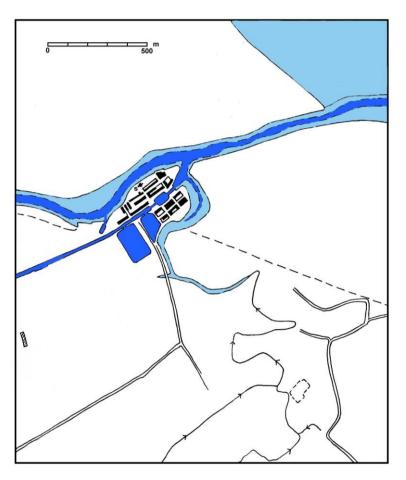
# **WILSON'S LOG**

This is part of the day book kept by Thomas Wilson during his supervision for the Forth and Clyde Canal Company of the work on the improvements to Grangemouth Harbour and its entrance from the River Carron in the late 1830s and early 1850s. Maintenance work on the canal as far west as Lock 16 is also covered, with some notes of events further west. The original documents are mostly in the care of Falkirk Archives, Falkirk Musuem.

The original spelling has, in instances, retained, and only the minimum of punctuation has been added in order to keep the character of the original but to make it more comprehensible. spelling reflects the accent of the diarist: so get become "git," entrance "enterance," and phrases such as "gine done the Banks" occur. Words highlighted in blue are explained in the appendix.





Illus 1: Plan of Grangemouth and surroundings in 1835.

Illus 2: Thomas Wilson in old age.

An article about the life and works of Thomas Wilson appeared in Calatria volume 10 in 1996.

# GRANGEMOUTH IMPROVEMENTS

# Journal of Work each Day

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# 1838

### **MARCH 1838**

### March 30th

Commenced with **Dredging boat** along the last slope of the Grangeburn. Loaded 4 **punts** & **livered** them at the end of the **Tunnel** which carries the Water from the Wood Basin. Loaded 2 Punts at Ebb tide near the wood Bridge and at high-water loaded three Punts from the Dredge. Got **Lord Dundas Old Boat** lifted and taken to the **Basket point**. The Quantity of Mud lifted this day is 190 Tons.

### 31st

Dredging Boat lifted 3 Punt loads to day. Men wrought ½ a day.

## **APRIL 1838**

### April 2

Employed 12 additional men this day. Commenced Excavating Ground near Mr **Stark's Rope work** & removing it to the North Side of the track path as being a place from whence it can be most easily taken away, either with Boats or Punts. James Bryce as an assistant this Day. 7 Punts.

### April 3

Men employed at the excavations. Three Men livering 2 Punts in Grangeburn.

## 4<sup>th</sup>

Loaded 6 Punts, started them with the *Vesta* at 20 minutes past 10am and arrived at Lord Dundas **Sleech** in 15 Minutes. Got them delivered and returned to the **Dredge** at 12 noon, being 1 hour and 40 Minutes from the period of starting to their return.

### 5<sup>th</sup>

Loaded 5 Punts this day, but the day being unfavourable we did not get them loaded a second time same tide.

### 6<sup>th</sup>

Men employed in levering 6 Punts taken from the centre of the harbour with the view that the water from the lock may have a free course and allow the Vessels to pass while the **Dredge** is at work.

### 7th

6 Punts loaded and delivered on the North Sleech. Intended having them reloaded, but the Day being unfavourable three only were loaded.

### 9<sup>th</sup>

Loaded 3 Punts and livered 6 this day. Brought the **Dredge** round to commence work between the Basket Point and **Pollock's Wharf**, with the view of taking the mud from the front of the proposed Timber Wharf.

### 10<sup>th</sup>

Received another Punt this day. Loaded and delivered 7 Punts on the south side East of the **Pilot's House.** 

### 11<sup>th</sup>

Loaded 7 Punts but the afternoon being wet they were not delivered.

# 12<sup>th</sup>

Delivered 7 Punts, **Dredging Boat** not at Work.

#### 13tl

Loaded 7 Punts in the morning and delivered 7. Loaded 7 and delivered 7 in the evening.

## 16<sup>th</sup>

The **Dredging Boat** not at work this day. About 20 men employed at the excavation.

### 17<sup>th</sup>

**Dredging Boat** not at work the Tides being too low. Loaded 5 Punts with the Men -27 Employed. Delivered them on the South side of the river between the  $1^{st}$  and  $2^{nd}$  **Beacon.** 

### 18th

Loaded 7 Punts with **Dredging Boat** and delivered them as above. Loaded them again with the Men and delivered them at night.

## 19th

Loaded 7 Punts with **Dredging Boat** and delivered them inside 1<sup>st</sup> Beacon. Loaded 5 with Men. 22 Employed.

# 20<sup>th</sup>

Loaded 2 Punts with the **Dredge** and delivered 7 in the Grangeburn below the Timber Bridge. Loaded 5 between Basket Point and Pollock's Quay, also 2 on the South side entrance of the Harbour.

### 21

Delivered 7 Punts loaded yesterday. Loaded 7 with **Dredge** and delivered three in Grangeburn.

### 23

Loaded 3 Punts with **Dredge**, delivered seven.

### 24

Loaded 7 Punts and delivered 7.

### 26

Loaded 5 Punts by the Men and delivered five.

### 27

Loaded 5 Punts and delivered 5 by the Men.

### 28

Same as yesterday.

### 30

Loaded 7 Punts and delivered 7.

## **MAY 1838**

### May 1

Same as yesterday.

### May 2.

Same as yesterday.

#### 3

7 Punts loaded by **Dredging Boat**.

#### 4

8 Punts loaded and 11 discharged.

#### 5

The excavation goes on well. Got the large **Pile Engine** prepared for driving the Experimental Pile. The Excavation is at present 14ft 8 inches deep from the surface. (7 punts).

## May 7

Commenced throwing a bank across the Grangeburn at the South end of **Lord Dundas cut**. The contractor, George Colville, commenced the new cut for Grangeburn at the Pilot's House. 44 men employed. **Dredge** not at work. Began to drive the Experimental pile, prepared one 34ft long and 12" x 12." **Mr Mcneill** & **Mr Johnston** being present, Drove the Pile this day 4ft 5in with 6 blows. Ram 12cwt first fall 151/2ft; 1st blow the Pile went 161/2 inches; 2nd 81/2in; 3rd 7in; 4th 7in; 5th 7in; 6th 7in (8 punts).

### May 8th

Began again this morning at 5 to drive the Pile. The 7<sup>th</sup> blow drove it 41/2in; 8<sup>th</sup> 4in; 9<sup>th</sup> 21/2in; 10<sup>th</sup> 41/2in; 11<sup>th</sup> 41/2in; 12<sup>th</sup> 5in; 13<sup>th</sup> 41/2in' 14<sup>th</sup> 5in; 15<sup>th</sup> 51/2in; 16<sup>th</sup> 51/2in; 17<sup>th</sup> 5in; 18<sup>th</sup> 5 in; 19<sup>th</sup> 5in; 20<sup>th</sup> 5in; making 5ft 61/2 this day, which with 4ft 5in yesterday makes a total 9ft 111/2in with 20 blows, being an average of 6 inches each blow. **Dredge** at work in the harbour, filled 8 Punts and discharge 2. Part of the Excavation containing about 1600 cub. yards was let at 6d per yd for the first 12ft in depth and 8d for the next 6ft. 5 logs about 60ft long, each 12" x 12", were brought from the Basin for the temporary Bridge across the centre of Lord Dundas cut. The Embankment across the Burn going on well. **Mr Black** laid out the breadths of cutting 7 slopes banks for the **new Grangeburn cut**.

### 9th

The work continues to proceed well. 17 Punts loaded 7, 15 discharged. A horse was procured for hauling the Punts up the burn which expedited them much.

### 10th

The excavation goes on well. The Bricklayer commenced building the Smithy. The **Dredge** continues at work in the Harbour. 13 Punts filled and 15 discharged.

### 11<sup>th</sup>

Excavation as usual. The West Bank continues slipping and appears inclined to give way from the Base of Ledge. 18 Punts filled and 14 discharged. Got 4 logs 40ft long each thrown across the North end of Lord Dundas cut as a temporary bridge for the horse tracking the Punts.

## $12^{th} \\$

The Work goes on well but the West bank continues to slip. The Embankment across the Grangeburn when just finished was partly carried away by the tide which rose rapidly. 12 Punts filled and 14 discharged.

# **14**<sup>th</sup>

The work goes on as usual. The Bank has begun to give from the base of the hedge and part has fallen. The struts were taken off the centre of the old wooden bridge which allowed the Punts to pass up the Burn to the Embankment. 9 filled and 8 discharged.

# $15^{th}$

The Work continues as usual. The **Sawyers** began this day, got part of the **Cleading** on the Wooden bridge. Commenced repairing the Embankment across the Burn by driving in piles & filling between

with sods and stones which will prevent the tide lifting it as before. The **Dredge** began to work at the morning's tide and got 11 Punts filled and 12 discharged.

### May 16

Excavation going on as usual. The Embankment across the burn finished. The sails in the horse Bridge cut a side drain at the Embankment to carry off the surplus water, the tunnel not being sufficient. 13 Punts filled and 12 discharged.

### 17

Everything goes as usual. 15 Punts filled and 13 discharged.

#### 18

The Excavation continues to go well. There are 17 men employed by contract. Mr Wilson went across the Firth to view Mr Lowry's quarry which contains remarkably good stone. The Contractor is getting on well with the new cut. 12 Punts filled and 14 discharged.

## 19<sup>th</sup>

The Work goes on as usual. The Contractor has about 120yds of the new cut finished. Got the side drain widened at the bank across the Burn to prevent the Water, should rain come, overflowing the Bank and carrying it away. 15 Punts filled and 12 discharged.

# 21st

Continued heavy rain which stopped all work at the Excavation. The wooden Bridge was finished. 13 loaded and 12 discharged.

# 22<sup>nd</sup>

Rain still continues. No work done at the Excavation. The water in the Burn rising fast. 8 Punts loaded, 10 discharged.

### 23rd

Rain continues. The Embankment across the Burn was carried away last night by the flood which rose over the tops, the tunnel not being able to carry it all off. The excavation was completely inundated by the water from the land drains. There being spring tides prevented the water escaping as it would otherwise have done. No work done at the Excavation. The Carpenters got the rafters on the Smithy. The **Dredge** not at work.

### 24<sup>tl</sup>

The rain has abated. Commenced removing the water from the excavation, cutting through the South Bank and putting in a tunnel which drew off about 4ft of water and enabled some of the men to proceed with the excavation. Mr Johnston came down and seeing the state of the works decided on erecting a Steam Engine with proper pumps to remove the water at present in the excavation as well as any that might occur afterwards. 12 Punts loaded. 8 discharged.

### 25<sup>th</sup>

Some of the water was removed by men with scoops. The men working by contract commenced cutting a wide drain to carry the water to the lowest point where the Engine is to be placed in order to carry the water from the foundation of the wharf. **Walter McTarget & Co's** vessel arrived from **Memel** with timber for the Canal Company. 7 Punts loaded, 8 discharged.

### 26th

Commenced driving Piles for the wharf for landing the stone. Got a Pump down worked by men to draw off the water which is now about 8ft down. 10 Punts loaded and 12 discharged. Employed James Naismith.

### May 28

The greater part of the men employed driving piles for the Temporary wharf. 4 men pumping, three fourths of the water have been removed from the excavation. Some of the men employed at the embankment away at the wooden bridge across Lord Dundas' cut. The **Dredge** commenced working in the river opposite the rope works. 7 Punts filled and 6 delivered up the Grangeburn.

#### 29

Three Carpenters and Labourers employed at the Temporary Wharf. Labourers at the Embankment. 4 Men pumping. Sawers employed cutting up Memel timber, being the first of the Cargo received from Mr W. McTarget's Logs. 10 Punts loaded and 10 discharged.

#### 30

In consequence of the Tide Water having broke through the ditch embankment and filled part of the Excavation, the Carpenters commenced to a Wood tunnel with the view that such an occurrence may not take place in future. 4 Men Pumping. Men assisting the Carpenters. Labourers cutting the embankment at the Wooden Bridge.

Labourers commenced to fill up the Old Grangeburn at the Junction of the Cut made by Lord Dundas. Received 6 Deals, 4 used for the Tunnel, 2 for the *Vulcan*, and 12 Scottish fir trees for Piles to support the incline for Conveying the Materials from the Temporary Wharf - Mr W. McTarget & Co. 800 Tyle from Kerse by the **Cyclops** for the Smithy, Bellows, Anvil, etc. the **Cyclops** and the *Vulcan* both came down for the purpose of taking away part of the Soil from the Excavation. 11 Punts loaded, 10 delivered in Grangeburn. **Dredge** still working round the Point at entrance of the Harbour.

Mr Black Came down from Falkirk by Order and took the levels of the land drain which runs East from the South end of the excavation to the New Grangeburn cut, by which it appears that there is a fall of 2ft from East to West. Also that the bottom of the New cut where the Tunnel is to be put in is 2 feet below the bottom of the Drain where well allows the drain to be deepened 1 foot, and at the same time keep the bottom of the Tunnel above the surface of the average run of water in the Grangeburn. By these means there will be a fall of 1 foot given to the water from West to East, the drain being of sufficient depth at the West end to admit of filling it up 2ft 6 inches. Mr Black also laid out the heights of banking and slopes cutting, etc for Pheely the contractor who is assisting Colville. The 100 feet Pine Stobs etc having been all removed by Walker the farmer, Mr Black was obliged to replace them, 2 Sawers employed Cutting, Wheeling Plank and Covers for the Jetty.

### 31

Carpenters & 3 Labourers employed at the jetty. 13 Punts loaded and delivered. The **Cyclops** and *Vulcan* were loaded from the Spoil Banks and delivered in the old Grangeburn near where we have been employed embarking. 6 Men employed at the One, & 4 at the other. Two Pair Sawers employed this day in Cutting, Wheeling & Cover Planks for the Jetty.

### **JUNE 1838**

### June 1st

Cyclops and Vulcan loaded & unloaded to-day as above. Rest of the men until Dinner, as was the Carpenter & 3 Labourers after Dinner, unloading the Pump apparatus from **Port Dundas** intended to Pump out the water from the excavation. In consequence of having rain continuing during the greater part of the day there was not much done at the excavation, the men having been obliged to stop after break. 1 Punt loaded, 5 discharged.

### June 2

Continued heavy rain till 12 o'clock. Nothing done at the excavation in consequence. The men employed repairing the Embankment across the Old Basin got a small boat sunk across the Burn, which materially strengthened the embankment. The Carpenters employed at the Jetty getting on the covering Planks.

### **∆**th

The Carpenters employed at the Jetty. Labourers contd. filling up the Grange Burn. *Cyclops* & *Vulcan* loaded from the Spoil Banks, and delivered up the Old Grangeburn. 10 Punts loaded and 7 delivered.

# 5<sup>th</sup>

The Carpenters employed at the Jetty got up the Crane, assisting in the removing a few Memel logs to the Sawpit. Two pair Sawers employed. Labourers assisting the Carpenters, Pumping Water, and Grangeburn filling up. 6 Punts filled, 7 Discharged.

Cyclops and Vulcan loaded and unloaded.

### 6<sup>th</sup>

Carpenters employed in erecting a Cran on the Jetty, one at the Smith's Shop. Smith and Hammermen employed at Iron Work for the Crane. Labourers employed filling up the old Grangeburn, four Men pumping water from the excavation. **Dredging Boat** not at work in consequence of being the **fast day**. The *Vulcan* loaded.

#### 7<sup>th</sup>

Carpenters employed at Jetty, Smiths' Shop, dressing Polls. Labourers filling up the Grangeburn, taken out Piles, etc. out of the Cut. Brought round a Draft of Timber from the Basin to the Sawpit. Favourable day for Work. Loaded and unloaded the *Cyclops* and *Vulcan*. 9 Punts loaded and unloaded.

### 8th

Carpenters employed at Smiths' Shop & Polls dressing. A. Glen & 6 Labourers removing the longest logs from the Basin to the excavation in order to have them placed as a platform to raise the Stones for the building.

# 9<sup>th</sup>

Carpenters employed at the Platform. *Cyclops* and *Vulcan* loaded. *Cyclops* with Carron **Danders**, but the *Vulcan* had not water up the New Cut. Labourers in filling up the New Cut bank.

### 11<sup>th</sup>

Carpenters with Labourers removing timber to the Sawpits, Piling Machine and repairing Barrows. Having made a statement to the men employed on board the Punts that for the future they will receive 3 Shillings for unloading each filled by the **Dredging Barge** and 4 Shillings for unloading each when loaded and unloaded by the Men, there was no waste with them to-day. Messrs Macneill & Johnston having arrived and examined the Set for the foundation of the Peir, part of which is this day excavate to the depth, they were both of opinion that the Piles may be dispensed with and the Strata appearing to be so firm and solid a nature that it will not be necessary to make the building more than 8 or 9 feet thick at the foundation, and that the Platform should consist of not more than 3 half logs laid longitudinally and covered with transverse Plank 4 inches thick. *Vulcan* unloaded.

## June 12th

The Puntmen having agreed to take 3 Shilling for delivery of each Punt when loaded and the sum of four shillings when loaded and unloaded by themselves from the Cut and Spoil Banks, and the Men on board the **Dredging Boat** to receive at the rate of 3d per hour when the Boat & Machinery is in actual operation, commenced this evening's tide and filled 18 Punts from the **Dredger** & by the Men, and delivered 12. Men employed at the **Dredge** – hours each. Messrs Macneill & Johnston having suggested that the *Manchester* should be fitted up for the purpose of Conveying Lime from Charlestown [ $ctrl\ F$  + "lime"] for the Buildings, ordered the Carpenters at Tophill to put on the Decks in a temporary manner and taken to Grangemouth this evening.

## June 13th

The *Manchester* started at 6 this morning in tow of the *Vesta* for a Cargo of Charlestown Lime. The Punts and Barge also this Morning's tide. – hours Punts loaded by the Men and – Punts unloaded. Put down a bore in the Set of the foundation with the view to ascertain the nature of the Strata, so as to regulate further precedance as to the laying of the Platform and thickness of the building. The Strata continues the same to the depth of 12 feet, but if anything rather softer. It will therefore be adviseable that the platform should consist of 6 inch longitudinal Plank for the first range, laid close; that the 2<sup>nd</sup> or transverse range should be 4 inches thick, also laid close; and that the third or upper range should be 3 inches thick and the whole 12 feet wide, secured with 1½ Inch transverses through each as showen on the sketch. The *Manchester* returned by 8 o'clock this evening in tow of the *Vesta* with 600 Bushels Lime Shells & 10 Tons Coals. Also a Sloop with 34 Stones from Mr Lawrie, Blair Quarry. Loaded the *Cyclops* and *Vulcan*. Punts loaded by the Men and unloaded.

### June 14th

It commenced to rain about 4 o'clock this morning and continued without intermission till ---We have had nothing like this since operations commenced. Had great difficulty in clearing the Sluice of the Tunnel near the Old Wood Bridge to prevent the Water from the Surface drains filling up the ditch and thereby overflow the Banks and fill up the excavation. The flood still continues to increase

and am now afraid that when the tide rises that we will not only have our excavation filled up, but the Bank across the Old Grangeburn at the head of Lord Dundas New Cut carried away. Ordered the Carpenters to take the rail off the temporary Bridge for the horse passing when tracking the Punts and to make fast a rope to each of the logs in case the bank giving way, which will no doubt soon take place, being now completely undermined on the West side. Got one half of the Stones delivered from the Sloop this morning. The weather being so unfavourable prevented the remainder being unshipped. The *Cyclops & Vulcan* unloaded to-day.

### June 15th

The Rain still continued. Matters looking worse & worse. All hands at Work raising small embankments round the excavation and ditch to keep out the water. About 8am the track path opposite the experimental Pile began to rent and gave way about one o'clock. Providentially the cut was not taken out to any great breadth for if it had been taken out to the same breadth and deepth as the lot for the foundation the whole embankment must have slipt in and the consequences must have been dreadful. Mr. Macneill came down to-day. Employed the whole of the Contractor's Men to raise an embankment across the new Grangeburn Cut and to cut the embankment at the Pilot house to allow the Surface land water to run into the burn and prevent it from running past the ditch to flood the operations. The rain has continued in torrents all this day. The Temporary horse Bridge slipt down at the West side.

### June 16th

Employed a few men this morning to let the water into the River before the tide rose. Feely & Connel's Men employed cutting a drain from the first lot of excavation near the Rope Work across the field to the ditch so as to carry off the water which is now considerably above the level of the ground at the excavation. Mr. Black employed with Mr. Macneill. David Keir & Co. men employed in raising a Mound at the Slip to secure the bank from further mischief. 6 Men employed in Pumping water from the excavations. Carpenters with a number of Labourers in removing Memel logs for a second of Props with the view to prevent the slope behind the back of the intended peir giving way.

### June 18th

Matters are looking very ill this morning. The lower part of the excavations have slipt in. The track Path gradually rending away over the excavation and the clay appearing to be soft, brought 12 Logs from the Basin for more Props. All hands employed with David Keir's Men, at the Props, cutting a slipe Road for the stuff being taken out at the North end of the excavation, Pumping out the Water, etc. Mr. Johnston was here to-day. Mr. Black assisting Mr. Macneill. Rain commenced this day again at 3p.m. and continues very much against our operations. The Wheel of the Purchase Crane brock which stopt further proceedance to-day with the **Dredge Boat**; sent it to Carron to be repaired.

### **Tuesday 19**

The Rain continued all night to half past 3am, commenced again at 7a.m. and continued the whole of the day. Men employed in Placing Props, Pumping out the water from the excavation, clearing drains, etc. Four men from Tophill. Mr. Black laying of the line off the Harbour for D. Keir.

## Wednesday 20

Six men commenced this Morning at 4a.m. to pump out the Water, so soon as this was down the Pump a foot below the level of the foundation and as the West slope of the excavation with all the props was still giving way, I considered it will prove for the interest and preservation of the timber taking to erect a perpendicular temporary wood framing with Piles and props to firm the other side of the Slope with the view to secure the under part from giving way and to Puddle up the Back to such a hight as to prevent the Stuff slipping down. This day continued most favourable for our operations Until 5p.m. when the Rain commenced again.

### **Thursday 21st**

Found it necessary to raise the Perpendicular wood framing 2 feet higher so as to prevent the stuff from slipping under the longitudinal logs. Labourers employed in removing the stuff so as to lighten the top of the Bank etc.

### 22nd

Men employed to-day in preparing the timber for 20 feet of the Platform. David Keir Contractor got 20 feet of the excavation taken out to the depth beg. 30 feet in the front and  $31^{9}/_{12}$  feet at the back part of

the foundation. The Carpenters got 6 of the cross Logs laid above the Concrete. Labourers employed in preparing it and Slipping the Bank etc. (One boat load started from Brighton).

## Saturday 23rd

Carpenters employed at the Platform. Labourers at the Concrete, delivering Stone and repairs of the Road Bridge sustained damage from the Punts passing under it.

#### 25th

Carpenters employed in laying the Gang way for Conveying the Stones for the building, finishing the Platform. Labourers loading the **Cyclops** from the front of the Crane Jetty, loading the **Vulcan** with Mine dust 40 Ton from Bainsford. The day is favourable but the Contractor has got little done being disappointed of a horse which he now requires to track the Barrows up the Slope of the excavation.

#### 26th

The Carpenters employed in preparing the gangway. Labourers in delivering a Cargo of Stones from Blair, delivering part of the Mine dust, & David Keir commenced with a horse which appears to work well. 1 Cargo Stones from Denny, Feely & Collins commenced the excavation as per Contract.

### 27th.

Labourers employed delivering a Cargo Stones from Denny, a Cargo of **Ashlar** & Ruble from Brighton, loading the Boat etc. Commenced to rain this morning at 8, continued to 12, and then turned out a fine warm day. Carpenters employed at the Platform **Sheerpolls** for lowering the Stones Gangway etc.

### 28th

This day rather unfavourable, occasional showers. Labourers employed in prepairing Concrete for another length of the foundation Platform which is now excavated to the length of 60 feet. The Carpenters in prepairing the timber for the Platform, in erection of perpendicular poles agreeably to Mr. Macneill's directions for the line of the Wall. We have laid the first 4 foundation stones for the Wall 6ft. in length by 2feet 4inches broad and 15 inches thick, which forms the Counter fort. Mr. Black assisting Mr. Macneill yesterday & to-day. 7 Labourers employed extra hours in the delivery of 40 Tons Rubble from the Sloop *Cleveland*, Wm. Ewing Master, from Blair Quarry.

### 29th

The Carpenters commenced to lay the Platform which will allow a stretch of 40 feet for the foundation. Labourers in prepairing Lime and Concrete to lay under the Platform. Got 4 Stones laid to-day on each side of the Counterfort, 4 feet each. Walter McTarget & Comp's Vessel arrived with the remainder of the Memel fir.

### 30th.

Carpenters employed at the Platform. Labourers in making Concrete, delivery Mine dust, Lime etc. and removing Rubble stones from the wooden Jetty got 3 stones laid, used 8 inch spikes for the planking which appear to answer better than the **treenails** and are much cheaper.

\* 4 x 2.4 x 15. 4 x 2.6 x 15. 4.7 x 2.9 x 15.

# **JULY 1838**

### July 2nd

Stretch of platform of 40 feet being near finished, The Carpenters were employed in removing timber, erecting a set of **treeangles** for the Purpose of lifting the Stones on the Carts at the timber Wharf. The Crane having unfortunately brock from a sudden Jerk in raising a stone from the Crane boat. The guide rope having brock the stone came in contact with the front of the Wharf which rendered the Crane entirely useless, the Shaft being brock below the level of the floor etc. Masons employed hewing Stones, two at the Building, 7 Stones laid. Labourers in removing Stones etc.

1st Course 4.2 x 2 x 15. 2nd Course 4.3 x 2.6 x 15. 4.2 2.6 x 15 4.6 x 2.7 x 15. 4.3 x 2.4 x 15 4.6 x 2.4 x 15. 3.4 x 2.7 x 15.

### July 3rd

Carpenters employed in prepairing timber for a Crane for the Timber Wharf in lieu of the one which was brock yesterday, Making handspokes etc. Ordered the Company's Smith at Tophill to commence and employ another hand to forward the Iron work of the Course. Masons employed hewing, two building, 11 stones laid and -- feet of the Rubble Wall built. Labourers in conveying stone for the Wharf. Mr. Black employed by Mr. Borthwick to take the levels with the view of cutting a Ditch from Lord Dundas inclosure to the New Grangeburn Cut near Mr. Oswald's Farmhouse and at the spot where it was intended to lay a Cast Mettle Pipe to supply Mr. Oswald with fresh water. Mr. Black was also laying off the lengths and breadths of ground from the Pilot house west, which is intended to be taken in lease from Lord Dundas for the Grangemouth West Dock entrance etc. 1 Stone laid in the 1st

Course 5 x 2.2 x 15. 2nd Course 2.6 x 3.10 x 1.4. 4.4 x 2.6 x 1.4. 4 x 2.3 x 1.4. 3.7 x 2.6 x 1.4. 3.6 x 2.6 x 1.4. 4 x 2.1 x 1.4. 3.9 x 2.7 x 1.4. 3.10 x 2.7 x 1.4. 2.8 x 2.1 x 1.4.

### July 4th

Carpenters employed in supporting the Gangway Platform at the New Crane, removing the Pump etc. to allow David Kier, the Contractor, to commence to the south of the building to excavate that part which was filled up, so as to allow another stretch of Platform to the South of the present foundation. David Kier's men also employed in taking out the Stuff at the north of the platform near to the whole extent of the wall to the North entrance of the Docks, to be carried up to the hight of 6 feet. Labourers employed in delivery of a cargo of stones from Denny, In conveying of stones with **Ice Boa**t from the Basin to the Wharf, and removing them from thence to the building. Twenty stones laid to-day. Viz. 1st Course. 4.3 x 2.2 x 15. 2nd Course. 4 x 2.6 x 15.

3.5 x 2.2 x 1.4.

6 x 2.6 x 15. 3.10 x 2.3 x 15. 6 x 2.6 x 15. 4.8 x 2.6 x 15. 5.3 x 2.1 x 15. 3.1 x 2.6 x 15. 6 x 2.1 x 15. 4.7 x 2.5 x 15. 3.1 x 3 x 15. 3.9 x 2.7 x 15. 4.3 x 3 x 15. 3.4 x 2.7 x 15. 3.6 x 2.5 x 15. 4 x 2.7 x 15. 4.10 x 2.5 x 15. 4.6 x 2.5 x 15. 3.5 x 2.5 x 15. 3.9 x 2.9 x 15.

Sent a Raft of Memel timber to Mr. Smith's Sawmill to be cut up for the platform, part of which is intended for the erection of a stage to raise the Grab so as to lift the stones off the Cart and lower them down to the building in place of the **Sheerpolls** which we find very inconvenient.

### Thursday 5th July 1838

Carpenters employed in prepairing timber for the Crane and for another Grab. The Crane Machines on board the *Manchester* will answer the purpose, but Labourers in removing Stones. 17 Stones laid, with Back Wall and filled up level with the Concrete. The Builders are rather at a loss for a sufficient number of Stones of a proper thickness—viz the 1st and 2nd course being fixed at 15 inches and 3rd course at 16 inches high. Wrote the different Contractors to send stones of the above dimentions.

### Friday 6th

Carpenters employed at the Crane, Grab Sheerpolls, removing etc. A most serious accident occurred with the **Dredging Boat** to-day in consequence of a Bucket getting in Contact with a large stone which

brock a link-bolt for connecting the Bucket and the suspension truss. Men at work to endeavour to get the Bucket again connected and when within a few inches of being so, the Purchase Blocks gave way and rendered it impracticable to proceed further until we are furnished with a stronger purchase to bring the Buckets in connection. Foundations laid are to the length of the platform.

### Saturday 7th July 1838

Carpenters employed finishing and putting up the new Crane for landing the Materials, prepairing Cross logs for the north stretch of the foundation. Mr. Needham with the assistance of a Carpenter & Labourer, laying the Cast iron pipe under the Grangeburn Cut to supply Mr. Oswald with fresh water from the East side of the Cut. Masons finished the third course of stones the length of the platform and back Wall to the height of other two Courses which I think we should risk without danger of the Platform rending. Labourers employed in delivering a Cargo of Stones from Blair Quarry in the Basin Wharf, assisting the Masons, placing another pump to clear out the water from the north side of the foundations, a considerable quantity having accumulated since last night from heavy showers since yesterday at Noon.

### Monday 9th July 1838

Carpenters employed in livering a Punt load of Sawn timber from Sawmill. - feet 4 Inch Beech — and feet of the Memel, which was sent up on Wednesday last in prepairing the Cross logs for the North end of the platforms. Labourers in removing the Stones to the foundations only Stones. Paid to-day a number of the Masons ab Mr. J.

### Tuesday 10th.

Rain again commenced this morning by 8 o'clock and continued the whole of the day except an hour in the afternoon without intermission. Carpenters commenced to lay the North stretch of Platform. Labourers at Concrete, in levering the Mine dust into a punt from the *Vulcan*, which had got under the *Manchester* and a Sloop, she being in danger of sinking with the rise of the tide. Commenced to lever a Cargo of Stones from Kenmuir. This is the first Cargo - 44 Stones in Number. Messrs Johnston & Borthwick agreed yesterday to have a Tunnel put in where the New Grangeburn Cut joins the Old a little south of Oswald's Farm to carry the Water off Lord Dundas pleasure ground and lands to the south, and ordered Mr. Black to make a survey and Plan of the whole of the Old Grange burn so as it may be refered to at any future period.

In consequence of David Keir having commenced with a shift of men to the excavation south of the present foundation, It was considered necessary to close up the Tunnel which conveys the water from the Ditch into the old G. Burn at the Wooden Bridge. It will therefore be necessary to put in embankment 100 yards east in the ditch & pump or Scoop out the water and send it east to the new G. Burn Cut.

### Wednesday 11th July 1838

Carpenters employed in laying the North Stretch of the Platform 4 inch Plank of beech from Jacob Smith & Co. which is very ill sawn, a number will not answer the purpose. Carpenters & Labourers also employed in propping up that part of the Sloop opposite the trial Pile which we had formerly to fill up from the dangerous appearance of the bank slipping in - by placing 4 in. Plank perpendicular with longitudinal half logs in a Red Pine? whole logs for props. Men also employed pumping and scooping out the water which is considerably accumulate from the heavy rains yesterday and to-day.

### Thursday 12th July. 1838

Received 29 Stones from James Laurie, Kilsyth, but I do not think we can take any more, their appearance is much more like Whin than free stone and will not be possible for the men to work them at a moderate price. Received by the same Boat 12 Ton Smithy Coal from W Nat. 12 Carpenters employed at the Platform. Mr. Johnston having fixed with Archibald Jack to hew the Stones for the building at 2¾ Pr Cubic foot of building and Mr. Black having measured the hewen stones and the building already erected, A. Jack commenced to-day to hew the Stones according to this agreement. Carpenters & labourers employed in propping part of the Slope in danger of falling in and Commenced to the Tunnel for carrying the Surface Water off Lord Dundas' pleasure ground into the New Grangeburn Cut, length 60 feet, height 18 by 15 inches within. Seven load of Stones from William Dobbie and a Sloop from Blair Quarry. Labourers employed in the delivery of both and commenced to scoop the water out of the Ditch to prevent it from overflowing into our operations.

### Friday 13th

Carpenters employed at the Tunnel. Labourers in delivering the Sloop from Blair Quarry, conveying Stones to the Masons, Boiling Water, and delivering a 2nd Cargo of stones for Stones laid to-day.

### Saturday 14th

Carpenters employed at the Tunnel and propping up the North end of the Slope which appears rather in a dangerous state, two of the Props lately put in having bended considerably and the cracks along the surface indicated that the bank was slipping in. Labourers delivering a Boatload of Stones from Kenmuir, part of lime from the *Manchester*, assisting the Masons making up Concrete filling up between the front and back building & Scraping out the burn which they have reduced to 14 inches. 4 Men employed clearing out the Ditch at the east end so as to give sufficiency of clearance for the water being carried off the West end where the water is delivered. In consequence of Geo. Colvine being stopt in the Cutting, the Grangeburn from the Mason work of the Bridge not being finished, and it still appears that it will be 10 days to come before it will be in such a state as to allow the trade to pass over it, I considered it will be for the interest of the Company to stop the road altogether and wrote Mr. Borthwick stating the circumstances, and that it will be better to pay a reasonable remuneration for carriages to go round about by the old Road than to suffer such a loss as we are doing from the water still being kept in the Old course. Received an answer from Mr. Borthwick stating that he will have no objection to the road being stopt a few days, provided I became bound for the stoppage the road Trustees may sustain and by giving notice the travellers at each end of the road. I therefore gave intimation to the Tollmen at each end of the Road and to Geo. Colvine to proceed to cut the embankment at the lower end of the Cut and south of the road, so as he may be in a state forwardness to let in the water on Tuesday. [See note 1] 52 Stones laid this week.

### Monday 16th July 1538

Carpenters employed in the slop under the first tear of logs, which was put in opposite the trial Pile. The Banks still appears to be in a dangerous state from the disagreeable state of the weather particularly at the north end of the excavation. Labourers employed in delivering a Cargo of Stones from Brighton, 29 Stones & 11 Tons Rubble, Scooping the water out of the ditch, assisting to convey stones to the Masons, Lime, clearing out the Ditch etc.

# Tuesday 17th

Carpenters commenced to lay another platform east of the present one for the purpose of conveying the materials from the Timber Wharf to the surface of the ground in front of the building, also in making the Tunnel and in Propping the north extremity of the Slope which appears still in a very dangerous state in consequence of the incesssant rains and particularly today. The Masons had to cease work in the afternoon. The Labourers were employed in assisting the carpenters conveying stones to the Building, loading and delivering the **Crane Boat** with Stones from the Harbour. Was under the necessity of employing eight additional hands today to assist in Scooping and Pumping Water from the excavation and clearing the water out of the ditch, at which they have made very little progress from the heavy rain. Ordered eight men to resume their work at the Pump at 7 and continued to 10pm.

# Wednesday 18th July 1838

Carpenters employed at the Tunnel prepairing 12 feet square logs for the South Stretch of the Platform, putting up tree angles etc. 8 Labourers employed from 3 a.m. scooping out water and Pumping, removing stones along the new gangway in to the Park, delivering **Gravel** and Lime. Mr. Johnston was here today and appeared much satisfied with the progress of the Work having finished nearly 4 Course 68 feet in length. The day is favourable and the work going on progressively. The Repair of the **Dredger Boat** (?)

# Thursday 19th July 1838

Carpenters employed finished the Tunnel, prepairing cross logs for another stretch of Platform which I expect David Keir will be in readiness by Saturday per 60 feet. George Colvin cut the embankment and let the Old and New Grangeburn join this day, which will prove a great benefit for our operations. Carpenters cut a set of tree angles for lowering the stones. This will make three in number, which I find preferable to Sheer Polls for lowering the Stones. Labourers in scooping water out of the ditch, pumping water from the excavation, conveying stones to the Masons, levering a Cargo of Gravel for Concrete, and a Cargo of Stone from William Dobbie - this is the 5th Cargo from him. This is a favourable day for the Operations.

## Friday 20th

The Carpenters were employed in prepairing timber for the platform, making a Set of Tree angles for placing the Stones, taking the Tunnel to the (Sprit?) for conveying Lord Dundas water off his pleasure ground. The Labourers in pumping and scooping water, conveying stones to the Masons and into the Park. One Longitudinal half log laid today.

### Saturday 21st

Carpenters employed in laying the cross logs. Labourers in making up and filling the concrete, delivering 1 Load of Stones from Wm. Dobbie, and another from Kenmuir Quarry - this is the 6 Cargo from Wm. Dobbie and the third Cargo from Kenmuir.

Mr. McNeil arrived just as we were laying, the men appeared satisfied with the progress and workmanship of the building but complained that the Concrete was bad that the Gravel ought to be riddled and have less proportion of sand. Complained that the cross logs were not properly bedded to have them removed and a greater quantity of Concrete path.

Agreed that the North termination should be finished with solid masonry 24 feet by 20 feet to form a radius on the north-east corner of 12 feet after the building is 6 feet in height. Mr. Black to take the levels of the Tunnel from the Basin (?) Waterloo Place with the view to extend the Tunnel to join the Course for carrying off the water from Lord Dundas pleasure ground.

### Monday 23d July 1838

Mr. Macneill left No. 16 this morning for <u>Slamannan Railroad</u>. In consequence of Mr. Needham having ordered the workmen to remove the cross logs and take out the whole of the Concrete which was put in on Saturday agreeably to Mr. Macneill's orders, there has been nothing done to the platform, nor will there be much done to it this week if the whole is to be taken and put in the front of the building as we will not have a sufficient quantity of lime until another Cargo is got from Charlestown. Ordered three men to start with the **Manchester** to-morrow morning, provided they can get the berth to take them down. Labourers employed in removing the Concrete stopping in front of the building to allow the Concrete to be put in and puddling the back of the Rubble building. Ordered the four Carpenters belonging to the Company to Tophill and commence tomorrow to ship a new set of up Stream Gates in Lock No.4, the old ones being in a very decayed and dangerous state.

# Tuesday 24th

The Carpenters employed today in relaying the cross log which was lifted yesterday and the longitudinal quarter logs. Labourers employed at the Concrete, removing stones, rooting out the Hedge along the bank for the purpose of stopping the Current of the Water washing down the earth taken from the excavation with the harbour. Ordered three Labourers to be at Tophill early tomorrow morning for the purpose of scraping the water out of the old Ballast boat [see note 2], which is lying sunk in the Cut, and to bring it to Grangemouth for the purpose of laying it across the Grangeburn above the Timber bridge for the purpose of forming a dam and supporting the embankment of the earth which is taken from excavation to fill up the old Grangeburn cut.

The *Manchester* started in tow of the *Vesta* at 7a.m. for a Cargo of lime. The **Dredge Boat** commenced this afternoon about 100 yards down from the entrance of the Harbour, loaded three punts.

### Wednesday 25th July 1838

The Carpenters employed at the Platform which is attended with considerable work from the Scots fir plank being so badly sawn. Masons commenced to lay the foundation stones 8 in number. The Labourers in conveying stones to the Masons, filling up the Grangeburn at the temporary Road Bridge. Carriages are passing the Bridge across the New Grangeburn cut [see note 1]. The old Ballast Boat was laid across the old cut, but close to the timber Bridge. 4 Punts delivered into it and Feely and Connel's?) men conveyed Stuff from the excavation across the old timber Bridge and emptying it alongside the Boat with the view to an embankment. The *Manchester* arrived at 5pm with 800 Bushels lime from Charlestown.

### Thursday 26 July 1838

The Carpenters were employed in laying another stretch of longitudinal half logs for the Platform, this when finished will be 40 feet of Platform ready for the Masonry, 6 feet of which 2 feet high, 20 feet One course, and the remainder of feet ready for the Stones.

Labourers in conveying stones, making Concrete, and assisting the Carpenters. Feely and Collins, the Contractor, commenced this morning, and David Keir with his men, in conveying stuff from the

excavation to form the embankment along side the Old Ballast Boat and with great exertion I am happy to say they managed to raise it to such a hight as to keep back the tide which was at its hight about half past 6a.m.

### Friday 27th July 1838

At a quarter past 4a.m. the embankment across the old Grangeburn cut had a dangerous appearance from the weight of the stuff thrown to the side of the Boat and softness of the Bottom. It slipt off and the embankment rended so much that by ¼ from 4 the Water was flowing over and two minuets more would have sent the whole into the bottom of the burn. Sent for Feely & Collin's men and they were not long in wheeling as much stuff as made it secure against the flowing tide. Carpenters employed at the Platform. Labourers at Concrete. Had to get 8 men from Feely Collins to assist in unloading the Sloop *Cleveland* with a Cargo of Stones from Blair Quarry.

# Saturday 28th

Carpenters employed at the Platform. 8 men in making and conveying Lime from the *Manchester*, 1 Pumping Water, 2 Assisting the Carpenters, 8 assisting the Masons in Conveying Stones & Puddle for the back of the building. Mr. Black taking the levels for George Calvin on the south side of the junction of the old and new Cut.

### Monday 30th July 1838

Carpenters employed at the platform. Labourers at the Concrete, assisting the Masons, delivery of Lime, and forming another  $\mathbf{Saw}$   $\mathbf{Pit}$  – 22 Stones laid.

### Tuesday 31st

Carpenters employed at the Platform. Labourers in making and conveying Concrete. Delivery of the 4th load of Stones from Kenmuir Quarry, *Cyclops* with a Cargo of Gravel for Concrete, delivery of Lime, pumping water, assisting the Masons & Conveying materials to the building. Punts loaded and unloaded close to the embankment put across the old cut. It is quite astonishing that the Pressure of the stuff is raising up the old Boat which we Put in support the same. 17 Stones laid.

## **AUGUST 1838**

### Wednesday 1st August 1838

Early this morning I observed the top of the bank or track path opposite to the trial pile considerable cracked, and in going down to the platform I observed that it was shifted two Inches East and the back part of it raised as Much. I therefore ordered all hands to bring forward 6 Logs for Props in order, if possible, to prevent the banks from subsiding and danger to the Works. Labourers employed in making and filling up the space between the Ashlar & Rubble building with Concrete, Puddling the back of the building and assisting the Carpenters. 23 Stones laid.

# Thursday 2<sup>nd</sup>

It has rained all night without interruption. I was extremely sorry to observe the state of the New Grangeburn at the Pilot house from last night rain, for fifty yards the whole of the Slope is washed away and the bottom out 2 and three feet below the original depth. It will be necessary for the preservation of the whole to have logs laid across with Sheeting Piles and Pitched with Rubble Stones. Wrote Mr Johnston to this effect. 6 men employed pumping out the Water till 10 P.M. The rain continued till 5 P.M. and commenced again at 11 P.M. 2 stones laid.

### Friday 3rd August

Carpenters in extending the Cartway, as far as the excavation is taken out. prepairing Cross logs and Putting in another Prop to Support the Banks. Labourers in loading and unloading the **Ice Boat** with Stones from the Basin, Assisting the Masons, Pumping Water, etc. This day is rather favourable and we have got the water nearly all taken out of the excavation for the Platform, and I am happy to say matters are looking better than I expected the Slopes, but sorrow to observe the State of the Grangeburn the slopes of which is fallen in and sweept into the Carron 120 Yards in length from exit and forming a Bar across the River, and as Mr. Johnston has not made his appearance to-day as I expected I shall therefore commence and get a punt or a Boatload of Stones taken down to-morrow and thrown into the Bottom so as to prevent the progress of being washed away. 19 Stones laid.

### Saturday 4th August

Carpenters employed at the sawpit and prepairing timber for another stretch of Platform. Labourers in removing Stones, Gravel for collecting Concrete, assisting the Masons, etc. and taking a Cargo of Rubble Stones to the Grangeburn which was delivered at high Water. Sent the **Cyclops** for two dozen Scots fir trees and Some Beach Plank with the view of raising a Coffer dam to prevent the Sludge being carried into the River. Was sorrow to observe that the Rubble Stones had very little effect to stop the Progress of the bottom and Slopes giving way. Ordered Mr. Oswald to procure 2 Carts of Rice or branches of trees to make a trial of it on Monday. 23 Stones laid.

## Monday 6th

Carpenters employed in Prepairing the Platform. Labourers in puddling the Back of the building, Pumping Water Prepairing Concrete, discharging a Boatload of Stones from Wm. Dobbie. In consequence of the Embankment appearing to Subside and slip, it was considered necessary to Stop off 16 feet from the surface to the first range of Log Props - and employed Keir & Co. & Feely and Company to commence to the Same with the view to take off the Weight and prevent further risks of the foundation being shifted. Geo. Colvin got 2 Carts of Brushwood put in the face of the slip in the bottom of the Grangeburn, and covered with Rubble Stones to prevent the progress of the Sides and bottom being further sweept away, which I trust will have some effect. We had a great deal of rain last night, it fell in torrents and occasional Showers to-day.

### **Tuesday 7 August 1838**

Carpenters were principally employed at the Platform. Labourers in discharging a Boat load of Stones from Brighton Quarry, in puddling, Making Concrete, assisting the Masons, etc. In consequence of the Tumbler Shaft next the Origin of the Hercules having been found brock, there was no Work with the Dredging to-day, and we had to employ a Number of the Puntmen to Assist in delivering the Stones etc. Met Mr. Johnston at Castlecarrie, and after settling some damages to the Amount of 30/ Sustained by Mr. Dawson from a pit being sunk in the line of the Stirling Canal etc. we returned to Grangemouth. Proposed to carry the Water from the Common Shore at Waterloo Place south in front of the Houses into the Cut lately made by Lord Dundas, and to join the drain proposed to be made for conveying the Surface Water off his ground into the Grangeburn. Mr Johnston considered it would not be adviseable to commence to it until it is ascertained wither the Improvements are to consist of Wet or Tideal Harbour. Mr. Johnston then examined the Grangeburn Cut and appeared very much struck at the progress which the flood has made in sweeping away the Slopes and bottom of the Grangeburn and particularly at the bank which is accumulating across the Carron. Requested that we should commence without delay to have it properly piled so as to prevent the injury which is progressing daily. This I promised to do so soon as the Water is subsided to allow men to proceed with the Work. It was agreed to send the Shaft [of the *Hercules*] to Carron [Ironworks] and to request Mr. Dawson to have another Cast without delay.

# Wednesday 8th

Carpenters employed at the Platform removing a few of the Memel Props where they are no more necessary, and at the Platform. Labourers in loading the *Vulcan* with **gravel** from Carron River for Concrete and discharging part of the Same, Assisting the Masons Making Concrete etc. Mentioned to Mr. Johnston the dangerous state of Lock No 16 from the Stone Pitching and flooring of the Lock being render useless the most of the Plank and a great number of stones being sweept off. Mr. Johnston agreed to have it repaired without delay and appointed Tuesday eight days to it.

### Thursday 9th August 1838

Rain commenced again this day at 8A.M. and continued to 6P.M., consequently little was done either in building or heaving Stones for the erection. Labourers employed in the delevery of the *Vulcan* with Gravel and a Boatload 8 tons of Rubble from Mr. Alexr. Lawrie, Brighton. It was my intention to have commenced to the Grangeburn this day, but in consequence of the heavy fall of rain which flooded the burn to a very considerable extent, nothing was got done. The Carpenters finished the Platform.

### Friday 10th

The Carpenters were employed in erecting a Sawpit, cutting out Plank for a Watchhouse. Labourers in discharging a Cargo Stones from Brighton, Pumping Water, and Assisting the Masons.

### Saturday 11

Carpenters and 6 Labourers employed at the Grangeburn put in a Punt-load Rubble stones from Robert McKay with Stabs & Brushwood to prevent the Slopes and Bottom of the burn from further injury, but from the last Nights rains the Water was so rapid as to prevent us getting it done to Satisfaction. I trust however that it will stop the progress of destruction until we have dry weather.

## Monday 13th August 1838

In consequence of having received intimation to Meet the Committee I went west to Auchenstorrie by the 10 o'clock Boat, which consisted of Mr. Finlay and Mr. Jack from London. Arrived Grangemouth about 3P.M.and after examining the Operations and Plan of the Lock with the view of converting the Harbour into a Wet Dock. They seemed highly pleased with the Work so far as the Work have progressed, and considered it would be a waste of Money not to carry the Wet Dock into Execution. 1 Cargo of Rubble Stones from Bantaskin.

### **Tuesday 14 1838**

Carpenters employed at the Shed for the Masons & Watch house etc. The Labourers in levering a Cargo of Stone from Blair Quarry, assisting & conveying Stones to the Masons, Pumping Water, etc.

### Wednesday 15th

Men employed as above. 1 Cargo Stones discharging from Kenmuire, very bad.

### **Thursday 16**

Men employed as above. 1 Cargo Stones from Wm. Dobbie. Carpenters commenced to the Grangeburn, very bad.

# **OCTOBER 1838**

## Monday 15th October 1838

Several important circumstances have occurred since I was in a situation to attend to active duty. The Slope of the Grangeburn for 150 yards up from the Pilot House have suffered most severely and a great number of Piles planking etc. have been drove and Stones, Mud, and Gravel, in great quantity have been put in with the view of securing the slope. We have a Boatload of Moss [ie peat] to try an experiment along with the Pile which I trust will have some effect of preventing the current of the Water serching through the stones and make it flow over the surface.

On Thursday the 6th September the tide rose to an unprecedented hight and it having rained without interruption on Tuesday, Wednesday, and Thursday, the whole of the operations were flooded to a considerable deepth and it was with great persevereance that the tide was prevented overfloing the Banks & filling up the excavations. The Building have advanced progressively with the excavation. The Carpenters are employ in laying another stretch of Platform. This brings us to within 90 feet of the 500 feet, being the eastern extremity of the building.

Delivered a Boat of Ashlar from A. Lawrie, Brighton. Commenced with the **Dredge Boat** at the end of the Grangeburn Cut with the view of taken out Embankment accumulate from the burn.

### Tuesday 16th [see note 3]

Carpenters employed at the Platform, only 10 have been at Work and today Jack in serch of Masons, and unless he procure a few good hands I am afraid we will not be able to get the whole length of building founded this Season. Had one Boat of Rubbish from James Lawrie and a Boat from Robt. Hendrie with moss from Hungryside for the Grangeburn. The Masons and Most of Labourers had to drop Work after dinner, it being so wet. The Carpenters continued at the Platform being afraid of the embankment slipping over it, should the rain continue.

### Wednesday 17th October 1838

Vessels discharging this day, *Vulcan* with 30 Ton Mine dust & 10 Ton Carron Company Danders, Scow *Mary* with 40 Ton Moss discharged into two Punts. Carpenters in finishing the Streetch of Platform props for the Roof of the Shed to sharp the Masons Tools. And<sup>w</sup>. Glen and 12 Labourers at the Grangeburn and drove a roe of piles across, which we intend to make up with Moss, Stones, etc, as an experiment to prevent the bottom being undermined from the Current in the Burn. Masons Builders

laying the foundation Stones and Back Wall. Labourers employed at Concrete, at Lime, Assisting Masons, Conveying Stones to the Builders, Pumping Water, Assisting discharging the two Boats.

## Thursday 18th

Commenced to rain this day after Breakfast and continued all day, consequently there was nothing don by the Masons after that hour, except the Carpenters who were engaged in prepairing a Platform for the foundation of the Cran. Labourers at the Basin.

### Friday 19th

*Cyclops* discharged a Cargo of Stones & rough Gravel from **Ballast** hill. In consequence of the excessive rain Yesterday, the water is risen considerably in the excavation. Six men employed Bailing Water to prevent the last part of the foundation being overflowed. Two men at hand Pump where the pump is placed to take the water off the Men Cutting the level to the Pump. Carpenters employed putting the Roof on the Shed for the Masons to sharp their Tools, at the Platform for the Crane, etc.

### Saturday 20th October 1838

*Vulcan* was discharged 30 Tons Carron Danders. 1 of Ashlar from Wm. Dobbie and commenced to discharge Moss for the back of the Building. Carpenters at the Platform for the Crane, Smiths Shed and at the Pump. Labourers at the Concrete, Pumping Water, Conveying Stones to the Masons, discharging Stones, etc.

### Monday 22<sup>d</sup>

*Cyclops* discharging 60 Tons Gravel for the road along the top of the Slope, 1 Scow with Ashlar Stones from Alex. Lawrie, Brighton. Two Carpenters at the Pump Well after the Water being taken out with two hoses which had accumulated since Saturday Night. Masons & Labourers employed as --- The day favourable.

### Tuesday 23d

A Scow with Ashler Stones from R. Martin & Co Bantaskine discharged. The Vulcan with Gravel from Ballast hill for concrete, a Scow from Castlecarrie with 100 Small Scotch fir trees and 600 7 feet Stubs. Labourers employed in discharging the Stone, Making Concrete, conveying stones to the Masons.

# Wednesday 24th

Carpenters employed prepairing Cross logs for another Stretch of Platform &c. Labourers loading the **Ice boat** with the Ashler lying at the Basin &c, Concrete, conveying Stones to the Masons, &c.

## **Thursday 25**

Sent the *Manchester* off in tow of the ---- for a Cargo Lime Shell, day favourable. Scow from Mathew ---- discharging Quarry Rubbish in Grangeburn. Commenced to Rain with wind from the East, which caused the Men to drop Work after 2 o'clock.

## Friday 26 October 1838

Mary Scow with a Cargo of Quarry Rubbish from [space left], discharging in Grangeburn, *Vulcan* discharging Gravel for Concrete from Carron River. **Cyclops** discharging Gravel for the Road, and a scow with 40 tons Quarry Rubbish from ---

## Saturday 27th

1 Scow discharged from James Lawrie with Quarry. In consequence of the incessent rain today the Masons & a Number of Labourers wrought only one hour to day. Resolved in future that the Men be paid up to Friday night in place of Saturday to give ---- for having the Account of Wages made up.

## Monday 29th

1 Scow discharging stone from Brighton. 1 scow the *Vulcan* with Quarry Rubbish from **Neitherwood** discharged in GBurn. The **dredging Boat** met with an accident from the Boespreet of a Ship going through the Engine house and in the Afternoon the Wheel for lifting the frame -----.

## Tuesday 30th

A Scow with 4 Whin Stones for the foot of the Crane intended to be erected at New Harbour discharged at the Basin Crane and 22 Stones from Kenmuir?

# Wednesday 31st

Discharged 35 Stones from Black Craig, Plean, Peter Shaw. **Cyclops** with Cargo Rubbish from [space left]. Mr Johnston was here to-day and was most anxious that we should proceed with the wharf across the Grangeburn without delay.

## **NOVEMBER 1838**

### **Thursday 1st Novr 1838**

*Mary* Scow with a Cargo Quarry Rubbish from Netherwood, the *Vulcan* with a Cargo Quarry Rubbish from James Lawrie, & a Boat load Ashlar from Brighton. About 85 feet of the Slope of the South side of the Harbour have given way and slipped down to a considerable distance into the excavation this has taken place from the continual rains and the difference of the Strata, the upper bed being of a soft sandy have slipped off the Bed of Shells & Clay which is much more firm and hard.

### Friday 2nd Novr 1838

Labourers employed in discharging Stones out of the Ice Boat. Carpenters preparing the platform etc.

## Saturday 3rd

Discharging a Boat from Wm Dobbie with Ashlar Stones.

## Monday 5th November 1838

Discharging a Boat load Ashlar from James Lawrie. The *Manchester* having been sent to Tophill Dock for the purpose of having the leak stoped I was very much surprised to find that 2 Plates on the Larboard side under the Water was entirely corroded through. Ordered the belt to be taken off but not to interfere with the Iron Work until Mr. Johnston came down, which I expect this afternoon. Mr. Johnston came here and the Sluice in the Timber Basin for the Common shore which runs on to the old Grangeburn to be closed up as the Company have no right to be at a farthing expense of keeping up the Tunnel. That the Sluice was put in by the Company meerly for the Purpose of emptying the Basin. Mr. Johnston also agreed to extend the South boundary of the Company property for Grangemouth Improvements 30 feet and ordered that Mr. Black should make the Plan accordingly.

### Tuesday 6th

Men discharging a Cargo of Brushwood for the Intended Wharf across the old Grangeburn cut but I consider the Stuff far ill adapted for the purpose.

### Wednesday 7th

It commenced to rain this morning about 2 o'clock and continued till 9 and again came on at half past 12, and rained incessantly till the middle of the night, forcing hands at the Pump. 4 men at the Hand pump, but the Water has increased both in the excavation and at the foundation which is much against us getting on with the remaining streitch of building.

### Thursday 8th

Discharging a Boat with Ashlar from William Dobbie. Men at the Pump all day.

# Friday 9th

Discharging a Sloop with Ashlar Stones from Blair. Last night the remaining Slope of the South side of the Harbour Slipped in and I am much afraid that the sides of the excavation will not stand at the south end where we prepairing for the foundation.

# Saturday 10

Discharging a Cargo of Ashlar from Alex. Lawrie, Brighton. Feely & Collins still employed at Excavation.

### Monday 12th Nov. 1838

Discharging Sloop *Carrock* from Inverkeithing with a Cargo of Ashlar Stone, very much dissatisfied with the Stones, not being at all dressed to the line.

Carpenters employed at the Platform.

### Tuesday 13

Discharging a Cargo of Ashlar Rubble from William Dobbie. The side of the Slope of excavation appears in a dangerous state, part of it slipped in, had it removed to the front of the building. Carpenters at the Platform.

### Wednesday 14

In consequence of the dangerous state of the Slope, and a considerable part having slipped in since last night, we were under the necessity to remove the Gangway and get 5 longer logs put in their place. Carpenters employed at this & Labourers.

### Thursday 15th

Discharged a Cargo of Ashlar Stones from Alexr. Lawrie, Brighton. Commenced to discharge Small Sloop *Bird* from Sands Quarry with 22 Stones. Sent off the *Manchester* to Charleston for another Cargo Lime after being in Tophill Dock.

Carpenters got the Platform in such a state of forwardness as to allow the Masons to commence with the building to-day. Received -- feet of 4 Inch Scotch fir plank for the platform from Jacob Smith & Co.

### Friday 16th

Discharged the small Sloop with 250 feet Ashlar from Sand Quarry and a Scow with Quarry Rubbish from James Lawrie. Masons made great progress to-day with the foundation.

## Saturday 17th

Discharging a Cargo of Rubble Stone from A. Lawrie, Brighton. Commenced also to the Small Sloop with 20 Stones from Sands Quarry.

## Monday 19th

The day being favourable, the Masons got the foundation Stones all laid the length of the Platform and a half of the second Course. Went to Kenneil Quarry and inspected the Stones taken at the different places where the Duke of Hamilton proposed to open up Quarrys. From the appearance of the Stone, and after inspecting the ruins of the Old Church and the tomb stones which appears to have been from the same rock, I am of the opinion the stone is durable and will answer the purpose either for the erection of houses or sea Walls. **Mr. Bauchop** stated that he would send us a few Tons of Blocks for a trial and if they were found to please he would then be enabled to state at what price he could afford to lay them down at Grangemouth.

Discharged the small Sloop from Sands Quarry and Commenced to discharge a Sloop with Stones from Blair Quarry. Weather favourable.

# Tuesday 20th

Discharged the Sloop from Blair Quarry - containing 52 Stones 715 feet.

# Wednesday 21st

Discharged small Sloop *Bird* from Sands Quarry. Weather favourable but very cold.

# Thursday 22<sup>nd</sup>

Carpenters employed in fixing up the New Crane gear for delivering the Stones.

Mr. Johnston was here to-day. Agreed to have the Burn filled up at the temporary Bridge, and to take offers to have it executed. Accordingly, to proceed with the timber wharf with the least possible delay. Mr. J. also agreed that we should drop the **Dredging Boat** during Winter and pay off all the Men except the Engine Man if he is pleased to remain at reduced wages, say 3s per day, and to get the Assistance of the Engine Man and Fireman of the **Vesta** to assist in repairs of the Machinery when not employed with her.

## Friday 23rd

There was no work to-day with the Masons at hewing for want of Stones.

## Saturday 24th

Discharged the Sloop *Cleveland* with 36 Stones from Blair Quarry 722 <sup>1</sup>/<sup>12</sup> feet. Mentioned to Thomas Thomson, Engineman of the *Hercules*, that we intended to drop Work with the **Dredging Boat** during

Winter and if he wished to stop at a reduced wage, he would be employed in repairs of the Machinery which he declined to do at 3/6 per day.

# Monday 26th

Discharged the small Sloop *Bird* with Stones from Sands Quarry and the *Vulcan* with Stones from William Dobbie.

### Tuesday 27th Novr. 1838

In consequence of the frost being so severe last night there was no Work with the Masons to-day. The Carpenters and a few Labourers in sinking the ground at the foot of the Pump in order to get the level taken off to the Deepth of the Bottom of the Dock. The *Vulcan* away for Cargo of Gravel for Concrete ---.

### Wednesday 28th

This day more favourable, all hands at Work. Carpenters commenced to Place the Platform for the Purpose of driving the Main Piles for the Timber Wharf across the Grangeburn. Went up to Port Dundas. Mr. Johnston agreed to take offers to fill up the Grangeburn lately cut by Lord Dundas and to allow the Farmers to cut the Drains to take off their Surface Water the Grangeburn. Got the late -- it can be by others. It commenced to rain very heavy between 3 & 4 P.M.

### Thursday 29th Novr. 1838

Carpenters employed at the Platform, but in consequence of one of the half logs having brock, the Pilling Engine came down and rendered it almost useless. It came on to rain at 12, the Masons & Labourers had to drop Work.

### Friday 30th

The Hewers were idle to-day for want of Stones. Carpenters raising the Gangway to allow another Course of Stones to be brought forward and repairing the Pilling Engine. I have given up the idea of finishing the foundation until the Spring, the weather being so unsettled and having plenty of Work for the Masons in carrieng up the building. I conceive it will be much more for the Company's interest to proceed no further with the excavation for the remainder of the foundation at present.

### **DECEMBER 1838**

### Saturday 1st Decemr. 1838

The *Vulcan* discharged with a Cargo of Stones from William Dobbie and a Scow with a Cargo of Stones from Brighton p Alex Lawrie.

Mr. McNeil arrived to-day and appeared satisfied with our operation, suggested to form two Births for Vessels in the Grangeburn.

### Monday 3rd

Discharged the small Sloop *Bird* from Sands Quarry. Mr. McNeil was here to-day and had Mr. Black employed taken levels across the Carron at the entrance and down the River.

# Tuesday 4th

Discharged a Cargo of Rubble Stones from Brighton p Alex Lawrie. Messrs McNeil and Johnston was here to-day, agreed that we should extend the timber Wharf up the Old Grangeburn 230 feet on both sides — and 100 feet wideth leaving Space for a Wharf on the East 100 feet and on the South 40 belonging to the Company and 60 feet for a Wharf and 40 feet for a Street in front of Waterloo Place belonging to Lord Dundas, making the distance from the front of the Stone Wharf to Waterloo Place 34 feet.

### Wednesday 5th Decr

No Work to day with the Hewers to day for want of stones. Commenced this to the preparation for the Piles agreeable to the New Plan of the Wharf. Drove the first Pile 36 feet long - with 28 blows of the Ram, being [space] feet into the solid at the rate [space] inches each blow. Discharged the **Vulcan** with a Cargo of Quarry rubbish from Netherwood.

### Thursday 6

No Work today with the Hewers for want of Stones. Finding the Smiths shop rather small, and being under the necessity to employ another Smith to get forward with Work of the Timber Wharf, commenced to take down the North Gable in order to get another pair Bellows erected.

## Friday 7th

Discharged Boat from Mr Dobbie, but the scow turned out so leaky that the Men had to discharge 12 Stones at No 16. Carpenters employed in putting up a --- to drive the Piles for the Timber Wharf. Attended Mr McNiel's <u>experiments at No 16</u> for draging vessels with the Stationery Engine placed half a mile West The bank. made an attempt to track a vessel which was accomplished at an ordinary rate and one of the Passage Boats I am rather afraid that it will answer unless some other plan is taken to keep the Truck line in a direct line with the rope from the Engine over the pulleys.

### Saturday 8 Decr 1938

Discharged the *Vulcan* with 16 Stones from Netherwood, 7 Stones from Mr Dobbie and the 12 Stones left at No 16 yesterday.

### Monday 10th

Geo Calvin Commenced to fill up the Grangeburn made by Lord Dundas. Discharged the *Buck* from Sands and a scow from Brighton Quarry with Ashler Stones from ---- with Quarry Rubbish. Weather favourable.

## Tuesday 11th

Discharged a Scow with 41 Stones from ---- 534 feet. A rather unfortunate circumstance happened to the pump Machinery from one of the horses getting unruily, it ran off with others and brock the Socket of the Turning frame and must send it to Carron to have another cast.

### Wednesday 12th Decr 1838

Discharged a Scow with 40 Tons Ruble from Brighton. Went Carron with the broken Socket of the Pump and found they could not make a Cast from it and was under the Necessity to order a Pattern which Mr Dawson agreed to have don without delay. Mr Dawson also agreed to let me have a loan of the Portable Crane with the view to make another from it and ordered Andrew Benn-- to take a horse and have it taken to G'mouth tomorrow.

### Thursday 13th

Discharged the *Bird* with a Cargo of Ashler 28 from Dalach Quarry, Inverkeithing, and the *Vulcan* with a Cargo Gravel for Concrete from Carron River. Received the loan of the Portable Crane from Carron Company.

# Friday 14th

Scow from James Lawrie to Grangeburn with Quarry Rubbish. Received the Casting from Carron and Commenced Pumping this Afternoon. Weather favourable included? a frost?

### Saturday 15th Decr 1838

From last night's frost the Masons did not begin till after breakfast. Labourers employed in raising the Platform.

### Monday 17th

Discharged the *Cyclops* with 43 Stones from Peter Shaw, Torwood, and a Cargo of Ruble from Alex Laurie. Went west to Craigmarloch and saw a trial of the Diving Bell which this Company has a loan of from the Clyde. Considers it will prove of great use to lift stones in the bottom of the Canal and having been brought up from the bottom and another is lying long side of it which will be taken out to Morrow

Mr Johnston agreed that we should make the Timber Wharf 120 feet in length in place of 230 feet and take out the slip in the South bank which is slipt in to a slope that will stand.

## Tuesday 18 Decr 1838

Commenced to discharge a Sloop from Dolarchy Quarry from Archbd Logan with 58 Blocks 677 feet. The Stones are of a good size looks well, very like Blair Stones. Went over to Blair and found a good

number of Stones lying in the Quarry, got hold of the *Bud* and took her into the Quay to load, and so soon as we came over I ordered the *Vesta* to return and brought her over with a Cargo this afternoon. The *Vulcan* was discharged in the Grangeburn a Cargo of Drain Tyle from Kerse for the Drains along the tail of this Slop.

## Wednesday 19th

Discharged the Sloop Jamie? and ---, and the Bud with 20 Stones [blank] feet from Blair Quarry.

### Thursday 20

The *Vulcan* arrived with 41 Stones from Will<sup>m</sup> Dobbie commenced to discharge.

### Friday 21 Decr 1838

Discharged the *Vulcan* and ordered to Netherwood for a Cargo of Stones. The *Bud* arrived with a Cargo of Stones from Blair.

### Saturday 22<sup>nd</sup>

Saturday a Sloop arrived from Inverkeithing with 82 Stones from Mr John Hood Duloch Quarry 672 feet according to his measurement and according to our measurement 773 feet which is certainly ample allowance. Discharged the *Bud* with 20 Stones from Blair.

### Monday 24th

Discharge the Sloop today and will commence with Boat from Alex Laurie, Brighton, tomorrow. Carpenters employed at the Pump today, in consequence of the Pit being filled up with Mud we could not get it to work and will have to Plank it up from the Bottom.

### Tuesday 25 Decr 1838

Discharged the Scow from Brighton to-day with 46 Stones. Carpenters & Labourers employed at the Pump.

### Wednesday 26

Discharged the *Vulcan* with Stones from Netherwood, received 10 Barrels Roman Cement from Glasgow. It became very wet. Men had to drop Work after 12 o'clock.

## **Thursday 27**

Discharge Company's Scow *Mary* with 14 Stones & 15 Ton Quarry Rubbish from Netherwood and 10 stones from James Laurie - also a Boat with Stones from Bantaskine, Robt. Weston & Co, also the Sloop *Carrock* from Blair with Stones.

### Friday 28th

Discharged the Vulcan with Stones from William Dobbie.

## Saturday 29th Decr. 1838

Discharged the *Carrock* with 38 Stones from Blair. 359.

### Monday 31st

Men employed at the Platform across the Grangeburn, raising the Platform for the conveyance of Stones to the Masons. In consequence of the frost the builders could not proceed to-day.

# <u> 1839</u>

**JANUARY 1839** 

**MARCH 1839** 

## Tuesday 5th

Wrote the two Contractors at the excavation that they will receive no more subsisting money until they take out the bottom part to the depth required. Purchased an Oak log from W & I. Breaks for another portable Crane.  $26 \times 16$  inches.

### Wednesday 6

Wind and a considerable fall of Snow during the night which have prevented Stevenson Builders from Work

Discharged the Sloop *Cleveland* from Blair Quarry with the Stones. This is the most severe day with cold we have had this season.

### Thursday 7th

Labourers employed in discharging a Cargo of Stones from Sands Quarry and removing the logs off the building. Most severe day, frost and snow.

# Friday 8th

Labourers removing the logs from the Building. The frost still continues most severe, occasional showers of snow.

### Saturday 9th March, 1839

The Frost still continues most severe with occasional showers of snow. No work today. I should have stated that upon Thursday I ordered Russel & Aitken to Interdict Charles Grindly, Barleyhill, from erecting a Mole as I conceive upon the Company ground. Mr Geo. Miller.

### Monday 11th

There has been a great fall of snow since last night. No work this morning nor during the day.

### Tuesday 12th

Carpenters and Labourers removing the timber from the timber Bridge across the cut lately made by Lord Dundas. Geo. Calvin having got the burn fitted up so as to allow the Carriages to pass. Masons, Steven, and Labourers at the *Cyclops* discharging supplies from the Falkirk Foundry to the back of the building and the **Star** with quarry Rubbish from Neitherwood.

### Wednesday 13th

Carpenters and Labourers in removing the Pilling Machine the North east end of the Timber Wharf to the south end preparatory to driving a row of Piles 15 feet south of the Present ones. Labourers in conveying stones to the builders, and concrete. Discharged the *Star* with 5 Ton Smithy Coal from Mr. Watson and 35 tons Quarry Rubble from Netherwood for Grangeburn.

### Tuesday 14th

Carpenters and Labourers commenced to drive the Piles across the south end of the Wharf. All hands at work at the different departments.

Went west to Castle carrie. Mr. Leslie and my son Robert pointed out a spot for placing a Pipe across under the Canal to carry off the Water from the spot covered with water from the Lime quay. Robert mentioned that he had a pipe 12 Inches diameter at Port Dundas 45 feet long and it will require 80 feet more to extend the whole length.

# Friday 15th

All hands employed at the different departments.

## Saturday 16th

Men employed as above, employed George Colvin and his men to cut the drain 2 feet deeper at the South side of the Company boundry, so as to carry off the surface water from the adjoining field. Discharged the **Star** with a cargo of 37 Stones from Neitherwood Quarry. Loaded James Gillies Scow with 45 tons Mine dust from Bainsford to Mr. David McCall.

## Monday 18th March 1839

Met Mr. Johnston at Castle carrie this morning. Proceeded to Barley hill, Met Charles Grindley whom we had interdicted from building a Wall on what I conceived to be the Company Ground. After talking

to him a little on the Subject Mr. Johnston proposed that he should appoint One Man and the Company another so as to ascertain exactly how matters stand before entering into further litigation which he (Grindley) agreed to. Pointed out to Mr. Johnston the dangerous state of the road at Bainsford Bridge in consequence of the sunk fence having given way. Mr. Johnston agreed to have it taken down and rebuilt and raise it three feet above the level of the road or put up a rail for a fence. Grangemouth - Mentioned to Mr. Johnston the necessity of having a Railway placed along the top of the track and cross the Grangeburn at the Pilot house for the Purpose of conveying the Stuff taken from the excavation to save the expense of forming Spoil Banks. This he agreed to as soon as Mr. McNeil has his experiments made west from No.16. Met Mr. Borthwick and proposed that we should pile up the remaining part of the park to the south of the intended Lock between the Company Boundary and the Ditch which run into the Grangeburn, which he agreed to on condition that the Company pay Mr. Walker the Tenant for his Crop which is new laid down in Wheat.

Sent for Messrs. Thomson, Walker and Oswald for the purpose of settling their claims for damage sustained from the Grangeburn going through their fields and for crops damaged from flooding. Settled with Mr. Thomson, and Mr. Black was ordered to make out a statement of the Measurements of the different fields and crops, drain C, so as to have the business settled without delay. Agreed that I should order half a dozen Waggons for conveying the stuff from the excavations and stop Russell and Aitken from further proceeding with the Interdict in regard to Grindley.

(In returning up I pointed out the ditch on the south side of the Company boundry and which is covered, which Harry Aitken held of the Company [This sentence was written then crossed out.]) J.M. In returning up I pointed to Mr. Johnston the covered drain chocked up on account of which a prosecution is threatened by Mr. Fisher, Tenant, from having his ground flooded and crops damaged in consequence of the water not having free course. Mr. Johnston ordered Me to call on the proprietor to open up the Drain immediately otherways steps will be taken to compel him to do so. I employed two Carpenters to assist in getting forward with the Tunnel and Timber Wharf.

### **Tuesday 19th March 1839**

Men employed in discharges a Cargo Stones from Blair Quarry. All hands at work, the day favourable.

### Wednesday 20th

Discharged the *Star* with a Cargo of Rubble from Brighton Quarry. Discharged the Sloop *Cleveland* with a Cargo 37 stones from Blair Quarry. All hands at Work, the day unfavourable. Good deal from [indecipherable].

### Thursday 21st

All hands at work at the different departments. Daughter Martha. 3 Punts put into Mr. Adam's Dock.

## Saturday 22<sup>nd</sup>

Carpenters and Labourers commenced to the Tunnel and cutting the excavation to carry water from the Tunnel at Waterloo place into the harbour. Considerable fall of snow last night and occasional showers this day.

## Saturday 23rd March 1939

Men employed at the excavation for the Tunnel, Puddling, attending the Masons, and discharging the Sloop *Cleveland* with 37 Stones from Blair Quarry. Arrived a Sloop loaded with Stones from Sterley Burn.

### Monday 25th

Discharged the Sloop *Argo* with 91 Blocks 944 feet from Polocky Quarry & Archbld. Logan. All hands at work. Went with Mr. Black to Barley hill. It appears from the plan that the Company ground extends within a few feet of Charles Grindley's house, but as Mr. Black is employed by the Proprietor of the adjoining Lands to Make a Plan of his field we considered it proper to defer coming to a decision until it is ascertained how the field and Canal Company agree with the disposition.

### Tuesday 26 March 1839

Carpenters & Labourers employed at the Tunnel to carry the water off at Waterloo Place. Masons & Labourers at the building, Puddling & c.

## Wednesday 27th

Carpenters, Labourers & Builders employed as above. No work with the Hewers today in consequence of the want of Stones. Met Mr. Johnston, agreed that offers be taken from Feely & Collins, David Keir & Co., and George Colvin, to take out that portion of the stuff north of the lot in front of the south Part of the building in progress of being taken out by Feely and Collins. On examining this operation, Mr. Johnston requested that I should not allow D. Keir to put too much [much scored out] or lend this stuff taken out of the excavation above four or five yards of the Wheat field, until the whole length is covered, and to have it put in regular. Ordered the South part of the Wharf embanked by Feely & Collins to be regularly leveled and finished by them according to the contract. Agreed to James Bryce should receive an advance of wages to be paid from the time he commenced here at the rate of 5/- per day. Ordered that I should use every endeavour to procure a greater supply of stones and to proceed over the water to the different quarries for this purpose, and to write W. Logan and offer him a halfpenny more per foot if he will agree to furnish a half load a week. Railway to convey the Pig Iron from the Basin to the Dock.

### Thursday 28th

Discharged the *Mary* with a cargo of stones from Wm. Aitken, and ordered her off for another Cargo from Neitherwood. All hands employed as above.

### Friday 29th March 1839

Discharged the *Tullialand* with a cargo of 35 tons Iron and *Cleveland* with 37 Ashlar stones from Sands Quarry. Carpenters in preparing a platform for the lighthouse proposed to be erected south of the Main Crane on the Stone Wharf. Mr. Black measuring.

### Saturday 30<sup>th</sup>

Discharged the *Mary* with a Cargo of Stone 55 from Neitherwood and the *Cleveland* with 41 Stones from Blair Quarry. Men employed as above.

# **APRIL 1839**

### **Monday 1st April**

Sent off the *Manchester* for a Cargo Lime & 10 Tons Coals for the **Dredge Boat**. Weather extremely cold, Wind East.

# Tuesday 2nd

The **Mary** with a Cargo Mine dust from Bainsford. This is the most severe day with Cold experienced during Winter, the Builders could not stand it.

## Wednesday 3rd April 1839

Sent the *Mary* for a Cargo of Stones to Neitherwood. In consequence of the Weather still continuing so cold that the Masons cannot Work, ordered Labourers up to the Ballast hill to level part of it, having promised Mr Huggins that it will be don first opportunity.

### Thursday 4th

Discharged the *Mary* with a Cargo of Stones from Neitherwood. Ordered the Labourers to Assist Thos Watt to take out the small Tunnel at Dalderse and put in the New One to carry the water from the Cistern of the Bridge [see note 5]. No Masons employed either in hewing or building today.

## Friday 5th April 1839

The Labourers assisting Thomas Watt with the Tunnel did not get it through to this place in consequence of the Tide having fallen off, and it will be Wednesday or Thursday next week before the Tide will rise to such a hight as the allow the Tunnel to be brought in to the Act.

Went down to Kinneil and met Mr. Bauchope Factor to Duke Hamilton for the purpose of examining the Stones taken out of the Quarrys prepared for Grangemouth Improvements in order that we may be satisfied with the quality before removal. The Stores appeared to be good, except in a few black flakes like threads appear in some of the Stones, which can be used in the interior of the building. I ordered the whole of the Stones to be forwarded to G. Martin with the least possible delay and would pay them per foot at the same rate as others from whom we are at present being supplied.

The weather still continuing most severe with the wind in the east we had no builders employed today. Carpenters employed at the portable crane, Labourers in discharging the *Cyclops* with Ashes from Falkirk Foundry, and at the Ballast hill.

George Colvin commenced to level the Spoil bank and form a road for the conveyance of Material between the Sheds and Mr. Abbeys old erections.

## Saturday 6th

Carpenters employed in shifting the Pile Machine to drive the legs for a Crane seat on the south side of the timber Wharf. Masons commenced to build. The weather still continues very cold but the wind more moderate than it has been all this week. Discharged the *Mary* with a Cargo Ashler from Neitherwood.

### **Monday 8th April**

Men employed in discharging a Cargo Danders from *Cyclops*, Lime from the *Manchester* which arrived on Saturday. Carpenter at the Piles etc.

## Tuesday 9th

Discharged the Sloop **Cleveland** with a Cargo of Stones from Blair. Carpenter employed in driving the Piles for the --- of the --- of the --- ---.

### Wednesday 10

Discharged the Sloop *Benny and Jenny* from Sterleyburn with a Cargo of 64 Blocks. Carpenters employed in removing the Piling Machine and prepairing the Platform to cut the top of the Pile Machine, then came down last night and after taking into consideration the Propriety of taking in offers to excavate the remainder of the stuff North of the lot in Progress of being taken out by Feely & Collins, it was agreed that both Feely & Collins and David Keir & Co shall not be allowed to cut any more of the Surface until the Whole length and breadth [& Surface — scored out] of the excavation [with which are — scored out] under contract is taken out to the depth and the whole finished to my Satisfaction. Ordered that each of the Contractors shall Cut the levels under their own department to carry off the Water to the Pump - and the remainder to be let by Contract as soon as the above is finished.

### Thursday 11th

Discharged the *Mary* with a Cargo of Stones from Wm. Dobbie and the *Cleveland* with a Cargo of Stones from Blair. 41 Stones.

### Friday 12th

Discharged the *Star* with a Cargo of Rubble and Flags from Alexr Lawrie, Brighton.

## Saturday 13th

Discharged the Lighter *Tullyallan* from Longannet with Blocks - this is the (part?) Cargo from that Quarry.

## Monday 15th

Sent the **Dredger Boat** to the excavation at Carron River, but got little done today in consequence of the Wind being rather high. Went west to Castlecarrie for the Purpose of seeing the State of the Work, the water being run off yesterday for the Purpose of repairs of the Piles and for putting in a Cast Iron Pipe under the bottom of the Canal to drain the Water off the west part of ground belonging to Lord Dundas on the South side of the Canal West from Castlecarrie.

## Tuesday 16th

Returned to Castlecarrie New Lot of up [space?] peices and a peice indented with the --- M--tered the River Gate. --- peices in No. 19 Lower Gate & C. three B--- in North Gate brock ---- the Up Stream Gate docked and ---- the joints of the hollow Quoins. Lifted the Up peices and got them [soldered?] Cut a Grave in the building of Castlecarrie Bridge and put in a log for a [Sill?] in order that Better doors may be shipped when required. No. 18 up ---- peices lifted and relaid, a peice indented into the ---- pieces the / on the part of the ---- parts both brock and Past Split Water let in at 12 PM.

### Wednesday 17

Discharged a Sloop with 59 Stones from Sands Quarry. The Wind continues so squally that we have got very little done with the **dredger Boat**.

## Thursday 18th April 1939

Carpenters employed at securing the longitudenal half logs across the top of the Pile Timber Wharf Building & excavation going on progressively. Wind still Squally during the Middle of the day & little done with the **Dredger Boat**.

# Friday 19th

Discharged a Sloop with 58 Ashlar Stones from Blair Quarry. It has blown incessantly ever since the **Dredger Boat** went out to the entrance of the River, that only 8 punts have been filled and today the wind was so high that the Punts were in great danger of having their Timber heads tore out and One brock a drift. Ordered the *Vesta* down to bring the whole of the Punts to Grangemouth until the weather becomes more moderate, which she did after towing up the Punt to the [enterance ?] of the River which had drifted as far down as opposite to Bo'ness. And as the Current is so very strict when the **Dredger Boat** has commenced, which is about 300 yards east of the butes Beacon, I arranged with Mr. Andrew Waddle, the Master, to make a trial of lifting the stuff with the Buckets to see what effect the Current will have of sweeping it into the deep water without having recourse to the Punts until the river is deepened up to the narrow Channel, which he thinks is quite practical and will save a great expense in the tear & wear of the Punts & Mens' Wages.

## Saturday 20th

12 Men employed from the **Dredger Boat** in leading 6 of the Punts from the Sludge inside the Timber harbour. Men in discharging the *Star* [?] with a Cargo of Stones from Netherwood.

## Monday 22<sup>nd</sup>

This day being Moderate sent off the 6 Loaded Punts to be discharged in the Forth and loaded them from the dredger at the enterance of the River. Discharged the *Cyclops* with a Cargo of Danders from Bainsford. Commenced to convey the Stones from Duke Hamilton from the Basin along the road to the Works.

# Tuesday 23

Discharged the *Star* with a Cargo of Stones from Wm. Dobbie and the *Vulcan* with a Cargo of Gravel for the road from Castlecarrie taken out of the Canal. Loaded the *Cyclops* with Mud for Henry Aitken taken out in front of the Timber Wharf to allow the short Piles to be drove.

### Wednesday 24 April 1839

Discharged the *Star* with a Cargo of Rubble from Brightens. Carpenters employed in Cutting the top off the timber Wharf Pile and Geo. Colvin's Men in prepairing a Recess and Bench for the Waggons to be conveyed along the Railway up the side of the Old Grangeburn with the view of filling up the same, in place of the expensive way of taking the Stuff in WheelBarrows beyond the one hundred yards.

# Thursday 25th

Discharged the Sloop Jimmie and Jenny from Herleyburn with a Cargo of Stanes for And. Logan.

### Friday 26

Discharged the Star with a Cargo of Ashler from Netherwood.

# Saturday 27th

Discharged the Vulcan with Cargo of Stone from Mr Dobbie.

## Monday 29 April 1839

This Morning the Catch on the upright shaft of Main Wheel for Pumping the water again brock. It will be of no use to attempt to repair. Wrote Mr Johnston to send east Mr Neilson to have the small Engine fit up in place of being at the expense of repairing the present useless expensive Article. Discharged a Cargo of Ashler from Sterling—Burn. Discharged the *Vulcan* with a Cargo Quarry Rubbish in Grangeburn from Netherwood.

## Tuesday 30th

Discharged a Sloop with a Cargo of Ashler from Blair Quarry. Mr Johnston sent my son, Robt., to say that he does not wish the small Engine to be fit up at present to lift the water from the excavation and to send the shaft and Wheel West to Mr Baird, who will likely have the Pattern, which I did. Loaded the **Cyclops** with a Cargo Mud from Inside Timber Wharf. Sent the *Manchester* for a Cargo Lime Shell.

# **MAY 1839**

# Wednesday 1st May 1839

Discharged a Sloop with a Cargo Ashler from Sands Quarry and the *Star* with a Cargo Quarry Whin Stone from Auchenstorrie for Grangeburn. Weather most favourable.

## Thursday 2<sup>nd</sup>

Discharged a Sloop with a Cargo Ashler from Longannet Quarry and the *Vulcan* with a Cargo Mine Dust from Carron. In consequence of one of the Copper pipes having to be replaced today, there was no work with the **Dredger Boat**. I therefore ordered two punts to be taken down to the spot where I propose to erect the timber Wharf for loading the Stone for the erection of the Wharf? to take out the stuff in the Slope to a proper depth for driving the Pile and discharged in the Grangeburn.

### Friday 3rd

Discharged the **Star** with a Cargo Stones from Netherwood. Met Mr Johnston at Lock 16, proceeded to Grangemouth and started with the berth? at 26 minutes past 7am and arrived at Herleyburn at 10, went up to W. Logan's Quarry and examined the rock which consists of different qualitys. Ordered him to procure as many of the Cope as possible from the Grey and brown Strata as possible. Shipped at Burntisland and crossed over to Granton, where we arrived at half past one P.M. Examined the pier now in progress of being built up by the Duke of Bucluch. Observed the building to consist of heavy Blocks not less than two feet thick, the Cope 5 feet broad in the bed. The wharf is about 100 feet broad which is filled with heavy Rubble packed with small stones and causewayed above all. Mr. Johnston being unwell, he left us at Newhaven and proceed home by the Coach from Edinburgh. Left Granton at half past four and arrived at 10PM, had to take a small Boat from Beacon.

### Saturday 4th May 1839

In consequence of a fine genial shower this Morning there was no work till 12 PM. The Pump shaft and Wheel arrived at 2 PM and had them placed with the Arms by 8 PM.

### Monday 6th

Commenced with 4 horse at 2 AM this Morning to Pump out the Water, and continued to 10 PM. Discharged the *Star* with a Cargo of Danders from Bainsford. Feely & Collins Men employed at the south excavation for the foundation. Good deal rain fallen since Saturday.

# Tuesday 7th

Had four Men employed at the hand pump to take out the water from the south foundation. Loaded the **Star** from the site of the intended Wharf for landing Material opposite the Lock. Horse still employed extra hours at the Pump Machine.

### Wednesday 8 May 1839

Men employed in prepairing the Platform for the Foundation at the Railway Tender (?) Wharf etc. In consequence of the Men employed in discharging Punts having refused to discharge the number which W. Waddle considered they were intitled to do, I ordered them, 12 in Number, about their business and Paid them off.

### Thursday 9th

Men employed as above. Discharged the **Cyclops** with Mud in the Wood Basin into the Old Grangeburn at the Timber Bridge. Went to Lock No. 18 with Mr. H.

# Friday 10th

Willm. Philip, Keeper of Lock No. 18, having got his leg severely hurt from the Stern part of one of the Pilotage Boats having got a turn round it in bringing the boat up in the Lock, Satur. Last, and having

received a letter from My Son that he considered him in a very dangerous state, I went up last Night with Dr. Hamilton, and after examination The Dr. gave his opinion that the only chance for the Man's life is to have the leg taken off immediately, to which he appeared perfectly resigned. The Dr. Wrote the three Doctors to meet him today, which they did and after a little consultation they appeared unanimous that the leg should be taken off, which was accordingly done by Dr. Hamilton. It was wonderful to see how the poor fellow stood the operation, he never so much as uttered a complaint.

### Saturday 11th

Pay, Settled with Mr. Bauchope for Duke Hamilton for the Stone received previous to this date being 86.10.9. Discharged the *Star* with a Cargo of Mud from the intended New Wharf.

### Monday 13th May 1839

Carpenters employed at the Timber Wharf, Labourers in discharging a Cargo of Stones from Blair Quarry, discharging *Star* with Mud.

### Tuesday 14th

Discharged the Sloop *Jamie & Jenny* from Herlyburn with a Cargo of Ashlar Stones. Loaded and discharged the *Vulcan* & *Star* with Cargoes Mud from the front of the intended Wharf. Received a letter & plan from Mr. MacNeile of the foundation of the Lock, but does not understand it properly. Went west to Glasgow to consult Mr. Johnston on the Subject.

### Wednesday 15

Met Mr. Johnston and after examining the plan Mr. Johnston stated that I might proceed with the excavation to the regular depth but no further until the dementions of the Lock is fixed and an ---- of the Lock made out and agreed to by the Company. Mr Johnston agreed that as the excavation on the south end of the building had of necessity to be taken out from the slips which took place latter end of last year that we should extend the building to the length of 520 feet. In consequence of a heavy fall of snow which commenced yesterday and during the night and severe frost, the men got nothing done till after breakfast. Discharged Cargo Stones from Sands Quarry.

## Thursday 16th

Labourers discharging a Cargo of Stones from Blair.

# Thursday 16th

Discharged a Cargo of Stones from Blair and the Star with a Cargo from Neitherwood.

### Friday 17

Carpenters & Labourers employed in conveying the timber for the Platform, commenced to discharge the *Birdie* with a Cargo of Stone from Longannet.

### Saturday 19 May 1839

Discharged the *Star* with a Cargo of Stones from Wm. Dobbie. Carpenters employed in levelling the bottom for the foundation, which I expected would have been ready today but was kept back by the Contractors not being at work today from the Morning being Wet and Stormy.

## Monday 20th

Commenced to discharge the *Jamie and Jenny* with a cargo of stones from Sterlyburn, both this and the proceeding Cargo being bad in quality and not fit for the purpose of Cope, the few which have been sent. I told Mr. Logan who was here today that we could take no more of his Stones unless he can send the Grey rock. The Carpenters commenced to lay the platform for the foundation, but was retarded for part of the day in consequence of part of the slope slipping in. Wrote Mr. Johnston to come here to get his instructions with regard to the transverse Slope.

## Tuesday 21st

Discharged the *Jamie and Jenny* and the *Star* with a Cargo of Stones from Wm. Dobbie. Carpenters at the platform .The *Vesta* having been under repaires for this 10 Days past the Men commenced with the dredge Boat at the entrance of Carron River.

# Wednesday 22<sup>nd</sup>

Carpenters and Labourers employed at the Platform and in order to make the work more secure I ran the first layer of longitudinal half logs close together and place the whole logs 12 In square across the quarter logs and 4 Inch plank as formerly. Sent off the *Manchester* for a Cargo of Lime Shells, discharged the *Vulcan* with a Cargo of Quarry Rubbish in the GBurn from Neitherwood. Loaded and discharged the *Star* with a Cargo of Mud from front of the intended wharf. Commenced with a horse to drive the Waggons from the Contractors along the railway, but I am much afraid it will not proves a profitable concern from Waggons not ----.

### Thursday 23rd May 1839

Carpenters employed at the Platform Labourers at Concrete. Grangeburn Puddling back of the building. Discharged the *Vulcan* with a Cargo of 33 Ton Danders and 7 Ton Mine dust.

### Friday 24

Carpenters at the Platform Labourers at Do. Concrete Puddle at back of the building --- the Masons who have commenced to lay the foundation of the south end of the building. Discharged the *Vulcan* with a Cargo of Mud from the front of intended Wharf. Discharged the *Star* with a Cargo of Stones from Wm Dobbie.

### Saturday 25th

Carpenters at the Transverse Platform, Masons at the foundation, Labourers assisting Masons Puddling back of the foundation, and I Ordered Feely and Collins to excavate and remove the Slope 30 feet further east with the view to give a sufficient strength to the building in the event of it not being carried to the extremity of the east side of the Harbour.

### **Monday 27 May 1839**

Carpenters employed at the transverse platform, Masons at the foundation, Labourers at Concrete, Discharging the *Vulcan* with a Cargo of Ashlar from Wm. Dobbie, and Commenced to Discharging the Sloop *Industry* with Ashlar from Blair Quarry.

## Tuesday 28th

Discharged the Sloop *Industry* and the *Star* with a Cargo of Rubble from Brighton Quarry. Carpenters as above.

### Wednesday 29th

Discharged the *Vulcan* with a cargo of Ashes from Falkirk Foundry. Carpenters finished out the transverse section of the Platform 30 feet. Mr. Johnston was east yesterday. Agreed to extend the excavation 30 feet further east for the additional length of Platform to ensure stability of the building.

### Thursday 30th May 1839

Carpenters commenced this day to the Timber Wharf, Labourers in discharging a Cargo of Ashlar Rubble Stones from Blair Quarry, Masons at the building. Weather continued favourable for the work, but has been excessively Cold these 10 days past, which I am afraid will prove injurious to the hay Crops. Loaded *Vulcan* with Mudd.

### Friday 31st

Carpenters at the Timber Wharf discharged the **Star** with a Cargo of Whin Stone Shivers from the Auchensterrie to Grangeburn.

## **JUNE 1839**

### Saturday 1st June

Carpenters at the Timber Wharf. Loaded the *Vulcan* & *Star* with a Cargo of Mud from the New Wharf. Weather still continues favourable for the operations but still continues cold wind from N E.

### Monday 3rd June

Discharged the *Bud* with 21 Stones from Longannet. Loaded the *Vulcan* with Mud from the intended Wharf and the *Star* and two Punts from the timber Wharf. Weather still continues excessively Cold but favourable for the building.

The reaches from No.14 to No.16 were run this morning. Put in a Set of lower place pieces in No. 12 Lock attempt to stop the Leak in No 13 upper hill but as there was not time to get to the bottom of the leak which require the Pitching (?) to be lifted so anything that was done can be of very little benefit, stopt a few leaks in the ballast.

## Tuesday 4th

Carpenters employed in clearing away the Stuff to allow another set of pumps being placed to take the Water from the excavation in case of a heavy fall of rain which is now very likely to take place. Load and discharged the *Vulcan* & *Star* with Mud from the timber Wharf, loaded 2 Punts from the timber Wharf, discharged the *Cyclops* with ashes from Falkirk Foundry.

### Wednesday 5th June 1839

Carpenters employed at the Pump Well. Masons were not employed at the Building today it being the fast day in Falkirk.

### Thursday 6th

Carpenters at the Pump Well. Masons at the Building. Labourers at general Work. Went with Mr. Needham for the purpose of viewing Longannet Lands and Blair Quarry for the purpose of giving orders for the Cope, but, the wind being rather high and the tide considerable fallen, we thought of running down to Charlestown to examine the Waggons on the Railway, and although we went up the Railway to Dunfermline and returned by the Road, we could not see the Sense of Waggons which was represented to us as being applicable for our purpose.

### Friday 7th

Carpenters at the Pump Machine.

## Friday 7th June 1839

Mr. Black was employed today to take the Measurement of the Excavation and the Building so as to ascertain how Matters stand, as to the Cash which they have received from the Company. The Solid Contents of the Building is 77.949 Cubic feet exclusive of 2623 feet by days Wages (?).

## Saturday 8th

Carpenters & Workmen employed as above.

## Monday 10th

## Tuesday 11th

Mr. Johnston was here today, ordered that I should make out a detailed Account of the whole expence of the Grangemouth Improvements since the commencement, and state of the progress of the Work, to be laid before the Committee in London and the Glasgow Committee who he expected to be here next week.

# Wednesday

### Thursday 12 June 1839

It has rained during the night and continued till 12 AM which prevented the work being proceeded with.

### **Thursday 13**

Carpenters at the Timber Wharf, commenced to place the stringers across the south end, & discharged a Cargo Stones from Blair.

## Friday 14th

Men employed as above.

### Saturday 15th

Men employed as above.

## Monday 17th June 1839

Discharged a Cargo of Stones from Sands Quarry. Carpenters and Labourers commenced to drive the short Piles. The Slope on the South west corner have slipt considerably, which is most astonishing after the building is raised in the Corner above [blank] feet. It would have been attended with danger and great expence had it slipt in at the time we were engaged in the Platform or even after it was up a few courses but I trust no great inconveniences will arise from what has taken place at present.

### **Tuesday**

Discharged *Star* a Cargo of Small Stones from Mr. Broom and a Cargo of Ashlar from *Vulcan* from Mr. Dobbie. Carpenters, Labourers at the Wharf and removing the Memel and Red Pine timber out of the way of an intended railway which we propose to lay to convey the stuff from the excavation out at the open of the building.

### Wednesday 19th June 1839

Men employed as above.

### Thursday 20th

Carpenters employed at the Timber Wharf repairing Barrows etc.

[See note 4]

# **JULY 1839**

### Monday 1st July 1839

Labourers wheeling away the surface from the South Bank with 15 of Feely & Collins men. Carpenters at the Timber Wharf and also commenced to drive temporary piles for the erection of the wharf opposite the Sea Lock.

# Tuesday 2nd

Received Estimates to Excavate 3 Lots of the Harbour agreeably to specification Viz Feely & Collins one shilling per cubic yard.

Peter Mercer No. I Lot  $10\ 1/4\ 2d\ lid\ \&\ 3d$ . Lot  $9\ 1/2\ per\ cubic\ yard$ .

George Colvin 1st Lot 9 1/2, 2d 8 1/2 & 3d. Lot 9 per cubic yard.

Peter McQueen 1st 2d & 3d. Lot 7 1/2. Went to Port Dundas to consult Mr Johnston. Showed him the four estimates. Requested that I should inquire as to McQueen's Character, and if he can produce sufficient security, &c, request him to come forward on Thursday, when he Mr Johnston, and the Committee will be at Grangemouth to have the matter arranged.

## Wednesday 3rd July 1839

Carpenters employed at the Timber Wharf and the Crane Wharf in Carron River. Labourers in removing the stuff from the top of the Slips. Wrote out an agreement for Peter McQueen binding him to fulfil his engagement under a penalty of Two hundred pounds and to produce a respectable person as security for the same, and to attend Mr Johnstone.

## Thursday 4th

Received a letter last night from Mr Johnstone stating that Mr Finley, Mr Douglas of Aleton & himself would leave Port Dundas at 7 o'clock morning and would likely reach No.16 by 11. Met the gentlemen at No.16. After taking breakfast in Mr Rankillar's, proceeded to Grangemouth, examined the Grange Burn, and from thence to our operations. At which they appeared very much satisfied and expressed much astonishment at the appearance of the slip on the side of the Harbour. Agreed that the stuff be taken out without delay; and as Peter McQueen has not made his appearance according to promise and with security for the fulfilment of his Contract, that George Colvin, being the next lowest should have the Contract, and Mr Needham was requested to intimate the same to George Colvin. It was also agreed that the whole interior of the Harbour should be built at least 12 or 15 feet high so as to enable the work to be finished at any future period.

It was also agreed that the Sea Lock shall be made 200 feet long and fifty feet wide and that Keir & Company should commence to cut out the found. It was also agreed that the work be done in the most substantial manner so as no misunderstanding may take place. It was agreed that the Lock shall be built to the level of the Cope of the Wharf. Mole. Peter McQueen made his appearance this night at 10 o'clock with a line signed by James Black Allan as his security. I told him that as he had failed to make his appearance today according to agreement, to settle the business when the Committee & Mr Johnstone was present, that I could not allow him to proceed.

### Friday 5th July 1839

Finding that Peter McQueen was determined to stand to his contract, and that should he fail the Company will be no losers by it, I agreed that he proceed immediately. Which he did to lay the Railway to convey away the stuff with the waggons. Carpenters & Labourers at the Timber Wharf and Crane Wharf James Baird did.

# Saturday 6th

Men employed as above.

### Monday 8th July 1839

Carpenters & Labourers at the Timber Wharf. Labourers employed in removing the surface top of the South Hope. Mr Black employed in lining off the length & breadth for the excavation of the large lock. Breadth of the slopes to be taken back for the erection of the Harbour Walls. Squared off the ground in front of the building so as to allow Feely & Collins to finish their contract. Had sections taken of the south part where the Bank have given way, in order to ascertain the measurement of Peter McQueen Contract.

### Tuesday 9th

Carpenters & Labourers at the Timber Wharf. Labourers employed to take out a slope at the south end with the view to take the weight off the building.

### Wednesday 10th

Men employed as above.

### Thursday 11th July 1839

Carpenters & Labourers employed at the Timber & Crane Wharf. Labourers in removing the stuff from the south side.

## Friday 12th

Carpenters & Labourers employed as above. Discharged a sloop with the stones from Blair Quarry. Discharged The **Star** with 100 Larch Trees from A & S Paterson.

### Saturday 13th

Having observed the building south of the operation in the Centre push outwards since the Slip took place, and being more convinced of this from a Crack observed on this surface, I have ordered the South Counterpoint to be removed, and if agreeable to Mr McNeill whom I expect today, to have the Stuff at the back of the building removed so as to have it lightened as much as possible to prevent it from giving way further. After Messrs Macneill & Johnston had examined the wall they considered it absolutely necessary that not a moment should be delayed in having a Mound of Earth put in front of the Wall where the stuff is removed to the level of the bottom, and that not only the two seats for the Cranes but also the earth at the back of the building should be removed immediately. Ordered Feely & Collins men to form the Mound from the bottom part he is at present engaged taken out, and also from the front of the Slip, stakes being put in by Mr Black to the breadth, and to distinguish the quantity taken from the South Slip for measurement. The whole of our Labourers employed to remove the earth at the back of the building and the south seat for the Crane. Ordered the men to continue their work to 10 o'clock this night. Mr McNeill stated that he was under the necessity to proceed again for London tomorrow, and requested Mr Needham to write him every day with the state of the building.

### Monday 15th July 1839

Labourers commenced this morning at 3a.m.to the Mound in front and to remove the Earth at the back of the building. Carpenters at diagonal grooves to secure the south side of the Wharf.

## Tuesday 16th

Labourers employed as above. Masons in removing the Stones from the Crane Seat. Carpenters at the Timber Wharf. We brought in the *Hercules* last night to have the Harbour cleaned out before the arrival of the American vessels. Discharged a Cargo of Stones from Longannet.

### Wednesday 17th

Men employed as above.

### Thursday 18th July 1839

It has rained during the night and incessently all day, consequently there was no outdoor work.

## Friday 19th

Carpenters at the Timber Wharf, repairing waggons, & Masons in building up the open space in centre of the building. Labourers at concrete & wheeling the earth from the back of the building. Discharged balance with a cargo of Ashes from Falkirk foundry.

# Saturday 20th

Carpenters employed as above.

### Monday 22nd

Carpenters, Masons & Labourers employed as above.

## Tuesday 23rd

Men employed as above. Received a letter from Mr Johnston stating that the committee intended to make their general survey upon Thursday and Friday next.

### Wednesday 24th July 1839

Carpenters employed at the Timber Wharf. Masons commenced to take down the transverse part of the building raised in consequence of the Slip. Labourers assisting at this and removing the stuff from the back of this building, and discharging the baleen with 20 tons dressed Causway Stones for the Tram Railway and 20 Ashler Stones from Netherwood.

## Thursday 25th

Carpenters & Labourers employed at the Timber Wharf in placing Brushwood & filling up with earth from the Excavation. Masons & Labourers removing stones from the building.

## Friday 26

Men employed as above. Bought of A & S Paterson 46 Pieces of Scots fir Timber 292 <sup>4/</sup><sub>12</sub> feet. We had a visit this day of Mr Wilson & his son from London and other two gentlemen. Also a Mr Hamilton from Leith of the General Steam Navigation Co also came up with a Steam Boat expressly for the purpose to see the work at present going on here. Mr Wilson got all the information necessary in respect to the dimensions of the dimensions of the intended Wet Dock & Sea Locks with the depth of water etc. Mr Wilson had a letter of introduction from Mr Lock MP, one of the London Committee addressed to Mr Johnston or to the local gent in Mr Johnston's absence. Went with them to Charleston.

### Saturday 27<sup>th</sup>

Carpenters & Labourers at the Timber Wharf. Masons & Labourers removing the transverse section of the building, etc.

### Monday 29th

Men employed as above, Masons in removing the lower part of the Crane Seats, etc.

# Tuesday 30th July 1839

Carpenters & Labourers principally employed at the new Crane Wharf. Received the Working Gear for this Wharf from Gilchrist & Co, Kirkintilloch. Masons & Labourers removing the Stones from the Crane Seats.

### Wednesday 31st

Carpenters & Labourers at the Crane Wharf. Masons & Labourers as above.

# **AUGUST 1839**

### **Thursday 1st Augt**

Carpenters, Masons & Labourers as above. Commenced to make up the south side of the Timber Wharf with Brushwood and the stuff taken from the excavation by Feely & Collins. Put down a bore 18 feet on the line of the intended south wall but found it to be so soft that we could not proceed further without tin tubs, which I did not think it proper until we hear the opinion of Committee which is expected next week.

### Friday 2nd Augt 1839

Carpenters & Labourers at the Timber Wharf and forming a gangway across the excavation for Keir & Co to take out the stuff from the North side for the foundations of the Lock. Labourers at the Timber Wharf received a Cargo Brush Wood from Castlecarrie for the same.

# Saturday 3<sup>rd</sup>

Men employed as above.

## Monday 5th

In consequence of having heard that the Engine placed west from No 16 for the purpose of trying Mr Macniell's experiment of dragging vessels on a railway having been stripped of all the Copper tubs and Brass bushes I went west to the Shed and found that a great number of Valuable Articles were broken off and taken away.

That information having been given on Saturday evening of a noise having been heard about the Engine for several days by the people who occupies a house near the place on the opposite side of the Canal, Mr Thos. Stark went west and found the two Connecting rods and some other Articles, which he brought away, and with the view to catch the depredators Robert Hendrie, John Taylor was sent to watch on Sabbath Night, and found the fellow lying under the Boiler. This day he was taken before the Sheriff and Fiscal for examination. The fellow denied all knowledge of taking the articles. That he was a little the worse of drink had went in when there was an open at the back side and lay down and fell asleep - and denied having been in the Shed before that night. Mr Stark found a letter on Saturday in the shed on Saturday which he had dropt, wrote by Mary Mowet to her Sister recommending the bearer, Wm Williamson, as an Engineer or Coalman, and to use her influence with her husband to get him in a situation. This letter he acknowledged to have lost which was good evidence that he had been in the Shed before Saturday. Got a warrant from the Sheriff to serch for the stolen Articles and sent Charles Stevenson, the Person who is employed to clean the Engine, along with the Officer. Found three pieces of Copper Pipes in the house of Aitken which he seemed unwilling to say from whom he purchased them. Called at Mr Ferguson Tin smith and he stated that the pieces were offered for sale on Saturday and would know the Person that offered them for sale. On Mr Ferguson being taken in presence of Williamson, declared he could give his oath that he is the Person which is a conclusive evidence, the examination to be resumed on Wednesday.

## Discharged a Cargo of Stone from Blair.

Tuesday 6th July 1839 [must mean August]
Carpenters, Labourers at the Crane Wharf in Carron River. Labourers in putting in Brush Wood & covering the same at the back of the Timber Wharf. Masons dressing Stones brock by the Ship.
Labourers raising the Platform etc.

# Wednesday 7th

Labourers in discharging a Cargo of Stones from Longannet. Men employed as above. The examination by the Sheriff was postponed.

### Thursday 8th

Discharged a small Cargo Stones from Sandy. Men employed as above.

Met the Committee at Craigmarloch, which consisted of Stephen? Finlay, Arthur Graham, Douglas Johnston, & Mr Macneill, Engineer. Reached Grangemouth at 3A.M. and after the Gentlemen going round and inspected the operations they retired to my lodgings where they appeared to agree to our future procedure.

1st That the south extremity of the Wall which is now taken down should be founded anew 50 feet east and excavate 3 feet below the level of the Platform 28 feet wide and filled with Concrete to the bottom of the Platform. That the building be made 20feet in length at the top and sloped up from the

bottom. That a recess be made in the building at the extremity of the 20feet for the first Main Pile, and as the Strata appears to be so very soft it will be necessary that every precaution be taken to make both Platform and Building as substantial as possible.

2nd. It was agreed that the Wharf from the extremity of 20 feet should consist of Timber upon Mr Macneill's plan which was shown the Gentlemen and that Mr Macneill do make out an Estimate of the Timber Wharf accordingly.

3rd. That the Sea Lock should be 62 feet wide 300 feet in length, to form a Double Lock of 120 and 180 feet each, with Three Sets of Gates in order that vessels of different sizes may pass through the Lock with the view to saving of Water. That Mr McNeill do make an estimate of the same and submit to the consideration of the Council in London.

## Friday 9th August 1839

The Gentlemen of the Committee proceeded west with the intention to continue the Survey to Bowling. Mr Macneill & Black returned to G'Mouth where we started off the length and width of the Sea Lock and staked off the length and width of the cut for the south extremity of the building.

### Saturday 10<sup>th</sup>

Men employed at the Timber Wharf, Crane Wharf, & discharging a Cargo of Stones from Netherwood. In consequence of Peter McQueen having refused to commence work this morning I ordered Geo. Colvin to employ as many men as would employ a horse to take up the stuff from the south part of the harbour with the view to have the foundation for the south extremity of the wall cleared out for the Platform without delay.

# Monday 12th

Men employed at the Timber Wharf, Crane Wharf, removing stuff from the south side of the Dock for the foundations.

### **Tuesday**

Received from Mr Turner Bryce 24 Rails and 96 Chairs in loan until we get a further supply. Men employed as above.

## Wednesday 14th

Carpenters at Timber Wharf. Labourers at same & Crane Wharf.

## Thursday 15th

Messrs Johnson and Macneill were here today. Agreed to the platform being made the whole breadth of the bed of the Concrete for the South extremity of the Wall and after making a calculation of the Timber Wharf, comparing the One made up with Scots fir trees and the One erected on the principal of the Model, it was found that the latter will cost at least 10 Pounds less than the former and they therefore agreed that the Wharf should be erected on this plan and to try all safe methods to reduce the expense.

## Friday 16th August 1S39

Carpenters and Labourers at the Crane Wharf. Geo. Colvin's men in removing the Stuff from the South side of the Dock got part of the stuff taken out for the Concrete bed. Was served with Interdict at the Instance of Peter McQueen, but as I am only a Servant of the Company do not think that I will be justified to stop the men without an order from Mr Johnston to do so.

## Saturday 17th

Men employed as above. Wrote Mr Johnston by the early Boat apprising Mr Johnston of the Interdict and requested his advice by return of the Boat, in consequence of not receiving an answer I called upon the Sherriff and stated that I was very much surprised that he should have granted an Interdict to stop such work upon so frivolous a pretext. He appeared rather to be at a loss after explaining the danger and expense that the Company might be subject in the event of a few days delay. He advised me to call on a Man of learning who would advise me what steps I should take. Called on Russel & Aitken who advised me to be up on Monday morning and they would write out a petition to the Sheriff to have the Interdict removed but on no act. to allow the men to work.

## Monday 19th

Men employed as above. Geo. Colvin's men employed in taking out the stuff from the seat of the intended Crane. Called at Russel & Aitken's office and after writing out the Petition to the Sheriff called up McQueen's Agent to see if he would refer the matter to the Sheriff as to the necessity of withdrawing the Interdict, but he would not and the Sheriff would not say on this matter until McQueen's answer was lodged.

## Tuesday 20th August 1839

Men employed as above. Geo.Colvin's men employed in removing the Stuff at the back of the building, which has turned out so soft that it is necessary to go down to the gravel bed for the foundation for the Crane Seats. Having received a letter from Mr Johnston requesting Mr Needham and I go up to Russel & Aitken's office where we would receive information as regards the Interdict. They proposed that it would be proper to get the advice of an Engineer and request him to make out his opinion in regard to state of the work to be laid before the Sheriff, and they would meet us on the spot about 2p.m. Had a visit from Earl Zetland, examined the Plans and went over the works. Seemed highly pleased with the operations.

Russel & Aitken could not find an Engineer to come down with him and therefore requested Mr Needham to write out a report on the State of the Works and to meet us at 5 p.m. when we would go personally to the Sheriff with the Model of the Slip made by Mr Needham . On calling at the Sheriff he stated that he could not grant an order to remove the Interdict without hearing both parties. Sent for McQueen's Agent and after some consultation the Sheriff agreed to meet on the spot a little after seven tomorrow morning.

#### Wednesday 21st

Sheriff, Mr Aitken and McQueen's Agent and Mr Black inspected the operations. Met and inspected the spot under contracted. I think the Sheriff was convinced of what had been said and what he now saw of the dangerous state of the work. Think he will be disposed to remove the Interdict tomorrow.

### Thursday 22<sup>nd</sup>

Men employed as above. Went to No 16 to see the experiment of tracking the Passage Boats by means of a Locomotive Engine on the Rail way which was put there by Mr McNeil for the purpose of trying the experiment of tracking vessels by the small Engine stationed ¾ mile west from the Stable. The Engine which was made by Mr Dodds for the purpose of conveying loaded waggons on the Kirkintilloch Railway was applied to the Passage Boats and the average speed with Boat fully loaded with Passengers was from 16 to 18 miles p hour. Dragged one of Carron Company's vessels in the Liverpool trade loaded at the rate of 4 miles an hour. It would be satisfactory to ascertain the rate at which 3 or 4 vessels of such description can be tracked. Received a letter from Russel & Aitken stating that the Interdict at the instance of Peter McQueen is removed and to commence work.

#### Friday 23rd

The men under Geo. Colvin commenced work this morning to the excavation lately under Contract by Peter McQueen. Carpenters at Timber Wharf. Labourers at the proper? Concrete, etc.

## Saturday 24th

Showers of Rain today which prevented the Labourers at the Excavation from 10 to 2 o'clock - men employed as above.

#### Monday 26 August 1939

In consequence of the want of piles of sufficient length for the Back Piles of the Crane Wharf in Carron River, ordered A. Glen with the Labourers to commence to the driving small Piles on the West side of the Timber Wharf. Mason cutting the Grooves in front of the Dock Wall. Rest of the Labourers at Concrete, & Geo. Colvin's men at the Excavation. Discharged a Cargo Brushwood from the Company's Plantation at Castlecarrie?

### **Tuesday 27**

Men employed as above. Discharged the *Vulcan* with a cargo of Ashes from Falkirk Foundry. The **Star** with a Cargo Ashler from Netherwood and a Cargo Brushwood from the Company Plantation at Castlecarrie. Mr McNeil called today on his way from Edinburgh to Glasgow. Ordered the Stuff to be taken out at the back of the building and Ashes from Carron to be put in its place. Thinks it will be

proper to extend the east building 50 feet and finish it to that length perfectly solid the whole height. We lifted the *Grangemouth* Lighter belonging to Mr Joseph Bog and took her out to Carron River entrance and placed it on the West side of the Beacon and put a few Punt loads from Dredging Boat on board but the stuff was no sooner put on board than the vessel rent asunder and the upper works separate from the bottom so that the vessel will not answer to the purpose intended - that of making the Beacon more conspicuous at Night.

### Wednesday 28th

Men employed as above.

## Thursday 29th

Rather soft today. Men employed as above.

## Friday 30th

Men employed as above.

#### Saturday 31

Applied to Mr Adamson for four Carpenters to lengthen all the Platform?

## **SEPTEMBER 1839**

#### Monday 2nd September 1839

In consequence of the Dock being filled 2 feet with water from the Rains that have fallen since Saturday I could not get the Carpenters to work at the Platform and employed them at the Timber Wharf. Received Rails and Chains.

#### Tuesday 3

Men employed as above.

## Wednesday 4

Men employed as above.

## Thursday 5th

Men employed as above.

### Friday 6th

Geo. Colvin's men commenced this day to take away the Stuff from the back of the building. A. Glen Labourers at the Platform.

#### Saturday 7th

It has rained last night and heavy showers during the day - very little work done - Mr McNeill and another Gentleman were here today, gave no instructions . Two men drowned out of a small Boat in coming ashore from the *Hampton* which sailed from here this day.

## Monday 9th

It rained almost incessantly since Saturday— a great accumulation of Water in the Dock. Men employed in removing the stuff which is slipt down at the south west corner above part of the Platform which is laid for the building. Men also employed in pumping out the water from the excavation which is in process of being taken out for the seat of the Crane.

## **Tuesday 10th Sept 1839**

Carpenters employed at the Platform. Labourers at the Concrete, etc.

#### Wednesday 11

Men employed as above. Labourers in wheeling stuff from the back of the building for the Crane seat. The Committee met this day at No. 16 to witness the trial of the tracking of the boats by the Locomotive Engine. The Gentlemen appeared very much satisfied with the rate the Engine went with the Passage Boats being about 17 miles per hour, and with two loaded vessels at 3 miles per hour. [Change of handwriting at this point until 19th — on holiday?]

## Thursday 12th

Carpenters, Labourers at the Platform. Labourers wheeling from back of the building, Concrete, etc.

#### Friday 13

Men employed as above.

## Saturday 14 Sept 1839

There was little work done this day in consequence of rain, which continued the whole day. In consequence of being summonsed as a witness to attend a justiciary trial of the man that stole the articles from the Locomotive Engine west from No.16, I went to Stirling with others of the Company Servants and after waiting till 8 PM the Judge intimated that they could not proceed with any of the other cases and ordered the jury and witnesses to attend at 10 M on Monday morning.

#### Monday 16th

Attended the Justiciary Court today and after waiting to near 4P.M. it was announced that the prisoner had pled guilty and received sentence of Six Months' Imprisonment. Carpenters at the Platform. Geo. Colvin's Labourers at the Excavation. It has rained most incessantly during Saturday Night and Sunday and has flooded the whole low lying country and caused great destruction to the Crops. The water is 18 inches deep in the Dock.

## **Tuesday 17th September 1839**

Carpenters, Labourers at the Platform. Masons Commenced to lay the foundation stones. Geo. Colvin's men at Excavation. Received 2 horses to drag the Barrows up the Slope, and which appear to answer well.

### Wednesday 18th

The Masons employed at the Building. Labourers assisting the Carpenters securing the slope of the water course to the Pump. Geo. Calvin's men at the Excavation.

## Thursday 19th

Men employed as above. Carpenters at Barrows? repairing Stables, etc.

#### Friday 20th

Two Carpenters at a New Stable. Labourers & Masons employed as above. Went west with Peter McQueen to Port Dundas with the intention to learn what terms he had to propose to Mr Johnston in regard to the terms he wished his business decided. He stated he had been thirty pounds out of pocket, exclusive of his own time and attendance, and wished to be paid the sum that would defray that expence. Mr Johnston told him that he would have no objection to pay him the balance of his account which is 19.11.3, but to make up any loss which he may have sustained, he would not. That as he had given up work of his own free will and having Interdicted the Company that in place of giving him the balance he ought to be severely punished for his Conduct. McQueen said he would not except of the balance as it would not be sufficient to pay his debt, a very fine reason indeed.

#### Saturday 21st

2 Carpenters at the Stable. Masons, Labourers at the Building. At half past 5 a.m. was informed that the South Lower Gate of Underwood Lock was carried away this morning by one of the Night Luggage Boats coming upon the Gates when the Lock was full. Went west with the early boat and found the lower half of the Gate intirely seperate from the upper, Swing Bar brock and the Gate intirely useless. Got the lower half chained to the upper and after the Gate was unshiped and dragged for a considerable distance to a proper place on the south bank, to have it taken out. We put the materials on board the Passage Boat above the Lock and went west and put the New Gate which is lying at the south bank at No.19 Lock into the Canal, had it taken out on north side of the Lock, got a purchase from the south side and another across the Door of the Stable and launched it into the Lock. Very gently got it put into its birth and shipped so as to allow the 4o'clock P. Boat from No. 16 to pass west. But the Old and New Gate does not meet properly. Ordered the Old Gate to be unshiped tomorrow and a peice taken off the meter part to prevent such a great leakage of water in the meantime.

#### Tuesday 24th

Two Carpenters at the Stable. Masons & Labourers at the Building, Concrete etc.

## Wednesday 25th

Carpenters, Masons, Labourers as above. The space between the south of the Timber Wharf and south which remains to be filled up by Feely & Collins being nearly filled with water, I ordered the road to be cut across and put in a temporary tunnel to carry off the water into the harbour through the tunnel which runs into the harbour.

#### Thursday 26th

Four Carpenters at the Stable with the loan of two Joiners from Mr. Wilkie. Masons and Labourers at the Building. Received the **Vulcan**'s Cabin by the **Ice Boat**, which I intend to hold Straw and other articles.

### Friday 27th

Some Malicious Person brock all the panes of Glass in **Vulcan**'s Cabin during last night or early this morning. The **Ice Boat** was put into W. Adamson's Dock this day. Men employed at the Works as above.

## Saturday 28th

In consequence of this day being so very wet the Labourers & Masons had to drop work at 12 o'clock.

#### Monday 30th September 1839

Carpenters employed at the Stables. Masons & Labourers at the Building. Mr Black at the enterance of Carron River taking Sections with the view to ascertain the progress that the **Dredging Boat** is making and ascertain wither or not the excavation taken out is not again filling up with mud.

## **OCTOBER 1839**

#### **Tuesday 1st October 1839**

Men employed as above.

#### Wednesday 2nd

Men employed as above. Received a lantern from Glasgow for the **Hercules** Dredger Boat but I am afraid it will not answer the purpose being one of the first that was made for the Swift Passage Boats and was given up, not giving a Sufficient Light. Received from Jacob Smith & Co. 42 Memel 4 Inch Deals for the Timber Wharf.

#### **Thursday 3rd October 1839**

Carpenters employed at the Stable. Masons & Labourers at the building & Excavation. Gas -

## Friday 4th

Carpenters finished the Stable. Masons & Labourers at the Building.

#### Saturday 5

Carpenters commenced to put temporary stays from each side of the Timber Wharf to support the South side of the same having observed it to be slipping east, which I am afraid will not stand.

## Monday 7th

Carpenters commenced to drive the Inside Piles of the Wharf in Carron River. Masons & Labourers at the Building.

## Tuesday 8th

Men employed as above.

## Wednesday 9th

Carpenters & Labourers at the Crane Wharf & Timber Wharf. I have considered it necessary to fix a diagonal piece along the west and east side of the Timber Wharf to see if possible to prevent it giving further way with the stuff at the south side.

## Thursday 10<sup>th</sup>

Carpenters & Labourers at the Crane & Timber Wharf. Masons & Labourers at the Building & Excavation. Went west to No.16 to see that the Locomotive Engine and Railway is in complete state of repair preparatory to another trial which is to take place tomorrow. Met Sir John Robinson, Mr McNeill, & others, who had come for the same purpose.

#### Friday 11

The trial commenced this day amongst the Gentlemen were the following: Sir J.Robinson, Messrs Finlay, Gladston, Lock, Douglass, Grahame, Smith of Deanstown, Professor Forbes & Russell McAllen?, Thurston. Johnston, Napier? Wood of Glasgow, Crichton, Sanderson, and a great Number of other Gentlemen, and all the Company's Officers.

A Great variety of different experiments were made with the Passage Boats & heavy Vessels. The Passage Boat was tracked at 20 miles per hour and they got in there 2 Schooners 4 Sloops & 2 Scows, averaging about 620 Tons dead, which the Engine tracked with great ease at the rate of 2 and 1/2 miles p. hour. Came down with Mr Lock and showed him these works, at which he appeared to be much satisfied with the operations.

#### Saturday 12 Oct

Men employed as above.

#### Monday 14

Men employed as above. Attending a Meeting at Pt Downie for the purpose of inspecting No.6 Lock on the Union Canal in order to give evidence if required in regard to the state of the Lock in the event of any damage being sustained by the Bridge proposed to be erected by the Edinburgh & and Glasgow Railway Company. Found the Building of the Lock in a complete state of repair. Present Messrs. Collie, Walker Lawriestown, Robt. Wilson, Andw. Ross, Wm. Gass, & myself.

#### Tuesday 15th

Carpenters & Lab. employed at the Crane & Timber Wharf. Masons at the 2nd Crane Stool?. Labourers in removing the soft stuff and putting Foundry Rubbish & Ashes at the back of the building.

#### Wednesday 16

Men employed as above. Received from Carron the Working Gear of the New Piling Machine which is excellently executed.

## Thursday 17th

Carpenters & Labourers employed at the Crane Wharf & Timber Wharf. Masons & Labourers at the Crane Stool.

#### Friday 18th

Men employed as above. Mr. Johnston was here today. Agreed that we should form a Counterpoint on the east extremity of the building and step it up to the breadth of the Cope at the top.

Mr. Johnston agreed that all the additional excavation taken out for the breadth of the Lock should be taken off the South side. Ordered the sketch of a shed to be made for Bainsford with the probable expence. He also agreed that Daniel McIntosh should have the piece of ground occupied by Thos. Watt as a Garden to erect a shed. The rent to be fixed after ascertaining the dimentions of the ground. Went west with Mr. J.

#### Saturday 19th

Men employed as above.

### Monday 21st

Called upon Mitchell & Nielson, Engineers at the Broomielaw. Found that they had commenced to the *Manchester* Engine to have it converted into a Pump Engine to pump the water from the Dock. Agreed that one of them should go to Grangemouth and fix upon the most eligible spot to put up the Engine with the view of answering the purpose of taking the stuff from the excavation and to furnish a Plan for the Engine Seat and Shed. Mr. Johnston fixed to be east on Wednesday to go over the 4 mile reach and would request Mr. Neilson to go east with him.

#### Tuesday 22nd Oct. 1839

Carpenters & Labourers at the Timber & Crane Wharf. Masons & Labourers at the Building. Labourers at the Excavation. In consequence of the Slope on the South side of the Dock having slipt considerably to the east of the old one, I ordered Geo. Colvin to set too the men to lighten the top with the view to take back this slope and prevent the slip from doing farther damage.

#### Wednesday 23rd October 1839

It has rained incessantly all day consequently there was no work done with the Masons & Labourers. Went to No. 16 in expectation to meet Mr. Johnston & Mr.McNeill, but they did not make their appearance. Met Mr. Hamilton, overseer for Mr. Forbes, according to appointment. I stated to him that it was the intention of the Company to improve the south bank of the Canal west from No.16 and as the bank was rather narrow in some places it was Mr. Johnston's wish to consult him on the subject and if Mr. Forbes will allow the Ditch which is on the north side to be removed to the south side of the Hedge so as to give a sufficient breadth of Bank, the Company will give a fair valuation for the same by an exchange of land. Mr. Hamilton stated that he considers there would be no objection to accommodate the Company and advised stakes to be driven along the line to the breadth required and he would meet any day and give his oppinion on the subject.

## Thursday 24th

It still continues to rain. No work done.

## Friday 25th

Carpenters & Labourers at the Timber & Crane Wharf. Masons & Labourers at the Building. Labourers taking the Slope back at the South side of the Dock.

### Saturday 26th

Men employed as above.

### Monday 28th

Carpenters & Labourers at the Timber & Crane Wharf. Masons & Labourers at the Building. Labourers sloping the South side of the Dock.

#### Tuesday 29th

Men employed as above. Labourers commenced to take the bottom for the transverse & end of the building which is propose to extend 30 feet south so as to step it up to stone 4 or  $4\frac{1}{2}$  broad at the top. Met Mr. Johnson. Engineer walked over the 4 mile reach with him.

#### Wednesday 30th October 1839

Carpenters & Labourers at the Crane Wharf. Carron River got all the Piles drove. Carpenters & Labourers commenced to drive Cross Piles in the Timber Wharf with the new Piling Machine which empowers the purpose of throwing out the Ram at any hight extremely well. Masons & Company the Stable, Labourers in removing stone taken out the excavation for the end of the building and taken off the Slopes.

## Thursday 31st

Men employed as above.

## **NOVEMBER 1839**

#### Friday 1st November 1839

Carpenters & Labourers removing P. Rock from the Timber Basin to the Timber Wharf. Carpenters & Labourers at the Timber Wharf. Masons at the Building & Labourers at the Excavation. ½ day.

## Saturday 2<sup>nd</sup>

Men employed as above. Carpenters & Labourers at the Platform for the end of the building.

#### Monday 4th November 1839

A considerable rain has fallen since Saturday and wind high from the North. Carpenters & Labourers at the Platform at the cross end of the building which we are making 20 by 18 feet with Memel half logs laid transversely close below & above, which I consider to be preferable to the expensive plan with the rest of the building. 10 men employed wheeling stuff from G. Calvin's extracting.

#### Tuesday 5th

Carpenters & Labourers finished the Platform by breakfast time this day. Carpenters & Labourers driving Piles at the N-east end of the Timber Wharf. Some malicious person brock off the handles of the Pilling Machine. Offered a reward of five guineas for the conviction of the offenders. Carpenters & Labourers half day repairing the floor of the horse road for the Pump. Masons & Labourers at the end of the cross building, etc. Mr Neilson was here today with a plan of the seat for the Pump Engine. But I do not wish to proceed in driving the Pile for the framework until Mr Johnston & Mr McNeill come & have the fix on the proper spot.

### Wednesday 6th

Carpenters & Labourers at the Timber Wharf. Masons, Labourers commenced at the transverse peice of the building which forms an enterance to the south in the event of the Dock at any future period being enlarged.

## Thursday 7th

Men employed as above.

## Friday 8th

Men employed as above.

#### Saturday 9th

Cannot proceed further with the Timber Wharf until we get a supply of Scots fir Piles to tie back the front

## Monday 11th

The *Manchester* arrived on Saturday night with a Cargo Lime Shells from Charlestoun. Was alarmed by a person at 2 AM on Sunday Morning exclaiming that the *Manchester* was on fire. Got Andrew Glen and a few of the Labourers. Found that the flames were confined to the after Bulkhead. Got the lime removed and the flames stopt by 6 AM. After the vessel was taken to the timber Basin.

## Tuesday 12

Carpenters & Labourers commenced to the Crane Wharf to fix the bearers for the Platform. Masons & Labourers at the building.

## Wednesday 13

This being the Falkirk & Grangemouth Fair day no work with the men except those at the Pump.

#### Thursday 14th

Carpenters & Labourers at the Crane Wharf in Carron River. Masons at the Building, etc.

## Friday 15th

Men employed as above.

## Saturday 16

Men employed as above.

## Monday 18 November 1839

Carpenters & Labourers at the Crane Wharf in Carron River. Masons & Labourers at the Building, etc.

#### Tuesday 19th

Men employed as above.

## Wednesday 20 Thursday & Friday, Saturday 23rd

Carpenters & Labourers at the Crane Wharf. Carpenters & Labourers at the Timber Wharf driving the two roes of inside piles. Masons at the building.

## Monday 25th

It has rained almost incessantly since yesterday. No work today. Mr McNeill was here yesterday and brought the Specification of the large lock which he left for Mr Needham and I to make such observations as we should think proper and to meet him in Glasgow upon Wednesday first to consult on the subject. Mr Macneill expressed himself highly pleased with the operations.

## Tuesday 26th

Hard frost today which prevented the Masons & Labourers commencing work.

#### Wednesday 27

Weather still frosty. Went up to Glasgow. Met Mr Macneill at his Office where Mr Needham and I had a hearty breakfast. Mr Johnston came down to the Office and after examining the Plans & Specification of the Large Lock it was agreed that we should proceed without delay to get out the Excavation for the foundation of the Lock with every dispatch, and if Keir & Co will not employ a sufficient number of men to Carry on the work so allow Feely & Collins to take a share of the Concern that we must turn over all our men upon Keir and make git on expeditiously. Agreed that I should contract with Quarry Men for the Pitching Stones of the Lock.

#### Thursday 28th Nov. 1839

Weather still inclined to frost with a heavy fall of snow during the night. No work with the Masons today. S. Watson drowned last night.

## Friday 29th

This day the wind has shifted to S.E. with rain. Carpenters & Labourers at the Timber & Crane Wharfs. Considerable quantity of water in Dock today.

## Saturday 30th

Carpenters & Labourers at the Timber & Crane Wharfs, shipped another Pump at the east end of the foundation for the Lock. The men being prevented from working today from the heavy fall of rain last night and severe gale of S.E. wind.

#### **DECEMBER 1839**

#### Monday 2nd December 1839

Men employed as above. Mr. Black was here today to measure the lot of Feely & Collins so as to ascertain the whole of the measurement of this excavation taken out by them since the commencement and to measure the Wall and other lots Keir & Co and the work done by days wages tomorrow. Sad news of the *Hast* Schooner having foundered on Friday night near Montrose and all hands perished. In consequence of the **Dredge Boat** Boiler having become leaky, and after employing a Boiler Maker to have it repaired, which proved of no effect, I ordered the Boat to be brought up to the Harbour tomorrow morning so as to have the Boiler properly examined and ascertain what is to be done.

### **Tuesday 3rd December**

Received a cargo of Rails & Sleepers from the *Vulcan* being the Rails which were used at No.16 for the experiment per the *Vulcan*.

## Wednesday 4th Dec.1839

Men employed at the Dredger Boilers. Masons at the building and a Boilerhouse for the Horse.

## Thursday 5<sup>th</sup>

Great fall of snow this day which prevented the Masons proceeding with their work after 12 p.m.

## Friday 6th

Carpenters at the Crane Wharf erecting Pumps for the foundations of the Lock etc. Labourers forming the road for a Railway to take the stuff from Dock at the middle of the building. On examining the measurement by Mr. Black I find the Balance due the different Contractors to be as follows:

Feely Collins 413
Keir & Co 126
Willm Jack - exclusive of the Horsehouse 18.1&.lld

#### Saturday 7th

Men employed as above.

## Monday 9th

#### Tuesday 10th

Carpenters, Labourers at the Crane Wharf. Carpenters repairing Barrows. Labourers forming the Railway etc.

#### Wednesday 11th

Men employed as above. I have been very much annoyed by David Keir & Company not confining their men to the west end of the excavation of the Lock which I am so anxious to have the bottom part taken out to the width & depth of the foundation to allow the Masons Work to be commenced without delay. I have therefore wrote them to say that if this is not attended to I will be under the necessity to withhold granting further payments.

### Thursday 12th

I was alarmed this morning on being informed that another Slip have taken place between last night and this morning at the Northwest end of the intended large Lock. Went across and found the Slip is in every respect similar to the one on the South side of the Dock which took place 26th June last [see note 4]. It is 65 yards in length and the bottom part which was cut 8 feet below the level of the Dock is raised up about 13 or 14 feet.

#### **Friday**

Mr. Johnston was here today and after examining what had taken place he appeared to be of the opinion that we should give ourselves no further concern about the Lock, but to fix our attention chiefly in proceeding with the building of the Walls round the extremity of the Dock with every dispatch so as to give accommodation to the trade which has so much increased of late without delay.

## Saturday 14th

Intimate to David Keir & Co that we cannot proceed farther at present with the excavation of the Lock and told him he must discharge his men that their Contract must cease until I should receive further instructions on the subject. Paid him Fifty Six Pounds to Account and ordered him to bring forward a Statement of any Account he might have against the Canal Company on Monday.

#### Monday 16th Dec 1839

Carpenters employed at the Crane Wharf and Labourers & Masons at the Building and erecting a Boilerhouse at the end of the Stable.

#### **Tuesday 17**

Men employed as above. Wrote out a Specification to excavate the two lots in the North South of the enterance Cut for the foundation Walls and sent the same to Mr. Johnston to be examined.

### Wednesday 18th

No Work with Masons & Labourers today.

### Thursday 19th

No Work in consequence of the Rain which has continued since Tuesday night. The Horse run sunk down this morning.

#### Friday 20th December 1839

Carpenters at the Crane Wharf & rest of Barrow Labourers uplifting. Masons at the Buildings excavation etc.

## Saturday 21st

Men employed as above. Messrs Johnston and McNeill were here and after examining the Works it was agreed that we should employ no more hands than what is necessary to carry on the building of the harbour Wall. Discharged 30 Men this day.

#### Monday 23rd

Carpenters employed at the Crane Wharf. Masons at the building. Labourers at the excavation & etc.

#### Tuesday 24th

The Weather very unfavourable for our operations.

## Wednesday 25th

The Weather still continues Boisterous.

#### **Thursday 26**

Weather favourable and inclined to frost. Received a letter from Mr Johnston stating that he had agreed to purchase Mr Adamson's Loan for the Sum of two Hundred Pounds.

## Friday 27th

Frost continues Moderate. Labourers employed in levelling the Ground opposite Waterloo Place, forming a Road in front of the building, and filling up the South of the building from the excavation & Ashes from Falkirk Foundry.

## Saturday 28th

Frost & Ice continues. Men employed as above. Commenced to raise a platform to drive the Piles for the Pump frame for the Engine.

## Monday 30th

Frost still continues moderate - but the wind shifted to SE in the Afternoon with a heavy fall of Rain. Carpenters at the Pump frame, Crane Wharf, etc.

#### **Tuesday 31st December 1839**

Carpenters at the Crane Wharf. Labourers Cutting a Wall for the Pump frame previous to driving the Piles, etc.

# <u>1840</u>

#### **JANUARY 1840**

## Wednesday 1st January 1840

No Work today except at the Pump. Soft Weather with heavy fall rain in the evening.

#### Thursday 2nd

Weather still continues soft & in afternoon Masons Commenced to the Building.

#### Friday 3

Masons at the Building. Carpenters at the Crane Wharf, Pump frame, etc. Was under the necessity to send the *Manchester* to the Tophill Dock having sprung a leak, with a half cargo her in.

## Saturday 4th

Masons, Carpenters, Labourers, employed as above.

#### Monday 6 January 1840

Labourers Cutting the Pump Wall, Discharging a Cargo Stones from Blair, Cutting a drain to carry the water from the Sound, filling Stuff & Ashes from the dock to back of the building. No work with the Masons today, severe frost.

#### Tuesday 7th

Men employed as above.

#### Wednesday 8th

Carpenters employed at the Pump. Masons framing, making roads, etc.

#### Thursday 9th

Men employed as above.

#### Friday 10th

New Scow launched. 200 pounds. Barrows, etc.

#### Saturday 11th

Ditto.

#### Monday 13th

## Tuesday 14th January 1840

Carpenters employed in driving Piles for the Pump framing. Barrows, etc. Masons employed at the Building. Labourers discharged a Cargo Stones from Netherwood.

#### Wednesday 15th

Discharged a Cargo small Stones from the *Grangemouth* Scow from James Lawrie. Carpenters, Masons & Labourers employed as above.

#### Thursday 16

Discharged the *Tulliallan* Lighter with a Cargo Ashlar from Blair Quarry. Men employed as above.

#### Friday 17

Went to Port Dundas with four Estimates to Excavate the east side of the Harbour South of the entrance Cut. Mr Johnston opened the same and found Daniel Collins offer to be 7 & ½, Thomas Clark 7 & ¼, George Colvin6 & ¾, & Peter Feely 4 & ½.

## Saturday 18 January 1840

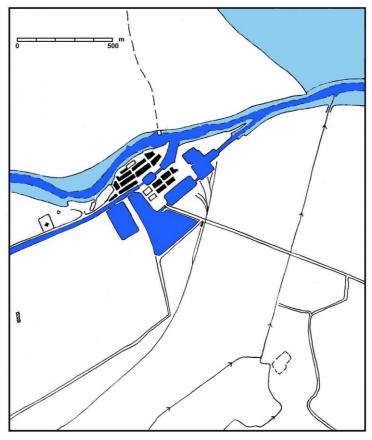
Men employed at the Pump frame, Carting, Ashes, etc, but the after part of the day being Wet the Men at the Excavation had to drop work.

#### Monday 20th

Mr Johnston was here today. Peter Feely signed the Specification to take out the lot referred to. He also agreed to take out the remainder west to the building at  $10 \& \frac{1}{2}$  p. yard. Mr Johnston met Mr Borthwick and fixed upon the line of Canal from the New Harbour to join the intended Basin. Ordered Mr Black to make a Plan & section of the same and to measure the lot to be taken out by Peter Feely. Weather still continues Boisterous with heavy fall of rain.

#### **Tuesday 21**

This day still continues very unfavourable. Mr Smith, Foreman to Mitchell & Nailer, was here to see the framing for the Pump Machine. Agreed to have part of the Machinery down by the later end of the Week. Mr Black was here today according to Mr Johnston's orders. Heard that the **Star** Scow was sunk opposite the Stables west of No. 16.



Illus 3: Plan of Grangemouth and surroundings in 1860.

#### Wednesday 22nd

Carpenters at the Pump framing. Went west to No. 16 and found the Star lying right across the Canal, which prevented vessels of every description to pass. Got a purchase from the two Ice Boats and drove her bow round into the centre of the Canal. This will allow a number of light vessels to pass and if the captains of heavy vessels will not take their vessels to Underwood out of the reach, they must run the risk of any damage that may occur in consequence of the water being run off tomorrow.

[<u>See notes 6 -9</u>]

# 1842

## **DECEMBER 1842**

## Monday 12 December 1842

It is very wet this morning no work with the masons and labourers. Carpenters in the sheds and others commenced at 12 o'clock. Mr Johnston was here today, appeared pleased with the progress was have made with the Lock Gates since he was here 29 Nov<sup>r</sup>, and trusted that we will have them all finished by the middle of February so as to allow Peter Feely to commence to the remainder of the Stuff to be excavate at the east end of the Lock.

## **State of the Gates**

No. 1 North & South hung, wants the rollers, levers, pumps, chains & Crabs, foot Gangs &c. No.2 North & South wants the above men at the sill.

No. 3 North Gate nearly finished except the Clinching, Calking, &c.

No. 3 South Gate – the timber dressed, tennered and morticed lying ready to put down into the lock for framing so soon as the South gate in finished.

No. 4 North Flood Gate framed commenced to the cross planking. Men employed in dressing the timber for the South Gate Timber Basin Lock & Bridge.

Up Stream Gates in the Lock ready for bolts being clenched Lower Stream Gates timber dressed.

### **Stop Gates**

The Gates next to Dock men employed at the Cleeding [cladding] &c.

## Tuesday 13 Decr 1842

The weather still continues unfavourable, wet during the night and this morning. The men however continued at their work although it continued showery with little intermission during the day. The men however continued at their work. Mr Johnston stated yesterday that wished the dementions of the pipes necessary to carry the Gas round the works.

## Wednesday 14th

This day is favourable all hands at work.

## Thursday 15th

Carpenters at No. 3 South Gate Plates Cross Planking the North Flood Gate. Shipping the up Stream Gates of the Timber basin Lock dressing Gate Cleeding [cladding] &c.

## Friday 16

Men employed as above.

## Saturday 17

It has rained very heavily during the night and occasionally heavy showers during the day. Carpenters continued at work, Mason dropt after three. It is very unprofitable work to have such a number of Carpenters employed at this Season of the year in making the Gates being exposed to the weather which it will be impossible to make the work half as sufficient as three first Gates which is hung.

## Monday 19 December 1842

It rained almost incessantly yesterday which have kept the Pump constantly employed. Carpenters employed in Calking the lower side of the South No. 3 Gate. Prepairing purchases for having it raised tomorrow,

#### **Tuesday 20**

Carpenters employed in raising No. 3 South Gate which was got up in safety in the afternoon.

## Wednesday 21st

Carpenters principally employed at No. 3 South Gate getting A ship<sup>t</sup>, and lowering frame timber of the South Gate into the lock. Mr Johnston was here today. Mentioned that I had wrote Mr Borthwick reminding him of the necessity of having a Sluice and Cast Iron Pipe put into the North East corner of the Timber Basin for cleaning out the Common Shore proposed to be carried to the Grangeburn in the event of the ground being feued agreeably to the part of the **New Town** and that Mr Borthwick expressed a wish that the Company should put in the building Sluice Pipe &c in a substantial manner and that the Earl of Zetland will pay the Company for the expense of the same, which Mr Johnston agreed to.

#### Thursday 22d

All hands at the different departments of the work, it however came on very wet in the afternoon which stopt the work.

## Friday 23 Decem<sup>r</sup> 1842

We have had a very heavy fall of sleet during the night and although the men commenced work, it again commenced and the men had to drop, and heavy showers continued during the day being in the bottom of the Dock and having cast my eye along I observed a slight appearance of a round on the south east building about 60 feet west from the entrance of the lock and on examining the same I found the joints of the face stones had opened a little and four of the Ashlar brock. I can account for this on no other principal than the stuff below the foundation being softer and from the late heavy rains.

## Saturday 24th

Heavy fall of rain during the night but it is fair this morning. All hands at work. Was happy to observe that the building is looking no worse this morning. But sorrow to observe the Junction Canal slopes are giving way on both sides opposite the gas Works. Having received a letter from Mr Johnston requesting me to meet him at Seabegs I went west and met him. Mr Forrest and Charles Grindlay, tennant of the Earl of Zetland, who been annoying Mr Johnston in regard to the state of the lands on the North side from Canal leakage. After examining the parks and state of the drains, Mr Johnston ordered Mr Forrest to make out a Statement of what he considered necessary to be done with a calculation of the expense for his consideration. Mentioned the circumstances of the slopes having taken place & state of the building to Mr Johnston. He stated that he will be at Grangemouth early on Monday and bring Mr Thomson along with him.

## Monday 26 December 1842

Since Saturday night we have had occasionally heavy showers which have completely deluged all the works and have kept the pumps constantly at work, and we have had severe showers during the day. Messrs Johnston and Thomson was here to-day, went along the Junction Cut and examined the state of the slopes which are in a deplorable state but he suggested no method to secure the same further than mearly to take no more stuff out of it except a trench in the very centre to carry the water from the lock which is level with the upper sill and to clear out the stuff which have slipt into the ditch lately cut along both sides of the top slopes. They then examined the building of the Dock at the south east entrance into the Large Lock. They appeared to think that it was no use to lay stuff in the bottom in front of the building as a security, but to slope back the surface above with such an incline as the Rain water may be carried south with the ditch and if the building shall appear to incline any further out which is now found to be 1¾ of an Inch beyond the straight; that we will then commence and slope out about forty feet in length and from 12 to 15 feet deep if it shall be found to give any further afterwards.

### **Tuesday 27**

This is a Moderate day and all hands at work.

#### Wednesday 28

Frost this morning but it is not likely to continue. Carpenters at the large Lock Gates and the Lower Stream Gates of Timber Basin Lock laid down on the side of the lock.

## Thursday 29 December 1842

Ii commenced to rain last night about 6 o'clock and continued without intermission during the night. The surface water from the Earl of Zetland lands overflowed the timber basin to such an extent that the water flowed over the dam of the lock and run down the Canal into the Dock where there is three feet of water although the pumps have been at work all night, ordered the labourers to increase the dam above the timber Basin Lock. In the Canal and No. 1 Large Lock is on order that the pump may command the water in the Dock. Neither carpenters nor masons at work this morning.

## Friday 30th

Still continues to blow hard from S. West with heavy showers rain and continued the whole day. No hands employed except the labourers cutting drains and daming up the up side of the Timber Basin Lock to prevent the water flooding the Dock through the Canal.

#### Saturday 31

The wind and rain have been excessive during the night with little appearance of Moderate weather this morning.

## 1843

## JANUARY 1843

### Monday 2d January 1843

This morning inclines to frost the Carpenters at work and labourers but the frost is rather severe for the masons.

#### Tuesday 3rd

Frost continues but the appearance of a Change. All hands at work except the masons Mr. Johnston was here today went over the works and went to the end of the embankment. Was happy to find that there is no appearance of the east entrance from the Dock to the Lock being any worse when it was first observed. Mr. Johnston mentioned that he had a letter from the Governor who is most anxious to have the water let into the Dock without delay. One of Pollock & Gilmours Vessels, **The Gilmour**, 600 Tons, arrived here with a half load timber from America. The other half discharged at Leith.

About eight o'clock this evening the Captain of a Lime Kilns Sloop and two men came into Andr Glen to sittle their wages and had one Gill Whisky and Bottle Ginger Beer but the master did not taste the spirits. The night being exceedingly dark and the men being strangers Andr. Glens daughter and Servant woman went out with them to see them safe on board their vessel which is lying on the North West side of the Basin, where the Pig Iron is piled up close to the front of the Quay. The master mistaking the water for part of the Quay and in the act of taken leave of Andrews daughter tumbled into the Basin and she along with him. A servant girl of the Post Master hearing the plunge ran forward and she tumbled over the Pig Iron into the basin also. One of the men got hold of her and she was got out, but the master and the poor Girl could not be got out, for a considerable time not having Boathooks immediately at hand so that life was entirely extinct although every means was used to restore animation. About 10 o'clock the Mate and another resolved to proceed to Limekilns to communicate the mournful account of the Masters death and in attempting to go on board for refreshment and a change of clothes they both fell into the basin also, the vessel appearing to be nearer the quay than it actually was. By the time that the alarm was made it was a few minutes before the small boat was got to the spot one of the men was got out a few minutes before the other and it was with great difficulty that he was restored to life, the other poor man was entirely gone. I may mention it was not the Mate of the Lime Kilns sloop but two men belonging to the Inverkeithing schooner being acquented with the master that intended going to Limekilns both sober men and the poor man that is drowned assisted to carry the corpse of the master into the inn.

## Wednesday 4th

The weather continues very changeable all hands at work. One of Peter Feelys men met with a dangerous injury from a Waggon passing over his body. In the evening the Doctor has some hope for his recovery.

## Thursday 5th

Heavy shower of snow from the North but it soon cleared up and had a fair weather during the remainder of the day.

## Friday 6

Shower this morning and appears to continue soft.

#### Saturday 7

The weather continues most unfavourable no work except by a few Carpenters.

## Monday 9 January 1843

We had a considerable fall of snow yesterday and frost during the night but the wind shifted round to the S. West and it came on sleet and rain and appears to continue. I was surprised to observe the men returning from their work shortly after they should have commenced and on inquiry learned that the River embankment had made a slip and prevented the Waggons getting along the railway. On proceeding to the spot found that fifty five yards in length have given way at the extremity of the embankment and that before any more stuff can be taken down the slope will require to be secured by piles etc. Wrote Mr Johnston to come down here tomorrow to give his opinion on the subject.

## Tuesday 10th

It has rained incessantly since yesterday to this morning and it now inclines to frost. Carpenters and a few labourers rest of labourers commenced at 12.

#### Wednesday 11

Went down to examine the state of the embankment along with Messrs Johnston, Thomson, Neediham & Black, when it was resolved to remove as many of the stones as can be got back and carry the embankment further off the slope of the river.

#### **Thursday 12**

All hands employed at the different works, weather very unsettled.

#### Friday 13

It has snowed & rained all night and occasionally during the day, all hands stopt except a few Carpenters, in the shop dressing timber.

#### Saturday 14 January

It has blown very fresh during the night but it cleared up during the day and inclines to frost. Was sorrow to hear of a sloop belonging to Montrose for Glasgow having foundered at the Arsters yesterday loaded with grain and all hands perished.

#### Monday 16th

Severe frost since Saturday to this morning which inclines to be a little soft. Ordered four of the Company horse west to No. 16 to take the *Ice Breaker* to Grangemouth and back to No. 16, *Hansel MONDAY* is little attended here except for the Carron Company men and a few individuals in different places. Mr Thomson and a Mr Wilson from Dalmarnock was here to-day, went down to the embankment but did not say much about the necessity of piling that part of the embankment which have given way, thinks it will be proper to carry on in removing back the stone until we have the opinion of Mr McNeill as he is expected here on Friday next.

## Tuesday 17th

Very moderate and soft this morning. George Arnot.

#### Wednesday 18th

Messrs Johnston, Macneill & Thomson came here to-day, examined the whole of the building. Mr McNeill does not think that there is the least danger of that part on the South East entrance towards the Lock, but advised a portion of Concrete to be put in along the front of the building and also along the North & West sides of the Dock. The gentlemen did not go down to the embankment but promised to return tomorrow by the early train to have it examined.

## Thursday 19 January 1843

Messrs McNeill, Thomson & Black returned today and went down to the embankment. Mr McNeill requested that we should take no more off the bottom from the two Beacons he being afraid that the current will undermind the embankment and promised to write out a memorandum of what he considers necessary to be done on both sides of the River. The following agreement was made with Peter Feely for conveying the stuff beyond the Pansteen Greens, to be paid at the rate of ten shilling per lineal yard of embankment. Measuring from the short cross embankment at Pansteen green out to the point at which the embankment was formed on the 3<sup>rd</sup> November 1842 and to be paid from that date at the rate of two pence per cubic yard upon the total quantity at that time to be removed from the Dock, and also from the entrance from the River to the Lock. The measurement to be ascertained by Alex<sup>r</sup> Black. The quantity at the above date in the Dock being about 18,500 yards.

The above price of 10s/per linal yard is to be reconed on the embankment when finished.

The excavation in the entrance to be paid at the rate of fourteen pence per Cubic yard for as much as may be taken out. The Company to have the power of stopping the excavation when they find it necessary.

Mr McNeill stated that he had suggested the necessity of trussing the South & North buildings which appears to have given a little since the gravel bed was removed and the plan prepared is to have two tear [tiers] in the height and four in length, placed across the entrance. This will require 24 logs at 50 feet each to reach across and built to the end of each other, exclusive of the upright supports and stays.

Agreed that John Bryce should be paid for having the stones for the timber basin lock by the Cubic foot double measure to Circular Work. Mr McNeill ordered a body of concrete to be put in front of the Dock walls 3 feet wide and to the depth of the under part of the Platform which is about two feet level of the bottom of the Dock.

## Friday 20<sup>th</sup> January 1843

Commenced at the North flood Gate to have it raised up yesterday and got it shiped and finds it to appear very well.

#### Saturday 21st

Carpenters employed in removing the frame work of the South flood Gate into the lock. Planking the under side of No. 3 South Gate. Cleeding [cladding] the Dock bridge and finishing the lower stream Gate of Timber basin bridge. Purchased of Alexander Thomson 20 Red Pine logs for propping the building.

## Monday 23

Carpenters employed as above. Carpenters and Labourers making trusses for propping the building. Labourers building gates out of the timber basin dock to allow the Carpenters to commence shipping the gates.

## Tuesday 24th

Strong Gale with wind during the night but has continued dry during the day. Carpenters and labourers employed in shipping the cranes and preparing to ship the timber Basin Lower Stream Lock Gates, also at the logs for propping the building. Was sorrow to hear of Alex<sup>r</sup> Hendrie being drowned last night between 8 and 9 o'clock. He had been at a funeral and on returning had gone into his Brothers house in Camelon and on returning home he had taken the North side of the Canal with the intention of crossing the Lock to his house, and it is thought the night being extremely dark he had taken the Canal for the Road. Three boys were standing on Canal bridge observed him trip and heard the Plunge, they made the alarm but before assistance could be got it was half an hour before his body was got out. Robert Jones, one of our Labourers, has got himself severely hurt in blasting the stones in the bottom of the Dock. One of his fingers was blown off and his head severely injured.

## Wednesday 25th

Carpenters employed in shipping the Lower Gates in Timber basin Lock, fix the Bolts for opening and shutting No.1 North Gate, at No. 3 South, and framing the South flood Gate, Mains in fixing the four Crabs for opening & shutting No. 1 South & North Gates.

Sent Robert Jones to the Infirmary by the 12 o'clock boat to-day.

#### **Tuesday 26**

Day favourable all hands employed at the works as above.

## Friday 27th

Messrs. MacNeill Thomson & Black was here today went over the work. Examined the North No.1 Large Gate which is now fitted up with the Rollers and Lever with Crab Chain, etc. and they appeared much satisfied with the ease at which the gate is wrought. Ordered Concrete to be put in the front of the Dock foundation 4 feet wide and 2 feet deep.

## Saturday

This day is very Boisterous. Men wrought, 3 ill.

## Monday 30th January 1843

It has blown a complete storm & Rain from the West since Saturday and continued during the day. No hands at work, except the Smiths. A few Carpenters & Labourers bailing and pumping water.

#### Tuesday 31st

It is rather calm this morning. Men commenced work but had to drop work at 9 o'clock from Rain. Men commenced at 12 the day proving more favourable, although it commenced again to blow very hard from S.W.

## FEBRUARY 1843

#### Wednesday 1st February 1843

This morning appeared very unsettled like, it however cleared up through the day and all hands at work – Wind high from S.W. A Berwick Schooner got on the stones forming the embankment and sunk with Pig iron.

#### Thursday 2

It has blown a complete hurricane with hail & Sleet since last night or yesterday. Indeed it has never slacked with very little intermission since Friday last. None of the men at work this morning.

#### Friday 3

The weather still continues to blow a complete Gale, sleet & snow during the night. No work with the men till after dinner.

#### Saturday 4th

The wind checked round. To the No. 6 yesterday after our teams had gone out loaded with stones for the embankment. One of them sunk east of the Grangeburn entrance and we got back the other with great difficulty, discharged her at the River Wharf.

## Monday 6 February 1843

It has continued moderate since Saturday night and pretty severe frost since last night. All hands employed this morning.

#### Tuesday 7th

Messrs Johnston & Thomson was here to-day. Mr Johnston stated that Mr McNeill in his report of the works, he recommends the embankment on the north side of Carron River to be commenced with as soon as convenient and that the beaching on the south side should be carried down to the level of low water to prevent the current undermining the facing of the embankment. That he had ordered four peers of rubble work to built under the level of the Dock at proper distance from each other 20 feet of the front of the West Dock wall to be propped from the building to the piers with 2 logs as a security to prevent the buildings inclining to slip. These peers to be 10 feet by 6. That Mr NcNeill had also recommended the Junction Canal to be built that a full wall of rubble should be erected which will prove of great use to the Company as Wharf accommodation. Mr Johnston appears anxious to ascertain the cost of said erections.

#### Wednesday 8

This morning is moderate inclining to soft wind. No 6 all hands employed at the different departments of the work.

## Thursday 9

Men employed as above.

#### Friday 10 February 1843

This day favourable, all hands at work. Mr Black fixing stakes for North embankment,

## Saturday 11th

Carpenters in preparing to ship the South No. 3 Gates. Labourers at the Concrete, levelling the South east side of the Lock, etc. Carpenters had the 7<sup>th</sup> Gate shipped this afternoon with far less trouble than any of the others.

## Monday 13th

The Carpenters are employed at the South Gates. Commenced to the Cleeding [cladding] sinking the Plate, etc. it being the Last I am anxious to have it completed with the least possible delay.

## Tuesday 14th

Exceptionally cold wind North, frost, dry. All hands at work at the different departments. Marked off the Cut to be made at the North east corner of the new Timber Basin for the purpose of erecting the building and laying the pipe for securing the Common shore intended to put through the Earl of Zetland's promise in the line of the intended **New Town** at his Lordships expense.

### Wednesday 15th

It has continued a hard frost since yesterday. None of the masons at work but all the others employed. Masons commenced at 12 o'clock at the retaining wall opposite the north Wing wall of the Lock To allow the railway to be shipped further North. William Ross was drowned out of the Scow "**Richard**" in going to the improvements with a Cargo stone.

#### Thursday 16 February 1843

Frost still continues very severe and likely to continue. All hands at works, labourers at the South embankment and commenced this day to the North embankment. Carpenters employed in placing the props across between the two buildings in the Dock west from the entrance of the Lock. Ordered Andrew Glen to place a few logs across the entrance of the Dock Bridge to act as supports to prevent the West Dock wall pressing out when the stuff is taken out, being considerably alarmed to observe a crack in the ground above 30 feet back from the face of the building opposite to the mound of earth raised for conveying the material to the Lock which is now removed. Examined the face of the building and saw no appearance of any crack or flaw in the stones.

#### Friday 17th

I am extremely sorrow to observe the rent in the ground has become half an inch wider since last night. Order Peter Feely to remove no more stuff from the front until further orders. On examining the rent at 6 o'clock pm, the rent appears to be extending further South and becoming wider. Gave instructions for all the Labourers to assemble with their tools tomorrow and lift the earth at the back and throw it over into the bottom as a Counter balance for the mound taken away.

## Saturday 18th

At 2 o'clock the watchman called and stated that the rent had become considerably wider. On going to the spot I found the rent had extended the whole length of the building and to all appearance was likely to give way. I ordered the watchman and Police to call the whole of the workmen and at three commence to remove all the lose material with the view of throwing the stuff from the back over into the bottom, but the men had no sooner got commenced, when the men in the Dock cried out that the bottom was raising and the men above called for God sake to come back, when to my outer astonishment and grief, the building gave way, sunk about 5 ½ feet in centre, and bilged out 4 ½ feet beyond the straight. This is one of the most lamentable, and at the same time most extensive, and will be attended with the greatest possible trouble and expensive of all the accidents that have taken place since the works commenced. I immediately prepaired and set off to Glasgow, arrived at 10am, called on Mr Thomson, and he forwarded an express to Mr Johnston, and we met at the railway station, and returned here at ¼ before one o'clock. Upon a strict examination of the building we found the greatest injury was the North entrance of the bridge and South end of the wall where the stones next the Hollow Quoins of the gates were torn and brock 2 inches, also in the face a number brock, but by no means so many as might have been expected from such a pressure and it is most surprising that only two of the caps have sustained any injury and none of the fenders appear to damaged. It was agreed that now we have by dear bought experience found that the whole of the building will come to the same fate. Mr Johnston & Thomson and all of us considered that in place of removing any more of the stuff from the front, that we should at once commence and lay down a greater quantity so as we may have full security for the safety of the Dock walls, and also for South Wing Wall on the south east entrance of the lock. Ordered Peter Feely to employ his men, 60 in number, to remove a shail bank and throw it over the buildings at North entrance from the Dock to the Lock for the safety of that part of the building, and to commence to lay down stuff where there is the least.

We made several calculations of what the expense will probably amount to take down the building and rebuilt it from the Scarcement, being 21 feet in height, at 3500 pounds.

Mr Thomason prepaired to erect a timber wharf which will cost 2000 pounds, but as nothing definite can be come to until a meeting of Committee. Mr Johnston stated that we will call a meeting on Monday and most likely the Committee will be here on Wednesday after. Messrs Johnston & Thomson went away. Mr MacKay suggested to erect a wharf say 100 feet and 30 or 4- yards wide in front of the present building what will prove the least expensive, and at the same time will give more accommodation and security to the wall.

Estimate of Jetty 100 feet long and 40 feet broad:

Excavation 102 & 46 & 6 for say 1090 yards at 1/2	£63.11.8
Concrete 102 & 46 & 2 for say 344 yards at 6/	£103.04
Platform 102 & 46 & 9 3519 at 2/6	£439.17.6

Rubble backs 97 & 31 & 9 at 2356 yards at 9/ Ashlar 240 31 3 2230 at 1/4 Filling up 97 31 & 16 178 yards at 1/3	824.12 1488 – 11.2.6	
		3030.7.5
Crane peat 16 20 12 143 yards at 8	57.4	
Ashlar 34 11 10 3740 peat at	187-244	.4
		3174.11.5
Causewaying 554 yards at 5/	138	
		3312.11.8
Estimate of stone Jetty Brought forward		£3312.11.8
Estimate for raising the present wall		
Raising and relaying the cope 390 & 4 & 1.3 1950 feet at 6d 48.15		
Rubble 390 & 3 & 3 130 yards at 8/	52	
Ashlar 390 & s & s 3510 feet at 1/3	219.7.6	
Raising & Relaying two crane seats say 75 leads	150	
Filling up & levelling say 1910 ay 1/	95.10	
		£3878.4.2

#### Monday 20 February 1843

Secured the wall this morning. Find no difference from its appearance since the slip. Mr Thomson was here consulting as to the further precedence of the Works and for the further security of the other Dock Walls. Suggested that the entrance Walls should be supported with an inverted Arch across from each wall, say 10 feet deep at the walls and 10 feet wide and two feet deep in the centre, also puts built in front of North, North east, South east, and South Walls.

#### **Tuesday 21**

Received a letter from Mr Johnston stating that the committee would be here by the 11 o'clock train that leaves Glasgow. Messrs Douglas, Finlay & Johnston came and examined the astonishing and lamentable appearance of the wall. Mr Douglas stated that he was decidedly of opinion that the plan proposed of erecting a pier will be most secure method of preventing the wall giving further way. Mr Finlay is of the same opinion. Mr Johnston stated that there is sufficient accommodation further ----without this Wharf altogether, and his opinion is that the Company should do nothing more than what is necessary to let the water into the Dock and then raise the wall as it is to its present height. The question being put to Messrs Thomson, Needham and myself, what would we do supposing that the expense for securing the building was to be at our own expense all of us stated that we would at once adopt the erection of the pier.

The Gentlemen stated that they are anxious to have the work done at the least possible expense, at same time it would be a pity to attempt to raise the wall in its present state when there is so much doubt of its standing, and agreed to refer the matter until they have the opinion of McNeill on the subject. The Gentlemen agreed to allow part of the bottom of the Dock to be cut where the set of the Pier is proposed to be built in order that the stones which are lying scattered over the bottom may be laid to suit the under part of the Platform. The excavation to be cut as follows, 100 feet in length 50 feet wide and 6 feet deep.

## Wednesday 22 Feb 1843

This continues very unfavourable although the men continued at their work. Labourers cutting drains to carry the water from the face of the sunk building which is accumulating since the slip took place. Commenced to cut out for the under building to firm the foundation with the stones lying in the Dock in the event of the pier being erected.



Illus 4: 1860/64 Ordnance Survey Map (National Library of Scotland) showing the pier in the West Dock.

#### Thursday 23 Feb 1843

The Labourers employed in cutting Drains in the bottom, cutting out for the foundation of the intended pier. Carpenters clinching the plate on the South flood Gate etc. Mr NcNeill and Thomson was here to-day and they prepare to have two piers instead of one, as formerly prepared. One in the centre and the other forty feet off the Bridge entrance; the centre pier to be forty feet wide. Ordered a quantity of more stuff to be put in front of the North entrance Wall to the Lock, and also in front of the North Wall and to throw over the Land which is lying on the Wharf. Mr McNeill prepares to erect the pier of Rubble and put 30 Iron Ties in 3 two in, round rods of Iron secured through the building 10 feet apart; screwed at each end to fenders and that the building above the water should be of --- etc.

### Friday 24th

Mr Thomson's brother was here to-day with instructions to remove the earth from the back of the building 27 feet back from the front and 9 feet deep. Slopt [sloped] similar and through [throw] the earth into the dock in front of the building. Men employed in cutting out for the foundation of the pier. 25 in bottom 59 men employed ½ day.

#### Saturday 25th

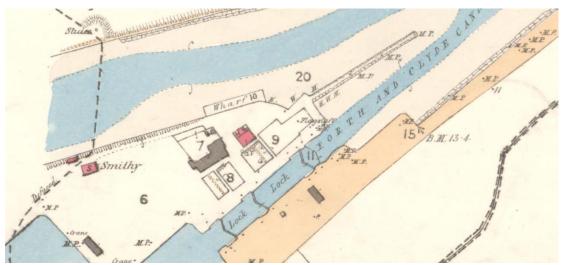
Messrs Johnston & Thomson was here to-day ordered all hands to work in removing the surface from the back of the building. Stated that the Committee had agreed yesterday to extend the pier of Jetty only fifty feet in the meantime until they have the opinion of the council in London, but in the meantime to cut out for the foundation and under building for the one hundred feet.

## Monday 27th February 1843

On Saturday we got the South Flood Gate shipped being the 8<sup>th</sup> gate which finishes the number required for the Lock. All hands employed at the excavation for the Pier, erecting Gangways for conveying the materials to the Pier.

50 ½ days by P. Feely

37 by Camp & 8 Camp.



Illus 5: 1860/62 Ordnance Survey Plan of the Entrance to the Wet Dock (National Library of Scotland) with three sets of south-facing gates and a single set of north-facing flood gates – making eight gates in all.

#### Tuesday 28th

Men employed as above, astonished to observe such a number of men pleading for work.

Mr Thomson was here today, he appears now to think that the face wall should consist of coursers instead of rubble, and that thin wall one run longitudinal through the Centre and two across, will act with greater security against pressing out the building and can be done at less expense than by walls as proposed by Mr McNeill and shown in the plan.

48 by Feely, 26 by Co, 36 in the bottom and 11 Carpenters.

#### 29 Feb 1843

Went to Port Dundas met Mr Chrichton & Readman along with Messrs McCall, Forrest, Craig & Wilson, and consulted as to what is absolutely necessary to be done to the Works on the Canal during the Month of March. I stated that a Number of the Lock Gates were in a weakly state and the sooner that a Lot of New Ones were got and put in the better. Mr Chrichton is of the same opinion & Robert Wilson was ordered to proceed without delay to get Gates made both for the East & West district. Ordered that all the bulky Materials should be got from Port Dundas and that two Carpenters Tophill should come here so as to be under my immediate charges etc...

## **MARCH 1843**

## Wednesday 1st March 1843

We have 63 of Peter Feely men, 31 of the Company, removing and throwing the stuff over the Dock walls. 32 men at the Excavation for the Pier and 11 Carpenters erecting the Gangway for conveying the materials for the pier and 20 men at the seabank.

#### Tuesday 2

Messrs Johnston & Thomson was here today. Mr Johnston appeared displeased at not having a greater quantity of stuff thrown over in front of the wall and begged that we should take the stuff from the back 54 feet wide and 9 feet deep in the centre sloping up to the Cope and to the level in the back. 71 men employed by Peter Feely, 39 in the Bottom of the Dock, 24 do, 12 at the embankment.

#### Friday March 3, 1843

9 masons employed, 71 Peter Feely, 39 & 24 of Company Men in removing stuff from the back and throwing it over into the front of the Dock Walls. 8 masons, 24 Carpenters, 30 Labourers at the lock.

#### Saturday 4th

Same number of men employed as above. Messrs Johnston & Thomson was here today, still insists to have more stuff thrown over from the back into the front of the walls, and stated that as they received no instruction from the Gentlemen in the London Council with regard to the Pier that I should proceed

no further with the work now that we had got out the excavation and the under building finished this evening until had received further instruction on the subject – got down part of the Platform from the Saw Mill.

#### Monday 6

Same number of men employed as on Saturday. Received letter from Mr Johnston requesting that we should not proceed with the pier until further orders, the Governor & Council in land on having agreed to send **W. Cubett** Civil engineer to inspect the work.

## Tuesday 7th

Weather still continues favourable, what a pity that the erection of the Jutty should be stopt and so much unnecessary expense thrown away still continuing to throw more stuff from the back into the Dock. Mr Thomson was here today seeing how we are getting on.

## Wednesday 8th March 1843

Men still continuing to remove the stuff from the back of the building and removing it to a shail bank and throwing it over at the North Wall and also on the South entrance wall.

#### Thursday 9th

Men employed as above.

#### Friday 10

All the Labourers still employed in removing the earth from the back and throwing it over into the front of the walls – rain after Breakfast, dry after 12.

### Saturday 11th

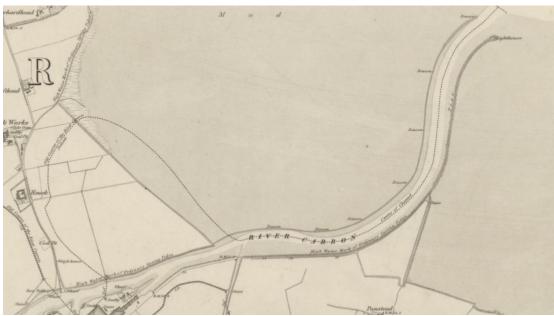
This day continues favourable, men employed as above.

#### Monday 13th

Went to the extremity of the river embankment this morning and on observing the quantity of stones filled up on each side of the intended embankment, I have given instruction to each of the Quarrers to send no more rubble until further orders. The men having been employed at the removing the earth from the back of the wall and throwing it into the Dock in front of the building this fortnight past, have prevented us from facing the embankment which is the cause of this accumulation of rubble. Messrs Johnston, Thomson and Mr Cubitt, Engineer from London, being appointed by the Council there to examine the West Wall which gave way on Saturday the 18<sup>th</sup> Feb, and it gave me great pleasure to hear Mr Cubitt express himself so much gratified at finding the wall standing in so favourable a manner to what he anticipated, and from what I could learn appeared to approve of the suggestion of the pier as being the most efficient and less expensive way of securing the building. Mr Cubitt also inspected the whole of the works and appeared highly pleased with the substance and workmen-like manner of the whole undertaking. Examined also the River Embankment, but as the tide was up he had not a proper view of the Slope and channel of the river. The gentlemen left this with the intention of Mr Johnston & Cubitt returning tomorrow to inspect the Canal from Grangemouth to Port Dundas.

## Tuesday 14th March

Messrs Johnston and Cubitt arrived by the early train this morning and after again going over the works went to the extremity of the River Embankment and after examining the same, proposed that as soon as the embankment is carried out on the South to the E. Beacon to commence on the North side at the outer Beacon and carried inwards as the South side is taken out. Messrs Johnston and Cubitt left this. Mr Needham & self to No. 16, and after examining the Lock on the Union Canal and the --- Railway Bridge across the Union Canal. Nothing to be done with regard to the pier until his request is laid before the Council and orders from London.



Illus 5: The Embankments along the River Carron leading from the sea lock of the new wet dock to the Forth estuary.

#### Wednesday 15th

This day is favourable. Stopped Peter Feely's Men from proceeding in removing the stuff from the back of the building. Ordered him to commence at the east end of the lock pitching and take out 40 feet in length the whole width, and two and a half feet deep to be filled up with heavy rubble stone as recommended by Mr Cubitt. Sent the buleon to Tophill Dock.

#### **Thursday 16**

Wind S. East, exceptionally cold. 32 Peter Feely's men employed at the east end of the Lock pitching.

## Friday 17th

Peter Feely 28 men employed in removing the stuff of the east end of the lock pitching for the purpose of laying the rubble  $2\frac{1}{2}$  feet to save the work of the water from the sluice injuring the pitching. Labourers employed at the river embankment. On inspecting the buleon in Tophill Dock I find that the plates above the building and buildings. Plates are wore through to the thickness of a sixpence and will require a new floor 45 by  $11\frac{1}{2}$  and  $2\frac{1}{2}$  inches thick.

Mason commenced to lay the under building in front of the Lock pitching.

#### Saturday 18

Made trial of the beita with the Harrow, but in consequence of it getting fuel we had not an opportunity to ascertain how it will work. Ordered the smith to make a davit to hoist up the harrow. In consequence of my Son Robert having applied to for one of our cranes to track down the one at the Timber Basin Lock with the machinery and shipped on board of the *Cyclops*, save the Stays, to be taken to Port Dundas.

## Monday 20th

In consequence of receiving a letter from Mr Johnston insisting that he had authority from the gentlemen in Council in London to proceed with the Jetty agreeably to Mr McNeill refers, Mr Johnston requested that we should proceed with all possible speed. We therefore commenced to the Platform this morning. Mr Johnston was here to-day and brought the plans of the Jetty, stated that Mr Thomson had gone to Greenock to inquire about the bolts proposed to be put through the Jetty as shown on the plan. I am afraid that if purchased them the Company will be put to considerable additional expense.

## Tuesday 21st

Carpenters and labourers at the Jetty platform. Taken 5 feet more for the foundation to extend it to the 100 feet and 2 feet below the present found. Rest of men employed at the gates.

#### Wednesday 22

The platform laid so far as we had the timber. Ordered a punt off for the remainding Yellow Pine Cut at the Saw Mill. Mason in filling up the space cut out to allow the platform to be extended to the length of the building commenced to the back of the wall, having cut the concrete out from the up side of the timber basin lock hill to stop the leak in the Cill, I ordered 30 or 40 ton clay from Mr Smith at the brick field to puddle up the same, not having much confidence in the concrete.

#### **Thursday 23**

It came on to rain this morning and to 12 o'clock continued with occasional showers during the day. Went to Tophill to inspect the builon and finding that she can be patched up at little expense, such as a few patches on the bilge, ordered work to be done. Mr Thomson came here, went over works ordered Courses for front of Friday 24<sup>th</sup> wall Jetty. Wind S.E. heavy fall rain which prevented the workmen being employed after 12 o'clock.

#### Saturday 25

Wind East blows hard this morning. Mr Johnston was here to-day, requested that I should attend pointedly to the orders sent by the Governor to have the Flood Gates of the large lock kept constantly shut. I told Mr Johnston that it will cost a considerable sum to erect a pump to take the leakage out of the east end of the lock in place of conveying through the lock by the roan of the pump engine, and as the only time at which danger can be apprehended is when the tides are high during the night, he might rest satisfied that the gates mite be shut during the night and open during the day when the tides are low to allow the leakage. ?? mentioned to Mr Johnston the necessity of calling attention to that part of the building next to the Dock Bridge which I consider to be in much more dangerous state than wall which has slopt, as the building from top to bottom at the Hollow Quoins, and also about ?? feet from the corner is completely rent and forms a detached part from that part of the wall which we have commenced to support by means of the Jetty. Mr Johnston requested that I should [state] what Plan I would adopt to secure that part of the building. I told him that my opinion is that s strong put or retaining wall built opposite the rent in the face, say 20 feet projecting under the bottom out from the wall 10 or 12 feet wide, 8 or 10 feet deep, in the extremity of the 20 feet and slope it up to the building so as vessels may not come in contact with it. Or take down and rebuild that part of the building. Mr Johnston promised to take this matter into serious consideration.

#### Monday 27 March 1843

Wind N.E. strong Gale with snow, the hills are intirely covered since last night and so bitterly cold that the men are unable to attend their work this day.

#### **Tuesday 28**

The wind continues in the N.E. but not so severely Cold as it was yesterday. All hands at work. Employed twelve additional masons this day.

#### Wednesday 29

This morning is very moderate with a little frost during the night. All hands at work. Messrs Johnston & Thomson was here to-day and brought a sketch of an embankment on the north side of the entrance to the lock, but nothing definite was settled. I have since the commentable occurrence took place on the 18 February, I mean the slip of the west wall, considered the south end and Recess for the flood gate to have suffered most, and if some stringent measures are not taken to secure that part of the building which is completely detached from the hollow Quoins of the Stop Gates and also from the main wall 30 or 40 feet North, there can be no security for that part of the wall standing after the stuff is removed away from the front of it, and suggested that the Bull-ropes should be place in front 20 feet as suggested to Mr Johnston on Saturday last but it was not formally settled what plan should be adopted. Mr Thomson agreed to keep the Lower Longitudinal fender 12 inches bigger than shown in the plan.

## Thursday 30th

This morning is foggy with frost. Very quiet, all hands at work. No word of the Bolts for securing the side walls of the Jetty. Mr Thomson has been twice at Greenock and his brother yesterday for the purpose of seeing the end pieces of the bolts screwed and tested and the other pieces furnished by Monkland Steel Company.

#### Friday 31

Wind shifted to west, blew fresh with rain last night, fair this morning but still continues to blow hard. All hands at work. Received the bolts for securing the side of the Jetty but no word of the ends with the screws.

## **APRIL 1843**

## Saturday 1st April 1843

Preparing the next lengths of longitudinal fenders. I'm also preparing the Bolts for moulding Hamilton.

### Monday 3 April 1843

This day is favourable with all hands at work.

#### **Tuesday 4**

Smiths got the first under Bolt placed in the Jetty Next the wall. Wind shifted round to East.

#### Wednesday 5

This morning is wet but fair after breakfast and men commenced work. Smiths got the 2 x 2½ inch bolt placed in the jetty wall.

#### Thursday 6

This morning is again wet, wind S.W., it however cleared up and the men continued at work during the day.

#### Friday 7

It commenced to rain at half past 7 this morning. The men had to drop work but having cleared up by 9 all men made up their time at Breakfast Dinner and in the evening.

Mr Johnston was here to-day.

#### Saturday 8th

It rained this morning. Men did not commence till breakfast, after that all hands at work.

#### Monday 10

This day turned out favourable although frost in the morning. At the embankment gave orders to G. Colvin to place the stones on the west side at outer Beacon more compact so as to prevent the rush of the tide from cracking a passage west of the beacon. Was sorry to observe the slope next the river at the extremity inclining to slip in.

## Tuesday 11 April 1843

In consequence of the slope next the river at the extremity of the embankment still inclining to slip wrote to Mr Johnston recommending to drive piles at the fit [foot] of the slope with view to prevent it slipping bodiely with the river. Hard frost during the day.

## Wednesday 12th

All hands employed at the different departments of the work. Mr Johnston was here today, examined the slip at the extremity of the embankment. Mr. J. stated that we found it still continued to slip, to drive a few piles at the tail of the slope. Ordered Mr Black to stake off the line of the North Wing as proposed by Mr Cubitt and take out the slope two to one.

### Thursday 13th

Mr Black was here and placed the stabs in the line of the top of the slope, finds that the tail of the same will extend twenty feet beyond the entrance of the lock which will not answer, consequently the wall must be carried out as formerly proposed or erect a stone or timber Jetty according to Mr Cubitt's plans.

#### Friday 14

Received a letter from Mr Thomson from London stating that he has consulted Mr McNeill about the North Wing Wall of the large Lock and he decides it should be first finished as we previously fixed at 40 feet or as near as possible, and the remainder of timber.

#### Saturday 15 April 1843

Carpenters employed in removing the crane at the east end of the lock. The masons have now commenced to lay the courses for the next tear of the 2 longitudinal fenders and Geo Colvin's men, after the tide, commenced and cut out for the South buttress at the South end of the wall.

#### Monday 17th

Went down to the River Embankment this morning and was sorry to observe the slope next River have again given way. This is the third time and I am much afraid that we will be under the necessity to commence and drive Piles half way up the slope for about 90 or 100 yards, but as it may have a chance to stand in its present position for some time, and as the tides are now falling off, I am sorry to throw Peter Feely's men & horse idle until the Piles are drove. I have ordered Geo Colvin to alter the South Rail to be shifted further east and make a treat for a day or two, and if it then found that the Bank is still inclined to give way, that we will then commence to the Piling. Mr Johnston was here to-day. At first he did not approve of commencing to the excavation for the foundation of the North Wing wall as formerly proposed, but after a little conversation on the subject agreed that we should proceed. Examined the state of the slip at the extremity of the embankment and agreed to make a trial of it for a day or two and if it is then found that it still gives way there will be no other alternative. Mr Johnston thinks we should proceed to excavate for the Bathsep at the South end of the wall.

#### Tuesday 18 April 1843

I am happy to observe that the extremity of the River Embankment have not given way further since yesterday morning and trust it will now stand the test and not require pilling.

#### Wednesday 19th

The Jetty being now raised to the second tear of Longitudinal fenders, Carpenters employed in placing them, etc – day favourable.

## Thursday 20th

This day still continued favourable – all hands at work.

## Friday 21

The weather still continue dry but appearance of Rain.

## Saturday 22<sup>nd</sup>

It has rained all day without intermission which put a stop to all the operations except the Carpenters & Smiths and a few labourers discharging a cargo of stones.

## Monday 24th

This day is favourable, all hands at work.

## Tuesday 25th

It has rained insessently since last night. All hands commence at 12 o'clock. Mr Johnston was here to-day, appeared satisfied with the progress we have made since he was here on Monday 17<sup>th</sup>.

### Wednesday 26 April 1843

This morning is favourable, all hands at work.

#### Thursday 27

This day continues favourable. Carpenters employed at the Longitudinal fenders from the face of the wall so as to prepare to scarf the upright fenders when the wall and Jetty is raised to the height.

#### Friday 28th

This morning is again very wet. No hands at work and continued to this afternoon.

## Saturday 29th

This morning is favourable, all hands at work. Mr Johnston was here today anxious to have the water into the Dock [see note 25].

## **MAY 1843**

#### Monday 1st May

All hands at work, day favourable. Geo Colvin's men at the foundation excavation for the buttress and filling up the interior of the Jetty.

#### Tuesday 2

This day is also favourable.

#### Wednesday 3

Got out the excavation & Masons commenced to the buttress at the South end of the wall which has been a very different piece of work owing to the quantity of water from the foundation of the Wall.

## Thursday 4th

Mr Johnston was here to-day, mentioned that the committee is to be here next Wednesday.

## Friday 5th May 1843

Peter Feely have got the excavation cut for 40 feet of the North Wing Wall and the remainder of the excavation for the Buttress is taken out also. Carpenters employed at upright fenders of the Jetty.

## Saturday 6th 1843

All hands at work at the different departments of the work.

## Monday 8th

Peter Feely got out the foundation for the North Wing wall to the depth of the Gravel Bed. Carpenters commenced to lay the platform for the building 40 feet in length which, when finished, will be 98 feet from the entrance of the lock.

#### **Tuesday 9**

The nature of the stuff above the Gravel bed, being three feet of sand, renders that part when it is excavate for the wing wall very dangerous, but it being Neep tides there is not such a pressure from River. However, we got the platform finished and two course of Ashlar laid at the extremity of the Wing Wall, which completely secures it from danger. Mr Thomson was here to-day and intends to return tomorrow to meet the committee.

## Wednesday 10th

Messrs Douglas, Finlay, Johnston, Reidman, came here about 1 o'clock. Walked over the work and down to the end of the River Embankment from whence to the new Timber Basin. Appeared satisfied with the progress we have made since they were here after the accident. Resolved with Mr Thomson that the water shall be let in the Dock upon Monday 22 of this month. I stated that it will be very inconsistent thing to let in the water through the Junction Canal in the present state, and recommended the lose stuff lying in the bottom to be taken out, which the Committee agree to and that Peter Feely should commence to it immediately.

## Thursday 11 May 1843

This day is favourable. George Colvin's men, after tide came up, and continued dropping and levelling the slopes and the timber Basin lock. Ordered Alexander Glen to prepare for dropping a row of piles at the fit [foot] of the Canal slope on each side of the timber Basin lock.

#### Friday 12

Andrew Glen employed driving the pile. Geo Melvin's men after tide times whilling [wheeling?] land and Danders [iron clinker] into the heart of the Dock Jetty. Peter Feely's men commenced to take the bottom of the Junction Canal as ordered by the Committee on Wednesday.

#### Saturday 13

We have a heavy fall of rain since yesterday at 5pm ,in the morning, which will do a great deal of good.

## **Monday 15 May 1843**

The wind have now again checked round to the N and continues very cold. Ordered Peter Feely to employ a number of additional men to the Junction Canal, so as we may have it cleared out by Saturday night to allow the water to be let in from the Old Basin to fill up the Dock to the height of Timber Basin lock sill.

## Tuesday 16th

Mr Johnston was here today, appeared much pleased that Peter Feely is likely to have all the lose stuff out of the Junction Canal to allow the water to be run from the Canal to the Dock by Saturday night. I told Mr Johnston that my only objection to the water being put into the Dock before the excavation of the east entrance to the lock is taken out, that the Leakage — will be such from the river that will prevent a great proportion of the stuff being removed, except such as is above the level of the tide.

## Wednesday 17th

Ordered Andrew Glen to commence to remove the Red Pine logs placed across from the North to the South building as props at the Dock entrance.

#### Thursday 18th

All hands at the different department of the work. Mr Thomson was here in my absence today, ordered all the stuff to be removed out of the bottom of the Dock except such as in lying in front of the walls. This command he done.

#### Friday 19 May

Messrs Scott, Farmer and Forrest, Company overseer, came here. Mr Scott for the purpose of putting a value on the damage sustained from the salt water flowing over the Grange Burn Banks on 26<sup>th</sup> March 1842 and flooding the field occupied by John Walker under crops of Beans, and a field preparing for Barley and Grass. Mr Kincaid examined the Beans and Barley before they were cut in August last and gave it as his opinion that John Walker should be paid Fourteen Pounds as remuneration for the loss on the Beans & Barley, but could say nothing regarding the Grass until this Spring, when it would be then ascertained whether the field had sustained injury or not. It was therefore for that purpose that Mr Scott have come to meet an arbiter appointed by John Walker. After they gone over and examined the field they came into the office and stated that they were not likely to come to an agreement respecting the amount of damage, but if Mr Johnston will agree to take the whole of the Grass at a valuation, that is to say at the same rate per acre as fields of grass in the neighbourhood. I advised Mr Scott to write Mr Johnston on the subject.

#### Saturday 20th

All Geo Colvin's men employed in placing a ??? of stuff along the foot of the Dock walls.

## **Monday 22 May 1843**

Mr Johnston was here to-day, agreed to take John Walker's field of grass at a valuation and wrote Mr Scott to meet John Walker's Arbiter on Thursday next at half past twelve o'clock in Blue Bell Inn, Falkirk.

Mr Johnston expected that we would have been ready to let the water into the Dock this morning. I told him that I could have done so, but as the Gas Company did not get the pipes finished which they are putting in at the Dock entrance Bridge for conveying the Gas along the South side of the Works, I was disappointed and will commence tomorrow morning. Carpenters is placing a temporary sluice to run the water from the Old into the New Timber Basin for the purpose of filling the Dock.

## **Tuesday 23**

Commenced to run the water this morning but, finding the rush of water was likely to endanger the embankment, I ordered the sluice to be shut and the planking carried out level with the bottom of the new Timber Basin. Messrs Johnston and Thomson came here to examine the state of the works in the water being put into the Dock. There appears to be a small leakage from the Dock Gates, but cannot form a proper idea until there is weight of water upon them. By 10 o'clock at night we had 5 feet water in the Dock, when I ordered the sluice to be shut during the night so as to allow the Canal to fill up.

Promised to write Mr Johnston tomorrow to inform him as the state of the works and height of the water in the Dock.

#### Wednesday 24 May 1843

Commenced to run the water again this morning and expect by 4 o'clock in the afternoon to have 8½ feet which is as much as we can let in to allow the double upright fenders to be fixed round the Jetty. It gives me great pleasure to observe the Dock Gates to fit so well and so little leakage. Still I am afraid that we will not be able with hand pumps to take out the leakage from the east entrance of the Lock. All George Colvin's men employed in cutting a water course from the South east corner of the Wing Wall to the Ditch along the fields to the Grange Burn. By 8 o'clock in evening got in a Cast Iron pump and had 5 men employed to pump during the night.

### Thursday 25th

Heavy fall of rain during the night and appears to continue. Sorry to observe the pump have made little impression during the night and I am afraid that we will be under the necessity of erect the Small Engine provided we can get the loan of Mr George MacKay pumps which he had at the Pit which was found to be too small for the purpose.

Met Messrs Scott & Wilson's Arbiters on the Grass filed belonging to John Walker and after a deal of altercation they agreed that the Company pay ten Pounds per acre for first and second crop.

#### **Friday 26 May 1843**

Carpenters at the upright fenders for the Jetty. The waters in the Dock have risen about 6 inches since yesterday merely from the heavy fall of Rain which continued without intermission till 6 last night. Sorry to observe that the water at the east end of the Lock have increased 2 inches this morning. Ordered two of the pumps intended for the Gates to be put in along side the present one.

#### Saturday 27

I am sorry to observe that although we have an Additional pump during the night that the leakage has increased one and three quarter inches, which require 10 men three shifts in the 24 hours, which is at the rate of three pounds per day. We must therefore proceed to have the small engine and will endeavour to see ??? and Mitchell's 7 inch pump, to have it sent here without delay.

#### Monday 29

We have had a heavy fall of rain since Saturday at 5pm which has brought down part of the slope on both sides of the Junction Canal and raised the water at the east entrance of the lock 5 inches, although we have the men constantly at the two hand pumps. Wrote to Mr Johnston by the early boat this morning that I am afraid that the time which will be taken up in the erection of the small pressure Engine and the expense attending the hand pumps, that you will prefer the leakage to rise level with tide in the River and the remainder of the stuff which cannot be taken away with the waggon to be removed at tides work and the **Dredge Boat**. Mr Johnston came here on receipt of my letter this morning, and after inspecting the works and state of the leakage considered it would be proper to fit up the engine but carry on the hand pumps as we cannot calculate the time the engine might take and expense of erection, and as the excavation must be in such a state of forwardness and the embankment cut to admit vessels into the Dock by 1<sup>st</sup> July. Mr Johnston advised to carry on the hand pumps and if the weather becomes favourable that we will not only be able to allow the leakage to rise, being more than we will succeed in taken it out, to the level of the Lock Sill.

#### Tuesday 30 May 1843

This day is most favourable. In consequence of the quantity of stuff required to fill up the building and the time which will be necessary taken to level up the back of the walls, I have employed Alex Morrison to remove the Ballast from the Harbour at 3 pence per cart load and appointed the man employed for levelling the same to see that the carts are properly filled, and to keep account of the same – employed Angus MacKay to attend during the day and William Scott during the night, to attend and see that the men does their duty at the pump.

### Wednesday 31

It commenced to rain last night at 7 o'clock and continued during the night, the morning wind east and extremely cold. The water has risen 2 inches during the night. Another ??? of water into the Dock, the hand pumps gained ¾ on the leakage.

## **JUNE 1843**

## Thursday 1st June 1843

The weather continues most unfavourable. It has rained during the night, wind east and excessively cold to be at this season of the year, rain continues. Water in the Dock 13 feet. Leakage gained 2 inches on the pump.

## Friday 2<sup>nd</sup>

I am sorry to say that the weather continues most unfavourable for our operations. It has continued to rain incessantly since yesterday and no appearance of fair weather. The leakage have gained 2 inches on the pump since last night which is no more than may be expected considering the heavy fall of rain and the extent of surface we have to pump out.

Messrs Johnston & Thomson was here today, seemed most anxious about the state of the leakage, but at the same time does not think we could adopt a better plan, as the time is so limited, than to carry on the hand pump. The rain still continues and I am much afraid if it does not cease during the night that we will be stopt with the pump from the adjoining lands being flooded.

#### Saturday 3

This morning is rather favourable, but it still appears very unsettled. On considering the matter more naturally I am of opinion that we might manage the leakage by getting the loan of Messrs Mitchell's pump and place it in the Gate recess at the Lock and works with a long break which could be erected at little expense. Ordered Andrew Glen to go over and see of the pumps are still lying at Mr MacKay's Pit, and if so to have then carted over this afternoon, which he did, so as to commence on Monday morning.

## Monday 5 June 1843

This morning is as cold as we could expect in the 5 January, and if the weather doesn't take a turn for the better immediately I am afraid we will not only have late but bad crops. Carpenters commenced to the frame work and bring the 6 inch pump in the North 2 Gate Recess with intention to pump the water into the Dock.

## Tuesday 6

This morning is calm and trust we will have a change of weather for the better. Carpenters are framing the 6 inch pump. The leakage has gained 4½ inches since Saturday night. Finished the frame work of the pump and commenced to work at 4 o'clock pm. Finds it will require 30 men in the 24 hours to work it properly.

## Wednesday 7

Was happy to observe that the pumps have gained 2 inches on the leakage. Went to Glasgow, met Mr Johnston and consulted about David Napier's account £25 for the lock casting, Malleable Iron Anchors, Levers, Screws, Hoops, etc which I consider to be too high charges. Mr Johnston stated that he would send for David Napier and ascertain what deductions he intended to make and left with him. Mr N. Account. Was sorry to observe on my return home that the leakage have gained upon the pumps since morning. Finds that it will be quite out of the question to keep on such an expense and have resolved to put a strong dam to keep the water from Peter Feely's men as long as possible and then take out remainder by tides Work.

### Thursday 8 June 1843

Ordered Geo Calvin's men to put a strong Dam across ??? part of the excavation to prevent the Lock water getting to the pump so as to allow Peter Feely to carry on his work as long as possible.

## Friday 9

Messrs Johnston and Thomson was here today. Ordered the seats for the cranes to be placed farther off the Jetty than the old ones and to have one only on each side, arranged as to the slope from the end of the North Wing Wall to join the timber wharf. Carpenters employed at No. 3 Lock Stantions for the passage across the Gates.

## Saturday 10

Favourable day, all hands at work.

## Monday 12th

The wind has again checked round to the N.E. and continues very cold and much against the products of the Fruits of the Earth.

#### **Tuesday 13**

The wind continues from the East. All hands employed as above.

#### Wednesday 14

The wind still continues to blow hard from the east and a cold withering draught and the season in General appears to be very unfavourable. Sorry to observe that the extremity of the embankment has taken such a quantity of Earth and Stone about 30 yard in length have sunk successively there three days past.

## Thursday 15 June 1843

This morning more favourable than for many days past. All hands employed at the works. Mr Johnston was here today, being in Falkirk had no time for communication.

#### Friday 16th

Weather favourable.

#### Saturday 17

All hands at work. Wind still continues from the East. E. went off at 5pm.

#### Monday 19

Employed five additional Carpenters to get forward with the Jetty fenders &c. Wind high & cold from the East E Md.

#### Tuesday 20th

This is the most favourable for our operations. Carpenters employed at the Gate, footgangs and fenders for the Jetty. Masons have got the north East wing wall built the height except the Cope. Masons have got the Cope on the South Side and East side of the Jetty.

#### Wednesday

The wind has at last shifted to the West and trust the weather will continue genial. We have now got the embankment carried out to the third Beacon after considerable trouble and expense. The last 300 yards have taken more materials and expense than 700 yards on any other part of the embankment. I now find that by laying a bed of stones across the bottom of the embankment is likely to prove a great saving of time, trouble & expense, but we will have a better opportunity to judge after passing the Beacon.

## Thursday 22 June 1843

We have had another favourable day. John Club have finished another length of Tunnel between Dock Bridge and the Harbour. Geo Calvin's men have been employed in removing Shail Banks to level up the back of the South West side of the Dock Wall. Carpenters employed at the Gate foot gang way and the Jetty Fenders. Received a Cargo Lime from Charlestown, the want of which laid us under the necessity to stop the masons yesterday after 12 o'clock.

#### Friday 23

The weather still continues most favourable.

## Saturday 24th

We will commence on Monday the breeching from that part of the embankment where we intend to cut through for the admission of the water.

## Monday 26th

Support with the *Grangemouth* in removing a Cargo of pitching. All hands employed at the different departments. Weather continues dry with wind from the East. Mr Johnston was here today, went down to the end of the embankment which is now abreast of the 3<sup>rd</sup> Beacon, from hence to the old Grangeburn which is in progress of being filled up from the Timber Basin, and from thence to the field

of Grass which Mr Johnston appeared anxious to have it disposed of to John Walker, offered six pounds per acre, and Peter Feely would have given the same some [sum], but Mr Johnston considered it should be of as much value to the Company and agreed that we should cut it and preserve for the company. Horn removed Boatload stuff for outside of the intended open through the Bank.

### Tuesday 27th

Men employed as above, weather still continues extremely warm — we would be much the better of a shower to lay the dust. The dam broke out this evening at the east end of the lock entrance. This is a most unfortunate circumstance as Peter Feely's men would have all the stuff removed which was intended before the water was let in tomorrow night. This will put us to considerable trouble to have the material removed, such as rails.

### Wednesday 28th

Weather still continues favourable. Wind N. I find that the rails & c is attended with considerable trouble to have them taken up, there being 4 feet water above them.

## Thursday 29th

Men employed as above. Ordered a punt and *Cyclops* to laid along the tail at the river bank and load a cargo of each while the water is low.

#### Friday 30

Appearance of rain this morning, it however keep up. All hands employed as above. Severe trial of parting from my daughter Eliza away to Montreal with her husband John Young.

## **JULY 1843**

#### Saturday 1 July 1843

This day we have still the appearance of rain, very moderate. Discharged 20 masons and 22 labourers.

## Monday 3

This day have blown a complete hurricane from the S. West. I do not recollect such a Gale at this season of the year. Masons employed at the North Wing Wall cope and the Dock wall cope.

### **Tuesday 4th**

This is a most favourable day. Purchased from Walter McTarget & Co 5 Memel Logs. Contents 262  $^{6}$ /<sub>12</sub> for the fenders. Mr J. & T. was here today.

## Wednesday 5

This day is favourable and exceedingly warm fine part of the day, but it commenced at 5pm to rain and we have had nothing like such a deluge and the continuation of thunder since we commenced operations here.

#### Thursday 6

We have one hired Boat, 2 company's ??? and punt at the intended Breach which we intend to allow the first Vessel into the Dock, which is intended to be excavate as to allow the *Hampton* to get in on Monday or Tuesday. This day has proved very unfavourable, heavy showers.

### Friday 7

This is a most unfavourable day for our operations, heavy showers which prevent excavation for the Breach being taken out, and is afraid that we will not be able to have it removed so as to allow the *Hampton*, which arrived this morning, before Tuesday or Wednesday. Indeed, they will not have water in the river before that Period.

### Saturday 8 July 1843

?? employed at the Breach and expect from working every tide since we commenced with 8 punts that we will have the embankment out 6 feet below the height of the tide. Wrote Mr Johnston to this effect, be at 9pm the water rose over the breach and in one hour and a half the tide was level with the river.

## Sunday 9th

This morning the ebb tide has made considerable progress in removing the stuff in the breach. At 10 o'clock the watchman informed me that the Dock Gates were appearing to rise. In returning to the spot I found the tide and water in Dock was level upon the Dock gates and that the North Gate was afloat – the anchor raised 2 inches and the Cope stone spit same thickness 2 feet of the hollow quoin. Ordered Andrew Glen to get the gate scuttled with all expedition and we got the assistance of a number of men to assist in having every one of the gates done the same.

There was just 15 feet water upon the gates and have no doubts that had it not been that the watchman who observed it and Andrew Glen's exertion in getting the holes cut in the cleeding [cladding] of the gate & the water filled level up inside, that we would have had all the gates unshafted and the anchor stones rendered useless. This under any circumstance would have been a most serious lap and more particularly so under present circumstances when on the eve of opening the Dock for admittance of the trade.

## **Monday 11 July 1843**

Mr Johnston was here today and seems most anxious and at the same time well pleased that nothing material of a serious nature took place when the gates appeared to float yesterday and requested that every attention is paid to have such a weight added so that there will be no reason to fear them being unshapped at any further period. Mr Johnston agreed that we should put a Coffer Dam across the entrance of the old Timber Basin for the purpose of allowing Peter Feely to remove the 4750 yards of embankment between the old and new Basin, and to conveyed to the filling up of the old Grangeburn, which the company are bound to do and can never be done at any future period at double the expense. Loaded 4 ?? and 7 punts in the morning and same number on the evening from the breach.

Ordered the **Dredge boat** to be taken in for the purpose of cutting out a [channel]?? in the mid day tide tomorrow. [See note 10.]

### Tuesday 11th

We opened all the four gates today, for the purpose of ascertaining the weight necessary to put then to work with safety. The height of the water in the dock 22 feet after loading them with three tons of Causeway stones, we took out the wedges at high water and removed the weight gradually and as Mr Thomson, who was here today, declared that the gates will not float although there is no additional weight, just when we removed the last stone from the North Lock gate up it came in the very same manner as on Sunday, which was most annoying, put the weight again upon them, and shut No. 2 gates, the tide falling rapidly and after the water ebbed a little the gate came too. Still, however, it was not down by an inch, and I became afraid when it unshipped that the Brass plate on the top of the pivot was removed and that the gate could not get down from the plate lying angle on the top of the pivot. Luckily, heavier after the water had ebbed, and consequently more weight, it sloped down to its proper depth.

## Wednesday 12

This morning appears to rain which will prove, I fear, unfavourable to the opening and entry of the *Hampton* into the Dock. Received the company flag by the early train from Bowling. All the Carpenters employed in placing a platform inside the gate for the purpose of putting a sufficient weight to prevent accident such as we was threatened with on Sunday and yesterday. We therefore put into each gate after the platform was laid across the two upper bars, one hundred and forty stones into each gate equal to three ton 10 cwt. It continued to rain in the morning but cleared up in the afternoon.

At 2pm the *Hampton* got under weigh and came up in tow of the *Harmony* steamer in Grand style, entered the dock amid the roaring of cannon and five Thousand cheers, moored across the end of the Jetty by 3pm and it gives me much pleasure to state that not the least accident occurred either to the Vessel or the works. Mr Thomson came here at one, saw the Vessel enter, and set off at 3pm. Dined in the Zetland Arms Inn. Ordered Henry Rodger [harbour master] to take the Captain of the Vessels to Mr Morrison's [Crown Inn] and ordered Andrew Glen and George Calvin to give a pie and porter but not to exceed the value of one shilling for each man. [See note 11.]

#### Thursday 13th

Hercules Dredger at the entrance. Carpenters at the fenders and mason at the Pall bending.

#### Friday 14th

Men employed as above, put *Hercules* & punt into Dock say Wet Dock.

#### Saturday 15

The *Hercules* chain for raising the Buckets after she had loaded a Dozen punts from the front of the North entrance wall to the Lock and the Chain for working the North Side gate also brock owing to the bad welding, so much for the commencement with chains which has not been tested.

#### **Monday 17 July 1843**

This has been another unfortunate day. The Bolts for holding the end of the Chain on the Barrel brock on the South Lock Gate and Crab Wheel for opening the North Flood Gate brock also. The **Dredge Boat** employed at the North entrance of the Lock from the Dock ?? punts load. Messrs MacNeill and Thomson came here after Breakfast, went over the works, recommended retaining Walls to be built at the back of the South, South East and South entrance Dock. Walls also at the back of the North and N. East Dock Walls, similar to those built where the slip took place in the West Wall. Mr McNeill also recommended Crabs similar to the one placed for working the North Sluice of the Dock Gate. They appeared to give themselves very little concern about other departments of the works and went away at half past 11 am to catch the 12 o'clock train. Got Hay put into rucks.

## Tuesday 18th

Very heavy rain during the night, cleared up at Breakfast time. Carpenters employed at the fenders, mason in pumping holes for same and building in palls. Geo Colvin's men at the River Embankment.

#### Wednesday 19

Sorry to hear that the labored flue of the *Vesta*'s Boiler was Collapsed this morning from allowing the accumulation of Salt & mud to remain in the Boiler from Friday 7<sup>th</sup> being only eleven days since it was cleared out, whereas we never thought to cleaning it oftener than once a fortnight. Ordered the men to fill the Boiler after taken out all the salt and proceed immediately to Alloa with a letter, J.B. Paxton Engineers, to have it put to rights without delay, which I think they will be able to do tomorrow.

#### Thursday 20 July 1843

This morning is wet, considerable rain during the night. The *Hampton* left the Dock for America. I am sorry to hear that Mr Johnston is no longer Superintendent of the Forth and Clyde Canal. The Carpenters commenced to the Wood Tunnel to join the Cast Iron Pipe at the end of the brick Bank.

#### Friday 21

John Club finished his contract for the Tunnel between the Dock bridge and Harbour – this got the Cast Iron Pipe placed & the brick work properly united and will have the stuff removed so as to allow the Wood tunnel that goes to the end of the Cast Iron Pipe put in as soon as possible. Carpenters at the Dock wall fenders. Masons building in the palls.

#### Saturday 22

The Carpenters employed at the Dock Fenders for the Harbour. Labourers in levelling and cutting out for the entrance to the Tunnel from the harbour levelling.

## Monday 24th

Mr William Crichton, who is now appointed Superintendant in place of Mr Johnston, came here with Mr Thomson today. Went along the works and to the end of the embankment, from hence up the new Grangeburn to the termination of the Old Burn & where it is now filling up by Peter Feely from the New Timber Basin. It appears that a serious misunderstanding have taken place between the Committee and Mr Johnston as to the filling up of the old Grangeburn. Mr Johnston employed Mr Black in 1840 to make out a plan of the projected timber basin, Lock Canal, and Bridge into the Dock. The contents of the timber Basin was then proposed to be Seven Acres, and as the Timber Merchants complained owing to the manner of having their Rafts in single tears that it would be for the advantage of the trade to enlarge the Basin by extending it North parallel with the Bo'ness Road, and Mr Black having made out a detailed account of the expense of the Seven Acre and also the 111/2 Acre Basin, and having made it appear that the latter could be executed at saving of Six hundred pounds. Mr Needham and self met Mr Borthwick in Black's Office, when he stated that he would use his influence with Earl Zetland to grant the additional ground required, that we would take the stuff from the excavation to fill up the old Grangeburn instead of forming the embankment from the pilot house to the entrance of the River. Mr Johnston being unwell at that time I went to Glasgow and showed him the Sketch and Calculation of both and he highly approved of the proposal of enlarging the basin and as we considered that there would be a sufficient quantity taken out in the formation of the Canal and Embankment, Mr

Johnston stated he would arrange the business with Mr Dickson, the Earl of Zetland's factor. I stated to Mr Crichton that lately, after we had commenced filling up the Old Grangeburn, Mr Borthwick, factor at Kerse, complained that we was not filling up the burn according to agreement and that instead of it being made level with the Greens, the Company was bound to fill it up level with the adjoin fields. I stated that was not the instruction I had from Mr Johnston, and would not allow the stuff to be laid down an inch above the Green unless it was made to appear that Mr Johnston had unfortunately made another agreement which he was not aware of, nor did I understand that the Company were bound to fill up the old Grangeburn to the height of the adjoining lands until a meeting took place here when Mr Lock came here on the 31st October 1842, when Messrs Dixon, Johnston, Thomson and others, were present, when it was stated by Mr Dixon that the agreement was to fill up the burn level with the adjoining lands.

Mr Crichton stated that he would lay it before the committee, My proposal to put a Coffer Dam across the entrance of the Old Basin and requested that I should write a letter stating my opinion relative to the necessity of erecting Houses for the four Lock Keepers and expense attending the opening of the Dock on the 12<sup>th</sup> Inst.

## Tuesday 25th July 1843

Carpenters employed at the Dock Wall Fenders Tunnel for the end of the Cast Iron Pipe, & Labourers in cutting through the embankment for the wood Tunnel.

#### Wednesday 26th

We have so much brush wood & c between the front of the Timber Wharf and the end of the pipe that I find it a laborious job to get down to the depth necessary for the wood Tunnel. Ordered the men to be up by 2am tomorrow morning to cut the embankment.

#### Thursday 27 July 1843

We have now got the Tunnel placed to the end of the pipe and covered with puddle which will prove a great advantage for securing the Harbour so soon as we have the Cross Tunnel placed over it and a sluice or two placed in it to clear the whole breadth of the Cadge.

#### Friday 28th

Carpenters commenced to the open space left in the South Dock Wall where the three piles are drove for the purpose of having a Platform laid flush with the building. Labourers at the River Embankment and filling up the end of the Tunnel.

## Saturday 29th

Men employed as above, occasional showers to-day, we got the Hay in & stalked, in excellent condition yesterday.

## Monday 31st

The day is favourable. All hands at work. No word from the West as to the Cross walls at back of the building and Causewaying. Wrote Mr Crichton on the subject. Sent the **Iron Punt** to Tophill to be put into the Dock, having received considerable damage and sunk at the Embankment.

## **AUGUST 1843**

#### Tuesday 1st August 1843

This day is rather unfavourable, all hands, however, at work. Finds the Mud accumulating very fast in the Lock. It is a thousand pities that we did not put sluices in each of the gates, and I am afraid that will have to be done, but how can we get them in the Dock Gates?

## Wednesday 2nd August 1843

Carpenters employed at the Gates, Rails & c. We had five Vessels arrived in the Dock this afternoon in Ballast which is the most convenient place either for discharging it or loading the Pig Iron.

## Thursday 3

Wet this morning, very unfavourable weather for the crops. Mr Thomson was here today with a son & two Daughters of Mr MacNeill. Ordered Coffer Dam to be put across the entrance of the Old Timber Basin so as to allow the embankment between the Old and New to be removed to the Old Grangeburn –

and crop or the walls to be built two at the south, two at the North entrance from Dock to the Lock, and two at the North east Dock wall. In consequence of intimation from Mr Crichton Superintendant that a difference existed by two individuals at Bainsford Bridge relative to the privilidge of using the Banks for Carting Coals, which is now discharging them for the Railway Company, and discharging Grain from vessels into the Granarys. I stated that it might prove a great inconvenience to the people discharging the Grain, but as the Public have a right to the road, if it is found that the Carting of Coals for the Railway is found to prove inconvenient to the Public, then the Road Trustees might interfere, but the Canal Company had no further concern than to give every encouragement to the traders on the Canal.

## Friday 4th

Met Messrs Crichton, Reidman, McColl, Forrests and son, Robert, at Burnhouse at Bainsford. It appears that the two parties have disagreed and determined to do every thing in their power to thwart and oppose each other and wish the Company to interfere, particularly Taylor not to allow Dawson to land Coal into the yard not to Cart them away round the front of his house after being prevented by him, to his Carts by the back of the town as formerly. Mr Crichton told them that they must try and agree on the accommodation of the Wharf, that in such trifling disputes the Company could not interfere. Came down to Grangemouth after going round the works and conversed on several subjects. Mr Crichton wished that I should make out a report of what I consider necessary to be done, and the number of workmen to finish the work to be executed.

## Saturday 5th August 1843

We had another of the Crab Wheel brock today. It now appears that the whole will have to be altered and made similar to the one which was hung last week. They have been made by far too slight and whether this is the fault of the Engineer or Gilchrist & Smith, the Contractors, will be shown on examination of the plan & specification.

## Monday 7th

Went to Stirling, attended as Joureyman at Sheriff Court trail. Came on rain about 10 o'clock and continued to 5 afternoon.

# Friday 8 August 1843

Mason employed at cross walls on the North Side entrance from the Lock to the Dock. Day favourable, although still soft appearance. Ordered a punt to be taken to the entrance of the Old Timber Basin to prepare for the Coffer Dam. It came on to rain after Dinner and continued with little intermission until 10 o'clock.

## Wednesday 9th

Messrs MacNeill & Thomson was here today. Ordered hard wood Cope on the Top of the fenders round the Jetty and West Walls 6 inches deep. Few observations, promised to send sketch of Cross wall and wall for the South building entrance from the Dock to the Lock. Arranged with Peter Feely to take the Embankment between the Old & New Basin immediately.

## Thursday 10

Examined the North & South Embankment. Men employed cutting a ditch so far as the embankment is formed on the North side West from the Outer beacon. Ordered the whole of the punts to be discharged into the heart of the Embankments.

#### Friday 11th

Carpenters employed at the Lock Gate Gangway Rails. Masons at the cross Dyke walls. Labourers at the Embankment and Levelling.

# Saturday 12 August 1843

This is a most favourable day for the Country. All hands employed as above. Received offers from the men and John Reid to discharge the punts into the heart of the embankment. John Reid often was the lowest size. When this stuff is not required to form part of the Embankment each Punt discharged at the rate of one shilling & four pence & when required to form part of the present Embankment each punt load discharged at the rate of two shillings and sixpence on condition that he is to be furnished with wheeling plank & Barrows. The punts not to contain more than 16 or 18 tons of stuff on average. The rate of out put not to be less than one hundred & fifty punts weekly on an average. The operations

to commence on Monday 14<sup>th</sup> August 1843. With regard to the Number of Punts to be loaded and discharged we will come under no obligation.

## Monday 14th

Went to Glasgow, met Messrs MacNeill & Thomson in their office, agreed that Mr Gilchrist should make the other 5 crabs for opening and shutting the Lock Sluice similar to the one made by him and which is in use. There men making plans of a shed for the Jetty and cross walls & Tie roads for the South Wall at the entrance of Lock from the Dock. Brought away the plan of the works. Mr A. Black and I met Messrs Crichton & Reidman in Canal House, Pt. Dundas. A.B. showed the plans of a feeder from Lock to the Canal at Windford which he was ordered to survey by Mr Johnston. Some time ago Mr Crichton told him to make ?? his old and a statement explaining the circumstances as he may be enabled to lay the demand before the committee & I left my account of the Allowance and Dinner at the opening of the Dock. Mr Crichton requested that I should make out a report and sketch of the Number of Lamps which will be required for the Dock & Lock and the probable expense of Chains & Stantions to go round that part of the work where it is considered most dangerous for people falling into the water and to make out a report of what I consider necessary for the completion of the work.

#### Tuesday 15th

Men employed at the Timber Basin, Coffer Dam, Gate Rails, Cross Walls, River Embankment, etc.

#### Wednesday 16

Messrs Crichton & Thomson were here today, went down and crossed over to the West Embankment. Mr Thomson ordered the Ditch to be taken up the whole length at the back of the dyke which in my opinion is throwing the expense for no purpose. If the different Gullets were filled up the Ditch may be cut as the embankment is carried out, to commence at the West end opposite the Grangeburn Bridge. Mr Thomson mentioned that he has ordered the tie Rods Screws Coupling Plates and Washers for the South entrance wall. This is another waste of money, and piles drove as shown in the plan will do more harm than good.

## Thursday 17th

This day is most exceptionally warm. Men proceeding with the Coffer Dam.

#### Friday 18 August 1843

We got the whole of sheeting piles drove to the dam. Ordered the *Cyclops* Cargo from Bank at the east entrance to be put in front of the Coffer dam.

# Saturday 19th

The *Cyclops* second Cargo discharged in front of the Coffer dam. The *Grangemouth* with another Cargo. Peter Feely will have the run formed for letting the water of the Basin this afternoon. Commenced at 12 o'clock, but owing to the leakage in the building the Water in the basin was only 18 inches before the level of the Canal stopped this run, until tide time tomorrow.

## Monday 21st

The Coffer Dam very nearly gave way yesterday after the water was run off the Basin to within four feet of the bottom. Andrew Glen was under the necessity to call out the Carpenters at 3pm and got the dam propped with the heavy spans which we used for sheer poles and I am happy to observe this morning that all is right. Commenced with the labourers to remove the stones, etc. where the materials were discharged for the works and prepare for the Common Shore sluice which is intirely done.

#### Tuesday 22nd

It came on to rain very heavy at 9am and continued till 12 forenoon.

## Wednesday 23rd August 1843

Mr Crichton was here today, agreed to Cast Iron pipe and sluice being put in for the Common Shore from the Timber Basin to the Harbour, which is intirely decayed being of wood as far as the inside Mr MacKays Garden. Agreed to have the Gas Pipes placed with the least possible delay. Met with the Gas Committee and they are to send up there report of their condition on which they will furnish the Gas. Ordered a Specification to be made for laying the Gas and fresh water pipe and to forward it for taking estimates.

## Thursday 24th

The Common Shore being originally made of wood find it is intirely gone and will require to be renewed with stone from the end of the Cast Iron Pipe, which is to be placed in the basin to Mr MacKays Garden.

### Friday 25th

Peter Feely have got the old Grangeburn filled up as far as the men cut. Wrote Mr Crichton requesting him to be here tomorrow to consult as where the remainder of the stuff is to be taken from the Old Basin, as it will require the rails to be laid across the field of Beans as the shortest and most convenient way to have it removed.

## Saturday 26 August 1843

Geo Calvin's men at the Burn finished the Excavation of the Common Shore. About 3pm after the Gates of the Large Lock was opened a large foreign brigantine loaded with Grain on entering the Dock the Ban fast gave way when she struck the South Building, smashed one of the Cope and removed the whole round the entrance of the extent from fifty to sixty feet in length.

## Monday 28th

Masons commenced to remove the Cope this morning. Day very unfavourable.

#### Tuesday 29th

At Dunbar. All hands at work. The weather most favourable down in the ??

## Wednesday 30th

Messrs Crichton & Thomson was here today. Ordered a Chain across the entrance of the Lock to work with a Crab. 7/8 ordered.

Agreed to fenders being placed on each side entrance of the Lock to protect the buildings. Ordered that as Peter Feely is making so little progress in removing the stuff from the east entrance of the Lock, and it being attended with considerable danger for Vessels to enter the lock with such a Mound of stuff still lying, that Mr Black should measure what is to be taken out and the remainder to be removed by the Company's men.

## Thursday 31st August 1843

In consequence of Scott and ??? having got themselves beastly drunk on Tuesday when I was from hence, from which conduct they run the *Vesta* aground on the Green, below the Pay Bridge and lay during the night in a very precarious state, and it was with great difficulty she was got off yesterday morning by the *Harmony* Steamer, I have therefore ordered an Engineman and Steersman to be put in their place.

# **SEPTEMBER 1843**

## Friday 1 September 1843

Carpenters at the flood Gates and platform across the open space on the South West side of the Dock. Mason hewen stones for the Common Shore from the Basin to the ??? and building cross walls on the North side of the Dock. 27 sail of Vessels in the Dock.

#### Saturday 2

Employed Walter Paterson & Thomas Crane to Supperseed Mr Scott & Daniel ?? in the **Vesta**. Purchased off Mr McTarget 2 logs for swing Bars for the upper Stream Gates of the Timber Basin Lock and a Log for the Sill or Coffer Dam of the Same.

## Monday 4

On examining the extent of the Embankment was sorry to find that it is given way on both sides to a considerable extent. Ordered George Calvin to send down all the Beech Wood which was formerly used across the Pansteen Greens to be thrown in to the heart of the Embankment.

#### Tuesday 5<sup>th</sup> September 1843

Carpenters & Labourers employed in driving Sheeting & Pile in front of the foundation of the sluice pipe Building in the Basin for the Common Shore. George Calvin's men at the South West corner of

the New Timber Basin filling in the stuff brought by Peter Feely where he had the railway across the field back of the Rope work shed. Weather continues remarkably favourable for the Harvest. Purchased a log of oak from A. Thomson for a pile at No. 2 Lock.

## Wednesday 6th

Ordered preparation for fixing the Machinery for working the Lower gates of the Timber Basin Lock. Employed two additional Carpenters for that purpose. Calvin's men at the South West corner of the Timber Basin.

## Thursday 7th

Men employed as above.

### Friday 8th

Commenced to drive the main Pile for the cross tie rods at the South entrance of the Dock. Mason cutting for the tooth and pinions for opening and shutting the Lower Gates of the Timber Basin Lock. The weather continues most favourable and exceptionally hot.

## Saturday 9th

Mr Lock, the Governor, arrived with his son. Messrs Finlay, Crichton, Reidman, Moncreiff, Thomson, McCall, & R, Nelson, went down to the end of the Embankment, appeared satisfied with the progress we have made and appearance of the Works & Shipping in the Dock. The Governor is most anxious to have the Embankment removed so as the Vessels may have a clear entrance in place of taken the time which is most dangerous both to the vessels and the Building. Ordered that every expedition be used to have it removed. Ordered Beacons to be placed on the North Side of the River.

## Monday 11th September 1843

Mr Thomson was here today. Set off the line of the Causeway on the South Side of the Lock for Neil McCulloch, the Contractor, who I understand has agreed to do the work at three farthing the yard. George Colvin's men at the South West corner of the Timber Basin and racking up the Second cut of Hay. 4 scows load at the entrance.

## **Tuesday 12**

Ordered George Colvin to remove the accumulation of Mud inside the entrance of the Old Timber Basin to allow the pipe which conveys the water from Lauriestown to supply the town being cut and lowered below the level of nine feet or two feet below the bottom of the Canal. The **Dredge Boat** yesterday and today at the entrance with four Scows & four Punts at low water. Mason at the Common Shore and stones and Rack for opening & shutting the Timber Basin Lower Gates.

#### Wednesday 13

George Calvin's men at the Basin and turning the Second Cut Hay four Scows & 4 punts loaded at low water, the **Dredge Boat** loaded Punts. Wrote Mr Crichton that we will be ready to fill the Timber Basin upon Thursday 21 Current.

# Thursday 14th September 1843

Wrote Mr Crichton yesterday that we would have the works in such a state by Monday as to allow the reach above Grangemouth to be run off on Tuesday and to intimate to the trade that a stoppage between Bainsford and Grangemouth will take place on Tuesday and Wednesday, the 19<sup>th</sup> and 20<sup>th</sup> Current. All hands employed as above.

#### Friday 15th

Received a letter from Mr Crichton stating that he had fixed on Tuesday night at 10 as the most convenient time for the trade to commence running the water, allowing Wednesday and Thursday next week for the work, with instruction to put in the lead pipe across the Canal in the event of a Pipe being required from the Reach above to supply Grangemouth with fresh water. Carpenters employed at the Basin Lock up Swing Bars and tooth & pinion for the lower Gates. Mason of the Common Shore and in cutting a Recess for the sluice stream in the recess of the lower Gates.

## Saturday 16

George Calvin's men levelling the projections on the Timber Basin, putting a dam across the entrance of the Basin Lock so as to get the water bailed out to allow the mason to cut the groove in the recess for

the stones & the sluice to allow the Gates to fall back into the Recess. Carpenters at the sill intended for the Canal above No. 2 lock. George Calvin's men employed at the second crop hay, it secured, the weather being more favourable for the purpose.

## Monday 18 September 1843

Carpenters commenced to make a box for the Tooth and Pinion for opening and shutting the Lower Stream Gates. Mason dressing Ring stones for the large Lock and Cope for the Basin Sluice. George Calvin's men removing the dam which was put in at the lower stream Gates on Saturday to allow the masons to cut the Groove in the building out at the bottom and to have the rubbish Cleaned out of the Basin Lock Sill.

## **Tuesday 19**

Carpenters at the Timber Basin Lock and at the fender Covering Boards. Masons Ring stones. Calvin's men Levelling North side of the Canal and taken in the Hay Second Cut. We intended to have run off the Grangemouth reach this evening to the purpose of putting in a sill at No. 2 Lock to enable to Stop Gate being put in at any future period for repairs of No. 1 & 2 Lock without running the water which must be emense at any future period.

#### Wednesday 20th

Owing to the trade not getting forward it was half past 12 this day before we commenced running the water. Labourers in removing the stuff inside the Basin entrance. Carpenters preparing stuff in the Coffer dam.

#### Thursday 21

Commenced this morning with all hands. Peter Feely's men after Breakfast to take out the great accumulation of Mud from the Lock West. The Carpenters of the Coffer dam sill and sheathing piles which we got draw at half past 10pm with fire lamps. Mr Crichton was here today, suggested the propriety of the Anchors Chains & Buoys placed in the River East from the Lock entrance, also two Stones Chains & Buoys in the Basin – one opposite the entrance of the lock and the other two South.

#### Friday 22

Commenced this morning by day light with all hands and got out the rough of the stuff by 12pm. It is a sad pity that we are not allowed another day to have the stuff taken out as far West as opposite Carron Wharf but this will have to be done with the **Dredge Boat**. We got the Coffer dam properly propped with the vein to prevent the Canal Water getting into the Basin until the Canal was completely full.

#### Saturday 23<sup>rd</sup>

In consequence of the water in the Canal raising above the level of the tide in the Basin, the Coffer dam gave way and the Basin filled up level with the Canal, which will require a much greater quantity to be run from the reservoir than was expected. At 12 o'clock the Lighter, James Crawford, master, was the first Vessel loaded with Grain which passed up the Junction Canal. The Basin has a most splendid appearance and I do not think there is such depot for containing timber in Britain. It is much to be regretted that the Lock was not erected where the entrance bridge is placed and of the same width.

#### Monday 25 September 1843

I am sorry to observe a number of leaks round the Basin. The water is now up another 9 inches of being full and if it continues to increase we must get Peter Feely to have stuff thrown in to stop the leaks. Mr Thomson was here today, gave orders to have the Chain at the entrance of the large lock put under the Cope - & c brock one of the Gate racks.

#### **Tuesday 26**

George Calvin's men levelling the Junction Canal banks and down at the River bank facing. Carpenters at the Fender Covering boards, snatch blocks, and pumping water for the crop ties at the back of the South entrance building from the Lock. Leakage from the Basin still continues. Ordered a stone drain to be put in across the Bo'ness road east from the Basin Bridge to carry off the Leakage and Peter Feely to procure earth and throw in along the slope to ascertain if it will have any effect in stopping the leakage.

I never was more annoyed with anything connected with the works equal to the excavation and preparing for the piles, ties and cross wall on the South side entrance from the Dock to the Lock. The depth of the wall leakage through the building and the facing of Timber bolting the holes through the

walls, at least 12 feet thick, cannot be done without running off the water in the Dock 12 feet, which will render the trade up the Junction Canal to be stopped for two or three days.

## Wednesday 27 September 1843

In consequence of the leakage from the Basin not decreasing, I have ordered the six scows, which is removing the stuff from the Lock River entrance, to be taken into the Basin and discharge their Cargoes opposite to where we observe the leakage, which I trust will put a stop to them. Lined of the West dock Wharf for Neil McCulloch the Causeways. Mr Crichton was here today.

### Thursday 28th

Carpenters & Labourers employed in driving two additional piles for the Cross Walls. Masons commenced to build the wall & George Calvin's men at the Sea Bank and levelling. Discharged 6 Scows in the Basin.

## Friday 29th

I was surprised to observe a crack along the Causeway about fifteen feet back from the front of the West Harbour wall and the building appears to have sunk and slipped so as to form a round from the sopt which was repaired fifteen years ago. Write Mr Crichton to come here tomorrow or Monday to advise with me on the subject. Discharged four scows along the timber basin to ascertain if it will have any effect in stopping the leakage. Mason, Carpenters and Labourers, at the cross tie walls. Fixed one of the River Iron Buoys in the Timber Basin opposite the entrance of the Lock which will be of great benefit in assisting vessels out and in to the Lock.

## Saturday 30<sup>th</sup> September 1843

In consequence of the leakage from the timber Basin not appearing to dry up, I have ordered Peter Feely to cut a water table along the tail of the South Embankment and intend to fill it with stone so as to prevent any disagreeable appearance should the leakage continue. Intend the same at other parts of the Embankment where there is the least appearance of leakage. Carpenters & Labourers at the Cross wall which is attended with considerable trouble from the leakage through the walls and the slopes giving way.

# **OCTOBER 1843**

#### Monday 2 October 1843

Men employed at the Cross Wall & ties got in the first length of the rods and with great difficulty got another length of the foundation here taken out for the Cross Walls.

Messrs Crichton & McCall were here today in consequence of informing Mr C. of the appearance of the West wall in the Harbour appearing to sink and slip out at North part of the wall. And as it appears not to have given way any further since I ordered the six load of scows from the entrance to be discharged in front of the foundation it was agreed that we should do nothing further in the meantime than raise that part of the Causeway which is sunk below the level of the Cope, to be raised and relaid as to carry the surface water over wharf and in the event of any further appearance of the wall giving way to take down the dilapidated state of the building, drive a row of piles, and rebuild the same with heavier materials and secure the same with fenders. Mr Crichton advised that we should face the slope of the Timber Basin between the Lock and the Stables with flags & Small stones. Ordered a Chain to put across the inside entrance of the Lock to prevent Accidents to the Gates in case of the vessels breaking from their mooring or coming forward upon the gates before they are in a state to admit vessels into the Lock. Ordered 30 fathoms <sup>7/8</sup> Chain from William Lawrie to put across the Lock & for the Buoys to be placed east from the Lock.

## Tuesday 3

Got the first length of Rods in yesterday and the second length today. Remainder of the Carpenters employed at the Covering boards round the Jetty. George Colvin's men at the Basin cutting a water Channel between the Lock and the Stables, dressing the slopes, etc.

## Wednesday 4

Masons commenced to bore or jumper the holes in the face of the wall for the frame work attached to the tie rods. Ordered two Carpenters to assist the Masons in Jumpering the holes. Purchased off Pollock & Gilmour 2 Oak Logs for to finish out the fender. Covering boards.

#### Thursday 5

Men employed as above.

# Friday 6<sup>th</sup> October 1843

Mason at the front of the wall boring holes and allowed the water to ebb out of the Dock this afternoon to allow the masons to commence to the Holes for the main ties. The thickness of the wall is nearly 12 feet, which will be attended with considerable trouble to get these two hole  $3\frac{1}{2}$  in put through. The men will require to work till 12 o'clock or until the tide puts them out. Ordered three Quebec Yellow Pine and red Pine logs for Larking & Roofing for the new House. Men commenced to cut for the foundation. Calvin's men employed dressing the ground along the back of Bank between the Basin Lock & the Stables. The Timber from Walter McTarget, etc.

## Saturday 7th

I am sorry to observe the state of the Junction Canal Slopes from the Water in the Dock having to be run so low last night during the time the men was allowed to work at the Holes boring, which they got in about four feet. Commenced again this morning during the tide being out and bored four feet and trust by this evening tide we will have the two tie holes put through the wall. Mr Thomason was here today and appeared satisfied with the progress and sufficient way we have got with the Cross Wall ties & framing for binding the Wall. Proposed that the House for Lock Keepers, etc, should have the front to the east in place, as I understand, facing the Lock.

### Monday 6th

Heavy showers early this morning which prevented the Labourers to commence till after breakfast.

#### Tuesday 7th

Carpenters employed at Lock entrance fenders, Roofing for bothy, repairing Waggons & Barrows. Masons Boring holes for the fenders at the timber Basin Lock, Boothy, prepairing stone for the Jetty Shed, etc.

## Wednesday 8th

Men employed as above, went to Glasgow with a scroll of the Dock Regulations, and after going over them with Mr Crichton he stated that he would leave them with Mr Moncreff and after having his opinion he would get them printed. Promised to meet Mr Borthwick relative to the ground proposed to be taken on the South side of the Junction Canal for a Wharf 60 feet back where there will be accommodation for the Pig Iron.

## Thursday 9th

Got very much alarmed to observe such a quantity of water escaping through the upper Lock Gate and on filling the Lock observed a considerable Leak from the Mid Gate. So soon as the Gates were opened we found about 2 fathom of 4 ½ inch Rope between the splae piece and the North Gate, and on searching the Wide Gates we found a piece of basket had got in between the North Gate and the splae pieces. It was a most fortunate circumstance that we found and got them out as a few opening and shutting would have indented these into either the Gate or splae piece and formed a hollow which would have caused a leak that would not have been easily stopped. The *Hampton* arrived from Quebec but got no further than the entrance for want of water, and as the tides are taken off I am afraid she will not be got in this week unless they discharge part of the Cargo.

#### Friday 10<sup>th</sup>

Carpenters employed at the Fenders driving a pall into the South bank opposite the Lock entrance to assist vessels into and out of the Dock. Masons placing the stones on the Jetty for the Shed Pillars. The tide having been better this afternoon than was expected, the *Hampton* got into the Dock with great difficulty.

## Monday 9th October 1843

Commenced this morning to clear away the stuff in the way of the third length of the Iron Ties, and it was with great difficulty that we got them drove through from the inside of the building. Luckily, however, we got through the wood framing secured before the tide rose the height to prevent us finishing the Work. Masons at the Cross wall and George Calvin's men in filling up the excavation.

## Tuesday 10th

George Calvin's men and Masons as above. Carpenters preparing the top longitudinal up framing for the Cross tie and in protecting the Common Shore Sluice in the Basin.

#### Wednesday 11th

It commenced to blow a Gale from the NE at 3 o'clock this morning with heavy rain and continued without intermission till twelve o'clock, and I am sorry to say that six of the punts and the Dredge long Boat have suffered considerable damage having brock from their Moorings and was cast ashore on the east side of the Embankment. The Rain fell in torrents during Twenty four hours at 3pm. A Dutch Gallant came up and providentially the whole of the Gate were up, and although every exertion was made to bring the vessel up, she had so much way under her bare poles that the men could not give a turn of the rope, and had they not let go the Anchor which brought the vessel up, the Damage to the vessel and that in the Dock might have been most serious.

#### Thursday 12 October 1843

All the low lying ground adjoining the Dock is completely covered with water. Sorry to observe that the Embankment have suffered in several places from yesterday's Gale. The wind have checked round to the N. West this morning. One of the punts which was thrown up on the East Embankment floated during the night and blowen across to the embankment belonging to Henry Aitken, and another was taken off by the *Vesta* into deep water. These two punts does not appear to have sustained so much damage as the four which is lying on the Embankment. The long Boat, one side beat out. Keep stem and a number of Timbers required to be renewed.

## Friday 13th

Got up all the punts and long Boat which was damaged by the Gale to the entrance of the Lock. George Calvin's men filling up the back of the Building at the Cross tie Walls and discharging Ballast for levelling and laying the Causeway. Carpenters in prepairing the Timber for the Fenders at the east entrance of the Lock.

#### Saturday 14

Masons employed at the South east entrance of the Lock, laying stones at the back of the Cope for the purpose of fixing the Chain across the same to protect the Gates in the event of a vessel attempting to enter the Lock before the Gates are properly shut. Carpenters & Labourers as above.

#### Monday 16

Masons Commenced to fill up between the Beams at the temporary building or entrance on South side of Dock near the Bridge. Labourers filling up back of the Building & discharging Ballast. Masons Boring holes on South side of the Lock entrance for the fenders. Ordered the Ban Punts damed on Tuesday last by the Tophill to be taken to Tophill for repairs and to bring down the **Ice Boat** and a Yellow Pine Log lying at the sawmill for a Buoy for the Anchor which is to be placed east of the large Lock to bring up the vessels.

#### Tuesday17

This morning is extremely cold with sleet N. Hill completely covered with snow. George Calvin's men chiefly employed in cutting the bank in Timber Basin opposite Mr McLaren's house to endeavour to stop a leak which is very considerable. In the afternoon we got cut down and found the Leak and puddle up, which appears to be stopped, but there is another further North, which I am afraid will not be got so easily stopped as it appears to spring up from the bottom. Carpenters employed at the fenders, put the Anchor and Chain on board the **Ice Boat** and took her down to the Dock to get the Log put out for Buoy. Carpenters commenced to it. Masons boring holes for the fenders at Lock entrance.

## Wednesday 18

Men employed as above.

#### Thursday 19 October 1843

The workmen employed Carpenters at the Buoy repairing Barrowes, etc. Mason in Boring holes for the fenders and Cross walls. George Calvin's at the slitting of Leaks at the Timber Basin. Mr Crichton.

## Friday 20th

Carpenters at the Buoys. The Masons at the stone to support the entrance of the South entrance of the Lock. Labourers in attempting to stop a Leak from the Timber Basin which I am happy to say that they have in a great measure succeeded to in stopping the Leaks.

Mr Crichton yesterday agreed to the two Boothys – one at the Large Lock and the other at the basin Lock. Ordered the sketch of the Lock keepers house, Custom house office, etc. to be forwarded to Mr David McCall.

#### Saturday 21st

Men employed as above.

#### Monday 23

Carpenters employed at the Lock entrance Fenders, Sign Boards, etc. George Calvin's men at the Sea Bank. Sent a calculation of expense to finish the works to Mr Crichton.

#### **Tuesday 24**

Mr Alex Baird was here today and agreed to take a portion of the ground adjoining the Dock at the North West corner as a depot to store up Pig iron.

#### Wednesday 25 October 1843

Went to Glasgow met Messrs Moncrieff and Paterson in their office concerning the Accident which a man met with on board the vessels in August 1837 in consequence of the track line of the Sloop ?? not, having been hacked down the rope being cut with the Kniff, the end struck the man across the face and is now prosecuting the Canal Company and owner of the vessel for damages. The case is to be tried in Edinburgh on Tuesday the 31st by a Jury, and it is likely that I will have to attend to certify that printed bills were posted up warning the traders to give way to the Passage boats when passing.

#### Thursday 26

Masons commenced to the Lock Boathy. Carpenters at the Fenders. Purchased off Mr A.Cowie 3 spiral purchases to be placed on the Outer Beacon.

## Friday 27

Men went out to entrance of the River and placed the Two Casks on a spar and Bolted to the Oak log placed on the Outer Beacon, which I trust will have the effect of leading the vessels during the night to enter the River in safety. The Buoy opposite which brock adrift was also placed after Boring a hole into the stone and to fasten the Ring Bolt, and another Buoy placed further east.

Calculation of the expense to finish Grangemouth Improvements – 23 October 1843

River Embankment	
To 150 yards to extend the East Embankment at 80 L	600
To 7999 yards required the Bank having subsided on	
An average 3 feet at 1/2	408 6 8
To 2700 tons stones to raise the embankment	
3 feet & workmanship at 2/	270
To 480 Tons Road metal for the above 2/6	60
To 1500 lineal yards for the West Embankment at 40/	3000
To 6 Beacons, £10	60
To 10,000 yards to be removed from lock entrance at 6	250
To 3 Buoys & chains to be placed in the river at 100/	15
To 2360 yards pitching east from the lock at 2/	236
To one Anchor buoy & chain to be placed	
in the river east of the lock	10
To 6 polls 2 on the West and 4 on the embankment	24
To a rubble wall from the North wing wall to the Timber Wharf	52
To fenders on each side of the lock entrance	87 10
To 6 Crabs to work the sluice of lock	40
To a biathy to shelter the lock keeper	15
To 16 Crab Wheel which have to be renewed the original	
Ones not being sufficient strength	32

To a lock keeper Harbour Master office &		
Custom House boatman	300	
To 2380 Ton road Metal round the works at 2/6	297 10	
To 9000 yard to be removed the remainder in the dock at 6	225	
To additional mooring ring	30	
To a cast Iron Cistern for the Dock bridge	20	
To one cast Iron double purchase crane	150	
To Cross walls at back of the Dock building	150	
To a Platform at S. West end of the Dock	20	
To 4,174 yard pavement remainder required at 4/6	939 3	
To secure the slopes of the Junction Canal with piles, say	150	7441.71
Bright forward	7441 71	
To a house for basin lock bridge & keeper	140	
To timber polls say	50	
To shail banks to be removed by Peter Feely	500	
To timber Iron & c for West Dock Wall and Jetty	90	
Shed on the Jetty		
Gas light		
Deepening Carron River		
Iron posts & chains		

William Crichton

24 October 1843

To Agreeable to your request you have herewith a statement of my calculation of the expense to finish the work, exclusive of the gas light, Jetty shed, punts chains and deepening Carron River. I am down here.

Yours

Thomas Wilson.

#### Friday 27 October 1843

Having received a letter from Mr Borthwick requesting me to meet the Earl of Zetland at Kerse house at 11 o'clock, I accordingly attended him in presence of Messrs Dickson and Borthwick, that he had complained to the Meeting on Wednesday last of the leaky state of the Embankment round the Timber Basin and wished to know what plan I meant to take to have the leaks stopped. I told him that we had already stopped the most extensive one opposite Mr McLaren's house by cutting a trench three wide along the embankment, and I had no doubt what-ever that we will manage to have the whole of them completely stopped in a short time, and that Peter Feely have promised to commence to it on Monday. The Earl also stated that he had complained to the General Meeting of the state of the Junction Canal slopes not standing and that they ought to be built as he formerly proposed, and that Mr Crichton had proposed to take additional ground, say 60 feet, on the South and Cut the excavation to the depth which will allow the Wharf to be built without interrupting the Trade. I told his Lordship that we will require more Breadth in order to allow a sufficient strength of Bank to resist the pressure, and that it is intended to drive a far Shealting Piles on the North side to prevent the slope from slipping. His Lordship stated that he had no objection to the Company having the additional ground on condition that the built both sides of the Canal with masonry. Mr Crichton came after I had returned from Kerse and as he wished to see his Lordship on the business as stated above, we returned to Kerse. His Lordship stated that would comply with the grant of ground unless the Company agreed to build both sides of the Canal so as to secure the ground in the event that the property adjoin should be feued for warehouses, that it was the interest of the Company to pile the whole length of North side level with the Bank, which he considered would give sufficient security to houses supposing they were built. His Lordship replied that that might be the case, but the Company must become security and previous to anything being done they ought to take the advice of some practical Engineer to give his opinion on the subject. I am therefore of opinion that the Banks will remain as they are for some time Black meaning for P Feely's excavation.

### Saturday 28

It came on to Rain and Blow fresh from the N. East this morning and continued to 3pm when it slackened. Had a great number of light vessels arrived. Eight entered the Lock and the remainder of the Canal and Harbour. We have the greatest number that have been in the Dock since

commencement. The Earl of Zetland and Colonel Dundas came down in the afternoon and was highly pleased to see the number of shipping, etc.

## Monday 30th

In consequence of the intimation on Saturday, I proceeded to Edinburgh by the one o'clock Train from Glasgow for the purpose of Attending the Jury Trial regarding a man which got his face hurt on board the ?? Passage Boat in August 1837 as a Witness. All that I can say in the matter is regard to the Passage Boats having a right to take the inside when passing vessels and to Certify that Bills were Printed and accurate to that effect, as well as it being included in the Canal Regulations.

#### **Tuesday 31 October 1843**

Attend court in the parliament house with other 22 witnesses including Mr Johnston, our late Superintendent, and Mr Herbertson, our Collector at Port Dundas. After the Advocates had given their deliverance on both sides, the case was given up as regarded the Company's liability, which proved satisfactory to all concerned, and returned to our lodgings. After going down to Leith with Mr Herbertson, where we got the Dock regulation from the Harbour Master, and returned by the 3 o'clock train.

## **NOVEMBER 1843**

#### Wednesday 1 November 1843

Carpenters employed at covering the open space at the South West corner of the Dock. Labourers discharging Ballast and levelling the ground for the Causeways. Fast Day Messrs Crichton, Thomson and another Gentleman, arrived here, met Mr Borthwick to arrange with respect to the intended Wharf wall to be built on the south side of the Junction Canal. Mr Thomson stated that he would make out a report to be laid before the Earl of Zetland on the Subject.

#### Thursday 2<sup>nd</sup>

Men employed as above.

#### Friday 3rd

Carpenters at the Lock entrance Fenders. Labourers in discharging vessels with Ballast, two in the Junction Canal.

#### Saturday 11th

This Dock continues very strong. The *Alfred* belonging to Alloa arrived in the Dock this morning from America. Men employed as above. [See note 12.]

#### Monday 13th

Carpenters employed in placing the Buoys Anchor east from the entrance of the Lock. Messrs Crichton & Thomson were here today, went to the end of the South embankment. Mr Crichton agreed that the extreme end should be made a little, say 20 feet, wide at the top to have space for a Light house.

#### **Tuesday 14 November 1843**

Went up Glenfewer where there is a Cargo Oak timber lying by the side of the Canal belonging to McLaren and Callender. Picked out 30 piles and put them on board the **Grangemouth** scow intended as polls for different places wanted round the works and in the timber Basin. In consequence of having received a letter from Mr Loyd of the Customs informing me that the ??? Board of directors have approved of the plan for the erection of a watch house in connection with the Lock Keeper's house, I went over to the Custom house and to my astonishment Mr Loyd informed me that the plan was retained by the directors in London, but if I required the plan, to take a Copy of it I must write him a letter and he will forward it to London, a Copy of which is in the other end of the Bank.

#### Wednesday 15

It came on to rain at 8am and continued to 4pm. Carting from the Railway still continues. Wrote to Montreal.

#### Thursday 16

Received hand Bills to prevent Carters laying down Pig Iron within seventy feet of the Lock. Commenced to lay down the timber and drive the piles on the South West side of the Timber Basin to be drove 60 feet apart.

#### Friday 17

Ordered Mr Wilkie to measure the thirty pieces of Oak Timber purchased from McLaren at Callander.

Specification – Joiner work of a house to be built by the Forth & Clyde Canal Company North from the Large Lock at Grangemouth. The Company will furnish all materials except the Window Glass. The Contractor to do the work and finish the same in a substantial and Tradesman like manner to the entire satisfaction of any person the Company may appoint to superintend and Inspect the same.

## Saturday 18th

Measured John Murray's paving on the North side of the Harbour, 220 feet in length by 21 feet.

## Monday 20th

This day is very unfavourable – rain to 1pm.

#### **Tuesday 21**

The Dock is getting a little more slack.

#### Wednesday 22

This day unfavourable. I understand that the lower Stream Gates of the No. 16 Lock was carried away this morning by a Pig Iron scow in consequence of the foolish conduct by men giving the scow too much way into the Lock. The stern fast snapt and it was a providential circumstance that there is chains upon the upper Gates, for if they had given way the consequence would have been most dreadful.

#### Thursday 23

Went up to No. 16 and found my Son had got the New Gates shipped and the trade passing by eight o'clock this morning. The old Gate, Clap Bars, Turn posts, etc. completely torn asunder, and from the sudden jerk of the upper Stream Gates when they came too with the weight of water. The eye Bolt of the safety Chain gave way, and part of the Cleeding was burst out. The Trustees of the late Mr Fairburn have sustained damage from the water rushing over the bank into their store house and damaging the Nails, but what would have been the consequence had the up Stream Gates been carried away – the whole country would have been inundate.

## Friday 24th November 1843

Having appointed this day to take in offers to execute the Mason Work of the house on the North of the Large Lock, the following Estimates were opened in presence of the parties.

Box	John Bryce	£78
	Alex Marshall	86
	John Club	95
	John McClay	115
	Alex <sup>r</sup> White	120

## Saturday 25th

This day is more favourable, inclines to frost. Carpenters at South entrance fenders & Boathys. Mason at Covered Gutters from the Causeway.

## Monday 27th

Contractors commenced to the masonry of the New house. Carpenters employed at the fenders, Boathy, and repairs of wagons.

## Tuesday 28th

In consequence of the Buoy placed east of the Lock entrance not having sufficiency of Buoyancy, ordered the **Ice Boat** out with one of the Barrel Buoys to replace the large Bell Buoy and to bring it up for the purpose of being placed east of the Lock entrance.

#### Wednesday 29th

Carpenters at the Fenders east entrances. Masons at the Covered Drains from the Causeway.

Thursday 30th November 1843

Carpenters at the Fenders. Masons at the covered Causeway drains. Labourers cutting a ditch for the Gas Light.

## **DECEMBER 1843**

#### Friday 1st December

This being fixed to take in Estimates for his Joiner, Slater, Plaster & Plumber work of the New House North of the Large Lock. The Estimates were opened in the presence of the three first names, Mr Aitken being Absent here.

Alex <sup>r</sup> Wright & Russell	£95
James McLaren	106
Peter Wilkie	126
Rab Aitken	130

## Saturday 2<sup>nd</sup>

Men employed as above.

## Monday 4th

Carpenters placing the large Bell Buoy east from the Lock entrance. Masons at the Causeway covered drains.

## Tuesday 5th

This has proved very unfavourable to work with the general part of the workmen.

#### Wednesday 6

Very stormy this morning until 10am, but it cleared up during the day. Mr Thomson was here today, wished part of the lock made the Model Gates in Order that they may be exhibited in Edinburgh next week. Purchased Six Memel Logs from Mr McTarget.

#### Thursday 7th December 1843

This morning still continue blow fresh from S. West with heavy showers.

### Friday 8

Still continues to blow fresh. The two Steam Boats however managed to bring up the *Henry Porchart* during the night tide, although it blowed fresh. Both *Simpson & Harmony* in tow. This day is continued dry and favourable for the work.

## Saturday 9th

This day is very moderate. Carpenters at the Fenders, Waggons, etc. Masons at the Causeway covered drains. George Calvin's men at the River Embankment.

#### Monday 11th

This day continues very moderate. Carpenters at the entrance Fenders. Mason at the covered drains.

## **Tuesday 12**

Commenced this morning and run the water out of the Dock down to the depth of 13 feet with the intention to get the pumps, but with pump working the whole day we could not manage to get any more than upper height of spare pump. It therefore appears quite evident that water from the Dock must have a communication through the Tunnel from Dock, and until that communication is stopped it will be impossible to get the water out of the pump wall. Mr Crichton was there today with Mr A. Baird and pointed out a spot at the N.E. corner of the Dock for the Depot for his Pig Iron 400 yards per acre.

### Wednesday 13 December

George Calvin's men are all employed in cutting the Ditch for the gas Pipes on the north side of the Lock. Went down to the extremity of the Embankment. That part described by Mr Thomson will

require a very great quantity of stone to form the Circle and the breadth required for a Signal or light house which will be of great use when the Embankment is finished.

### **Thursday 14**

George Calvin's men is again retained to assist in bringing sand and stones to the Causeway. Got down the remainder of the red and yellow pine stuff which is cut up for roofing, joints, etc, for the House. Purchased from G.A. Thomson a yellow pine log for the house finishing it being the only log to appearance out of either the *Hampton* or the *Henry Partchan* cargos likely to answer the purpose.

#### Friday 15

Since yesterday morning it has blown a complete hurricane from the West, which have caused the highest Neep tide to rise 22½ feet on the gates. George Calvin's men engaged in levelling for the Causeway.

#### Saturday 16th

Carpenters employed at the Lock entrance fenders. Masons in boring holes and at covered drains to carry the Water from the Causeway. George Calvin's men at the River Embankment.

#### Monday 18th

Carpenters at the Lock entrance fenders. Mason at the Covered drains. George Colvin's men at the River Embankment to 12 o'clock. This day is very moderate.

#### Tuesday 19th

Men employed as above. Contractor & Men to the Jetty Shed.

#### Wednesday 20th

Went to examine the sheer poles erected there for to raise heavy articles such as boilers, etc. out and in of the Large Steam Ships which frequent the Port. The sheer poles appear to be 60 feet in height with a heavy Chain stay from the land side. There is none from the Harbour to ease back the Poles in the event of any heavy Article being taken out of a vessel and landed on the quay, consequently the vessel on board of which the Articles are must be removed, and the one which is to be put in must be brought in to the birth. Messrs Dale & Paterson, Engineers. Messrs Gibson & Spittle, Harbour Masters, Messrs Tinman, Carpenter, & Morrison, are decidedly of opinion that these sheer poles are not only dangerous, but most unwieldy, and can never be used except for any purpose except for some very heavy Articles such as a Steam Boat Boiler, when they exceed 15 ton. Examined there Cribs for holding ashes, etc. taken out of the vessels which are mearly a strong open Box about 12 feet long and 6 feet wide, and the necessary houses which are built of stone, flagged in the floor, and have cast Iron Pots with eyes which are lifted out and emptied into the Police dung Carts which attend regularly for the purpose.

## Thursday 21 December 1843

Carpenters employed at one of the punts and Fenders. George Calvin's men at the Embankment. Lock Keepers clearing Mud out of the Flood Gate recess which have filled up to such a height that we cannot get the Gates to work. This is a most unfortunate circumstance and I am afraid unless we fall upon some plan to convey the water from the Gates and rush into every corner of the Recess that it will be attended with great trouble & expense to keep them clear.

## Friday 22<sup>nd</sup>

Men employed as above. Lock Keepers clearing out the Mud and trust that we will be able to get them to work today. It has blown a complete hurricane today, and had it not been that a scow was observed in time lying on the North entrance of the Dock loaded with Pig Iron, the water making a complete passage over her, it would have sunk in a short time. We therefore got her taken over to the West Wall where she lies sheltered from the Surge.

## Saturday 23rd

It has blown a complete Gale during the night, but it is much more moderate this morning. Purchased from Walter McTarget 4 Red Pine Logs, 2 for the Punts repairing in Mr Adamson Dock, and two intended for the home. We had 13 Lamps lighted this night. I am sorry to observe that the Globs appear to be too small. The Carers does not appear to allow the air in, which prevents the Gas to burn freely.

#### Monday 25 December 1843

Sorry to hear there is a considerable escape of Gas from the Pipes at no less rate than twenty feet per hour. Sent an order to the man who laid the pipes to come here immediately to have them examined and put to right. Carpenters at the Fenders, Rails at the Basin Bridge, repairing Waggons.

#### **Tuesday 26**

Day favourable. Men employed as above.

#### Wednesday 27th

The weather still continues very favourable at this season of the year. John Arnot, the Company's Smith, at the Old Basin come here for the purpose of examining the pipe, Globs, jets, round the Dock & the Lock, and to ascertain the cause of the lights being as deficient.

#### **Thursday 28**

I am happy to observe the great improvement which John Arnot have made on the lights tonight. Building of the new house up to the first flat. Alex Wright have put on the opposite Joints.

## Friday 29

Weather still continues most favourable. Carpenters at the fenders, Rails at the Timber Basin bridge. Messrs Crichton, Redman & Robt. Wilson was here today. Went to the extremity of the River Embankment which is carried out to within 30 yards. The stones twelve feet up is out the whole length. On our return back the North Up Gate was unshipped in consequence of filling the Lock too rapidly. Having to attend to have it shipped. I did not get them attended.

## Saturday 30<sup>th</sup> December 1843

The weather still continues favourable. George Calvin's men at the Embankment. Employed Thomas, Brown, William Brown & John McLachlan, to assist Andr Glen as Lock Keepers. Discharged two carpenters, three masons and twelve labourers.

# <u>1844</u>

#### **JANUARY 1844**

## Monday 1st January 1844

Being New Year's Day, few of the men appeared disposed to work. A slight shower snow during the night and inclines to frost during the day.

#### Tuesday 2nd

George Calvin's men employed at the Embankment to 12 o'clock, levelling ground remainder of the day. Frost, sent the **Ice Boat** to Auchenstorrie for Whin Pall Stones.

#### Wednesday 3rd

Men employed as above. Carpenters, Lock Keepers at the Fenders, dressing Boathook handles, etc. A complete change in the weather from hard frost to Rain and fresh weather.

#### Thursday 4th

Men employed as above. Got the protecting Chain across the entrance of the Lock.

#### Friday 5

Mr Thomson was here today, marked off the spots where the standards are to be placed for the protecting Chain. Gave orders to Mr Black to take the section of the Bank between the termination of the North Wing wall and the timber Wharf, being anxious to have it built and finished.

## Saturday 6 January 1844

This day is favourable. Calvin's men at the Embankment. Carpenters at the Fenders, attending the Lock, & Labourers Carting Causeway stone Land.

## Monday 8th

This day the weather appears changeable, frost in the morning, favourable during the day. John Arnot brought east a square Glob for the easter gas Light, but I am afraid it is too small also.

#### **Tuesday 9**

Raw frost during the night. The Mud have accumulate to the height of eight feet at the lock entrance, ordered Twenty punts to be laid across the Gullet in front of the North Wing Wall, and so soon as the tide was out we opened the four sluices which had a most excellent effect in Cleaning away a great quantity of the Mud. It came on to snow about 12 o'clock with a little wind N.E. and continued to 3pm, and it is probable we may have a storm if it comes frost in the evening.

#### Wednesday 10

Men employed as above. Fresh weather, rain to 12 o'clock. Calvin's men wrought all day. Went to Glasgow but got no business done with Mr Crichton, having met him going to Edinburgh.

#### Thursday 11

Day favourable, still inclines to fresh weather.

#### Friday 12th

Still inclined to be fresh.

## Saturday 13 January 1844

Masons employed in Causewaying round the Lamp post stones which had to be removed to get the stones placed. Carpenters at the Fenders. George Calvin's men at the Embankment.

#### Monday 15

We have had moderate frost since yesterday morning but it appears rather Changeable during the day. Having received a letter from five Timber Merchants complaining of the bad and dangerous state of the Road to the New basin by way of the Bowling Green, and that several people on their way to inspect the Timber in the pond have slipped their feet and been in imminent danger of falling into the water. I have ordered George Calvin's men to commence today with a Cargo Rubble to have a road formed at least four feet wide and covered with brock free stone and Gravel.

## **Tuesday 16**

Moderate frost during the night and the Dock covered with a thin coat of Ice.

#### Wednesday 17

Ordered the water in the Dock to be run off this morning to the depth of 12 or 13 feet to allow the Pumps to be taken out as low as the working barrel, but owing to a Bank being lying at the Southwest Quay where the stuff was not taken out, and the danger of the vessel sustaining damage, deferred running off the water until tomorrow when she will be put along side the Jetty where there will be no danger. Ordered Mr Black to get the levels taken, and the line of the South embankment slabbed off now that Peter Feely have got the shail banks removed.

#### **Thursday 18**

This day is soft and likely to change to more unfavourable weather. Run off the water in the Dock to the depth of 13 feet. We got the 2<sup>nd</sup> length of pipe with great difficulty, but did not get down the working Barrel, which I am most anxious to have taken out and will make another trial tomorrow. Messrs Crichton & Mr Baird was here today, agreed that a Timber Wharf should be erected 120 feet in length in the timber Basin parallel with the Bo'ness road and adjoining the South side at the Lock for the purpose of a depot for the Iron Ore.

#### Friday 19

This day is favourable. Run off the water and is sorry that we could not manage to get any more than one length of the pumps taken out. It is therefore of no use to be at any further trouble – Timber and remainder of the pumps must remain. A considerable slip took place in the Junction Canal this morning which will have to be removed in order to allow the trade to pass.

## Saturday 20th

Very moderate, inclines to frost. George Calvin's men employed at Junction Canal slope and Stoping Leaks at South side of Timber Basin.

## Sunday 21 January 1844

I was astonished this morning to hear that Andrew Waddell, Master of the *Hercules* Dredge, was found drowned along side of the Dredge. It appears that he had gone home on Thursday after the tides work, that he left his house after tea about 6 o'clock on return, that he called at the different houses, and lastly on board the Schooner *Meteor* where he remained a short time. The watchman spoke to him on coming ashore and advised him to take round the South side of the Dock as the gates were open. It therefore evident that in putting his foot into the pram which very crank he had either upset it or had fallen into the water and on laying hold of the pram had capsized it over him. The night being exceedingly stormy and the two men on board being fast asleep, the poor perished without any present to rescue or render assistance. It was astonishing that the men on board never thought of enquiring about him till Saturday afternoon, thinking that in consequence of him going home on Thursday that he had either himself or one of his family had become unwell, until they found on inquiry that he had not been at home since Thursday night.

#### Monday 22<sup>nd</sup>

Weather still continues very moderate, gentle frost. Ordered a respectable Coffin to make for Andr Waddell and was forward to his house near Castle Laurie Mill. George Calvin's men in removing the remainder of the slip.

#### Tuesday 23 January 1844

This day continues favourable and very moderate. George Calvin's men at the Embankment.

## Wednesday 24th

Calvin's men at the Embankment. Mason building a wall at the West side of the Timber Basin.

### Thursday 25th

Men employed as above.

### Friday 26th

Messrs Crichton & Thomson were here today, went to the east end of the Embankment. Stated that Mr Black have made a survey of the same, and that the quantity required to raise the bank 4 feet above the level of high water Mark spring tides is 7765 yards. Contents to raise it 3 feet above high water mark is 4565. The contents of the shail Bank or over plus stuff on the outside of the Embankment on the land reclaimed by the Earl of Zetland to reduce the outside slope to 1½ to 1 and leaving the top 12 feet wide 3783 yards. The metalling of the top 10 feet broad and 6 inches deep will require

Mr Crichton stated that he had received a letter prohibiting the Company from erecting a Depot for Pig iron or any other article. Also insisting to have the Remainder of the Old Grangeburn being filled up accordingly to agreement. That the Tunnel at the Pansteed Green shall be lowered as a Matter of right and not as a matter of favour, and that the measurement of the ground occupied by the Company in the formation of the Embankment ascertained to enable the Earl of Zetland to ascertain the Rent to which he is intitled from the Company at the same rate as the other ground which they occupy in the Grangemouth Improvements. Of all the arrangements that was ever entered into by the two parties I must say that the one entered into by the Forth and Clyde Canal Company must appear the most ridiculous. In the first place that of the Old & New Grangeburn, any unprejudiced persons would very naturally support they filling up the old Grangeburn, after the New Burn was cut and finished, this an exchange according to the number of Acres brought with cultivation would have been considered as equivalent for the New Grangeburn, and any other parts of the Improvement got from the Earl. But no, this does seem to be the case. The Company is bound to fill up the Old Grangeburn which contains double the quantity of ground that the New Burns require at an expense of Two Thousand Pounds, and the Company are not only bound to be at the expense but must pay for the ground occupied by the New Grangeburn at the same rate as the ground which is required for the Dock and other Improvements. Then it appears that the Company have no right to erect a stone house or depot on his Lordship's property or, I should rather say, on the Company's property from what they can charge a farthing of

dues or rents. But all the circumstance connected with the Transactions, that of demanding a rent for

the formation of the Embankment which have cost the Company nearly Ten Thousand Pounds and acquired to the Earl of Zetland several Acres of Land, that he should demand a Rent for the ground occupied by the Embankment is the most preposterous.

## Saturday 27 January 1844

Mr Thomson remained and went over the Forth, landed at Longannet, travelled along the shore East to the Blair to ascertain whether The Moss which is brought down the Rover is converted into Mud and is the cause of so much accumulation in the River & Elsewhere. Ordered a sample from different parts of the River to be taken and put into Boxes. Employed Mr Stuart to discharge the **Dredge Boat**.

## Monday 29th

This day is very unfavourable, blows hard with rain. No work after 12 o'clock.

#### Tuesday 30

This day still continues very Boisterous.

#### Wednesday 31st

I may say that this is the first morning in winter we have had this season we have snow during the night, wind North with frost. No hands at work this morning.

## FEBRUARY 1844

## Thursday 1st February 1844

The frost still continues, no men at work except the Carpenters repairing carts. Reid at the Basin Bridge. Went up to No. 16 inspecting the works.

#### Friday 2nd

Considerable fall of snow during the night. William Ferguson Lock Keeper at No. 14 & 15 was discharged from his situation it having been reported that he was in the practice of taking coals from scows in passing through the Locks. Ordered David Hall to employ John MacKay as the Old Servant in the mean time.

## Saturday 3<sup>rd</sup> February 1844

Weather continues very moderate. Carpenters employed in removing all the timber that can be got out without interfering with the Pump Engine Shed so as we may get the pump wall filled up. It is a great pity that we have not been able to get the pump out at least as far down as the working Barrel.

# Monday 5th

We got out the remainder of the timber which could be got at from the pump framing. Went to Port Dundas with James Bryce. Met Mr Crichton and Readman, agreed that we should commence and sink the Tunnel at Pansteed Green to the depth required by Mr Borthwick, and to keep an account of the men's time employed at the same so as the Earl of Zetland may be charged the expense. In consequence of intimation having been given to James Bryce that the Company have no further need of his services, he presented a letter stating the time he had been employed very nearly thirteen years and hoped the Company would provide some other situation for him. Mr Crichton promised to lay his letter before the Committee for their consideration who are to meet tomorrow.

## Tuesday 6th

We have had the most severe frost during the night that have been felt this season. We had the *Hercules*, *Vesta*, *Ice boat*, *Cyclops* and the Lighter *Barberea* paid out from the edge of the Large Lock, but owing to them being placed rather far South we did not get the run of the water from Lock to scour away the near quantity of Mud I expected.

## Wednesday 7 Feb 1844

This day looks like a change, sleet & snow for part of the day. We had a considerable quantity of the Mud Cleared away this morning and some number of vessels laid for that purpose received Six Circulars from Mr Readman to be forwarded to the following Quarries, viz John Steel – Blair, D. Angus - Longannet, James Taylor - Bantaskine, Robt Nesta - Grahamstown, James Lawrie - Kilsyth, and Mr Russell - Auchenterre, which was forwarded.

## Thursday 8th

This day is very changeable, occasional showers of sleet.

## Friday 9th

Heavy showers, sleet fresh. Mr Crichton was here today, went over to that part of the Old Grangeburn which the Earl of Zetland still insists the Company to fill up after they have been at such an extraordinary expense in filling up the Burn which have been done. To inspect the part of the adjoining ground which is to be allowed to be taken the surface of which is to be laid aside and the remainder to be taken off to a certain depth required to fill up the Burn. Went up to Mr Borthwick to ascertain if his Lordship is still inclined to allow the Earth on the pond to be taken for that purpose. Mr Borthwick stated that his Lordship, in consideration to the Company having been put to so much expense with the Burn already, that he will have no objection to the company having that benefit, but as the ground in question was now in preparation for a crop of Beans, it will rest entirely with the Tenant whither he will allow the surface to be removed before the Crop is taken off the ground.

Mr Crichton agreed with Peter Feely to remove the overplus stuff east of the Grangeburn to make up and finish the embankment at Eight pence per Cubic yard, the measurement to be ascertained by Mr Black, James Bryce to be paid to the term.

#### Saturday 10 February 1844

Severe frost during the night and likely to have a severe storm, wind N.E.

## Monday 12

This morning is very quiet. Snow during the Night. George Calvin's Men commenced to cut the Bank for the purpose of lowering the Tunnel at the Pansteen Greens, which was formerly put in to carry the surface water off the Earl of Zetland's Lands, but is now found to be too shallow by 3 feet – the depth required by Mr Borthwick.

Another of the Chains brock for working the South Up Gate of the large Lock and it was with great difficulty that we got a link put in owing to the end being fixed to the Gate below the tide and only 9 inches attached to the Gate.

# Tuesday 13

Calvin's men at the Excavation of the Tunnel and I am happy to say that we got it lowered 3 feet 4 inches and covered above four feet, and expect to have all finished tomorrow.

### Wednesday 14

Weather still moderate. Received a letter from Mr Readman stating that David Angus, Langannet, have got the furnishing of the stones for the Embankment at 1/6 pr Ton.

# Thursday 15th February 1844

Weather still moderate. Mason & Labourers placing the stones for Chains protecting standerts, etc.

#### Friday 16th

Blows fresh from N.W., fresh weather, Hurricane. ?? Mason placing the protecting stones. J. Morrison died.

### Saturday 17th

Weather moderate, changeable. George Calvin's men after being put out at the Embankment commenced to form a Path on the top of the Embankment east from the Lock.

#### Monday 19

A continuation of Rain since Saturday. This morning the wind N.E. and the hills again covered with snow and appears very unsettled. The lands south of the Lock is considerably inundated from the heavy fall of rain. We will therefore be under the necessity to put in another Tunnel through the Grangeburn to prevent damages to the Company.

#### Tuesday 20th

The frost have been pretty severe during the Night. Men employed in placing the **Dredge**, **Vesta**, and with the view to have another trial of scouring away the Mud from the Lock entrance. I have now considered that in place of an additional tunnel through to carry off the surface water through the Bank

into the Grangeburn, that by Cutting a Drain across say 40 feet east from the end of the Dock Wing Wall south into the present ditch with a Tunnel through the embankment, that it will not only carry surface water off the lands more effectually, but will in a great measure assist in clearing away considerable portion of the Mud from the entrance of the lock. A plentiful supply of water can be obtained by putting in a sluice Tunnel through the Junction Canal South bank and conveying into the present ditch. We had the most effectual clearance of the Mud this tide since the commencement, and expect tomorrow's tide to have a complete clearance parallel with the Slop of the Embankment.

#### Wednesday 21st February

We was this morning rather disappointed in getting such a clearance of the Mud in consequence of the *Vesta* being carried away with the run of water from the Dock. I have therefore ordered the *Grangemouth* to ly on tomorrow with a Cargo of stones to make another trial. Shower of snow during the Night, hard frost during the day, Wind N.E.

## Thursday 22<sup>nd</sup>

We had a pretty good Tide this morning but I find that we will not be able to get a proper clearance until we fill up the north side, which still continue deeper than the channel straight out from the entrance.

#### Friday 23rd

Frost still continues, Wind N.E. with appearance of snow.

#### Saturday 24

Great fall of snow last Night, rather fresh this morning, Wind E by N, little frost in evening.

#### Monday 26 February 1844

We have a very heavy fall of snow during yesterday and today, wind blows fresh from N.E. with frost.

#### Tuesday 27th

Frost very severe during the night. Dock completely froze over and so much ice in the Canal that we have been under the necessity for the first time this Season to open up the Canal with the **Ice Boat**, which was taken up to No. 16 and returned with two of the Company's horses and two assisting from Alex Morrison.

#### Wednesday 28th

Gentle frost this morning. Ordered a mere punts to be put at the North entrance east from the North Wing Wall to enable us to get the run scoured out in the Centre east from the lock.

#### Thursday 29th

Ordered George Calvin to get that part of the North Embankment opposite the Lock entrance, which is now in danger breaking through in to the field, to be faced with stone. Went to Port Dundas, met Mr Crichton & Readman, along with Messrs McCall, Forrest, Craig, & Wilson, and consulted as to what is absolutely necessary to be done in the Works on the Canal during the Month of March. I stated that a Number of the Lock Gates were in a very weakly state and the sooner that a lot of New Ones were got and put it the better. Mr Crichton is of the same opinion & Robert Wilson was ordered to proceed without delay to get Gates made both for the East & West district. Ordered that all the bulky materials should be got from Port Dundas and that the two Carpenters, Tophill, should come here so as to be under my immediate charges, etc. Mentioned that two Masons will be required and two Labourers for repairs of the Locks.

## **MARCH 1844**

#### Friday the 1st March 1844

George Calvin's men at the North Bank and Cutting of the punt Slip at North Wing Wall. Received a letter from Mr Crichton stating this, he had a letter from Mr Dickson withdrawing Lord Zetland's opposition to the Pig iron Wharf at the timber Basin and requested that I should therefore proceed with it as fast as possible. Wrote to John Club, John Bryce and Alex Marshall to give in estimate to Mr Crichton on or before Monday next the 4<sup>th</sup> instant for the retaining Wall. The Company to furnish the materials.

## Saturday 2<sup>nd</sup>

Made a survey of the Canal. Ordered a storm fast hook to be put in on the North Side of Lock 3 at the up Stream Gates in consequence of the Old one being in a dangerous state for bringing up vessels in a Gale of Wind. Ordered a Cargo of Rhine stone Metal from Auchenterre by the *Grangemouth* to be put on the Road between Camelon bridge and No. 16. Ordered David Hall to take the dimension of the different kind of Ashlar that is required for the Hollow Quoins and to go West to Mr Paterson, Bonny Bridge, to ascertain if they have timber of proper length's fit for the erection of the Jetty at the Timber basin. Examined the Crane erected at Abbotshaugh for lifting the Timber out of the Canal for the Saw Mill. Think that a Crane of that description can be erected for about One Hundred Pounds to carry 5 ton.

## Monday 4th March 1844

It rained almost incessantly yesterday until evening when the wind veered round to the N.E., inclines to frost this morning. The three loaded punts sunk last week east from the lock we got up only one, morning.

#### Tuesday 5th

Sever frost during the night. Ordered four Thousand bricks from Kerse Brickfield for the new house by the *Grangemouth*, and take on board all the track Cast iron to Kirkintilloch and Malleable Castons to Underwood for the Loanhead Forge.

We had another scouring of the Mud from the entrance of the large Lock from which in great quantity of Mud was swept away, but we have not got the entrance to the depth of the River, but is in hopes that we will be able tomorrow to have a good clearance.

#### Wednesday 6th

George Calvin's men at the Embankment, ordered the Punts to discharge on the North side into the Cargo gullet so as to prevent the water poring through the stones which is laid there. Ordered the Boat off to Charlestown for a Cargo Lime shells, having received a letter from Mr Menzie that he has lime on hand. John Club informed me that he had got a letter accepting his offer to build the retaining wall for the Pig iron Wharf.

# Thursday 7<sup>th</sup>

Made survey of the Canal. Considers it necessary so soon as the weather permit to put one Corner Stone in the Up North corner stone 6 feet by  $3\frac{1}{2}$  & 16 inches thick No. 3 Lock. In No. 4 Lock one Hollow Quoin 3, 10 & by 6 feet & 16 inches thick, one Corner Stone North side 6 x  $3\frac{1}{2}$  & 16, Two Copes  $4\frac{1}{2}$  & 3 & 16 Cope next the Hollow Quoin 3 & 10 x 3.6 & 16, One Cope  $4\frac{1}{2}$  &  $3\frac{1}{2}$  & 16, two Cope 4 & 3, 3 & 16. Observed a vessel aground at the tail of No. 7 Lock and will required to be deepened so soon as we can get the **Dredge Boat** from Port Dundas. Find that we can be supplied with Rhine Stone corners & Anchor Stones which are lying at Tophill No. 13 & 15 Locks.

## Friday 8th

Gave orders for 5 pce stone Cope from Mr Laurie Brighton for Lock No. 4. This day became very unfavourable in the Afternoon.

# Saturday 9th

We have had most severe Gales of wind this Forenoon upon the S. West, which made a complete passage over the embankment and has Blown down the Signal mast on the Outer Beacon, but a more serious affair appeared to take place and that was in the North East side of the timber basin, most providentially the greater quantity of the Timber was blown over to that side. If that had not been the case I am almost certain the broad side of the embankment would have given way and the consequence would have been awful. Mr Moncrieff was here on a most shameful business.

## Monday 11th

Weather little more moderate, but rained a good deal after breakfast.

#### **Tuesday 12**

Weather very changeable, snow during the night, and snow and sleet between 10 & 12. Now went along the Canal to Tophill, took notes of Lock No. 6. Building in a very bad state, particularly the first

course of Ashlar which was pointed last year with Roman Cement. That mode of repairing buildings of such description can only serve to blind the eye and expend money for no purpose.

## Wednesday 13th

Very severe frost during the night and this morning, but it became more mild in the after part of the day. George Calvin's men levelling on the North East side of the Lock. Received the Life Buoys by Mr Carter from Mr Crichton.

### Thursday 14th

This day appears to be favourable, but it commenced to rain and the Wind shifted in the evening to N.E. Surveyed up to Tophill. Masons employed at Burnhouse Tunnel S, side.

## Friday 15th

It has blown a heavy Gale from the N.E. since last night and continued during the day with showers of snow.

#### Saturday 16

Wind and snow still continues, frost during the night and still continues unabated during the day.

#### Monday 18

I am sorry to say that the west end of the Tunnel from the Dock entrance Bridge to the Harbour appears to have given way at or near where the Cast Iron Pipes join the Brick Work. I have therefore ordered George Calvin's men to commence to excavate to the depth so as we may ascertain what is the cause of the damage. Gas pipe brock last night. I therefore ordered the man to attend and not allow the Gas to put on for the Dock.

#### Tuesday 19 March 1844

We have had another turn at scouring the Mud away from the Lock entrance, and it is most astonishing to observe the quantity that have accumulated since last springs, and I have no hopes of it getting better until the River is Confined on both sides or a pier run out on the North side as far East as the one on the opposite side if not further. Calvin's men as above.

# Wednesday 20th

George Calvin's men at the Embankment during the tide, at the excavation for repairs of the Tunnel on the After part of the day, and after a few at the excavation of the found for the retaining wall for the Pig Iron Wharf at the Timber basin. In consequence of the tide not falling so low from the easterly wind this morning we got nothing done to scouring away the Mud. Masons at the Boiler house & office.

#### Thursday 21st

Frost very severe during the Night. Calvin's men at the Embankment and Digging out for the Tunnel. We had a good tide's work at the Mud today. We have now got the entrance from the River to the Lock as deep at the River, but I am afraid that we will not be able to keep it clear during the Neep tides.

## Friday 22

This morning is soft with occasional showers of rain. And in the evening the raid continued without intermission to 6 o'clock this morning, the weather a little more mild.

#### Saturday 23 March 1844

It rained heavily during the night and the day appears clear and warm. Calvin's men got down to the Tunnel and finds that the brick next the end of the Iron pipe have given way, say about a dozen, which I think is in consequence of the want of an Air Funnel immediately where the brick have given way. Mr Crichton was here today.

## Monday 25th

The weather is most unfavourable this morning, heavy Rain during the night, which prevents the work being carried on in filling and repairing the Tunnel until after Breakfast. The weather continued very changeable with showers sleet during the day. The men, however, continued at work and we got the Tunnel repaired and the Air Pipe built along the height of the tide.

## Tuesday 26th

This morning is much more favourable with sunshine. Mr Crichton arrived here at One in expectation that he was to have met Mr McNeill. Went down with him to the extremity of the embankment and was surprised to find that the Mud had accumulated so much on the South side since he was last here. On our return Mr MacNeill and another Gentleman arrived. Went round and examined the works, appeared satisfied that the building was standing so well. Agreed to the Pump Engine being removed to the South side of the Lock with the view to pump water out occasionally to have the Mud cleared out. Went down to the extremity of the embankment, was satisfied with its appearance, except at the extremity where the hand laid stones are washed considerably out and requested when stone shivery to be used, pinning in up the stones.

## Wednesday 27th March 1844

George Calvin's men at the embankment. The day rather unfavourable, heavy showers occasionally. Ordered the **Dredge Boat** into the Dock in consequence of William Stewart having to be absent until Monday burying his wife.

### Thursday 28th

This morning damp, a good deal Sunshine. Ordered the Punts to be taken into the Dock so as to be in readyness on Monday to commence removing the stuff thrown in in front of the Walls. Calvin's men as above.

#### Friday 29th

This day is most favourable. We have had this Season Warm with sunshine. Calvin's men filling up above the Tunnel & planting a part of hedge on North side of the Bo'ness road where the Railway was placed for conveying the stuff to the old Grangeburn.

## Saturday 30th

The Weather still continues most favourable. George Calvin's men at the Embankment and filling up above the Tunnel.

# **APRIL 1844**

#### Monday 1 April

Went with the intention of going to Port Dundas by the early Boat, but the hours being shifted to half past six in place of the usual hour at seven I have to wate on the early train. Met Mr Crichton and arranged with him as to the Pig Iron Wharf. *Hampton* sailed today for Quebec.

## Tuesday 2<sup>nd</sup> April 1844

George Calvin's men at the Embankment, but it came on to rain so heavy that there was no work after dinner.

## Wednesday 3

Rained heavily during the night, but fair weather during the day. Pointed out 150 pieces of Scotch fir discharged from a vessel in the Dock belonging to Messrs A & G Paterson intended for the Pig Iron Jetty. Schooner *Carsess* on entering the timber basin lock struck the North building, started four of the Cope and brock one.

### Thursday 4th

We had another scouring of the tide and it is very surprising that sine last springs what an accumulation of stuff has collected in the entrance of the Lock. The Embankment being now Carried to the height from the outside inwards, we had our punt load of Rails, Chairs & Sleepers, brought up the Labourers, taken off the Chains & removing them to a place of safety.

## Friday 5th

Friday another tide's work clearing away the Mud. Ordered another punt down for Cargo Rail, Chains & Sleepers.

#### Saturday 6

Ordered the *Hercules* & *Vesta* round to Mr Adamson's Dock for the purpose of being overhauled and painted. Joiners commenced to the Roof of the Lock Keeper's & Custom House.

# Monday 8th April 1844

Examined the *Hercules* & *Vesta* in Dock and I am happy to see the state of the *Hercules*, not the least appearance of the Timber or any other thing being in the least decayed. I should, however, be rather afraid of the *Vesta* Upper works. Carpenters laying ways for the punts.

## Tuesday 9th

Carpenters prepairing the Piling Machine to Commence driving the Piles for the Pig iron Wharf. Ordered Mr King, Plumber, to make the lead Gutter for carrying the rain water off the house. The Black Horse took ill of inflammation yesterday at 10am and died this day at 11am.

## Wednesday 10th

Carpenters prepairing Piles for the Pig Iron Wharf. Smiths employed as above. *Hercules* Dredge Boat finds that four plank in the ark are completely gone. Ordered Mr Adamson to put in Pitch Pine in this Place, the original ones in Red Pine.

### Thursday 11th

Carpenters & Labourers Commenced to driving the Piles for the Pig iron Wharf. Was down at the Embankment, is satisfied with the progress made both by Peter Feely and the Company's men. Understand that a man intended to sail with the *Hurricane* this morning was drowned in attempting to go on board last night, there was the name of Gibson, along with him, but I suppose both were so much the worse of drink that the man drowned could do nothing to save himself and Gibson was unfit to render him any assistance. Man's name is Peter Smith, belonged to Kirkwall. Purchased Walls of Target & Red Pine Cog Wheeling, Plank Embankment.

#### Friday 12 April 1844

In consequence of the *Hurricane* having sailed yesterday morning and the Captain acting is so an unfeeling manner as to leave no instruction regarding the poor fellow Smith's Corpse, and no person looking after the body, to have it intered. I ordered a Plain Coffin to be made and a Grave dug in Falkirk Church Yard to have him buried tomorrow provided none of the friends make their appearance. The length of the Embankment finished inwards is 260 yards, this day's work 26 yards – say 286 yards.

### Saturday 13th

Men employed at the Pig Iron Wharf. Calvin's men at the Embankment. I was happy to learn that the poor man Smith's Brother, his wife's Brother, his wive's Uncle, and that, made their appearance and had the Corps removed to Falkirk Church Yard for interment. They appear to have resolved to have the Captain and Crew examined on the vessel's arrival at Glasgow and make the Owner's pay, and pay the expense of the funeral.

## Monday 15th

Sent the *Grangemouth* Scow with a Cargo Gravel off from the South side of the Dock with orders to bring up in Cargo Rails, men employed at the Pig iron Wharf. Ordered the *Cyclops* to take a Cargo Gravel to the Embankment. Sent 3 Red Pine 4 in Plank for the embankment to enable the people to wheel their Cargoes to the top of the Embankment.

#### Tuesday 16th

In consequence of the Smith's not being able to furnish the Angle ring for the Piles as fast as to keep the drivers employed, ordered the men to remove two half logs to the Punt ship to finish out the length of the ways.

## Wednesday 17th

Men commenced after breakfast to the Pile driving. Sorry to observe that the dry rot have commenced on the timber of the *Hercules* to plank having to be taken out on each side of the Ark. The dry rot appears to have taken hold of the timbers there. We have had two plumbers employed at the **Vesta** to remove the west pipe which was entirely gone from the after part to the fore part of the Boiler. Got two Brass Bushes for the main shaft, the Old Ones being entirely wore through. Ordered Mr Adamson to repair the paddle floats and if possible to give them three inches more grip of the water.

## Thursday 18th

Went down to the out end of the Embankment. Order George Calvin to have all the Waggons which is not required by Peter Feely, and such as are out of repair, to be collected together. Also the Rails, Chains & Sleepers, which is lying about and put on board the Scow now loading at the embankment. David McCall commenced to paint the works this day. The length of the Embankment finished inwards is now 426 yards, being at the rate of 28 yards per day.

#### Friday 19

Men employed at the Pig Iron jetty. Agreed with **Mr Hardie** to let him have the Fish bellowed Rails at Three Pound Fifteen shillings per Ton, and the Chairs at three pounds per.

### Saturday 21st

Men employed as above.

#### Monday 22 April 1844

The weather continues favourable. Calvin's men at the embankment. Carpenters and labourers at the Pig iron Wharf, *Hercules & Vesta*.

#### Tuesday 23rd

We have taken the *Hercules & Vesta* out of Mr Adamson's Dock and put into the Dock for the purpose of being near the Blacksmiths' to have the Bucket pins & bushes put in a proper state of repair. Mr Crichton with Mr A. Baird came here today to examine the progress we have made with the Pig Iron Wharf. Both appear satisfied with the progress we have made and that it is likely to answer the purpose well. Returned by the train at 2pm. Calvin's men on Friday, Saturday, Monday & today have finished 124 being 550 yards of embankment.

## Wednesday 24th

Men on board the **Vesta** and **Hercules** employed in taken off the Buckets for the purpose of having their pins and links repaired. I find that a great number of the pins will have to be replaced, and most of them covered with steel, as also the link to be new bushes.

#### Thursday 25

Carpenters finished the pile driving and commenced to prepare for the stringers.

#### Friday 26

Carpenters at the Pin Iron Wharf. Smith & men on board the *Hercules* and *Vesta* and preparing the Iron work.

# Saturday 27<sup>th</sup> April 1844

Progress made on the embankment is 600 yards, which is not the usual quantity, owing to the men being employed in packing the rounded extremity of the embankment.

## Monday 29th

Men employed at the Pig iron embankment. Calvin's men at the facing. Smiths & Labourers at *Hercules & Vesta* Iron Work.

#### Tuesday 30th

In consequence of receiving intimation I went to Port Dundas and met Mr Crichton along with Messrs McColl, Forrest, Craig, & Wilson, to consult regarding the Works and hand in our estimate of Materials required next Month for the works. Mr Crichton requested that should report on the manner that the North bank ought to be carried out, and the difference of expense between slab & Rine & Stone provided and the Materials can be got. Went to Dunglas.

# **MAY 1844**

## Wednesday 1st May 1844

Returned from Dunglas to Clydebank and met our Smith where I had arranged to meet him for the purpose information regarding the method of making and repairing **Dredge Boat** Buckets. I find that they require to have them twice every season.

#### Thursday 2

Carpenters at the Pig Iron Wharf. George Calvin's men at the embankment. Masons at the Privy house, etc.

## Friday 3rd May 1844

We had another clearance of the Mud today. It is really wonderful where all that abominable stuff collects from the entrance being completely filled up again, and if not scoured away every stream tide the Lock would not quite pull and the Gates become.

#### Saturday 4th

We commenced to Clear away the Mud from the flood Gates today, but we got nothing done further than a great proportion of the Mud Cleared away from the South Gate.

#### Monday 6th

Attempted to close the North Flood Gate this morning at high water, but failed and will commence to clear away the Mud at low water. We have now got them shut with very little leakage considering the great quantity of Mud collected. We have now proceeded 800 yards inwards with the embankment at the rate 22 yards a day.

## Tuesday 7th

Men employed at the Pig Iron Wharf. We had another clearance today and got the flood Gates shut perfectly tight.

## Wednesday 8th

Having found that the Mud have accumulate in the Recess of the Outer Lock Gates, we commence with the Harl & spoon, and it is astonishing to observe the quantity and sold nature of the stuff taken out on the South recess.

### Thursday 9th May 1844

Men employed in Clearing out the Mud with the Harl & spoon, and we have filled One punt with Mud taken from both recesses. Five men have been employed in Cleaning and deepening a Ditch South from the Works since Monday.

## Friday 10th

We commenced in the Recess of the Mud Gates and find a considerable quantity there also, although not to be the same extent as the Outer Gates. Got the South side pretty well cleared out.

## Saturday 11th

The *Vesta* being now in a complete state, ordered her out of the Dock with two loaded Punts of Mud taken from the Recesses. Men employed with the Spoon on the North side of the Mud recess. Ordered three Logs Yellow Pine from Walter MacTarget to make out the flooring of the Pig Iron Wharf, and one hundred feet superficial feet ¾ Larch boards for the Canal Barrow cleeding from A & G Paterson, Bonnybridge.

# Monday 13th

Mr Crichton was here today, went down to the out end of the embankment, agreed that all the Gullets should be filled up in the meantime on the North side of the River, and that we should continue as fast as possible to have the South embankment finished. Arranged with John Walker, Farmer, that he should make out a statement of the expense Necessary to bring into cultivation the three Acres are ??? ground which has been used in laying shail Banks on the South side of the Lock. Mr Crichton requested that I should make out a Calculation of what the Embankments have cost since the commencement, and also the rate at which the Punts Cost in delivering the stuff at the back of the embankment.

## Tuesday 14th

Men employed at the Pig Iron Wharf. Calvin's men at the Embankment. Employed an additional Smith to enable us to proceed faster on with the *Hercules* dredge Boat.

## Wednesday 15th

Men employed as above. It has been most annoying to see so many Carts employed in conveying grain to the Railway for the four of five days previous. [see note 15]

## Thursday 16th

The North bank between Grangemouth & No. 3 Lock in several places require to be repaired. The Chain which was removed in repairs of No. 4 Lock building, ordered to be replaced. The Wharf opposite Forganhall Granary is in such a ruinous state that it will be as well to have it removed and the slope put in a proper state, and the stone Wharf opposite Castle Lawrie Mill, the slopes having given way at both ends, will require to be sloped up with stones.

#### Friday 17

We had Messrs Alston, Douglas, Finlay, McColl, & son, Crichton, Readman, McColl, & Wilson, on a Survey on the River Embankment, and it appears to be their opinion that the North side of the River should be confined with slab and Brush, and to save the expense. Mr Douglas found many faults, particularly with the extravagance of the Custom and Lock keeper's house. Mr McColl, one of the Committee was never here before.

#### Saturday 18th

Mr Baird, agent, Mr Lamont, had the assurance to take one of the Punts in the timber Basin and put about 20 ton Pig Iron into it for to load out a vessel in the Dock, and they had only three tone out when the punt upset. The whole seventeen ton in loaded in the bottom of the Dock and will have to ly there until it is taken out with the Diving Bell.

## Monday 20th

We have had a continuation of Easterly winds for this week past with cold frosty mornings and dry weathering draughts, in the after part of the Day we had a great appearance of frost ?? but I'm afraid the prospect is now blasted, and there is now every reason to believe that both the Potatoe & Barely Crop will prove a Complete failure from the Continuation of frost and dry weather. [see note 16.]

#### **Tuesday 21**

The weather still continues as above.

## Wednesday 22

Carpenters in repairs and Coating Roof of Stable with Tar.

#### Thursday 23<sup>rd</sup>

Weather still continues excessively dry and no appearance of a Change.

#### Friday 23rd

Calvin's men employed at levelling that part of the ground and embankment occupied by the Company east from the Lock. Carpenters at the Stables. Mrs Fulton, James Marr.

## Saturday 25th

Ordered the Canal Masons to commence to the repairs of the Wharf opposite Castle Lawrie Mill, the slop have given way at both ends and the stone work require to be carried out and sloped up so as to make the facing to stand. George Calvin's men levelling.

#### Monday 27th

Carpenters employed at the punt slip. Smiths at the **Hercules** Buckets & Pins. George Calvin's at the embankment. Masons still employed at the House flag.

### Tuesday 28th

The weather still continues dry although it rather appears pouring today. The hay & Grass will prove a complete failure. Carpenters employed in taking a punt up the slip for repairs.

#### Wednesday 29th

Masons employed at the house and commenced to the back wall for ??? of the Privy. Carpenters employed at the punt which requires a piece for the end 6 inches thick and the timber heads better secured with bolts through two or three of the Beams.

## Thursday 30<sup>th</sup> May 1844

The weather still continues dry with the wind from the North east. Men employed as above. Intended to have run the water to clear away the mud at the entrance of the large Lock, but the tides are not so low as expected.

#### Friday 31

The Canal **Dredge Boat** is now at Bainsford Bridge clearing out in front of the wharf & we had a pretty good tide this morning clearing away the mud.

## **JUNE 1844**

## Saturday 1st June 1844

Although we had a full moon and Eclipse last night, the weather still continues as cold and dry in the morning as ever. Had another good tide today.

## Monday 3rd

Weather still continues dry. We had another good clearance of the mud today. The Diving Bell arrived this evening for the purpose of having the Pig Iron taken out of the Dock.

### Tuesday 4th

Commenced with the Diving Bell, but I'm afraid from the Pig iron being so deep sunk in the Mud that a great part of it will not be got out. Succeeded in raising only about 2 tons.

## Wednesday 5th

Long looked for have come at last Rain came on at 6am, with wind from the East and continuous until mid day, but it has not done more than mearly refreshed the appearance of the fields.

#### Thursday 6 June 1844

We now find that the Pig iron being so completely bedded in the bottom of the Dock that the expense to take it up is such that it will cost more than the value of the iron, and being under the level of the bottom there is little danger of the **Dredge Boat** buckets coming in contact with it. They managed to get about three tons out yesterday. Went to Bonnybridge to meet Mr Forrest for the purpose of examining the clay at Coudenhill. Was sorry at Mr Forrest not making his appearance. Finds that there is a considerable depth of Clay which will make good Puddle, but mixed with a great proportion of stones which renders it very expensive to work and unless Mr Salmond agree to let the Company remove the Clay at two pence per Ton I will not advise them to bargain for it. I was sorry to learn that a young woman on board the early passage boat from Port Dundas in going out of Castlecarrie Lock got her head most severely injured in consequence of the unfortunate circumstance of her being seated in the fore part of the boat. Her head came in contact between the end of the Cabin and the Gate. I was informed by Doctor Hamilton, he was sent for when the boat arrived at No. 16, that her Collar & Jaw bone is brock, and is not certain but the back part of the head is much injured and skill fractured, but cannot be positive as to the latter. The symptom is bad from blood oozing out of the ears.

Alex<sup>r</sup> Marshall, Banksman, was drowned in the Canal opposite Mr Ballock's Lime kilns east from No. 3 Lock when in the Act of removing from a Punt discharging stuff taken from the **Dredge boat** at present employed there. He had got under the punt, as he never made appearance and was not found until about half an hour after, when life was quite extinct. Not having any friends that I am aware of in this quarter, except his poor Widow Mother in Stirling, I have ordered a Coffin for him, and wrote to a Mr Crystle in Stirling to commence the mournful account to his Mother.

I have ordered the **Dredge Boat** with the Diving Bell to desist after having taken out only about eight ton of the Pig Iron which will do little more than pay the expense.

#### Friday 7th June 1844

Ordered a Coffin for Alex<sup>r</sup> Marshall and sent the Corpse to Stirling where his Mother and other friends reside for interment. Calvin's men at the Embankment which is now finished 100 yards west from Panstead Greens. The weather continues favourable with heavy showers.

#### Saturday 8th

Carpenters employed at the punts and attending the tide. Six of George Calvin's men levelling at the New houses.

## Monday 10th

I employed John Steven as a Banksman along with Alex<sup>r</sup> Muir, vacant by the death of Alexr Marshall, mearly as a trial.

### Tuesday 11th

Calvin's men employed in finishing out the Embankment removing stuff with the sandpoles. Stuff to the Grangeburn and levelling at the New house.

### Wednesday 12th

Went to Port Dundas to arrange with Mr Crichton relative to the manner of men to be employed after Saturday, but was sorry to find Mr Crichton was from home. Met Mr Readman, agreed that he should come on Saturday to see the men paid as I understand that Neil McCulloch have been at the Office making some low insinuations as to the way the men are paid in the office here. That the men do not put their name to the pay sheet, & other most abominable stories mentioned in regard to the Contract which the Company is taken in for the different Materials that in the Schedule for the supply of Timber it should be inserted the measurement to be taken from the original Searching Boat.

#### Thursday 13

Carpenters employed at the punt removing the seapit & Timber Work for the little house Roof. This day have blown a very severe Gale from the N. West.

#### Friday 14

Carpenters at repairs of the punt. Calvin's men at the Embankment & Levelling.

#### Saturday 15th

Messrs Readman came here with the early train this morning and brought the cash to pay the men, and Mr Crichton came with the 11 o'clock train from Glasgow. Went down to the end of the Embankment, appeared satisfied with the progress made with finishing the same. Examined the Pig Iron Wharf in the Timber Basin. Proposed that we should lay the iron regularly on the wharf so as to make a fair trial ascertain if it will stand the pressure of the weight which Messrs Baird may incline to out on it. Mr ??? went over to Kincardine with the *Vesta* and Mr Crichton with the 4 o'clock train from Falkirk. Discharged the three masons and fourteen labourers.

## Monday 17th

The Canal **Dredge Boat** employed between the two Timber Basins. It came on to rain this day at 12 o'clock and continued almost without intermission.

## Tuesday 18th

The rain still continues. No work this day with the Labourers. Ordered the **Vesta** to the Timber Basin for the purpose of tugging the punts which is loaded in the Basin from the Canal to the South side the timber Basin. We have now got as much rain as will satisfy the minds of the farmers. 6 punts.

## Wednesday 19th

Still continues soft and moderate. The *Vesta* was employed in tugging the punts through the timber Basin loaded by the Canal **Dredge Boat** from the Basin. 10 punts loaded.

#### Thursday 20th

Weather still continues soft, heavy showers during the night. Loaded 13 punts from the Basin.

#### Friday 21st

Calvin's men finishing the Embankment of the Grangeburn entrance Bridge. Loaded 13 punts from the Basin.

## Saturday June 22<sup>nd</sup>

Weather continues soft & favourable. George Calvin's men at Grangeburn embankment.

#### Monday 24 June 1844

George Calvin's men employed at the Bridge & one Boat had Rubble from Longannet for the N. side.

## Tuesday 25th

Ordered the engineman to get all the pipes etc taken off the Pump Engine and laid carefully into the store house to prevent them being injured or taken away. Weather cold with heavy falls rain. No work with the Labourers.

#### Wednesday 26

This day is much more favourable. Ordered George Calvin's men to have Materials prepaired to commence to the North side from where we left off last year at the west end.

### Thursday 27th

Calvin's men employed at the North Embankment. Carpenters in repairs of a punt.

### Friday 28th

Men employed as above.

## Saturday 29th

Went to Glasgow, met Messrs Crichton, Readman, McCall, Wilson, Forrest, & Craig, in the Canal Office. Agreed from this day that the men employed here shall be paid once a month in place of fortnightly as formerly. That the permanent men be kept in a separate sheet from the extra men, and that we should proceed with the North Embankment as proposed by Mr Crichton by orders of Committee.

## **JULY 1844**

#### Monday 1st July 844

We had a good tide today and run off a considerable quantity of the Mud. Got up another of the punts on the slip which was damaged last year from the strong Northerly gale at the Embankment.

## Tuesday 2nd

In consequence of the Chain for opening the South upper Gate having brock we was under the necessity to run of the water until we had only 12 feet water in the Dock to get the Chain repaired and taken though the well. It was a sad mistake in the Chain Wells being kept so low, and we will be under the necessity to lift the Chain secured to the gate for having them shut.

## Wednesday 3

Ordered George Calvin's men after being finished with the Cargo Gravel discharged today to commence in the formation of the Saw Pit. Carpenters in placing the protecting Chain across the entrance of the from the Dock.

#### Thursday 4th

Met Mr Crichton in Falkirk and returned with him to Grangemouth, agreed that we should commence to clear the Mud out of the Harbour, which have accumulate to a very great extent. That we should straight the slope of the Junction Canal on both sides which will have 21 feet on the south, and – feet on the North sides for Track Paths. This will make the width of the Canal --- feet at the surface.

#### Friday 5th July 1844

George Calvin's men discharging *Cyclops* with gravel along the top of the Bank east from Grangeburn entrance and levelling at the new Lock Keeper's house & Saw Pit. We have shipped the small high pressure Boiler from the other Articles with a three foot Kneed Pipe which was not used at the large Lock on board of the *Cyclops* to be sent to Port Dundas. The Boiler is intended to be used on board of a Boat which is to build at Paisley as a tug for tracking the passage Boats.

## Saturday 6th

The weather continues most favourable. Calvin's men discharging the Grangemouth with earth in the Grangeburn. Labourers employed in clearing the large Portable Crane with the view of having it painted or tiered.

## Monday 8th

Carpenters employed in clearing out the shop and putting up shelf for holding the different Utensils. Was at Tophill and examined Union Canal Steamer.

## Tuesday 9th

In consequence of receiving a letter from Mr Readman I went to the Bog and examined the leak at the Iron Tunnel where Mr Forrest's men have been at work for a considerable time endeavouring to stop the leak. There appears no danger from the bank giving way and I trust Mr Forrest will be able to stop the leak in course of a day or two.

## Wednesday 10th July

We have had the first arrival today a Brig with Timber for Messrs J & A Thomson from America. Men employed in cleaning the large Moveable Crane and giving it a Coat of Paint & Red Lead. Sorry to hear from Mr Forrest that he has not been able to stop the leak in the Bog. 2 masons at the Saw Pit.

### Thursday 11th

Men employed in cleaning the Machinery Chains. Carpenters at the punt repairing Barrows. George Calvin's men at the North Embankment. We had a very heavy fall of rain this forenoon.

#### Friday 12th

Men employed as above.

## Saturday 13th

In consequence of having heard that Colonel Ingles proprietor of Kerse Hill had put in a drain Tile and filled up the ditch on the Company's boundary east of No. 5 Lock, I went up and found it to be the case. It was also stated that he had removed the March stone at the N. East corner of his park. This I do not believe to be the case, having no recollection of a March stone being there.

## Monday 15th

Carpenters employed at the punt. Calvin's men at the North Dyke. Received letter from Edinb.

#### **Tuesday 16**

Carpenters employed at the Punt. Men at Machinery. Calvin's men at North Bank. Had visit from Earl of Zetland.

#### Wednesday 17<sup>th</sup> July

The large ship *Merimickes* 600 Tons arrived in safety into the Dock loaded with Deals, Battens & Timber from America. Had a visit of the Earl of Zetland. Mr Dixon Borthwick, and Mr MacKay. Was astonished to ascertain from Mr Borthwick that the Company have not so much as the right to Build a Dwelling house upon their property. He stated that he was complained on for allowing the House being erected. I stated that he might as well say that the Company had no right to build the Dock. Was it understood the Dock was to be attended to without men, and was there no shelter to be allowed for the Lock Keeper. Besides, the Company is bound agreeably to Act of Parliament to furnish accommodation for the Custom People and should like to know where the Company is to erected a house unless it is on their property. Walked along the Bank as far as the Panstead Green. Mentioned that now was the time, if his Lordship intended to take in that valuable property, to carry it into execution, when the Company's men was employed in forming the North Embankment. His Lordship enquired as to the probable expense it would take – I answered Forty Pounds pr. Acres.

## Thursday 18th

We had the *Vesta* employed in removing the extra punts which was loaded in the basin, five in number, round the South Embankment. Had the Company's **Dredge Boat** taken into the timber Basin, having taken out of the Basin 204 punt loads stuff, which is laid into the Earl of Zetland's Park South from the timber Basin, say 2500 tons.

#### Friday 19th July 1844

George Calvin's men employed at the Beeching South side east from the large Lock.

**Dredge Boat** discharging five punts in the Afternoon at back of the South Embankment from the Basin. Fine showers.

## Saturday 20th

Ordered the Lock Keepers to commence to dress the other Sheer Poll for a Signal Mast to be erected at the North East end of the Lock. *Vesta*'s Men Painting the Machinery. Weather most favourable & exceeding warm.

#### Monday 22

Commenced this day to weigh the Rails & Chains belonging to the Company sold to a Foundry Company in Sunderland. Discharged from punts on the slope of the Bank North side – in way of the Course of the old fair way of Carron River.

## Tuesday 23rd

Ordered George Calvin to leave an open space in the North Bank for the purpose of allowing the punts a passage through to discharge. Shipps on board *Annie* of Montrose Railway bars and Railway chains.

#### Wednesday 24th

In consequence of it being Neep tides, we did not get the punts through the opening made at the North Embankment opposite the entrance of the Grangeburn, and sent them round the South Embankment. It came on to rain excessively at Breakfast and continued to 1 o'clock. 2 Carts Lime from John Fraser.

#### Thursday 25 July 1844

Sent eight punts loaded in the Timber Basin to the South side of the Embankment. We had a sale of the *Miramiches* Cargo which sold high, the cargo being excellent in quality yellow pine sold at --- Pr foot Battens at --- Pr, Deals. Rained heavily in the Afternoon.

#### Friday 26th

Rained incessantly during the night and will now prove most unfavourable for the Crops if it continues much longer, which is most Luxuriant. Still very warm.

#### Saturday 27th

Very fine day. Carpenters employed when not at the Lock at the Signal Mast. Ordered the **Hercules** Dredge Boat round into the Harbour to be in readiness to commence clearing out the Mud. We had eight punts conveyed through the open space of the Bank opposite the Grangeburn entrance, but they did not get discharged in time to return, the tide having fallen. Martha a Son at 3pm.

## Monday 29th

Ordered the Canal **Dredge Boat**, which is now finished in the Timber Basin, round to the entrance of the Bonded Basin, which is in want of being cleared out. The *Hampton* arrived in the Dock today with a Cargo Timber from Quebec.

#### Tuesday 30

It came on to rain very heavily after Breakfast. Rather concerned to observe a considerable run of water through the Tunnel at the South west corner of the Timber Basin. Ordered a punt to be discharged with Clay, but did not appear to have much effect. Ordered two scows to be loaded off the North side at the punt slip and discharged in the Basin also, but the weather being so unfavourable, could not to it today. We have now twenty vessels in the Dock with Timber, Grain, and the greatest number loading Pig iron.

#### Wednesday 31st

Went to Port Dundas, met Messrs Crichton & Readman. Went over the list of the Artificers & Labourers Wages and marked off a few which can be dispensed with. Met Mr Haggart, Bantaskine, agreed that the Company should level that part of the Ballast hill which is now cleared and, as the Company formerly agreed to be at one half of the expense to raise the wall between the entrance to the Ballast hill and Lock No. 12, ordered that I should ascertain the quantity of ground belonging to the Company inside the wall [see note 17]. Agreed to meet Mr Haggart tomorrow at One o'clock. Mr Crichton Agreed that we should build another Necessary on the North side of the Dock. The Brig *Inconstant* of Aberdeen on entering the Sea Lock bounded off the North Building and struck the South Lower Gate – Brock Stantions, Cast iron Lockets – Damage charged £3.16.8.

# **AUGUST 1844**

## Thursday 1st August

Examined the house at No. 16 intended for the Clerk which attend to the Goods shipped and delivered at the store house. Ordered Robt. Aitken to get the house Lathed & Plastered with windows etc at the sum offered by £12. Met Mr Haggart and examined the ground which he wishes to be levelled and promised to have it done as soon as possible. Thinks it will be proper to have done by contract. Mr Haggart mentioned that he understands we were in agreement with Mr Salmond for his hill at Bonnybridge and, as there still remains a portion of the ground belonging to the Company, he will have no obligation to pay the Company for the same quantity may have at Bonnybridge, provided the Company and Mr Salmond may come to an agreement. I stated that I would consult Mr Crichton on the subject.

## Friday 2

Carpenters at repairs of the Gate damaged by the *Inconstant* of Aberdeen. Commenced with **Dredge Boat** to clear out the Harbour. Loaded and discharged 9 punts.

## Saturday 3<sup>rd</sup>

Mr Crichton was here today and had a letter from Mr Dixon, man of business for the Earl of Zetland, complaining of the insufficient state of the new Timber – see Copy of his letter and my reply. A Schooner in taking the Lock this Afternoon, first of the tide with the wind from the East and before the Gates were open, came up with such force into the entrance as snapt the Chain. The vessel came first upon the Gate, carried away with the Rails on the North lower Gate, brock and started the foot Gangway. The name of the Schooner is the **Lovewell**, Achibald, Master, & Stantions, 2 main Rails and small rails will have to be replaced. Damage handed to Mr MacKay Five pounds four shilling.

#### Monday 5th August

Men employed today in endeavouring to stop the leaks in the Tunnel and West embankment. Found out the leak in the Tunnel and after putting in 2 Bags full of Clay and covered with a Boat load of puddle I find the Leak completely stopped. Found two or three very small leaks on the West side, but I am of opinion that the great evil in the planting proceeds from leakage from the Bonded Timber Basin which could not be observed before the water was let in to the New Basin; all the leakage having escaped into the old Grangeburn being so much under the level of the Bonded Basin. We have now thirty four vessels in the Dock. Most of that number is for Pig Iron. Employed three men from Mr Adamson in repairs of the punt on the slip.

# Tuesday 6th

The wind changed round to the east this morning and, having three punts lying at South side of Embankment, it came on to blow so severe that before they were got off two of them sunk or filled full of water. We got them off with difficulty with the **Vesta** and into the Harbour. In consequence of so many vessels arriving in Ballast, I have ordered that no more be discharged on the South side entrance to the Dock, and that they must be either taken to the old harbour Basin or at the North side of the Dock entrance. The Chain on the South up Stream Dock Gate have again brock and as it is dangerous to run the water off so low as to get repaired, I will recommend four course of Ashlar be lifted and the Chain Wall made not more than 6 feet between level of water.

# Wednesday 7th August 1844

It has rained insesently since yesterday at 4pm, this morning at 6am. In consequence of the strong easterly wind we had two of the punts sunk, and it was with great difficulty the other three, which was discharged at the back of South Embankment, was got off. *Rudford*, Newcastle, damaged the South Fender, Vines, Master.

## Thursday 8th

Rendered An Account of expense of Damage to Mr Mackay, Five Pounds four shillings, to be Charged against Captain Archibald of the Schooner *Lovewell* of Yarmouth for expense of repairing the gate referred to on Saturday last, but owing to the pilot being the sole cause of the Accident, Mr Mackay charged only Four Pounds and is to come upon the pilot Watson for the balance.

## Friday 9th

We have now got the leak in the Tunnel completely stopt, except a small dreeping which proceed from the South east Embankment which is very trifling. The Lighter *Robert*, Wm Hay, Master, on entering the New Timber Basin struck the West entrance and completed drove off the whole of the Cope, two of which is in the bottom. Ordered Cope from Tophill with Lime & Mine dust to be brought here with the Crane boat.

#### Saturday 10th

Calvin's men at the North Embankment forepart of the day & discharging punts South side of the embankment after part of the day. Carpenters launched the punts & forty sail of vessel in the Dock.

## Monday 12th August 1844

We have had a very heavy fall of rain since yesterday at one o'clock and cleared up about eight. It again came on at 5 afternoon and rained heavily with thunder, **Henry** *Parcher* arrives safely this day at 2pm.

### Tuesday 13th

Weather still continues wet. Two Barks arrived today, one for a Cargo Coals, and the other with a Cargo of American Timber – being four American Vessels in the Dock. Ordered David Hall to discharge Higgins, the Lock Keeper at No. 14 Lock, in consequence of leaving his Lock without leave, being second offence.

### Wednesday 14th

The weather still continues unfavourable for the Crops. Heavy rains during the night and in the Afternoon we had the most horrific thunder storm I ever heard, with rain which continued about one hour. Got another punt on the slope which is very much twisted, belts off, and ends damaged. Lock Keepers after tide dropping the Rails for the Gate damaged by the *Lovewell* of Yarmouth. We had another Cargo Clay from Cowdenhill for the Timber basin.

#### **Thursday 15**

Weather moderate this morning. Men employed at gate damage. Calvin's men at North Bank and discharging punts. Ordered the first Log for the Beacon 300 yards distant to be prepaired.

## Friday 16

Commenced to weigh out the remainder of the Railway Bars & Chairs to be shipped on board of the --- of Montrose for Sunderland.

## Saturday 17th August 1844

It has rained very heavy during the night and no wind. It is now much to be feared that the crops will suffer very much and unless we have a change for the better soon, many of the most luxuriant fields will be entirely lost.

The Ann & Elisa of Berwick in passing up yesterday detained the trade in consequence of Smith, the master, having got intoxicate and left the vessel in No. 15 Lock. Went into the Public House and requested to remove out of the Lock to give place for the Mary of Dundee, which was also going West, one of the Crew came out of the vessel struck Fraser the Lock Keeper repeatedly, and it was with difficulty that Smith was prevented doing the same and offered to fight Johnston the master of the Mary. I should think that a fine of five pounds is little enough for such conduct on the part of the master of a vessel.

#### Monday 19th

We had a most promising day yesterday, but we had a little frost through the night and rain this morning, and the day look not very flattering. Calvin's men discharging punts in the morning at the North embankment middle of the day, and discharging punts in the evening allowed a quarter of a day. Carpenters in repairing the North lower gate.

## Tuesday 20th

Weather favourable for the Harvest, several fields of Barely is cutting down. It, however, commenced to rain a little in the afternoon. In consequence of Higgin, Lock Keeper at Lock No. 14, having absented himself from duty and dismissed, ordered Robt. Graham, one of four Boatmen, to attend the Lock in the mean time.

## Wednesday 21st August 1844

Wet this morning, but continued fair after part of the day. Men employed in loading & discharging punts from the harbour at the North embankment.

### Thursday 22<sup>nd</sup>

*Henry Parcher* sailed this morning for Dalhaurea. We have not got a Clearance, and by tomorrow I think we will not have above fifteen vessels in the Dock. Weather continues very changeable and soft, considerable rain, which is very much against the Crops.

## Friday 23rd

After tide time the Carpenters were employed at the Signal Mast, repairing the fenders. The trunk was put into the hole and built in with stones, roughly jammed with earth 7 feet down. George Calvin's men discharging punts & levelling today. We have only ten vessels in the Dock.

#### Saturday 24

It is most astonishing to see the quantity of stone taken out of the field which Peter Feely has under Contract to trench, and it must turn out a losing concern for him. Put up the Signal Mast. George Calvin's men employed in levelling South bank east from the Lock & discharging Punts.

#### Monday 26 August 1844

George Calvin's men dressing the slope of the North embankment from the stones laid down to prevent the run of the current from the Grangeburn sweeping away the embankment which is now in progress of being carried out. The weather is most favourable today for the Crops. The *Ann & Eliza* of N. Berwick having been delained in consequence of Smith the master refusing to pay five pounds as a fine, I ordered David Hall, John Frazer, Lock Keeper, John Steven, Banksman, and Alex Duncan, Tracker, to appear in the Collector's Office and had them examined in presence of Smith who denied all recollection of the circumstances except what suited himself in exculpation. Frazer declared that Johnston, master of the *Mary* of Dundee, came up to No. 15 when Smith's vessel was there and declared he would report Frazer for allowing the men to go to the Public House and obstructing his vessel. Frazer, having repeatedly called upon them to come out and proceed with their vessel, and an altercation have again commenced at No. 16 Lock, one of men came ashore and struck Frazer repeatedly, and the rest of the witnesses having corroborate his statement, both Mr McKay and myself is fully of opinion that Smith is liable to pay the fine imposed by Mr Crichton.

### Tuesday 27th

The weather still continues most favourable. We had a run from the harbour this morning, but it had very little effect, and have ordered 10 load and empty punts for tomorrow tide to see what effect they will have in scouring away the mud from the entrance of the harbour.

## Wednesday 28th August 1844

We had another run of water from the Docks through the Lock where we had 10 punt, which we sent down with three horse tracking them from the entrance of the Lock to the Carron, but they had not that desired effect in sweeping away the Mud that I expected and, unless we adapt some other plan such as light punt with deep Keels, I am afraid it will have little effect.

### Thursday 29th

The eighteen punts placed at the entrance of the Lock with the intention of having the bank swept away, and I was glad to observe that we had a very good tide's work at it. Went to Abbotshaugh to see the pipes put in from the Canal to supply Mr Bell's house with fresh water. Masons employed at the North building at No. 3 Lock entrance Cope stones. Met Mr Crichton in Falkirk, who had been at Grangemouth, appeared to be satisfied with what he had seen, appears anxious about the leakage and requested drains to be put in across the Plantation adjoining Earl of Zetland's Policy, and if possible to get the leakage stopped to prevent further complaints.

### Friday 30th

We had another tide's work today, but the quantity of Mud swept away was not as much as I expected owing to the whole of the punts having brock away, and two of them sustained considerable damage.

## Saturday 31st

Met Messrs Crichton & Readman with McColl, Forrest & Craig. Weather most favourable.

## **SEPTEMBER 1844**

## Monday 2<sup>nd</sup> September 1844

Sorry to relate that the Grangemouth Coal Company Old Iron Waggon Boat, which they purchased from the Company, was brought into the Dock on Saturday night loaded with Coal to be put onboard the Brig *Matchless* of Liverpool, sunk in the Dock about Midday yesterday. This is another instance of the necessity for printed regulations to have men on board vessels by night and day, as there is no doubt, if the Boat had been attended to, such an accident would not have occurred. Got the *Cyclops & Grangemouth* Scow with two Logs across, and the large Moveable Crane Chain, but the Boats not being properly placed, and the Chain having sunk in the Mud, we gave up until tomorrow, when I intend to run off the water as low as we can with safety. Have the scows properly moored and endeavour to raise the Bow first, than another Chain for the lift and raise the lighter with the tide. Met Earl of Zetland and was astonished at the Numerous complaints respect leakage from the timber Basin

#### Tuesday 3rd

By 12 o'clock we had three Chains under the Lighter and at 2 after raising her within four feet forward of the surface. Ordered Calvin's men to attend after Dinner in order that we may have sufficient strength to raise her to the Level of the water. We therefore commenced and got her by 5 o'clock, and taken through the Lock with the two scows. The *Harmony* tug got them underway and taken to the Beech near the pay Bridge by 11 o'clock.

## Wednesday 4th September 1844

George Calvin's men at the North Embankment & discharging punts.

## Thursday 5th

In consequence of the tides being as low, I have ordered the **Dredge Boat** round into the Dock to lift the coal which was left in the bottom from the Grangemouth Coal Company Lighter. George Calvin's men discharging punts and at the North Embankment. Put the *Cyclops* in Tophill Dock.

## Friday 6th

**Dredge Boat** Commenced to dredge out the coal and filled 5 punts, but as there is such a quantity of Mud on board, it will be very difficult to say what coals may be taken out until the two are separate, which will be attended with considerable trouble. Three men at the punt after attending the Lock.

## Saturday 7th

In consequence of the coals not being worth the trouble of clearing them from the Mud, and the tide being that low to prevent the punts getting over the Lock, ordered the men on board the *Vesta* & *Hercules* to assist. George Calvin at the Embankment. Heavy rain in the evening.

## Monday 9th

Labourers at the Embankment till 12 and commenced again at 3pm. Smiths employed at the *Cyclops*. Since Thursday weather favourable for the Harvest.

## Tuesday 10th September

Met the Earl of Zetland with Messrs Crichton & Mackay, went over the Park where his lordship complains of leakage from the Canal Timber basin, and also along the Plantation where there is a little leakage. It was agreed that we should cut out a Drain in the plantation parallel with the hedge, 18 inches deep, and side drains wherever they may be required. Also that a Drain be cut along the east side of the road adjoining the field lately in Wheat Crops, and that every exertion be used to have the work done along with the leakage from the Basin into the Tunnel. Mr Crichton, on examining the field now trenched by Peter Feely, considered that as there is such a quantity of Ballast landed, and likely to continue so, that it would be as well to take the field intirely of John Walker's Land and keep it as depot for the Ballast, and gave orders that nothing farther should be done to the Park until further orders.

# Wednesday 11th

Launched another punt and prepairing for another being taken up. George Calvin's men at the Embankment till 2 o'clock. **Dredge Boat** at the entrance of the Lock.

## Thursday 12

The weather continues favourable for the Harvest. Ordered 20 Tons stones to be shipped on board the *Grangemouth* for Bainsford Bridge shed. The **Dredge Boat** commenced again in the Old harbour today.

# Friday 13th

This day is favourable, although dull.

# Saturday 14th September 1844.

It came on to rain last night about 11 o'clock, and continued without intermission with the wind easterly, and I am afraid that we will have a very heavy continuation. Mr Readman was here with the gentlemen from Bridge Water Canal.

Calvin's men at Earl of Zetland planting cutting drains, North Embankment and discharging punts, discharged the *Grangemouth* Scow with a Cargo clay along the basin west embankment with a view to stop the leak, which I trust will have the desired effect.

# Monday 16th

Discharge the *Grangemouth* scow along the west embankment and I am happy to observed that it has completely stopped the most serious leak along the bank. George Calvin's employed as above.

# Tuesday 17th

Loaded the *Grangemouth* with 30 tons Causeway stones and 20 Tons sand for the shed at Bainsford Bridge. George Calvin's men at Drains, discharging punt, and River Embankment.

## Wednesday 18th

In consequence of the water making a passage through the North Embankment at the 1<sup>st</sup> intended Beacon, ordered George Calvin to take out the Mud dyke and get a Cart of Puddle and another of dung to prevent the leakage. Carpenters at the Rigging of the signal staff & taking up another punt.

## Thursday 19th

George Calvin's men at the embankment & discharging punts in consequence of the tides getting that low that the punts cannot get over the --- I have ordered the *Hercules* & *Vesta's* men down to the Embankment tomorrow. Went to No. 16, saw nothing wrong as I went along the track path, except west from Bainsford Bridge, where the Banksmen were employed along with the Crew of the *Grangemouth* discharging the Gravel from the shed, which is now in progress of being causewayed from the stones which was taken from here.

Mr Donald, the Clark at Port Downie, complained very much of the want of accommodation for storing the goods at No. 16. The trade have increased so much of late that goods are exposed to damage, which will no doubt render the Company liable to damage and send the trade by the railway provided that another store house is not immediately erected. I promised to write to Mr Crichton on the subject.

# Friday 20th

Calvin's men, along with the men employed in the **Dredge**, commenced to cut a Drain parallel with the road on the South side of the Basin to Breakfast time, and then went down to the Embankment, discharged the *Cyclops*.

### Saturday 21

Men employed all day in Cutting the drain South of the basin. Is sorry to observe a considerable leakage so far as the ground is cut. I have therefore ordered 1350 Tile Drains & Covers, so as to prevent further complaints from the Earl of Zetland.

# Monday 23<sup>rd</sup> September 1844

George Calvin's men commenced after breakfast to the drain and was happy to observe the very trifling quantity of water. We have cut it 4 feet below the level of the road and have laid the drain tile and filled it up with Ashes & Gravel two thirds of the length required. Called on Mr Borthwick and mentioned that I had spoke to John Walker about getting an Acre of park on the south side of the Lock

to be used as a Ballast Hill, but that he could say nothing into it, not having the power to subset. Mr Borthwick stated that if the Company required it, application must be made to the Earl. I also showed him Peter Feely letter adhering to his former offer to fill up the old Grangeburn, which he appeared satisfied with. Mr Borthwick promised to come here to see our operations round the timber Basin and look at that part of the Grangeburn to be filled up. Mr Borthwick promised to meet me at 3pm, but he did not attend.

## Tuesday 24th

George Calvin's men at the Embankment discharging punts at the Drain. Weather keeps most favourable. The Collector of Customs requested a porch to be put up at the entrance of the door to their two rooms in the house lately built by the Company with the Lock Keeper, and also a Kitchen Grate for the fire place and to fit up the Necessary as a coal house. I told him that I will consult Mr Crichton on the subject, and will commence to what he proposes on receiving his orders. J. Smith & Clowson carting Danders from Carron to Bainsford Bridge.

# Wednesday 25th September 1844

Calvin's men at the Embankment & discharging punts.

#### Thursday 26

Men employed as above.

### Friday 27

Lock keeper & Carpenters employed in Turning & Painting the Crane uprights & stays. George Calvin's men spreading stuff and filling up the remainder of the Drains with whin stone slopes from Auchensterrie. When I was at No. 16 yesterday I proposed to give more storage by removing the Dungstead, and convert the stable into a store, which is 24 feet in length by 17 feet wide, open up a door in the Gable 5½ feet wide close to the present door below the pan light, put up one of our Cranes, remove the wooden stair and put it up with a porch along the Gable from the road to the entrance door in the house occupied by Mr Donald, Clerk. These alterations will cost about twenty Pounds.

# Saturday 28

Men employed as above.

# Monday 30th

I went to Port Dundas by the early Boat. Met Messrs Crichton, Readman, McColl, Forrest, Wilson & Craig. Mr Crichton agreed to the stable at No. 16 being converted into additional store rooms and a porch per Mr Donald. Also to the field South of the lock being levelled. And a porch and fire Grate for the Custom People.

# **OCTOBER 1844**

# Tuesday 1st October 1844

Carpenters employed in repairing the bridge at the Grangeburn entrance. Calvin's men at filling the Drain South of the Timber Basin the Breakfast time, at the River Embankment after that period.

# Wednesday 2nd

Carpenters employed in repairs of Grangeburn Bridge. George Calvin's men levelling Park South of timber Basin, Loading a Cargo stones from Grangemouth Coal Company.

# Thursday 3<sup>rd</sup>

Carpenters employed as above. Calvin's men in putting in a Tile Drain along the tail of the bank parallel with the Bo'ness road between the Bridge and North East side of the Basin.

# Friday 4th

Men employed as above. **Dredge Boat** in the Dock taken out the stuff that was thrown in front of the Building, and taken the punts to the South West corner of the timber Basin to fill up above the Tunnel with view of stopping the leak.

# Saturday 5th

Men employed as above. Calvin's men cutting Drains in the field lately trenched on the south side of the lock and discharging punts at the South West Corner of the Basin.

# Monday 7th

Sold or granted the loan of a Cart & harness to Mr Thomas Napier. The Cart to be valued by Andr Nimmo, Cart Wright, Camelon, and the harness by James Fergus, the Company's head groom.

Calvin's men, *Hercules* & *Vesta*'s men, employed at the South West corner of the timber Basin discharged punts. There will be no work with the **Dredge Boat** today and tomorrow in consequence of Robert Brown, Engine man, having to attend his Mother's Funeral in Glasgow.

Mr Crichton was here today and settled with John Walker that the Company allows him to work about one third of the ground which they held as a shail Bank and agree to make good the difference in the Crop as compared with the other part of the same field which they did not occupy. See Mr Crichton's report.

## Tuesday 8th

George Calvin's men to Breakfast time at the Embankment and then commenced to form a road on the South side of the Junction Canal to allow trade to pass by the Dock Bridge during the time that the Cast Iron Cisterns is put into the Timber Basin Bridge [see note 5]. Men fitting up a wooden house for Thomas Grant at the entrance of the timber Basin.

### Wednesday 9th

Calvin's men employed as above. Wind strong from the South.

### Thursday 10

During the night it has blown a heavy Gale from the South. The *undanted* Boat lying on the South side of the Dock tore up one of the mooring ring stones and another Ring was torn up in the Canal Basin. I find palls to answer the purpose better than stones. At No. 16 found the masons had got the Door broke out for the store west end of the house. Ordered the stair to be removed so soon as the building was raised up, parallel with the Gable, a rail put up and porch on the top.

# Friday 11th October 1844

George Calvin's men at the embankment before breakfast and at the road south side of the Junction Canal after part of the day. Another of the Chains on the lower Lock North gate brock and repaired.

## Saturday 12th

Was sorry to observe one of the horizontal bucket frames in the **Dredge boat** appearing to have given way today. Ordered a plate to be fixed on the spot in order that we may keep it from going further wrong in the meantime. Mr Readman was here today for the purpose of an explanation of Peter Feely account. Present Alex Black and Wm McKay and myself, when it was agreed that he should be allowed for raising and relaying the Railway 350 yd at 6d, one penny additional for the distance, and 10/ per ton on 9 ton Railway, which he was a losers by in consequence of conveying the stuff from the Timber Basin to fill up part of the Grangeburn.

# Monday 14th

Was sorry to observe that the South embankment have suffered considerably from the heavy Gale last week and will require a considerable number Cargoes of Whin stone to mix with rubble which is thrown out. We had the highest tide last night since September 1838. It was 9 inches above the Large Lock Gates. George Calvin's men at the Embankment, and finishing the road on the South side of the Junction Canal. Carpenters prepairing timber for strengthening the piles in the Cadge.

# Tuesday 15th October 1844

Carpenters at the Cadge. Calvin's men levelling & emptying the punts. Dredge Commenced again to clear out the Harbour. Sold Mr Thomas Napier a Cart and Harness

value of Harness by Jas Fergus

Do. Cart valued by Andrew Nimmo

3
£4.20

## Wednesday 16

Mr Black and assistant surveying the ground adjoining the Old Grangeburn where it is still to be filled up by Peter Feely at 4d Per Cubic yard according to contract. The Brig *Petronelle* of Tonsberg load

with Battens on coming round from the harbour to discharge, her Cargo struck the corner of the wall east from the Lock, raised 24 feet in length and brock a Cope 5 feet 9 inches in length 4 feet broad and 18 inches thick.

## Thursday 17th

Masons at No. 16 stone preparing, stopped for the flat above. *Cyclops* men levelling the ballast Hill for Mr Haggart. Complaints of the tail at Lock No. 5 being so shallow that it is difficult for vessels drawing Canal water to pass. I am of opinion that the most effectual and least expensive method to have it deepened is to lay two Scows, one each side the ridge, run off the water, and take it out by hands. Ordered the two banksmen to commence and clear the ditch on the North side of the bank from the Tunnel Aquaduct along the temporary cut at Lock No. 3. The tenants having complained of the foul state of the ditch and liability of being flooded. Ordered a cope stone from Mr Lawrie.

## Friday 18 October 1844

George Calvin's men at the Embankment and discharging punts. Ordered the Carpenters to commence to the punts so as to get the slip clear for repairs of the *Grangemouth* scow which is very needful at present.

# Saturday 19th

Charged Captain Gundirston of the Brig *Petronelle* of Tansberg three pound Sixteen shillings --- for damage sustained by his vessel coming in contact with the building at the entrance of the South building of the large Sea Lock on the 16 inst. Ordered a horse, went to Tophill to bring down the Company's Crane Boat for the repairs of the building.

### Monday 21st

Ordered the plates of the Cast Iron Cistern for the Timber Basin Bridge to be removed from the Dock with the view of having it put together near the spot and have the walls widened, being 6 inches too narrow to allow the Cisterns to get in. The masons commenced to dress the Cope for the building lately damaged by the *Petronelle*.

### **Tuesday 22**

Carpenters at the Bridge Cisterns. Masons at the Building damaged by the Brig *Petronelle*. Calvin's men at the South Embankment dressing the stone facing. The weather still continues most favourable.

## Wednesday 23rd

This being the Parish fast day, there is no men employed.

## Thursday 24th October 1844

We commenced today to remove the South leave of the Basin Bridge with the view to get the Cast Iron Cisterns put in. I find that the pit wall will require to be at least 6 inches wider and 3 inches longer to allow the Cisterns to get in. We got the Bridge without taken off the back tails, put on board the Breaker, and masons commenced to the widening the pit. Got as much felt from Mr Adamson as will joint the cistern.

# Friday 25th

I find the widening the pit to be more difficult than I was aware of. We, however, got it cut down to the lower course and expects to get the Cistern in tomorrow.

## Saturday 26

Commenced after the mason got the pit cut to the depth, to pump out the water and rubbish and got the Cistern in, but got quite alarmed to find that although every precaution was taken to prevent it rising. It got up three or four inches. We, however, got it secured and there is no little danger of it getting up any higher, and we then filled it up between and the building with Mortar, Mine dust, & Roman Cement, and had the Bridge shipped by 5 o'clock afternoon.

# **VOLUME 3**

### Monday 28 October 1844

We commenced this morning to the North Leaf and got it unshipped by breakfast time and the Mason commenced to having the stones in the pit to the width and length required. The weather have continued most favourable since last mentioned, indeed there have not been an unfavourable day since Saturday the 14<sup>th</sup> September.

# Tuesday 29th

On passing along the Canal to Tophill I was much annoyed to see the *Beehive* of Berwick so deeply laden going West as to detain the vessels proceeding east & West, and to my surprise on taken the depth over No. 8 Lock sill I found 9 feet 8 inches water. I therefore ordered the vessel to be stopped West of Camelon Bridge to allow the trade to pass. Observed Mr **Hardie** erecting a temporary shed on the Company's Bank to shelter his Castings. Ordered him not to proceed further until he got permission from Mr Crichton, which he promised to do and write him on the subject. Complained of Mr Hardie erecting a shed and ordered him to got permission from Mr Crichton.

#### Wednesday 30

We got the Cast Iron cistern [see note 5] put in to the pit and the North leaf of the Bridge put across by 2pm.

#### Thursday 31

Carpenters employed at the bridge. Mason building up fire places in Lock & Custom house.

# **NOVEMBER 1844**

### Friday 1st November 1844

Carpenters at Stop walls. Mason in repairs of Lock damage. Went to Port Dundas, met Mr Crichton, agreed to stop and fill up part of the Junction Canal North bank with the old Railway Sleepers. Agreed to the Pump Engine being removed to pump the water out of the Large Lock, agreed to one leaf being put across the Carron Company Timber Basin. Robert Wilson to look out back tails of sufficient length for one leaf.

# Saturday 2nd

This is the most unfavourable day we have had this many months, strong Gale from the east since yesterday and continues with heavy showers rain.

# Monday 4th

George Calvin's men employed at driving stobs round the field on the South side of the lock as fence for John Walker, taken in by firm from part of the ground occupied by the Company as a shail Bank. Weather continues boisterous.

### Tuesday 5th

Calvin's men cutting a Drain south side of the Lock. Ordered Calvin's men to be in readiness tomorrow morning to went to Lock No. 5 with their Tools to have the shole taken out. David Hall to make the necessary arrangements for running the water so as to have matters arranged and the Two Scows laid for having the stuff most conveniently laid.

#### Wednesday 6

We commenced to take out the stuff accumulate at the tail of No. 5 Lock, but the Boat not having been laid in the proper place, it took us more time to remove the stuff than I anticipated. However, we got all finished by half past 11 forenoon. The weather still continues boisterous with heavy showers from N. E.

#### Thursday 7th

Wind still continues from the east & N East with heavy showers, indeed, I have seen such a flood in Grangemouth since 1838, the year on which it was made. Carpenters making stops to be used Piles along the side of the Junction Canal we have.

## Friday 8th

George Calvin's men at the Embankment and Cutting drains in the field on the South side of Dock which is not taken off the Company's hands by John Walker, with the view that we may have it put into an arable state.

# Saturday 9th

We had the North leaf of Dock Bridge unshipped in consequence of the men not being able to raise it up to clear the rigging of their vessel which was passing. This shows the necessity of having the Cisterns put in without loss of time. This is a favourable day and will allow the vessels which are wind bound here and elsewhere to get to sea.

### Monday 11th

There was a considerable number of vessels sailed since the wind shifted. We have snow on the North Hills, first indication of Winter. Carpenters painting piles for the Junction Canal Embankment. Occasional heavy showers during the day. Calvin's men at the embankment and cutting ditches on South side of the Lock.

### Tuesday 12 November 1844

This day is rather favourable. During the night some malicious person Cast four of the punts adrift, which was loaded yesterday, and 3 was found lying on the North embankment, one in a dangerous state and other at the Coal Jetty safe enough this morning.

## Wednesday 13th

In consequence of having received a Summons to appear before the Court of Session at the instance of James Turnbull for defamation of Character, I went to Glasgow to consult Mr Crichton, but he being from home, showed the Summons and papers to Mr Readman and agreed that I should employ Mr Moncrieff to defend the case, which I accordingly did. Mr M appeared shocked at the circumstance and states that he will either be in Edinburgh or appoint a man of business to call on Turnbull's Agent, and if he will not give up the case I must resolve to defend the case and had no doubts of being successful, other than it should cost a small sum of money.

# Thursday 14th

The Chain for raising the Bucket frame of the **Deepening Boat** brock lat night and, as it has given way so often, ordered to take two of the large Crane Chains to put in its Place.

## Friday 15

It has rained without intermission during the night and John Walker's ground is partly flooded, which he complains of, and insists to have another Tunnel.

# Saturday 16 November 1844

The Articles taken from the Locomotive Engine which was sent down from London 8 or ten years ago for the purpose of making experiments to track the Passage Boats, consists of the following:

- 10 Pair Brass Bushes from the Old Deepening Boat
- 2 Brass Covers for the fore Wheels Steam Carriage
- 1 Improved Latter Spring Balance
- 1 Brass Lever
- 4 Brass locks
- 1 Large Brass Pipe
- 1 Copper Seive
- 3 Brass or Copper Pipes and several other Articles.

This day is more favourable, wind westerly. George Calvin's men at the Levelling.

## Monday 18th

Commenced to prepair in the Cisterns for the Dock Bridge. Got the South leaf unshipped on board the **Ice Boat** and shut the Gates. Run off 6 feet water and have the pits prepaired for the morning.

## Tuesday 19th

Commenced this morning, got the pit cleared out, put in the Cistern, and had the South leaf shipped, which will prove a great benefit to the trade. Indeed, it was impossible the Bridge could keep clear of accidents as it required 3 or 4 men to lift a side when the back tails got into the water. Received a letter

from Mr Readman to forward the Company two horse to Port Dundas. James Fergus came here and took them away. Wrote Mr Readman on the subject.

James Fergus handed the following list of stable function – 4 feet Cart Harness, 3 Cart Saddles,3 Cart Brechin, 2 feet halling sheets, 4 Bellis hands, 14 Corn Bags, 1 body brush, 1 water Brush, one Cutty Comb, 7 Carts, 1 Corn Chest.

### Wednesday 20th

We got the North leaf taken off and things prepaired to commence work tomorrow morning. Ordered the Junction Cut to be run after 12 o'clock.

#### **Thursday 21**

Commenced this morning and got the Cistern into the Pit by 10 o'clock. Had the Bolts holes bored and Bolts put in to secure the Cistern from rising and had the Gate or leaf shipped to allow the trade to pass. Sent 3 Pump Pipes from Grangemouth to Kirkintilloch.

### Friday 22<sup>nd</sup>

In order that the Cisterns may be kept from bending with the mortar put in between them and the building, I ordered 4 Round Bats to be put in each side run with lead into the building, and got all finished this afternoon. Removed from dwelling House to the New one.

#### Saturday 232

I intended to have put in one of the palls today, but owing to the want of a Horse to convey the stones to build in the same, the masons had to go to No.16 and finish out part of the flooring store house. We have 5 American vessels arrived in the Forth this morning, three got into the Dock this tide. The *Hampton* and *General Graham* is expected on Monday as the tides will appear better.

## Monday 25th November 1844

A little frost this morning, day moderate. The *Hampton* arrived, but the *General Graham* having keep too much to the North grounded on the Embankment formed by the Mud at the entrance of the Lock. Masons employed in the Pall on the South side of the Dock where the ring stone was pulled out by the *Undanted*.

#### **Tuesday 26**

Masons after being finished with the pall on the South side of the Dock commenced to removed the Casueway on the West side North of Bridge to have the other pall placed. Calvin's men at the embankment. The *General Graham* was got into the Dock this tide after discharging a few logs of Timber. The tides are kept very low this stream.

#### Wednesday 27<sup>th</sup>

Mr Crichton was here today, informed me that the Committee agreed to the additional Tunnel being put in to prevent the fields belonging to John Walker being flooded. Also agreed that the pump should be placed on the South Side of the Lock as pointed out by me.

# Thursday 28th

Calvin's men at the Embankment and discharging punts.

## Friday 29th

Men employed as above.

#### Saturday 30 November 1844

Went to Port Dundas, met Mr Crichton, agreed that we should put up the Oil Lamp on the South side of the Bridge on the Bo'ness road across the Timber Basin Lock. Also that we should proceed with placing the Pump Engine on the south side of the large Lock so as to get the sluice into the Gates to wash away the Mud from the entrance of the Lock.

# **DECEMBER 1844**

### Monday 2 December 1844

Carpenters making piles from the Junction Canal and porch for Custom house. Carting stuff from the Dock Wharfs. The weather favourable. George Calvin's men at the Embankment. Dredge men at the Harbour.

## **Tuesday 3**

Carpenters making and driving piles along the North East Bank of the timber Basin. The space on the west side being now completely filled up by the timber discharging from the six American vessels. Calvin's men discharging the Punts loaded yesterday.

#### Wednesday 4

The frost is rather severe this morning. Three L[abourers]. employed in placing palls & three Carpenters along the Junction Cut & Lamp posts at the Bridge. Lighted the Lamp.

## Thursday 5

The frost continues very severe. Ice on the Canal. Labourers & Carpenters employed as above.

#### Friday December 6 1844

The frost continues most severe. **Vesta** & **Hercules** men commenced to take the Pump Engine asunder for the purpose of having it removed to the South side of the Lock for the purpose of Pumping out the water. Received from Cumbernauld Lime Work for building a Necessary - 5 Chalder Lime.

### Saturday 7

6 men employed taking the Pump Engine separate. Carpenters making check Blacks. Calvin's men driving Piles to prevent John Walker's Ditch slipping in. It appeared very like a change this morning, but the frost set in very severe in the Afternoon.

# Monday 9th

The frost was very severe during Saturday night. The Canal was completely froze over yesterday and Children sliding on the Timber Basin, and still continues. Commenced this morning to get the **Ice Boat** prepaired to start. Ordered Alex<sup>r</sup> Morrison to have two Horse brock up the Basin. Started at 10am went to Dalderse Lock and on returning found the corpse of a young man who was with Alex<sup>r</sup> Morrison who had been missing since Thursday evening his name was Thomas Duncanson. Returned at 3pm. Stewart Paterson ----- and other with the **Ice Boat**.

# **Tuesday 10 December 1844**

This day the weather is very moderate & calm, little frost, consequently we were not under the necessity of starting the **Ice Boat**. Calvin's men at the embankment first, the ban to Port Dundas by James Fergus.

#### Wednesday 11

The weather continues very moderate, gentle frost. Had the **Ice Boat** employed with two horse breaking up the Timber Basin to allow the Timber to be put in and a Raft to be taken out.

### Thursday 12

We had a fall of snow during the night. The weather still continued moderate. Men employed in taking down the Pump Machinery with the intention of conveying it to the South side of the Large Lock to Pump out the water. George Calvin's men at the Embankment.

#### Friday 13th

Went to Port Dundas, met Mr Crichton, agreed that I should pay off as many of the men as possible except such as I consider useful in fitting up the Pump Engine, John Walker's Tunnel, and Stationary Crane

#### Saturday 14th

Carpenters and others at the Pump engine. We got the Boiler conveyed across in the **Ice Boat** to the South side of the Lock. George Calvin's men at the Embankment. Discharged twenty men today. Wind strong from the east with sleet, very cold. Paid off twenty men.

### Monday 16 December 1844

Lock Keepers and Carpenters employed at J. Walker's Tunnel and Attending the Lock. Other men collecting tools, etc from the Punts.

## **Tuesday 17**

Men employed in Carting Danders for the Road at Granton Lock. Carpenters and Keepers at the Tunnel. *Hercules* men clearing the Machinery.

Employed seven Labourers for the purpose of commencing to repair the slope of the Junction Cut, but the day being unfavourable, went them to repair the Roads on the North side of the Docks.

#### Wednesday 18

In consequence of not having the water run off the Junction Cut we did not commence to drive the Piles till after 2 o'clock, and I trust that we will be able to make a good job of it.

## Thursday 19th

Men employed in facing the Junction Canal having to go to No. 16. Mr Crichton came here in my Absence. Met him on his return, advised that a part of stones in South Carron River Embankment are washed out, then it will be proper as soon as we are done with the Junction cut to employ the men to have it put to rights.

# Friday 20th

Men employed as above. The frost commenced yesterday forenoon and is so severe that I was under the necessity to start the **Ice Boat** this morning from here to Bainsford, Canal being open above.

### Saturday 21 December 1844

The frost still continues most severe. Started the **Ice Boat** with three horse to Bainsford and returned in three hours. Calvin's men at the Junction Canal Bank have given up the piling and must just make up the sloped with Clay as we got on covered with danders or small stones, but will have to drop it if the frost continues to Monday.

## Monday 23rd

It has continued moderate since Saturday and did not require the **Ice Boat** this morning, which was very fortunate there being about thirty to forty sail arrived since Saturday night. We got nothing done to the Junction Canal today, nor will we until fresh weather for the puddle.

## Tuesday 24th

This day rather inclines to be fresh. Employed Carts to remove the stones from the Granton Timber Wharf for the Privy on the North side, Calvin's men employed.

## Wednesday 25th

None of Calvin's men employed owing to the frost. Carpenters employed in removing the Pump Machinery. One Horse from Alex<sup>r</sup> Morrison at the above. The weather continues very moderate.

# Thursday 26

Weather continues very moderate, gentle frost.

#### Friday 27

Was at Glasgow, met Mr Moncrieff & Forbes. Mr Forbes promised to meet me on Monday morning at Grangemouth.

### Saturday 28 December 1844

The weather still continued very moderate. We have had no frost since yesterday morning, not a breath of wind. The fleet which sailed four weeks ago are still lying wind bound. Gales of wind from the South east at Sea and perfectly calm ashore.

## Monday 30

Weather continues calm. Forbes of Moncreiff & Paterson was here and examined witnesses as to Turnbull's action.

## **Tuesday 31**

Went to Port Dundas, met Messrs Crichton & Readman with the other officers. Mr Readman appears very anxious to get the premises at Tophill disposed of and ordered me to get a plan made by Mr Black with the view of it being Lithographed so as to take in offers for the premises.

# **1845**

# **JANUARY 1845**

# Wednesday 1st January 1845

The weather still continues moderate.

# Thursday 2<sup>nd</sup>

Men employed at removing the Machinery.

#### Friday 3rd

George Calvin's men employed in Clearing out the Ditch and facing the slopes of the Grangeburn.

# Saturday 4th

George Calvin's men employed as above. Wind shifted to the south and blows fresh.

## Monday 6 January 1845

It rained and Blowed a heavy Gale yesterday morning and during last night, but cleared up during the day. Calvin's Men at the Embankment, Junction Canal.

### Tuesday 7th

Examined the River Embankment and is sorry from the heavy Gale on Sunday Night and early on Monday Morning that the east side of the South Embankment have suffered very much the surge having washed down the stone very much, and will require considerable work and a few boat load of stones to put it to rights. In consequence receiving a letter from Messrs Moncrieff & Paterson, Writes to meet then at 3pm. I went west when Mr Forbes read a report to be forwarded to Mr McKenzie, Solicitor, Edinburgh, for the purpose of making out a defence against Turnbull's Action against Me in the Court of Session for defamation of Character. Returned by the 6 o'clock train. Frost & thick fog.

## Wednesday 8th

This day appears as to be fresh. Wind S.W. Calvin's Men at the Junction Canal.

# Thursday 9th

Carpenters etc employed in receiving the timber etc of the pump engine & met Mr Haggart at the Ballast hill.

# Friday 10th

It has blowed fresh all night, wind S.W. Men employed as Above.

# Saturday 11th

It still Blows fresh. Men employed at the Junction Canal Grangemouth, in Timber Basin with Clay sloping banks.

# Monday 13th January 1845 – Old Hansel Monday – Old New years Day

George Calvin's Men cleared away the filth accumulate on the Dock Wharf etc. In consequence of vessels arriving during the Night and the Lock keepers not being aware of the arrival of such vessels until they are within a few Yards of entrance of the Large Lock, I have considered it proper to give David Sinclair a loan of the Bell which was placed on the Buoy at the entrance of Carron River, with instructions that when they have a vessel in tow arriving for the Dock when it is dark, that they shall commence to ring the Bell at such a distance as the Lock Keepers may have time to have the Lock prepaired before the vessel arrives. It will also be necessary for the lock Keeper to have a large Lantern to hoist as a signal that the Lock Gates are open for the ingress of vessels.

### **Tuesday 14**

There was a Cargo of Guana put up by public sale today, but only about one half of the Cargo, consisting of 400 Tons, was sold, which did not average above five Pound sixteen Shillings per Ton. [See note 13.]

John Club commenced to finish out the remainder of the retaining Wall on East side of the timber Basin Bridge. Alex<sup>r</sup> Morrison 2 Carts ¾ days, each carting Gravel for the road foot path Timber Basin Lock

## Wednesday 15

The weather continues fresh & moderate. Calvin's Men at the formation of the foot Path north of the Basin Lock Bridge. Alex<sup>r</sup> Morrison 2 carts 1 day carting Gravel etc to the Road.

### Thursday 16 January 1845

Calvin's Men at the Road in connection with the Timber Basin Bridge. Met my son Robert at Tophill informed me that he got instruction from Mr Crichton to furnish the Materials for the Bridge across the Carron Company Basin and that the *Margaret* Scow and *Grangemouth* put into Tophill Dock to be overhalled. A. Morrison 2 Cart employed 1 day.

#### Friday 17th

George Calvin's men employed on South Embankment. One horse employed ¾ day conveying Materials for erection of the Pump Engine south side of the Dock.

# Saturday 18th

Weather continues fresh, Wind S W, favourable. Men employed at North Embankment endeavouring to stop a Gullet getting through the Stones about 20 yards up from the 2<sup>nd</sup> Beacon. 2 Gages put in on the South side etc ---- at No. 16. Ordered the Carpenters to put the Dock Blocks in order for the purpose of getting in the *Margaret* & *Grangemouth* Scows. Received letter with one pound enclosed to pay Thomas Watt and R. Templeton, Lock Keepers, for Coals for their Bothy, 10s each, for to 31 December 1845, which I returned today by One o'clock R.P. Boat.

## Monday 20th

Considerable frost during the night, wind N.W. It has the appearance of Snow.

# Tuesday 21st

Men commenced to drive the Piles on South side of the Dock for the Pump Engine. None of Calvin's men at Work today. Hard frost this Morning, fresh in the evening.

## Wednesday 22<sup>nd</sup> January 1845

Calvin's Men at South Embankment, 2 Carpenters filling, for the Pump Engine, one Cargo *Cyclops*. Stone from Ballast hill and *Grangemouth* from Stance with ?? Stone for repairing Embankment.

## Thursday 23rd

Men employed as above. Strong Gale from South with rain. Mr Crichton & Beatman, Engineer, was here today. Mr Beatman appears highly pleased & approves of Sluices in the Gates.

# Friday 24th

We had a heavy fall of rain during the Night, but cleared up at 9 this morning and continued favourable. Wind N. West. Calvin's Men at the Embankment and levelling part of the field of John Walker. Men employed piling etc.

# Saturday 25th

This day Blows a Gale from the West with heavy showers Rain. The Collector, Controller and Tide Waiter, took possession of the Company's two Rooms for the accommodation of their Men connected with their Customs. George Calvin's Men at the North embankment with the Cargo discharging to stop up the Gullet near the second Beacon. It came on such a Gale as to cause me to order the *Samson*, one of the Grangemouth Tugs, to be sent down, & brought the two Scows up at half past four this Afternoon.

# Monday 27th

It came on to snow this Morning at 4 o'clock, Wind N.E, about 6 inches deep. Carpenters employed in dressing Poles. George Calvin's Men not employed.

# Tuesday 28th January 1845

Carpenters and others employed at Piling. Frost during the Night, wind N.E., with appearance of continuing. Carpenters at the Piles.

## Wednesday 29th

Showers of snow 2 inches deep last Night, with hard frost this Morning, white Calm.

#### Thursday 30th

The frost continues very severe.

#### Friday 31

Went to Glasgow, met Messrs Crichton & Readman, with McColl, Forrest, Craig & Wilson. Ordered a Sketch and expense of the erection of Safety Gates for the timber basin. The frost still continues, started the **Ice Boat** this Morning at eight o'clock and returned at 5pm with 4 horses from Alex<sup>r</sup> Morrison.

# **FEBRUARY 1845**

### Saturday 1st February

Started the **Ice Boat** with 6 Horses from A. Morrison for Windford, went no further than Bainsford, three Horses each. The frost continued most intense. Company's horse continued and returned at 6pm.

#### Monday 3

It commenced to rain yesterday at 10am and continued during whole of the day with a strong Gale from N. West, and this Morning the Canal was almost clear of Ice, consequently we did not require the **Ice Boat** today. The weather is favourable today, but again threatens to be frost.

### Tuesday 4th February 1845

We had a little frost during the Night, but nothing to retard the Passage of the Canal. George Calvin's men at the North Embankment with a Cargo of Clay to stop the large Gullet a little West from the 2 Beacons. I find it will now be proper to get a few Cargos put in both sides of the stone facing to prevent the rush of the tide getting through, as the sludge is considerably higher in the North side.

### Wednesday 5th

West at Castle Carrie. The Ice in several places out the head of the Lock, but in general the Canal is Clear, and surprised the Passage Boat is not plying today. Earl Zetland ??? 2 Horse from A. Thomson 4 hours breaking the Dock & Basin.

## Thursday 6th

Wind North, very Cold, with frost this morning. Men at the Pump Engine. Labourers at the Embankment etc.

# Friday 7th

In consequence of the frost still continuing and the Canal in several places completely frozen over, which prevented the trade, I ordered 4 horses from Alex<sup>r</sup> Morrison and commenced with the *Ice Breaker* in the Dock, proceeded West to No.16, where we got the Company's ?? Horse and ordered those to proceed from Windford, remain all night and return to Grangemouth tomorrow. Hours of Alex<sup>r</sup> Morrison 4 hours from 9am to 2pm, five hours each.

### Saturday 8th February 1845

The **Ice Boat** returned from Windford at 2pm with the Company's horses, hours say from 8 to 2 pm, with 7 Hours. Frost still continues, appearance of snow. Was at John Aitken's funeral, Bridge keeper, Castlecarrie. 2 horses & Carts removed the Waggon South side of the Large Lock to south of Junction Canal.

# Monday 10th

It came on to Snow Yesterday Morning and continued during the day until 4pm, very moderate with little wind. This Morning still continues very Calm, inclines to be fresh. Started the *Ice Boat* with the Company Horse at 8am with orders to proceed to Windford to meet the other breaker, and returned to No.16. Peter Feely died last night at 10pm.

# Tuesday 11th

We have another fall of Snow, but fresh, consequently there is not above three inches deep remains. Ordered the *Ice Breaker* from No. 16 with four horse to open up the Basin. George Calvin's Men discharging *Cyclops* with Gravel into the Gullet.

## Wednesday 12th

In consequence of the Company's Men & Horse not being here, and the Canal frozen over, ordered four Horses from A. Morrison. Started at 8am to proceed to No. 16. Two Pilots informed Me that they had got foul of the Chain to which the floating light was moored a number of years ago, that they got a Rope with a Buoy, and made fast to the same to enable us to procure the Chains and the large Stones to which it is secured, and requested a tides work for the same. I told them that so soon as the weather will permit, and if the Chains can be procured, that they should receive payment for the same.

#### Thursday 13 Feb 1845

Wind shifted round to S. West last Night and have blown very fresh, and expect the whole of the Ice to be swept off the Canal. Calvin's Men went out with the intention of discharging the *Cyclops* with a Cargo Gravel, but, owing to the Scows Moorings having brock and drifted down the river from the string Wind & rain, the men had to return at 9am. *Ice Boat* returned at 4pm.

# Friday 14th

Wind Westerly with frost this Morning. Men at the Pump Engine. Calvin's Men at the Embankment. Carpenters & others at the Pump Engine. Called on Mr Haggart, Bantaskine, and agreed to have Men set to work to have the remainder of Ballast Hill levelled without delay. Men employed on the *Grangemouth* Scow in Tophill Dock.

# Saturday 15th

Calvin's men at levelling south side of the Lock, other Men at the Pump Engine. A little frost this morning, Wind Westerly.

# Monday 17th

Calvin's Men at the North Embankment and levelling. Ordered them to have their tools sent West with the **Cyclops** and commence tomorrow morning to level the Ballast hill as agreed to be done by Mr Crichton. Pointed out on the Spot what I wish to be done and the Manner the Stuff is to be removed. Examined the **Grangemouth** Scow in Dock.

# Tuesday 18th

Went again to Tophill and inspected the work at the Ballast hill which the men have commenced to, very much to my satisfaction. Weather favourable.

# Wednesday 19 February 1845

Men employed at the Pump Engine. Calvin's Men at the Ballaast hill. The Weather favourable.

## Thursday 20<sup>th</sup>

Inspected the Men levelling the Ballast hill. Ordered them to give the South side a greater slop so as to require less stuff. Found the Corner Cope west entrance of No. 16 Lock in a very dangerous state. Ordered the Masons to Grangemouth to bring up the **Ice Boat** and Commence to get the Whin stone Cope etc placed with the least possible delay.

## Friday 21st

Men at the Pump Engine. Two Men assisting discharging the *Cyclops* with Stones South Embankment. George Calvin's Men at the Ballast hill. Day favourable.

#### Saturday 22<sup>nd</sup>

Wind S.E., frost this morning. Men employed as above.

# Monday 24th

Examined the work in progress of the ballast hill, find the work getting on favourable. Men at the Pump Engine.

#### **Tuesday 25**

Ordered two Men to commence cutting the ground for the fresh water conveyed from the Ditch to the Pump Engine.

## Wednesday 26

Men employed as above. We had a heavy shower of rain during last night, rain through the day.

### Thursday 27 February 1845

Inspected the masons employed in repairs of the South West Entrance of Lock No. 16. Find they have got the Whin Cope finished and ready to commence on the South side. Ordered 4 Cope to be take off further West and removed. Ordered the men at the Ballast hill to take a little more off the Surface already levelled at the South side.

#### Friday 28th

Met Messrs Crichton & Readman, ordered and offer to be taken in to build the privy on the North Side of the Dock, and Mr McCall to make out a Specification to rebuild the Wall from Tophill to Burnhouse on the North Embankment.

# **MARCH 1845**

#### Saturday 2 March

We have a very heavy fall snow today; men had to Work after. George Calvin's Men at the Pump Engine cutting the Ditch.

### Monday 3rd

George Calvin's Men Cutting the Ditch in curing the prop water from the Ditch to supply the Pump Engine with fresh water. Men employed at the Engine. We have had a heavy fall of Snow since Saturday morning, but it is all now cleared away.

# Tuesday 4th

It has snowed during the whole of the day. George Calvin's Men at the Pump Engine with the Carpenters & two Plumbers.

# Wednesday 5th

Hard frost during the Night and occasional showers Snow during the day. Men employed as above.

#### Thursday 6th

In consequence of the Men not getting the Pump Well cut deep enough last night, a considerable portion of the sides gave way this morning. We managed, however, to get the Bottom Plank and 2 tears of cleading before the water from the drain brock in, and after staying the remainder of the Well in a temporary manner, we managed to get the rest of the Planking and Stays put in.

# Friday 7th

In consequence of having received a letter from Mr Crichton yesterday stating that the Committee have agreed to resume Work at the North Embankment, I went over to Longannet and ordered the Quarriers to commence on Monday to send over Ruble Stone as formerly. I understand that Mr Readman was here today in my absence. Left the Stirlingshire Road Trustees Account 19/10 for Road money, which Mr Readman considers the Canal Co are not liable for taxes on Canal set out for the Navigation or Works Ice Chain 122 of 4 & 5 Vic Chap 55.

## Saturday 8th

This day is favourable. Calvin's Men filling up the above the Tile drain from the ditch to the Pump Engine. Plumbers soldering the Joints; Carpenters at the Shed etc. Had a considerable trouble with the South Side Gate to get it to shut – some stuff appears to have got in before the Roller on the Segment, and the Up North Gate leaks considerably.

# Monday 10th March 1845

Masons commenced this morning to build the Boiler Leaks for the Pump Engine. George Calvin's Men ½ Day at the North Embankment, levelling, etc. Mr Readman was here today with a Petition from the Pilots requesting that the Company will regulate their Pilotage and prevent Pilots belonging to other ports from entering the Port of Grangemouth. Mr Readman, after Consulting Messrs Brooke & Thomson, was of opinion that it will not be advisable for the Company to interfere unless it was to sanction a set of resolutions for the mutual conduct of the Pilots themselves.

#### Tuesday 11th

Calvin's Men employed at Levelling & discharging the *Friends*. Masons at the Pump Engine; also the Carpenters. This day have been severely Cold Wind form the N.E. *Friends* & *Agnes* discharged today. Ordered George Calvin's to the Ballast hill with his men tomorrow to finish out this levelling before we commence in ernest with the Embankment. Wind N.E., excessively cold.

### Wednesday 12th

Weather still continued frosty. George Calvin's Men at the Ballast hill. Masons at the Pump Engine. Sent with Carpenters at the Shed.

## Thursday 13th

A light fall of Snow, frost during the Night, a change of wind from N.E. to South, which I trust will bring warm weather. Men employed at the *Vesta* repairing and making a New Rod which in entirely gone.

### Friday 14 March 1845

This morning is excessively cold with the wind round again to N.E. Snow commenced and continued partially until the afternoon, when it commenced more serious. Ordered a Coffin to be made for Mathew Ballin who died yesterday, very quiet sober attentive man to his work during the time employed in the Company service, which is nearly 3 years.

## Saturday 15th

The wind continues from the N.E. with occasional Showers; the Snow in several places 3 & four feet deep.

#### Monday 17th

I do not recollect of such weather at this season of the year. The frost with occasional showers of snow since Saturday night have caused me to send four horse to Tophill for the *Ice Breaker*. A considerable number of arrivals having been since Saturday cannot proceed until the Canal is brock up. Advised Mr Morrison to put two additional horse into one of his vessels to make an attempt to proceed west until they meet the *Ice Breaker* from Tophill. The frost still continues this morning, but as the wind inclines from the West I trust we will have fresh weather by the after part of the day.

# Tuesday 18th

Frost during the Night, but the snow have considerable decreased from the heat of the Sun, although the frost still continues. Men at the *Vesta* Machinery and Pump Engine Shed. Walter McTaggart died this Morning.

## Wednesday 19th

George Calvin's Men at the N. Embankment. Frost still continues.

# Thursday 20th March 1845

Frost still continues severe in the Morning, during the day; Summer in front & Winter back of the house. Calvin's Men to the North Embankment; Carpenters at the Engine House etc. at Tophill works as usual.

## Friday 21st

This morning the wind shifted to S. West with appearance of fresh weather, but extremely cold, it came on to blow fresh with heavy showers. Rain at 2pm and continued till late.

# Saturday 22<sup>nd</sup>

This Morning is Mild, the Snow have been well cleared away during the Night and trust we shall have no more frost for the Season. George Calvin's Men at the N. Embankment. We have a great flood in the River today. It rained very heavy after 1pm.

## Monday 24th

We had a few showers rain yesterday, and a raw frost this morning turned out a find. Calvin's Men at N, Embankment, ¼ levelling ground, etc. We have now got the Machinery of the *Vesta* finished and trust she will answer better in future in stopping and backing than she did formerly, having got the throttle valve repaired along with the Air Pump, etc.

# **Tuesday 25**

This day blows very fresh from S. West with appearance of Rain being raw frost this Morning. Calvin's Men at N. Embankment.

#### Wednesday 26

The barks *Bee Henry*, *Porchart* and *Brooks* sailed this day. The two former for Quebec and the latter for Ro. Blows fresh from N.W. Thunder & Lightening in the evening and Rain during the Night.

# Thursday 27th March 1845

Wind & Rain. Calvin's Men at the Embankment during the tide, levelling on the North side of the Dock, and Procure the Rone for conveying the Water from the Pump Engine into the River.

# Friday 28th

A most terrible Gale from the West last night and this Morning. It is to be feared that many a poor Sailor will have found a watery grave during the Gale.

## Saturday 29th

Calvin's Men Levelling North side of the Dock. This day is moderate and trust we will have reasonable Weather for some time.

# Monday 31st

Went to Glasgow, met Messrs Crichton & Readman, agreed to the estimate – Two Carpenters, Two Masons, 1 Labourer & two Banksmen. East District – five Lock Keepers, One Smith & Hammerman, one Engine Man, Masters of the *Hercules*, One Scavenger, two watchmen and Eighteen Banksmen. Carpenters in General repairs of Lock & Bridges setting up a Crane at No. 16. Masons in prepairing Stones for Carron Basin Bridge, East District.

The Lock Keepers when disengaged at the Lock will be employed with the Artificers in fitting up the Pump Engine, repaires of Punts, etc. The Banksmen at Carron River Embankment, Grangemouth. Materials to be purchased – 14 Cope Stone for Carron Basin bridge. A few Norway fir Logs for Sluice Stems, 2 Mend Logs for a Crane at No. 16, 3 Logs --- for Tunnel 60 feet long 16 by 12 Inches wide to carry the surface water off the Lands at Lock No. 6. Barley and Rio Grass to sow about 134 Acres of the field off J. Walker. The *Vesta* will require to be put in Dock to get a Coat of Paint.

# **APRIL 1845**

# Tuesday 1st April 1845

The day favourable, frost in the morning. Calvin's Men at N. Embankment; Carpenters in repairs of a Punt, etc; man at the Pump Engine. Two Carpenters from Tophill Collecting the Material, etc.

# Wednesday 2nd

Men employed as above. Day favourable.

# Thursday 3rd

Masons Commenced to the prepairing Cope for Timber Basin Bridge. Calvin's Men at the North Embankment. Carpenters at Punts. Since Spring day, Wind S. East.

# Friday 4th

Ordered a Coffin to be made for James Smith who died this Morning at 2am. Men employed as above. Very cold this Morning.

# Saturday 5th

Men employed in levelling. *Hampton* sailed today. Wind N. East. Carpenters at the Punt repairs.

# Monday 7th

Calvin's men levelling North side of the Lock for want of Stones for the Embankment.

# Tuesday 8th

Calvin's Men at the Ballast hill. In consequence of a Number Stones being shipped at Camelon bridge for the North British Railway, I found that the Shed is not sufficient to support the Crane with the weight of Stones to be shipped. I therefore find it necessary to have it propped and ordered Norway logs for that Purpose, and when the Stones are all shipped I intend them to be cut up for Sluice Stems. And as we are to erect a Crane at the West end of the Store house at No. 16 I ordered a Red Pine Log for that purpose also from Robt & Thomas Melville, the trustees of the Late Walter McTarget not having timber to suit the purpose.

# Wednesday 9th April 1845

Calvin's Men employed at the Ballast Hill. Ordered them to Grangemouth to get forward with the Embankment.

## Thursday 10th

Calvin's Men at the Embankment from Breakfast time to 3pm, Levelling North side of the Dock remainder of the Day. A schooner, *Marice*, of ---, made a very narrow escape from Damaging the Gate on entry the Lock with too much way.

## Friday 11th

I find it will be absolutely necessary to employ the Scows during Spring tides to carry sand, gravel, etc to fill up the Channels which are forming rapidly towards the entrance of the River in consequence of the Embankment which is in Progress on the North side of the Carron River. In particular one opposite the 3<sup>rd</sup> beacon, one further out opposite the Marking 2<sup>nd</sup> rod placed South side of the Embankment. Since the 15 January the Mud have raised 3 Inches – Received .... for J. Walker's Park.

# Saturday 12th

Carpenters at the Punts, prepairing Guards for the Large Lock Sluices. Calvin's Men at the N. Embankment. Weather still, a little frost during the Night, Wind westerly.

## Monday 14th April 1845

Carpenters at the Punts & prepairing Guards for the Lock Gtes. Calvin's Men at he Embankment. Occasional showers, Cold Wind N.

# Tuesday 15th

Men employed as above. Weather very Cold with the Wind from the N.

## Wednesday 16

This day is considerably milder, although cold & frost in the Morning. Order a Stair Trap for A. Morrison's Stable, the old one being entirely done.

#### Thursday 17th

Painted and Measured off the distances for the Crane at No. 16. Finds it will be necessary to have a longer Jib, the present one being only 16 feet and will require at least 2 feet more.

# Friday 18th

Ordered the Carpenters to commence to Tar the Pump Engine Shed etc. Weather continues very dry. In consequence of the tides being so low during the Neaps we have got no stones for the embankment, except one at the entrance of the River this week.

## Saturday 19th

We have sent three Cargos Gravel to fill up the Gaps on the North side of the River, but unfortunately the tides being so low, the Cargos were not discharged in the proper Places for forming a dam to stop the Current of the run, but expect to do so during the Spring.

# Monday 21st April 1845

Carpenters Tarring Timber Work of the Crane. Ordered the *Vesta* out with the *Cyclops* & *Grangemouth* with Cargos Gravel to fill up the Gaps North Embankment and take them across the water for Cargo Stone, being kept back during the Neaps the tide being so very low. Weather very hot.

# Tuesday 22<sup>nd</sup>

The *Vesta* brought over the *Cyclops* & *Grangemouth* Scows with Stones from Longannet. We got the pump lowered down into the Recess of the South Gate. Ordered the Smith to take the sire of the Glands for fixing it to the building. The weather continues dry & warm. Mr Crichton was here today, but had nothing Particular to communicate. Thinks it will be proper after the *Vesta* is put in the Dock to get a load of Paint to take in offers from the tug Company and others, as he thinks it will be proper to dispose of her. Stated that the Company have agreed to pay Widow Smith Two Pounds to defray the expense of her Husband funeral. Went to Tophill and examined the field belonging to the Company which Mr White proposes to take in lease for a Wood Yard. Thinks that Mr White should pay at the rate of £24 Pound per Acres.

## Wednesday 23rd

Received for the *Vesta* 24 Fire Bricks & 1 Bucket of Fire Clay from John Club. The weather still continues very dry and warm. It is very seldom that we have such weather in the Month of April. Ordered the *Cyclops* & *Grangemouth* across for Stones, but on returning with the *Vesta*, the *Cyclops* upset Keel up and it was with great difficulty the three Men were saved. One got on the Keel and the other two was got on board the Steam Boat after being a quarter of an hour in the water. Very luckily the *Cyclops* floated ashore. Gave orders for the Steam Boat to go over tomorrow morning and bring over the *Cyclops* just as she is and we will manage to turn her over here better than anywhere else.

#### Thursday 24 April 1845

In consequence of the Fog being so thick this Morning we was under the necessity to return with the **Vesta**, it not being possible to see half the length of the vessel. I then ordered Andrew Glen, it having cleared up a little, at 6 to go over with the small Boat to ascertain in what state the **Cyclops** is in and if the floor have not fallen down. We will endeavour to bring her over next tide in the event that the floor have fallen. I am afraid it will be attended with considerable trouble to have the boat turned over. We started with the **Grangemouth** Scow with Punts, 2 Logs, Crabs, Chains, etc. in the event that the **Cyclops** will not float with the tide, but on arriving along side I was grateful to find she lifted with the surge. The wind being strong from the east, we therefore got the tow line made fast to a Chain round the bow of the **Cyclops** from the **Vesta**, and I was happy to find that she came off the ground and we "" her across, Keel up, into the Lock in the Hours, and sent the **Vesta** and brought over the **Grangemouth** & two Punts, etc and at half past 7pm.

# Friday 25th

Commenced this morning to turn over the *Cyclops* in the lock, which we easily accomplished after making the one side fast and run off the water. Men employed in removing the Materials from the Scows, Punts, etc. George Calvin's men employed remainder of the day assistance with 1500 Helpers for W. Watson driving ---- and dressing A. Walker's Field.

# Saturday 26 April

We had a most refreshing shower this morning which will prove a great blessing to the Country. The wind have shifted to the South West, the air is completely changed into a mild state. Where a few arrivals of foreign vessels today and several are expected.

### Monday 28th

Calvin's men at the N. Embankment; Carpenters prepairing Materials for the large Lock Sluices. Purchased from David Robertson 2 Danzig fir Logs  $24\frac{1}{2} + 12\frac{1}{2} + 26.7$ ;  $28 + 15\frac{1}{2} + 46.8$ ;  $41 + 12 13\frac{1}{4} + 46 3\frac{1}{2}$ ; is 119 6/12 feet at 22. Also 6 Danzig oak Plant.

## **Tuesday 29**

Calvin's Men at the Embankment; Carpenters prepairing Sluice framing. Weather most favourable with heavy showers since Saturday.

# Wednesday 30th

Went to Port Dundas by the early Boat. Met Mr Crichton with the other overseers, Mr C. agreed to the Estimate, viz 2 Carpenters, 2 Mason, 2 Banksmen, and One Labourer, for the East District; 5 Lock Keepers, One Smith, 2 Carpenters, One Hammerman, 2 Watchmen, 1 Scavenger, 19 Banksmen, One Engineman, & one man attending the *Hercules* & *Vesta* Steam Boat. Repairs proposed:

The Carpenters & Masons at general repairs of Locks & Bridges & fitting up a Crane at the Store house No. 16 Banks in facing the Slopes.

GRANGEMOUTH – The Lock Keepers when disengaged at the Locks will be employed with the Artificers in prepairing Sluice framing of the large Lock. The Bank men at the River Embankment, Materials to be Purchased. The small Punt which is used for convey ---- for facing the Canal Slopes is unfit for Service. The Materials and Workmanship to furnish another will cost about say Ten Pounds. Six Pounds for Timber & four pounds for other Materials & Workmanship. 6 Norway Dram Logs for large Lock Sluice Stems. Sign approved 26 April Mr Crichton.

# **MAY 1845**

## Thursday 1st May 1845

Thursday we loaded the *Grangemouth* Scow with Pig Iron in order to ascertain the quantity she carries and marked at 40 & 50 Tons on both sides of the Stem & Stern, part 50 Tons under 9½ inches, and 16 inches under the lower part of the bends both forward. Men employed at the Sluice frames etc. Calvin's Men at the Embankment.

## Friday 2nd

Being the Parish fast there was no work today.

# Saturday 3rd

Ordered the Mud to be taken out under the floor of the *Cyclops* and Patch her up in a temporary way to take a few Cargos Gravel to fill up the Gutters in the Embankment. Calvin's Men at the South Embankment for part of the day dressing stones in the Slope. Wind continues high from N.W.

## Monday 5th

Loaded the *Grangemouth* & *Cyclops* with Gravel for the Embankment. Calvin's Men at the Embankment for part of the day.

# Tuesday 6th

Went across the Water for the purpose of ordering the Quarriers to endeavour to send a greater supply for the Embankment. Promised that will try and procure another Lighter or two so as to have two Cargos a day regularly.

# Wednesday 7th

Strong Gale today, wind N. East, very cold. Had other three arrivals of Foreign vessels with Grain. We have now twenty sail of vessels in the Dock, mostly foreign.

# Thursday 8 May 1845

Calvin's Men at the North Embankment, Lock Keepers and Carpenters at the Sluices. Ordered 6 Drain Logs from Robert Melville for Sluice Stems for the large Lock.

# Friday 9th

Men employed as above. Wind continues high during the Day at N.E. with occasional showers. Ordered from Mr David Robertson 4 Riga Logs for a Punt etc for the east District of Canal, price 23 pence per foot -111.10 at 23, £10.14.4.

# Saturday 10th

This day is much more moderate although the wind still continues from the East. Calvin's Men at the Embankment, Lock Keepers & Carpenters at the Upper Gate Sluices.

# Monday 12th

Carpenters & Keepers employed at the Lock Gate Sluices. Calvin's Men at levelling for part of the day, after Breakfast at the North Embankment. Mr Readman called today having been at Tophill

arranging with Mr James White for the small field belonging to the Company on the North west side of Camelon Bridge for the purpose of erecting a Wood Yard which I think will prove a very convenient and answerable place for the purpose.

# Tuesday 13th

Men employed as above. Weather mild in the morning, wind the N. West towards the Afternoon it came round to the S. East and Cold. The trade was stopped last week in consequence of a leak having brock out at the Old Basin near Port Dundas, which was considered all put to right and the reach filled up on Sunday, but unfortunately it again brock out on Sunday Night and after running the Water off between the Bridge and Stop Gates, it appeared that the leakage proceeded east from the Bridge and consequently they were under the necessity to commence running off the reach as far as the Port.

## Wednesday 14th

Was at Glasgow today, but as the Water was not run clear of the reach, got not exact account as to the state of the leakage. Wind Westerly with moderate showers.

#### Thursday 15th

Having received information that Mr Crichton wished the Wooden Cart shed South from No. 16 Lock to be removed west to the Stables to give a little more accommodation, I ordered David Hall to commence with it, and to order 150 yards Sarking which will be required to put in anything like a proper state of repairs after it is removed.

# Friday 16th

Men employed at the Gate Sluices & G. Calvin's Men levelling. We are sadly kept back for want of Stones for the Embankment the Sea's tides being so very low.

## Saturday 17th

The weather is most favourable, we will be the better of a good shower of rain. Received a letter from my Son, Robert, who states that they have a platform 150 feet in length, 36 feet breadth, 6 metres thick, to put in the Bottom of the Canal where the Leakage have brock out.

# Monday 19th May

In consequence of not receiving the quantity Stones during the Spring tides necessary, I ordered two Scows over today with instructions to bring over 40 Tons each, employed the *Vesta* for that purpose.

# Tuesday 20th

Went to No. 16 and gave orders for removing the Shed on the South side of the Lock, etc. Ordered D Hall to procure for 1 inch boards from A & G Paterson to line inside, etc.

## Wednesday 21st

Went West to Glasgow for the purpose of seeing the state of the Works where the Canal is run out for the Purpose of repairs. Found the Bottom and Sides of the Canal after the Puddle is removed to consist of small quarry rubbish that the Water had got a communication between part of Rock which still remain and the Rubbish, and came out under above and through the sides of the Aqueduct on the north side of the Canal. The Plan now adopted is by cutting the Bottom down to the solid, filling up within four feet, then laying a platform 6 inches doweld into each other, and then filling up the level with Puddle. The side rubbish on the North side is cut out to the bottom and a retaining wall is to be built leaving a space behind for a ----- of Puddle.

#### Thursday 22<sup>nd</sup>

The weather still continues very dry with the Wind N. East. Ordered the Masons to build up the Boiler for the Stove near the Slip in case it may be required for boat repairs. Carpenters shifting the Slip & making it a little narrower so as to take up a Scow or the *Vesta* to be overhalled.

## Friday 23rd

Weather still continues in some state. Seven Cargos from Longannet being the gratest Number in one Day, being 298 Tons. Blows still from N.E.

# Saturday 24th May 1845

The Wind still continues from the N.E., Moderate in the fore part of the day and blows fresh in the Afternoon. Masons finished the Boiler Seat for the Stoves. We have 7 Cargoes, 280 Tons Stones from Longannet.

# Monday 26th May

We put in the large Larch Post for the 3<sup>rd</sup> Beacon on the North side, being 900 yards. It came on to rain about 2 o'clock and continued without intermission until about 8am. Wind from the N. East, very cold, although it will prove a great benefit to the Crops.

# **Tuesday 27**

The Wind still continues from the N. East and extremely cold to be at this season of the Year. Calvin's Men cutting out for the  $2^{nd}$  Tunnel for carrying off the Surface Water from John Walker's lands.

## Wednesday 28th

The Wind still continues from the N.E., cold. Calvin's Men have got the Tunnel into its place and filled up the Embankment to such a hight as to prevent the tide flowing over it, etc.

#### Thursday 29th

Calvin's Men at the Embankment. After Breakfast the Weather still continues excessively Cold, Wind N.E.

## Friday 30

Mr Crichton was here today, agreed to face up the South side of the Junction Canal similar to the North side. Pointed out the decayed state of the Mason Work in the Canal Basin, also Masons Work in Lock No. 6, but as the Company have been at so much extra expense with the Leakage at the Old Basin, he thinks it will be proper and do anything that can be possibly avoided this Season.

#### Saturday 31st

We have a change of Weather for the better, warm with appearance of refreshing showers, & set the pump to work mearly as a trial and appears to work well, and intend to make a trial to empty the Lock by the Middle of next Week.

# **JUNE 1845**

## Monday 2 June 1845

Wind South West. Men employed at the Tunnel to carry Water from the Pump in the Lock over the Gates, etc.

### Tuesday 3<sup>rd</sup> June

Commenced this morning to clean out the flood Gates. Calvin's Men finishing the Embankment when the Tunnel was put through from John Walker's lands into the Grangeburn. Cold wind, high from S. West, with occasional showers.

# Wednesday 4

Men employed at the flood Gates and Cleaning out the Chain Wells, being full of Mud. Calvin's men at the Embankment. W. Adamson Brigg launched.

# Thursday 5th

Wind S. East with Rain. Men employed in taking the Stones out of the flood gates which was put in for Ballast, the inside being nearly filled up with Mud.

# Friday 6th

Blows hard from S.W. Men taken out the Stones in the lower Lock Gates. Calvin's Men at the Embankment.

# Saturday 7th June 1845

Men employed in Cleaning out the recess of the Gates. Calvin's Men at the Embankment. Found an old Pall in the recess of the flood Gates, etc. The upper Axle of the South flood Gates Crab brock this day. Smith employed to have it occupied.

# Monday 9<sup>th</sup> June 1845

Men employed in taken the Mud out of flood Gate Recess. I am afraid that we be under the Necessity to unship the flood Gate as the building appears to have sunk so much since the Gate was shipped that it is with the greatest difficulty the Gate will either open of shut when it is half way along the segment.

# Tuesday 10th

We commenced this day with the Engine to make a trial of Pumping Water out of the Lock, but being Neap tides the Water did not flow in such state as to bring a prepare upon the flood Gates and not ---below in consequence of the building having subsided a little since they were hung. We have made no progress and gave it up after half tide.

## Wednesday 11th

Ordered One inch to be taken off the ---- of the South flood Gates, and another Bell Crank to be placed to prevent the Connecting rods from the vibration to which they are liable - being too long.

## Thursday 12th

Men employed in reducing the Water of the South flood Gates. The weather is excessively warm today.

# Friday 13th

Ordered the Masons to commence and build up Retaining Walls in both sides of the Ditch for carrying the surface water of John Walker's fields which was taken down by him, so as to allow the ditch being sunk to correspond. With the Tunnel lately put in. I am afraid that we will have to unship the flood Gate to get a piece more taken off the splaice pace and the lower part of the Clap Bar. We only got the Water 2 feet lower in the Dock than the tide today, Glasgow,

#### Saturday 14th

Ordered a Slip of fir 1 Inch thick at the one end and off at nothing in the other, to be put in between the Gates and the Skip for the purpose of making another trial of the Gates on Monday in pumping the water out of the Dock.

# Monday 16th

Heavy rain since 2 o'clock this morning, Wind S.E. which prevented us making a trial of the flood Gates this Morning. Ordered the *Grangemouth* Scow with the *Vesta* for a Cargo of Stones from Longannet to assist in rebuilding the retaining Walls at the Tunnel into the Grangeburn.

## Tuesday 17th

Made a trial of the flood Gates and was glad to find that they made very little leakage having put in two fillings between the Gates and the splae pieces. Went over with the *Vesta* & returned with the *Grangemouth* Scow, *Margs* & *Taylors*.

# Wednesday 18th June 1845

We made a trial run off the Mud this Morning, but finding that the tide did not run off, we made very little progress with tracking the Punts.

#### **Thursday 19**

We had a good tide this Morning and a great quantity of the Mud was swept away. Ordered the flood Gates to be closed during the Night, but found that leakage was such that it was of no use to continue the Pump after 12 o'clock at Night.

# Friday 20th

After the Water ebbed this Morning we commenced to cut out the Cleading for two of the Sluices in the lower Gates and, finding flood Gates leaked considerably, I ordered some horse dung to be got and stopped them so as the pump was able to keep the Water from rising so as to prevent the men at the Sluices, but most unfortunately the harbour Master not having estimate the Stoppage, I was under the necessity to order the Lock to be filled to allow him vessels to get out, which is very annoying.

### Saturday 21

Sold Alex<sup>r</sup> Lyson Old Machinery with the framing consisting of Upright shaft & Jib without the Stay for the Sum of Nine Pounds, and a Chain 2.0.18 at £200. Hand the Cash to Mr Mackay. Deferred the pumping the Water out of the Lock till Monday and have given intimation to the trade.

# Monday 23rd June 1845

So soon as the tide left the entrance of the Lock we got the fillings put in the flood Gates and commenced pumping the Water, and although we had considerable leakage, it did not gain upon the Pump, and trust we will be able to get the Sluices in without further difficulty.

## Tuesday 24th

Carpenters employed at the Sluices, but I find are to be attended with considerable more Work than I had the least idea of. We have managed to get the Water out of the Lower recess at least, the pump is able to keep down the leakage. Men employed to 10pm.

### Wednesday 25th

Applied to Mr Adamson and got two of his Carpenters to assist in the Sluices. Got two of them hung today. Had George Calvin's Men with a horse in lifting the Mud which is between 6 & 7 feet deep between the Middle and lower Lock Gates and considerable quantity between the Upper and Second Gates.

### Thursday 26th

Applied to Mr James Ross, Port Downie, and got two of his Carpenters. Finding that the Sluices are taken considerable more work that I anticipate, I am afraid it will not be in our power to get the Recesses clear of Mud by Saturday Night. This Lock as I always thought is Six feet too deep and will prove a heart break to all concerned, with the Company such a fine for depth & width is quite out of the question and will ultimately prove an expensive concern, even although the Mud is swept away with the additional Sluices.

# Friday 27th

Carpenters at the Sluice and all the Labourers with the Horse is taken out the Mud next the Middle Gate. Wrought to 10pm although the rain came on at Midday.

# Saturday 28th

It has rained incessantly till 9 this Morning, which retarded our operations. Commenced after Breakfast, got the Mud out of the North recess and the Tunnel put in, cut through the Centre of the Mud 8 feet deep in the Lock to allow us to get the Water drained out from the Middle Gates to commence early on Monday Morning. Mr Crichton was here today and appeared satisfied with the work getting on. Have sent for him expressly. To show him the difficulty we have to contend with.

## Monday 30th

We had a most difficult job of it today, however, we managed to get the Mud out of the Second Gate recess and we had no other alternative than to wheel the stuff in the 2<sup>nd</sup> lock. I trust, however, that the five Sluices in the third Gates, Four in 2<sup>nd</sup> Gates, and Six in the Upper Gates, will have the desired effect of not only clearing the Mud out of the Lock, but will also sweep it away from the entrance. We filled the Lock about 7 P.M. and I was much pleased to see the effect which the Sluices have. We could not get the Sluice Gates completely open on account of the large quantity of Mud, which ?? have been thrown over with the Pump.

# **JULY 1845**

#### Tuesday 1st July

This has been an extraordinary day with rain from the N. East & East. Little work done this day. Mr Readman was appointed Treasurer for the River Clyde.

# Wednesday 2<sup>nd</sup> July

Went to Glasgow, but as both Mr Crichton & Readman was not in the Canal Office, I went down to the Broomielaw and from thence to Bowling to see what progress our Men were making in prepairing for the repairs of the Sea Lock, but as Yesterday was so very unfavourable nothing was done except

emptying the reach above, and the Basin which they intend to deepen 18 Inches. Appointed John Mackie to Lock No. 14.

# Thursday 3<sup>rd</sup>

This day is very unfavourable, Wind N.E. with regular rain during the day.

## Friday 4th

It Blows most severe from the S.W., very unfavourable weather for the Hay Crops which is most abundant. We had a most favourable clearance of the Mud outside the harbour this Morning, the additional Sluices will, I have no doubt, have a wonderful effect in clearing not only the Mud away from the Lock and entrance, but will be a means of clearing all deposits in the River.

## Saturday 5th

We had another excellent Clearance of the Mud outside of the Lock and if the tides had taken off to expectation we would have got the Centre of the Passage below the level of the River, but I am afraid if the tides is no better on Monday that little more will be done until next Spring. Calvin's men at the Embankment after Breakfast. *Hampton* arrived in the Dock this morning tide from --- with a Cargo Timber.

# Monday 7th June 1845

It has rained incessantly during the Night and this Morning to 8 o'clock, we was therefore deprived clearing away the Mud at the entrance of the Lock from the flooded state of the River. Calvin's Men at the Embankment.

### **Tuesday 8**

This is a favourable day although a little cloudy. Carpenters in prepairing Sole pieces for the Upper or Dock Lock Gates, the inside being ready and we must take the first opportunity to have the Water off to get them put in.

### Wednesday 9

We had occasional heavy showers of rain today. Men employed prepairing Sluice Soles for the Upper Lock Gates etc. Very backward weather at this Season.

## Thursday 10th

The Weather still continues unsettled. Calvin's Men at the Embankment, Clearing weeds, & Sweeping the Dock Wharf. No. 13 Gates in a very dangerous State.

## Friday 11th

The weather continues unsettled with heavy showers Rain. Men employed as above.

#### Saturday 12<sup>th</sup>

The Lock Keepers at No. 16 is very badly situate for a Dwelling house; the one he now occupies was originally fit up in a temporary way for a Cellar about thirty years ago contiguous with the house occupied by Mr Thomas Stark, which is now nearly uninhabitable. The Lock Keepers House at Lock No. 13 is not sufficient for two family and will require an additional room.

# Monday 14th July 1845

The *Henry Porchart* & two Brigs arrived from America. We have taken the *Vesta* to Tophill and put her in Dock for the purpose of being overholed but can say nothing as to the state of the hull until we have her proper cleaned out & perished out & inside.

# **Tuesday 15**

Men employed in fixing a Double Purchase Crab for the purpose of taking up the Punts on the Slip. George Calvin's Men at the Embankment. *Hampton* sailed this Morning.

## Wednesday 16

Men employed as above. Went to Glasgow but was unfortunate in not seeing Mr Crichton to consult him on several subjects relating to repairs of the *Vesta* in Tophill Dock, Repairs on the Company house, etc. Very Warm today.

## Thursday 17th

I was sorrow to find the Boiler of the *Vesta* so much corroded in the Bottom and it being impossible to get it either examined or repaired being so close to the bottom. I have ordered the Deck to be taken off above the Boiler so as to have it raised up for examination and will then report to Mr Crichton what I consider necessary to be done.

# Friday 18th

Calvin's Men at the Embankment. Day favourable. Earl Mar.

### Saturday 19th

Calvin's men employed as above. Lock Keepers painting the Lock Gates rails. At the *Vesta* raising the Boiler. Smith repairing the Rudder, Bottom in a good state of repairs except in two places when a small bit of plate will be required.

# Monday 21st July 1845

We had the *Cyclops, Grangemouth* Scows, and five Punts taken down to the entrance of the Large Lock and commenced scouring away the Mud, and I am happy to observe from the effect of the Gate Sluices that we have done more this tide than was ever taken away since the Dock was opened.

#### Tuesday 22<sup>nd</sup>

We had another excellent tides work today with the Two Scows & Seven Punts on one side and Three on the other, with Calvin's Men assisting. Wind East. Examined the *Vesta* and ordered two plates to be put on the boat.

# Wednesday 23rd

Carpenters taking one of the sunk Punts on the Slip. We had a visit from Mr Crichton today, went out the Embankment and he appeared satisfied with the progress we have made since he was here. Went up to Falkirk Iron where Mr Hardie have been applying for additional Wharfage. Agreed to allow the Falkirk Iron Company to put up such accommodation as they may think proper at their own expense. At Carron Basin [see note 18] where the Men are employed taking the New bridge Cistern [see note 5] etc. out of the **Ice Boat**, went to Tophill & examined the **Vesta**. Mr Crichton was pleased at observing the state it was in - three rivets out of the Boiler and require two or three small bits of Plates etc.

# Thursday 24th

Ordered all the Rope Stays to be taken out to the rope work for the purpose of being tared preparatory to their being sold with their Cranes. George Calvin's Men assisting etc.

## Friday 25th

Men employed as above.

### Saturday 26

George Calvin's Men at the Embankment. *Heny Porchart* sailed this day. Men at No. 13 & 15 Lower Stream Gates.

### **Monday 28 July 1845**

A Set of Lower Gates having been sent from Port Dundas for Locks No. 13 & 15 it will be necessary to have the reach run tomorrow for the purpose of having the Splae pieces examined. Ordered George Calvin's Men to go up tomorrow Morning to assist in bailing the Water out from the tail of the Lock.

#### Tuesday 29th

Calvin's men assisting at No 13, 14 & 14 Locks. Having got the Old bridge off the entrance of the Carron Basin, Masons commenced to take the Cope off the east side. Find that it will require the back tail pit to be made 14 inches wider, 4 feet deeper, & 4 feet longer. Was sorrow to find that the *Vesta* Boiler is in a much worse state than we first had the least conception off and that several patches will have to be put in the bottom where the Boiler have been lying above the Stringers.

West Carpenters and Men from the East District employed in putting fillings on the Splae Pieces of No. 15 Lock, also repairing Upper Splae Pieces at No. 14, but as it will not be possible to overtake more than levelling down the Shoals below No. 15 & 14, we have resolved to fill the Reaches after 6 P.M. and run them off tomorrow in the purpose of repairing Lock 13 Splae Pieces & other. Was sorry to observe that the leakage at No. 14 upp sill have again brock out end as formerly 10 years ag the Water

have made way through the Sill or under it into the Chamber of the bottom of the Lock. Ordered all the soft stuff to be taken out as far down as possible and to get a few Bags filled with Clay put in and after being well pounded to fill up above with good Puddle.

# Wednesday 30th July 1845

Carpenters employed at Lock No. 14 & Lock No. 13 Lower Splae pieces. I was glad to see the stuff put in yesterday have stopped the leak in the meantime at Lock No. 13. The platform is intirely gone and I am rather afraid that the Platform in No. 12 is gone also and will require to be repaired first opportunity employed. Three extra Masons & two Labourers to assist the Masons Work at the bridge. The Reaches were again filled up after 10 P.M. to allow the trade to pass, and as Son Robt & I have to attend the meeting at Port Dundas we have ordered the Work above Water to be proceeded with tomorrow and intimated to Mr Hardie & the New Gas Company [see note 18] that as the Bainsford Reach will be run dry on Friday & Saturday that they will have the priviledge to put their Gas pipes across the Canal. Got the Cistern [see note 5] put in Forth Bridge.

### Thursday 31st

Met Mr Crichton with Messrs McCall, Craig, & Son Robert. Mr Crichton agreed to the *Etna*. which is now under repair at the Old Basin, be sent to Grangemouth when finished, and that Mr Craig got the *Grangemouth* Scow for the West district. At that all the Articles and machinery which is of no use at Grangemouth should be disposed of whither by provost or public pole. Masons employed in prepairing Stones & laying part of the Cope. Ordered shores put across to support the Wharf at Mr Milns Granary. We had a severe Storm of Thunder & Rain this Afternoon which is much against our operations.

# **AUGUST 1845**

## Friday 1st August

Water run off the Reaches this morning. Labourers Commenced to take down about forty feet of the Wood Wharf which is entirely gone at the East end of the Bridge to allow the masons to commence tomorrow to have it built up with Stones. Mr Hardie commenced to dig out the trench for his gas pipe and take out the Mud accumulate in front of his Wharf. Sorry to observe that the Wharf in front of Mr Milnes Granary [see note 20] is appearing to give considerably although we have Six Longs placed as support. The weather is unfavourable.

# Saturday 2<sup>nd</sup> August

Weather still continues unfavourable, heavy showers during the Night. I was much annoyed to see the Gas Company had only commenced to cut the trench for the Gas pipe this Morning. Masons & Labourers at the Breast Work at the east end of the entrance of the Bridge. Sorrow to observe the Wharf at the granary state getting worse and I am afraid it will not stand the next time we have to run the Reach. It has rained incessantly since 12 o'clock and I and afraid the Gas people will make a bad job of their pipe finding it will be impossible for them to get it in by the time we have to fill the Reach. I ordered all our Labourers to assist them and a most disagreeable business they had --- it does not appear that the Engineer and Gas people employed had the least idea of the difficulty they had to contend with. Our men was intirely done up having wrought for four days from 4 in the Morning to 10 o'clock at Night.

# Monday 4th

We had a great fall rain since Saturday night. It have cleared up today and trust we will have regular Settled weather for some time to come, we have got the Single leaf across the entrance of the Carron Basin and trust it will answer the purpose well. Masons employed prepairing the Stones for the Back Tails and also for the Breach. Wrote Mr A. Lawrie to forward from 40 to 50 lineal feet Cope 3 feet broad by 12 inches thick. Labourers in conveying the stuff taken out in front of the breast across to fill up the Wharf in front of Mr Milns Granary which have sunk considerably during the two days that the reach was run.

# Tuesday 5th August 1845

The Weather appears to be more settled, very warm today. Masons at the Bridge. Carpenters stopping leakage from Lock No. 3 Westwards. Ordered the Lock Keepers here to Commence to clean the gates preparatory to having them tarred below the Hight of the Paint Work.

# Wednesday 6th

The weather continue favourable. Masons & Carpenters employed at Bainsford, Carron bridge which requires considerable work to have the building raised and placed so as to suit the Single leaf. The Smiths are now nearly finished with the **Vesta**s Boiler which have required the bottom, almost covered with Patches --- the Weather continue dry to allow the Bottom & remainder of the vessel to be painted. I trust they will be able to lower the Boiler into its Seat tomorrow.

## Thursday 7<sup>th</sup>

In consequence of the heavy rain yesterday the men did get the Boiler and inside the *Vesta* finished with the Paintwork. Ordered a Barrel of fire Clay to lay on the Bearers before the Boiler is let down. Extra Masons still employed at the Bridge.

## Friday 8th

Carpenters Commenced to tar the Lock Gates. Ordered the flood Gates to be shut so as to get the Gates dry for Tar. George Calvin's Men clearing out the ditch which was filled up from the end of the Tunnel through the Embankment at the Pansteed Greens.

# Saturday 9th

Carpenters Taring the Gates. George Calvin's Men before breakfast removing the Crane Stays from the Ropework where they were tarred to the Loft above the Stables being the most convenient spot for them before they are disposed off. Having got liberty from Mr Crichton to proceed to new Castle started this Morning and arrived at new Castle by the *Vesta* at 10 A.M. on Sunday.

# Saturday 16th

Returned from new Castle this Morning at half past 12. Found all the work executed agreeable to the instructions given when absent. The three Gates having got a coat of Tar, etc. The *Vesta* in the Dock preparing for getting it finished, etc.

#### Monday 18

Found the Bridge at Bainsford in a tolerable forward state except the Cope at which the Masons are employed east from the Bridge. The **Ice Boat** is now so very leaky that it will be necessary to have it put in Dock so soon as the Bridge is completely finished. Finds that we will have to run the reach between No. 4 & 5 Lock to have the shoal taken out at the tail of Lock No. 5 which obstructs the vessels drawing Canal Water. Ordered the Carpenters from Tophill to assist the Carpenters here tomorrow with the Sluices in the Upper Gates as the Dock is now nearly empty and May not have a better opportunity for some time to come.

## **Tuesday 19**

So soon as we had the Water run off the Dock so low as to allow the Men to commence to the Sluices we shut the flood Gates and begun work after Breakfast. Also George Colvin's Men began the junction Canal Slopes. David Hall & R. Newlands assisting the Carpenters.

# Wednesday 20th

The Carpenters at the Upper Large Lock Sluices. Calvin's Men at the Junction Canal Slopes. This day continues very unfavourable, heavy showers during the day.

#### Thursday 21

The day rather favourable. We got the sluices placed and finished all but the Boilers above and trust we will find a great benefit from the Six Sluices washing the Mud out of, and clearing away, the entrance of the Lock. Calvin's men at Junction Canal Slopes.

# Friday 22<sup>nd</sup>

In consequence of receiving a letter from Mr Crichton intimating that the Committee have agreed to the sale of Machinery & Utensils at Grangemouth on Friday the 29<sup>th</sup> Inst. I have ordered the Carpenters to fix the Machinery to the Upright Shafts of the Large Cranes. Calvin's Men at the Junction Canal Slopes.

## Saturday 23rd

Men employed as above.

# Monday 25th

Carpenters, Smiths, & Lock Keepers employed in sorting the Machinery intended to be sold. Colvin's men at the Embankment after Breakfast. Heavy showers occasionally during the day.

# Tuesday 26th

Men employed as above. This day is rather favourable.

# Wednesday 27th

Men employed as above. Fine day.

# Thursday 28th August 1845

Men employed as above. Weather most favourable.

#### Friday 29

Carpenters at the *Vesta* etc. Calvin's Men at the Embankment. This being the day appointed for the Public Sale of Machinery & Utensils Mr Crichton came here, and although every article was sold except the Crane at Granton Quay, and one of the large Double Purchase Cranes Slays etc, they were sold the most of them, one half below the value I put on them a twelve month ago.

# Saturday 30th

Men employed as above. In consequence of a Scow loaded with Coal yesterday having sunck between Dalgreen Bridge & Grangemouth, ordered the West District **Ice Boat** & Diving Bell from Port Dundas as a great part of the Coals must be in the Canal. Men employed taken the Coal in which they succeeded to take about the One third.

# **SEPTEMBER 1845**

## Monday 1st September 1845

Men employed at Large Sluices & Embankment. We got the Scow up and the Men employed with the Diving Bell taken the Coal from Bottom of Canal. Employed Irishmen to cut down the Barley at £1.00.

# Tuesday 2nd

Carpenters at Sluices. Calvin's Men after tide time at the Embankment removing Machinery etc. Men at the Sunk Boat got the rough of the Coals out of the Canal by the Diving bell. Shipped one of the large double purchase Cranes for Mr Lawrie.

# Wednesday 3rd

Men employed during the tide clearing the Mud out of the Chamber of the Middle Gates etc.

# Thursday 4th September 1845

I am astonished this forenoon in passing Bainsford Bridge to observe a great accumulation of stuff lying in the late Walter McTargets Timber Yard, and on examining the Premises I was astonished to find that the Men employed by the New Gas Company [see note 18] have encroached upon the Canal Companys property in excavating for a tank to hold the Gasometer., the inside building of which is said to be 35 feet diameter and twenty feet deep and as James Hart, the Contractor for the excavation, have now commenced so that part next the Canal where I am decidedly of opinion was persisted in, will endanger the bank giving way, and thereby stop the trade of the Navigation for a considerable time, I considered it my duty to employ Russell & Aitken to take immediate steps to put a stop to such a Procedure until security was granted to Canal Company for the amount of loss which otherways they might have sustained in the avent of the South Bank happening to burst through into the Tank in Progress of being built. Ordered Russel & Aitken to write Mr Crichton on the subject.

#### Friday 5th

Two of the Cylinders for the Iron Work at Bo'ness [see note 21] being landed on the Quay at the Basin, about 5 Ton weight, with the Carriage say 7 Ton, I considered it my duty to employ Men for the purpose of supporting the Bridge at the Timber Basin and it was taken over with little trouble.

# Saturday 6th

In consequence of a letter from Mr Crichton intemating a Meeting to be held at Bainsford this day at half past 12 o'clock, I went up. Met Messrs ---- Engineer, Hederick, Secretary, Mr Smith, Writer on the Part of the New Gas Company, with Young & Hart, Contractors, and Mr McCall and Mr Aitken & myself on the part of the Forth & Clyde Canal Company, and after a little discussion on the dangerous state of the Bank, the Gas Company maintaining that should the bank give way all that the Canal Company can suffer is mearly the loss of water which will fill the space taken out, there being no space below the level of Canal where the water can escape, and on consideration that the longer the Interdict was allowed to remain the greater will be the danger of the Bank giving way, we agreed to lift the Interdict on condition that the gas Company was to become security for all damage the Company may sustain and to put that part of the Bank on which the encroachment was made in same state it was in previous to the operations, and pay the whole of the expense. Ordered Mr Aitken to make out an agreement to that effect previous to the interdict being lifted. Allowed Mr Hart the Contractor to proceed in mean time.

### Monday 8th

Purchased from Wm & Jas Brooks 3 long Spars for Ladders, 6 long Poles, and 6 Spars for Oars. From one of the Sluices in the Lower Large Gate not being covered above the rush of the water through the Sluice up between the Cleeding of the Gates was such as to start the outside Cleeding, and I am afraid that we will have to pump the water out of the Dock next stream in order to get the Cleeding repaired. We had most favourable weather since Wednesday 27 August, but it is rather dull today.

## Tuesday 9th

Carpenters etc of *Vesta* caulking the Decks. Calvin's Men at the embankment.

## Wednesday 10th

In consequence of the Two large Vessels, the *Glasgow & Elderslee*, discharging Timber & the owners being anxious to have them discharged so as to allow them to proceed without delay to America, ordered five of Calvin's Men to assist in discharging which they got the *Glasgow* out and ready for Ballast tomorrow.

# Thursday 11th September 1845

I rather suspect that we have to allow the whole of Calvin's men to assist to Ballast the two large Ships today.

## Friday 12th

Calvin's Men Commenced Yesterday after Breakfast in Ballast the *Glasgow* and got in the complement 300 Tons this evening by 6 o'clock, 11 Men being employed. Carpenters employed at the working gear if the Basin Scow *Mary*. Robt. Hendrie, Master. I took the width and depth of the Canal between No. 2 & 3 Locks today at every hundred feet but was sorrow in consequence of the Trade passing the water keep very unregular. It however appears that the most shallow Parts are east from Carron Company house occupied by Mr Hardie west from No. 2 Bridge, and at the tail of the Lock. I have therefore ordered two Inches to be put in the Basin Lock gates which will give sufficient depth in the most shallow places for the trade. Indeed, it would be attended with considerable trouble and annoyance if the reach was deeper than of the other, for the trade will take advantage of it and cause Stoppage and work of Water in passing the other reachers in the Canal.

#### Saturday 13

The *Glasgow*, a Bark about 700 Tons, sailed having been discharged 1000 Tons timber and Ballast 300 Tons in 6 days, having come into Dock on this day eight days, and the *Elderslee* of the same burden sailed next tide. Calvin's men employed in ½ day, after Ballasting the *Elderslee*, at the Embankment.

## Monday 15th

Men at the Embankment.

Tuesday 16 September 1845

Men employed painting Palls & Lamp Parts. Calvin's Men at the Embankment. Ordered the *Cyclops* & *Grangemouth* Scows to Tophill.

### Wednesday 17

In consequence of the short Reach at Tophill being so filled up that it was with great difficulty load vessels could get passed, ordered the *Cyclops & Grangemouth* to be laid in the most convenient parts so as to get the stuff thrown on board, and I was surprised to see the Gravel accumulate at the tail of the Lock so hard as any rock.

It came on to rain excessively about one o'clock and ordered the reach to be filled up. The *Grangemouth* Scow to be discharged on the south bank reach below and the *Cyclops* to be discharged on the track path at Carron Basin Bridge, it being more mixed with Gravel.

## Thursday 18th

It was my intention to have commenced to take other two Cargos out of Tophill Reach so soon as the two Scows were discharged, but as the Tides are so high and one of the Gullets on the north Embankment require to be filled up, I ordered the Two Scows to be loaded with Clay lying on the South bank, which was taken out of the New Gas Companys Tank at Bainsford, and taken down to the Embankment. Ordered Thomas Stark at No. 16 to charge Alex Baird, Carter, 15/ for forcing his Cart through the Check and brock the Bar.

# Friday 19th

Sent the Barley to the Home Farm & got it threshed etc and finds it to measure 6 Bolls. Men employed painting the Dock bridge, Polls. Calvin's Men at the Embankment and Drains North side of the Dock.

# Saturday 20th September 1845

Calvin's men at the Embankment with the *Cyclops & Grangemouth* Scows discharging Clay into the open space of the building above the Gullets which have lately been formed from the rush of the ebb tide into the river, and I am almost certain that if we had not got the Clay the whole embankment would have been swept into the river. Carpenters painting the Dock & Timber Basin Bridge.

#### Monday 22<sup>nd</sup>

We have had heavy falls of rain since Saturday Night and this morning went to Tophill to examine the **Ice Boat** in Dock. Find that the sheathing will require to be taken off and a part of the upper work plank, but cannot say as to the extent of repairs until they are removed. Ordered the Masons to Grangemouth to repair the Causeway on the North harbour Wharf of the Old Harbour. Cleared up through the day.

# Tuesday 23rd

Frost this morning, favourable during the day. Men employed painting Timber Basin Bridge, Calvin's men at the Embankment after Breakfast. The mason employed at the Causeway in Old Harbour Wharf.

#### Wednesday 24<sup>th</sup>

This day is rather favourable. Men painting & taring rigging of Signal Post, repairs of *Grangemouth* Scow.

# Thursday 25th

We have had very heavy showers with wind from West. Sorrow to find that no Carpenters can be got to repaire the **Ice Boat** in Tophill Dock and unless Mr Crichton agree to send four Carpenters from Port Dundas we will be under the necessity to take the **Ice Boat** back to Grangemouth and put it in Mr Adamsons Dock. I find that the sheathing will have to be taken off and part of the upper work plank, but can say nothing in regard to the timber until this is done.

#### Friday 26th

George Calvin's men at the Embankment. Carpenters at the Iron Punt and Signal Post.

## Saturday 27th

Men employed as above.

# Monday 29th

George Calvin's at the Embankment. Carpenters repairing Iron Punts & Skiff. Weather continues very Boisterous.

# Tuesday 30th

Went to Glasgow, met Mr Crichton along with Messrs McColl, Forest, Craig & Wilson. W. Crichton promised to be here on Tuesday to arrange with Mr. Hagart about the Ballast Hill and the Bills at Abbotshaugh respecting the Timber lying opposite their premises. Thinks it will be as well to pay the Earl of Zetlands rent for the ground lying on the South side of the Junction Canal, being 3 Roods 34 Falls. Weather continues Boisterous with heavy falls Rain.

# **OCTOBER 1845**

#### Wednesday 1st October 1845

Ordered the **Dredge Boat** into the Dock. Calvin's Men at the South Embankment. One of the Companys New Scows load with Coal from Clackmanan sunk at the entrance of the River and it was with difficulty the men were saved. Ordered one of our men down at low water to see of the tide will leave her, finds that the Boat is lying in such a way as she will be got up next tide if there is sufficient number of men to get the Coal laid to side and the water pumped & Bailed out.

### Thursday 2<sup>nd</sup> October 1845

Ordered a punt down to the sunk Scow for the purpose of having the Cart of the Coals, sent 5 men to assist, and we managed to get the water out with Pumps & Buckets by 10 o'clock, and brought to the Harbour by 11. Have the *Vesta* employed towing the *Juny* to Carron Shore and the *Grangemouth* across & back from Longannet with a Cargo stones. Weather very moderate.

### Friday 3rd

Received a letter last night from Mr Crichton stating that if the weather is all favourable tomorrow, this day, he intended to go east along the Canal to Grangemouth and wished me to meet him at Mr Salmonds property at Bonny about half past Eleven. But I am sorrow to say that the Wind Checked round to N. East with a heavy fall of rain about one o'clock this morning, and continued without intermission the whole day. I therefore did not think of meeting Mr Crichton.

# Saturday 4th

The rain still continues and is sorrow to see the quantity of sheaves floating down the River, which makes it appear that the low lying fields adjoining the Carron have been completely flooded and many have suffered considerable loss from the deluge, but as this day is comparatively calm, I have sent the *Vesta* across with the *Grangemouth* for a Cargo stone for the Embankment.

## Monday 6th

Men commenced to the large Crane. George Calvin's men at cutting a Drain between the North Dock wall and the River. *Vesta* across the water. The day favourable.

## Tuesday 7th

Men employed as above. George Calvin's men at Embankment.

## Wednesday 8 October 1845

Carpenters at the large Crane. Calvin's men clearing out Ditches between the North side of the Dock and the River. Day favourable.

# Thursday 9th

Carpenters employed as above. Calvin's men Clearing Ditches & at the Embankment and Grangeburn. This day is also favourable. Sent down the *Vesta* to Cromby Point with the *Grangemouth* with a Cargo Sawen timber from Abbotshaugh.

#### Friday 10th

Men employed as above. Day Calm by Showery.

# Saturday 11th

Carpenters employed at the large Crane Shaft. Calvin's men at N. Embankment. W. South with occasional showers. Received a letter agreeing to my Estimate for this Month except the stones for the repaires of the Canal Basin, which he wished to put off to next Summer.

# Monday 13th

We have had another fall of rain during last night and this morning to 10 o'clock, wind South blows fresh. Men employed at the Crane. Calvin's men a few Ballasting a vessel. Masons West at Castlecarrie assisting in repaires of the Sills; the Reaches being run today for repaires.

# Tuesday 14th

Carpenters employed at the Crane. Calvin's men at South Embankment. We had a most sever Gale from the South during the night, fortunately it kept dry which will be in favour of Cutting and securing a great quantity of Crops, favourable also for the October Tryst.

#### Wednesday 15th

Carpenters at the Large Crane. Calvin's men at the Embankment and prepairing for Draining part of the field which John Walker have taken back from John Walker. Ordered the flood Gates being shut tomorrow mornings tide with the view of pumping the water out of the lock.

#### Thursday 16

Men commenced cut in the wood run to carry the water from the Pump over the Flood Gates, but in consequence of the Gates not metering properly we were not able to Pump out the water. Ordered the men to rake the stuff from the splae pieces and have another trial of it tomorrow.

# Friday 17th

We have had another severe night of wind & Rain. Have put a stop to pumping out the water in the Lock from the great flood in the River. George Calvin's men removing loose stones at Granton Wharf and cleaning the West Wharf.

## Saturday 18th

Weather continues most boisterous, wind Westerly with heavy falls rain. I find we can do nothing this stream to pumps the water out of the Lock owing to the flood in the River.

# Monday 20th

The weather continues most alarming, yesterday it rained incessantly and during the night it has blown a hurricane. We have not had such backward weather for many years. The failure of the Potato and other Crops have a most serious appearance with the excessive rise in the price of Provision will prove a Calamity, which I am afraid to thousands during the winter. Calvin's men were not able to stand work from the hurricane.

#### **Tuesday 21 October 1845**

This morning is more favourable, no rain & Calm during the night, but by no means settled like. Calvin's men at the Embankment after breakfast. Carpenters at the Crane and repairing a Punt.

#### Wednesday 22

Received a letter from Mr Crichton ordering the Ballast required for vessels to be taken from the Ballast hill and Gravel, if it can be got, for repaires of the truck Paths. This day is most favourable for the Country, Wind westerly. Calvin's men at the Embankment. Carpenters at repairs of Punts.

# Thursday 23

Went up to Ballast hill, finds that at least one hundred yard Wheeling Plank. My Son Robert informed me that *Etna* Iron Scow was sent down with Cargo Pipes and that the *Grangemouth is* to be put under the Charge of Mr Forrest as a Bank Boat. Calvin's men at the Embankment at the Punt. Ordered a Red Pine Log from Robt. MeIvell for the Cargo Crane. *Vesta* employed.

# Friday 24th

Men employed as above. Weather continues favourable for the Farmers. *Etna* came down with a Cargo by Thomas Napier & Ordered the Smith & Hammerman to Tophill to finish the Iron Work of the **Ice Boat**, one Smith from W Adamson.

#### Saturday 25

I have ordered the *Etna* to take a Cargo Tallow from a vessel in the Dock with the view to ascertain the weight of the Cargo and Marked accordingly. This day have proved most favourable. I am afraid that we will not be able to ascertain exactly the exact Tons as the tallow is put on board the *Etna*, except the

whole and the floor being so high I do not think she will take a full load with safety. Got about 100 barrels, say 45 tons, the remainder to be shipped on Monday.

# Monday 27th October 1845

We have a heavy Gale and rain during last night and the rain, although the wind have fallen, is likely to continue during the day. In consequence of the Neap tides the *Henry Porchart*, *Hampton*, & *Retreat*, from America, which arrived in the roads on Wednesday will not get into the Dock until Wednesday or Thursday. The Brig of New Castle from America arrived this day. Loaded the *Etna* with 60 Tons Tallow height for at 21 inches Aft 17½ inches from lower part of pun streak.

#### Tuesday 28th

Lock Keepers etc. employed at punts etc. The *Retreat* arrived today. Calvin's men at the Embankment. Weather still continues very unsettled with rain.

# Wednesday 29th

This day is moderate. The *Hampton* got into the Dock and the *Henry Porchart* might have got in too if they had made the attempt their being sufficient depth of water. We had a very heavy fall of rain during last night.

#### Thursday 30<sup>th</sup>

This day is favourable with a fresh breeze from the West. Calvin's men at the bank.

#### Friday 31

Went to Glasgow, met Mr Crichton, present Messrs McColl, Wilson, Forest, & Craig. Mr Crichton agreed to have the *Cyclops* put in Dock to be overhauled and report if the Repaires appear to be serious, and also to the wall being built between Burnhouse & Tophill Cottage – North side of Canal.

# **NOVEMBER 1845**

#### Saturday 1st November

This is a most favourable day, through making out Accounts.

# Monday 3<sup>rd</sup> November 1845

We have had a great number of Arrivals since Saturday. The wind having shifted into the N. East & S.E., vey moderate.

# Tuesday 4th

Measured the Pig Iron Wharf erected by the Company in the timber Basin for the Messrs Baird, Gartsherrie. Length 1--- feet by 2—feet wide. Weather continues favourable. It is very surprising that the Canal regulations respecting Trackers is not the least attended. On Sabbath I met a man with two horses — so much intoxicate that he was neither able to attend the Horse nor walk, and this day at Tophill a Horse was drowned mearly in consequence of the Bay not being fit to guide the horse. Mr Thomas Stark and Mr McDonald at No 16 mentioned that Mr Crichton when he was at No. 16 proposed a fence from the West end of the store house to the east end of the Passage Boat Shed. If a wall was built and sheded over it will prove a great convenience to the trade.

# Wednesday 5th

Being the Parish fast day little was done except the Labourers at the Embankment.

#### Thursday 6<sup>tl</sup>

In consequence of a Letter addressed to the Harbour Master stating that a Meeting is to be held this day at Queensferry for the purpose of pointing out a pier or piers proposed to be erected at the Queensferry, I ordered the *Vesta* to start by 10 a.m. with following persons, Mr. Mackay, Captain And<sup>r</sup> of the Carron Company, Capt. Robert. Crawford, New Castle Trade, and James Maxwell, Pilot, and myself, and arrived at South Queensferry at 12 where we met in the Inn; Admiral Sir Charles Adam, James Walker Engr CC employed by Government, & Captain R.N. Where Mr. Walker showed the Plans of two Harbours – one on the South and the other on the North side of Queensferry, intended to accommodate the Trade by the Railway proposed between Edinburgh and Perth. The Harbour on the South side to extend 43- yards from Port Edgar into the Forth where there is 10 feet depth of water at low spring tides, and on the North side to extend 300 feet beyond the Long Craig Rock into the North. Captain

Walker being the Oldest Captain was examined by Mr Walker, having been 50 years employed in the trade, as to his opinion of the affect these Harbours will have upon the trading vessels passing & repassing the Forth at the Ferrys. As to the extension of the Harbour in the South side 430 yards he would not consent to more than 100 feet because it will prove a great disadvantage to vessels working either up or down the Forth with contrary winds, as to the Harbour on the North side, he was opposed to the extension beyond the Long Graig as it will prove dangerous for vessels in Calm weather with a ebb tide being drifted on Garvy Island, but the great objection that I have to the Harbours is the danger of the tides not rising to the usual height nor Ebb so low in spring tides as they do at present in consequence of them being extended into the Forth at the very place where it is of least width until it reach Kincardine. And I not only advise the Company, but every one interested in the Ports above the Ferry, to oppose these Harbours to the extent proposed.

# Friday 7th November 1845

Carpenters & Smiths at the large Crane. Calvin's men at the Embankment. Rain during the night.

#### Saturday 8

We have four foreign arrivals since yesterday. Timber & Grain from the Baltic. Men employed as above. We got up the  $5^{th}$  Beacon today.

## Monday 10th

Several foreign vessels with timber & Grain have arrived since Saturday, and the Dock have now a respectable appearance.

# Tuesday 11th

We have three arrivals from foreign and one large Brig with Coal from New Castle for Falkirk Iron Works. Calvin's men at the Embankment and discharging Drain Tyle from the Brickfield for the Walkers field and for draining the North side of the Dock Wharf. Smiths at the Cargo Crane. Mr Crichton was here today, appeared satisfied with the appearance of the Dock, considers it will be necessary to have Beams across the timber Basin. Ordered McKay to write the Agents to have their Pig Iron removed back 10 feet off the slope of the timber Basin. Went up Bank with him, complained of the Timber being allowed to ly in the Canal to the detriment of the trade, examined the Ballast hill.

#### Wednesday 12

More vessels arrived today. Calvin's men at the Embankment & Granted the loan of the hand pilling Machinist W. Wilson.

## Thursday 13<sup>th</sup> – Bo'ness

Men employed as above. At Glasgow.

## Friday 14th October 1845

Calvin's men employed at the Embankment and Covering Drains North side of the Dock. Carpenters at the Large Crane.

# Saturday 15th

Men employed as above. Ordered the Red Pine log to be put on the Pit to be slabed for the Jib of the Large Crane. West a Dalderse, ordered the logs intended to be sawn at the Mill to be removed more close to the South side of the Canal. 16 Tug Company how the **Vesta** employed.

## Monday 17th

Sawers employed in slabing the Jib for the large Crane. Colvin's men at the Embankment.

# Tuesday 18th

Men employed as above. Sawers with us today.

## Wednesday 19th

We have had a very heavy fall of rain since 12 p.m. last night and occasional showers with strong Gales from the S. West. It was with great difficulty after being on the North side of the Embankment that we got back to the South side owing to the excessive flood in the River.

## Thursday 20th

The weather still continues very boisterous, heavy falls of rain during the night. In consequence of a complaint from Mr Potter that his Wood Yard is flooded from the surface water not getting passage through the covered drain which is carried from the Grahamston road east and under the Falkirk Iron Works I went and met Mr Potter & Mr Hardie and mentioned to them that the Company has nothing to do in keeping the Drain clean, that Mr Potter & Falkirk Company covered the drains for their own convenience and therefore the keeping of the Drain clean rests intirely with Mr Potter & the Falkirk Iron Company. Mr Hardie stated that they will endeavour to open it up when it is likely the interruption takes place, and in order to prevent complaints in future he will carry the Tunnel across the entrance where it is now filled up next Spring in place of the Present Position in which it is carried round the Pow or cut which is now filled up [see note 22].

Ordered David Hall to have the *Cyclops* put in Dock tomorrow if the trade will allow, so as to ascertain the state of the Iron work etc. Previous to making the **Ice Boat** having been sent west to Port Dundas with a Cargo Old Castings, I ordered her to be loaded with Rubble & slag founds for the Dyke which is at present rebuilding on the North side of the track path between Burnhouse and Tophill Cottage from Netherwood. Mr Broom having got the Contract to furnish Coping at 8d pr Cubic foot \* Ashlar at 7d laid down at Grangemouth and wall stones at 1/8 and flag pounds at 3/ pr Ton laid down at Tophill.

#### Friday 21

This morning is rather more favourable, but it still looks very unsettled. It has however turned out favourable. Calvin's men at the Embankment. Men at the Crane.

#### Saturday 22

Calvin's men employed loading Ballast. Keepers and Artificers at the Large Crane. This is favourable, frost in the morning and appearance of frost this night.

## Monday 24th

Men employed the Embankment. Frost severe this morning, looks like a change this evening.

#### **Tuesday 25**

Calvin's men at the Embankment. Lock Keepers & Artificers after the tide employed at the Crane.

## Wednesday 26th

The weather continues very Boisterous with heavy falls of Rain, wind westerly. Calvin's men at the Wood shed sorting the floor for Mr Lamond to hold materials which he has taken at two Pounds Annum.

## Thursday 27th

This has been another very disagreeable day with rain. Men at the large Crane. Calvin's men at Embankment.

## Friday 28

This day is more moderate, still continues to rain. Men employed as above.

# Saturday 29th

Went to Glasgow, but in consequence of Mr Crichton being engaged with Mr Loch, the Governor, I did not see him, but left my report and Estimates in the Office.

# **DECEMBER 1845**

# Monday 1 December 1845

Since Saturday we have had a continuation of heavy Gales of Wind & Rain from the West and still continues.

# Tuesday 2<sup>nd</sup>

Calvin's men at Walkers drain. The flood being so heavy in the River that the men could not get to the Embankment, men employed at the Large Crane. Weather still continues very unfavourable, heavy Gales and rain.

## Wednesday 3rd

Frost, snow & rain, during the night, damp Cold frost during the day. Calvin's men at the Embankment and carring Drain Tib at ---

# Thursday 4th

Frost rather severe. West the Canal very much struck at Boys being allowed to Track vessels and able to lift a Bridge.

# Friday 5th December

In consequence of receiving a letter from the Clerk of Road Trustees complaining of the bad state of the road between Bainsford Bridges and Dalderse owing to the Ditch not being kept Clean, I ordered the Banksmen to commence to it immediately, but there never was a ditch where the road is in the worse state, it is rendered unpassable owing to the Additional Carting from the New Foundry [see note 23] and not being properly metteled.

A most Melancholy Accident occurred this afternoon. Poor James Brown, Bridge Keeper of Dalgreen Bridge, was Killed when in the Act of putting a plank on board of And<sup>r</sup> Mitchells Lighter. Two vessels had got jambed west from the bridge and James got a plank from the Lighter to prize off one of the vessels, and when in the Act of pushing the planks on board the end on board jambed between the Range and timber heads and his head being between the Bridge & the other end when the vessel was passing, deprived of life in one moment.

### Saturday 6th

I have heard that a vessel is sunk in the 4 miles reach near Bonny Bridge loaded with Fire Bricks & Clay. A considerable leak having brock out on the North Bank between No. 3 & 4 Lock, ordered four feet to be run off the reach and found the leak about 3 feet below the surface, 12 inches diameter, which made its way in a sloping direction towards the tail of slope which would have been attended with serious consequence had it not been taken in time, being close by the Culvert under the Canal.

## Monday 8th

Went west to No. 16 and ordered the pipe to be put in from the Canal to supply the new Iron Foundry [see note 24] at present erecting on the South side of the Canal and on the West side of the road leading to the Muirs. Went west to Bonnybridge where the sloop loaded with fire Brick and Clay was sunk in the Canal in consequence of being in contact with another vessel on Friday night going West. My Son Robt, had his men at work with Pumps & Buckets and, after running 3 feet off the reach, they got the vessel afloat 3 p.m. and brought down to the reach below Lock No. 16 in the evening. The men employed in putting in the pipe to the Foundry had the Bank cut and every thing safe by 4 p.m.

# Tuesday 9th December 1845

The weather continues very changeable, heavy Gales of Wind & Sleet from the N. West. Most of the workmen attended the funeral of James Brown, the late Bridge Keeper.

# Wednesday 10th

This morning is more moderate, but by no means settled like.

# Thursday 11th

We have had a Most boisterous night, strong Gales of Wind from the N. West. Calvin's men at the Embankment. Examined the *Cyclops* in Tophill Dock. Two Smiths having been employed these 8 Days having put on a few patches and thinks she will be finished by Saturday night. The Company having put in four Timber heads, and will require to replace the plank in the floor and Bulkheads. I ordered the ---- to Clear away the stuff lying at the tail of the Bank between No. 5 Lock and Bainsford Bridge.

## Friday 12

This day is much more moderate and inclines to frost. Men employed as above. The schooner *Norma* of Aberdeen when in the Large Lock came first upon the Wide Gate & brock 5 Stantions and a piece off both the rails and will charge him 30 shilling, being expense of Damage.

## Saturday 13th

We have had moderate frost during last night and today. Ordered Mr Mackay to charge the Captain of *Norma* of Aberdeen 30/ for damage sustained by the Vessel on the Large Lock Gates yesterday. Was

happy to see the *Cyclops* in Tophill Dock in such a state to be nearly finished this evening. Ordered the Banksmen to put in two palls on the North side at Burnhouse for the purpose of getting a line from the vessels to twist them off, when two vessels happen to meet in the reach between Lock No. 7 & 8.

### Monday 15th

The weather again changed yesterday morning & commenced to rain and in the afternoon it came on to blow a complete hurricane and continued during last night and still continues. Having heard that one of the Carron Company Lighters had taken fire West from Lock 16 loaded with Coal & small Coal, I went west afternoon and found that she was taken down into 15 reach & Scuttled by David Hall & Robt. Newlands, which was very fortunate, before the fire had made great progress. Calvin's men at 5<sup>th</sup> beacon.

## **Tuesday 16**

The weather continues most Boisterous, Wind N. West. Examined the Grangeburn banks which have suffered considerably from the long continuation of heavy floods. Wrote Mr Crichton to send me the Fewing plan with the view to place Crop fences to prevent the Carts injuring the slopes. Carpenters repairing the Gate rail brock by the *Norma*, Aberdeen. Calvin's men at the Embankment.

#### Wednesday 17th

Men employed as above. This day is much more favourable and inclines to frost, very calm.

## Thursday 18th

The Banksmen employed clearing the Drains east of No. 5 Lock North. Observed a considerable leak near Forganhall, ordered the Banksmen to have the reach run off three feet first opportunity to get the leak stopt. The frost was that severe as to stop the masons at fence wall.

## Friday 19th December 1845

We have a complete change of weather, Wind & rain from West this morning after a frost last night, which continued till 10 p.m. Revd James Jeffreys funeral day.

## Saturday 20th

This day is more favourable. The North Hills are completely Covered with Snow. I am glad to see progress of the Embankment having now got the 5<sup>th</sup> Beacon finished and the stone facing carried out to join the stones formerly laid and filling up the large Gullet, and trust by the end of the next day that we will have the run of the tide sent off the line of the remainder of the Embankment into the Forth.

#### Monday 22<sup>nd</sup>

We had a complete hurricane between Saturday night & Sabbath morning, wind N. East with frost yesterday afternoon the wind changed to west and blows fresh this morning. Poor William Syme Gas Keeper met with a serious accident this morning in consequence of the ---- of the rectifier having blown up and struck him on the head [see note 14]. There is no hope of his recovery. The *Cygnet* of New Castle when in the Large Lock on Saturday night, in consequence of throwing off the Bowfast when the sluices were thrown up to fill the Lock, came astern up on the Gate and brock two of the Stantions of the Lower Gates.

## Tuesday 23

The weather still continues most boisterous. Calvin's men at the Collecting of Ballast at No. 16. Sorrow to see the state of the Banks for want of Men and Boats to carry Materials.

## Wednesday 24 December 1845

This day is considerably more settled with moderate frost and trust it will continue for some time. Ordered seven of George Calvin's men to the Ballast hill to load the **Cyclops** to ballast a vessel in the Dock.

#### Thursday 25th

Calvin's men at the Ballast discharging. West at No. 16 observed the miserable state of the road between Bainsford Bridge & Castle Lawrie or New Falkirk Foundry [see note 23] and that they are encroaching upon the Canal Bank in consequence of having raked the dirt into heaps at the one side which is not removed.

### Friday 26th

This have been another boisterous day with heavy Gales Wind & Rain from S. West. Calvin's men collecting Ballast.

# Saturday 27

This day continues as boisterous as ever, particularly towards evening, it blowed a complete hurricane and deluge of rain.

#### Monday 29th

We had a moderate day yesterday, but today it appears to be as course as ever. Men employed at palls for the Junction Canal. After part of the day it rained incessantly. At Garscube.

## Tuesday 30th

It has continued since yesterday at 1 o'clock until 3 o'clock to blow a hurricane with heavy falls of rain, when the wind shifted all in a sudden into North and still looks very boisterous. A Sloop, loaded with Coal, sprung a leak from Clackmannan. Ordered her to be discharged at Grangemouth and would not allow her to proceed.

#### Wednesday 31st December 1845

The weather still continues most boisterous. Men employed at the large Lock mooring palls.

# 1846

### **JANUARY 1846**

## Thursday 1st January

The men attended their work and was sober today. Men employed as above. George Calvin's men at Drain Tile. About 7 o'clock p.m. a Sailor belonging to ---- when crossing lock No. 1 upper Gates fell into the Lock was drowned. It is allowed that he was the worse of liquor. Weather most moderate.

#### Friday 2nd

The men was employed as above. George Calvin's men at the Drain and Ballast hill. Weather moderate with frost. Carpenters at No. 7 footgangs, Banksmen cutting drains between No. 5 & 4 Lock North Bank.

### Saturday 3rd

The men employed as above. George Calvin's men Pumping Bridge Cisterns. Change of weather, the wind S.W. & fresh. The Yawl for conveying the men to and from the Embankment having received considerable injury from the heavy Gales, I have been under the necessity to send it to Mr Adamson for repairs.

### Monday 5th

Calvin's men at Drain tiel & Ballast. Frost fore part of the day & Rain after 5 o'clock P.M.

#### Tuesday 6

Men employed as above. Rain & Wind west.

## Wednesday 7 January 1846

Went to Port Dundas, met Mr Crichton, agreed that the Causway connected with the South East Quay at the end of the large Lock should be raised and relaid and to employ the masons for that purpose.

## **Thursday 8**

In consequence of having received a letter from Mr Crichton with the inclosed letter from W. Staintons Man of business in Edinburgh prohibiting the Mr. McLean Saw Mill from laying down Logs of timber etc upon the Road which he claims as part of the property of Powdrake. I wrote Mr Crichton to say that I had examined the a—to Mr Staintons Claim, and stated the Companys March Stones were place 4½ feet beyond Mr Bells fence at the West end & 6½ feet beyond the fence & Ditch at the east and that Mr Stanton was never refused a Servitude to the road along the Canal Companys property.

## Friday 9th

Went West the Canal Masons employed at Camelon Bridge relaying the Cross bar. Carpenters at the No. 16 fence from the store house. Trade continues excellent.

# Saturday 10th

Calvin's men employed at the Drains & Ballast.

#### Monday 12th

Ordered the Companys masons to commence to raise the Causway at the South East of the Lock for the purpose of having it relaid. Having heard that ---- Menagerie is to pass the Canal from Airdrie to Falkirk this day, I ordered David Hall either to get one of the Balling Boats or one of Mr Whites Rafts to support the Bridge at Camelon [see note 26].

## Tuesday 13th January 1846

Lock Keepers employed Clearing Mud from the Middle and Outer Gates and the Dock bridge which had received a stroke from some vessel which sent the Leaves off the Metre. Weather Calm & dull, wind from S. East.

#### Wednesday 14

We had a heavy fall of rain last night, very dull & Calm this morning. In consequence of the Captain of a vessel having stated that his Second Mate was amissing since Saturday, and a Bonnet having been found in the Basin, I ordered Mr Stewart to make a serch in the Sea Lock as it is probable he may have falled over the Gates when passing.

#### Thursday 15

The man who was amissing made his appearance in good health this morning after having commenced a serch for him in the Lock. Weather continues favourable. Ordered the Banksmen soon as the Trade will permit to run two feet off the Recess between Lock No. 3 & 4 to stop a few Leaks through the North Bank. The Trade continues most astonishing.

# Friday 16

A number of Vessels detained for want of Horses. At 8 p.m. I heard that a Scow loaded with New Castle Coal & Char is sunk in the Canal West of Dalgreen Bridge. Wrote Mr Crichton to request my son Robert to come East to arrange about have the Cargo discharged and Scow raised. Went west and found the Scow about 50 yards west of the bridge on the South side of the Canal with one Gunnel above the water.

#### Saturday 17<sup>th</sup> January 1846

Fortunately we had the *Ice Breaker* at Grangemouth and got the materials on board early this morning. Went west and commenced a Tackle at the Bow and Stern from the South Bank and the Crane from the Stern, which raised the Scow so high as to allow a quantity of the Char to be thrown into the Breaker. We then shifted the Breaker to the Ban, raised it as high to get the Gunwall above the water and the damaged part of the Bow, which was the cause of the Scow sinking having struck the South corner of the Bridge and stone in bath plank & Timber. We then commenced to have the water scooped out the – and remainder of the Cargo put on board another Scow, two thirds having floated up to No. 3 Lock & Sunk in the Canal. We had considerable trouble in getting it racked out before we got the Gates to work. Had it not been for the char which caused so much labour in Skimming it off the surface we would have got the Boat ready to start by 12 o'clock, but it required the men to continue all day.

## Monday 19th

The wind having shifted round to the South East, it commenced a heavy rain about 11 forenoon and continued all day. Very cold & wind high. Charged Miller master of the Scow £21,6.

#### **Tuesday 20**

The rain still continues calm and mild. Calvin's men at J. Walkers drain & rained incessantly.

## Wednesday 21

This is a moderate day. Calvin's men placing palls.

#### **Thursday 22**

Another days rain, what changeable weather, rained all day.

#### Friday 23 January 1846

This day still inclines to be wet, very moderate. Calvin's men at Ballast for part of the day.

#### Saturday 24th

The weather continues moderate, quite calm. A Boatsman of the name of Wilson went a missing Tuesday evening, being last seen going up the bank the worse of liquor. This day application was made for the --- and after serch they found the Corpse in the Canal West from McIntosh works.

#### Monday 26th

Calvin's men clearing Drains south side of the Lock. Weather changeable with heavy showers rain at Tophill. Ordered the banksmen to examine that part of the Ballast hill where the Company have a right to take away the stuff for Gravel for the Banks.

## Tuesday 27th

Calvin's men at the Embankment. Weather changeable, heavy showers of rain, Wind West.

#### Wednesday 28th

The Large lock Gates are now very stiff to work from the accumulation of stuff in the Recess. Ordered Calvin's men to assist tomorrow at low water to have part of it raked out.

## Thursday 29th

Calvin's men along with Lock Keepers clearing away the Mud from outer Gate recess. At No. 16 ordered the men in the *Cyclops* to take of the Clay & Earth from New Gas Works.

# Friday 30th June 1846

This day is very dull and wet, when will the weather dry up. Calvin's men at the Embankment.

#### Saturday 31st

The rain commenced again this morning and continued without intermission until 8 p.m., most extraordinary weather. Went to Port Dundas, met Mr Crichton and the other overseers. Mr Crichton agreed to the Articles contained in the Estimate and I trust in consequence of the Amalgamation which is taken place that matters will get on more prosperously for all concerned.

# **FEBRUARY 1846**

## Monday 2 February 1846

This is the most favourable day we have had for many Months. Calvin's men assisting the Lock Keepers to clear the Mud from the Gates.

## **Tuesday 3**

Changeable weather again, looks soft, and come on a heavy fall of Rain after 8 p.m., most boisterous.

#### Wednesday 4

The weather still continues most boisterous, heavy fall rain. Ordered the Scow to be taken to Tophill.

## Thursday 5th

Sent the *Cyclops* to Tophill to be overhalled having sprung a Leak. Went west and finding it could not be put into the Dock in consequence of the number of vessels passing, referred until tomorrow when the Trade may be more slack.

#### Friday 6 February 1846

The weather still continues very changeable, frost in the morning, Wind & Rain after 12 o'clock.

## Saturday 7th

We have had another most tremendous night with wind and rain, most lamentable weather. Several vessels brock from their moorings at the Coal wharf last night.

# Monday 9th

We have a change of weather yesterday & today. Wind North with frost, North Hills covered with snow, and it appears as we are to have a heavy fall of snow from the N. East. Ordered the large Crane, if Horse can be got, taken round to the West Wharf where it is to be erected. We commenced to the upright shaft of the Crane with plank and the Janker round the Wharfs, where it is causwayed and had it taken round with the Jib. Calvin's men being employed in assisting the Lock Keepers & Carpenters by 6 o'clock. Old Thos Aitken died this morning.

#### Tuesday 10th

The Weather Glass is now very high and the frost continuing moderate and I trust that after four Months Wet & Stormy Weather that we will have it settled for the same length of time. Went west to No. 16, was annoyed to see the Number of Rafts in the Canal lying in several of the Reaches and so many vessels passing east and West. One in particular, the *Ann* of Montrose, so deep as caused a great disturbance to the trade. Ordered her to be moored to the one side until the whole of the vessels got passed. The *Cyclops* having sprung a leak was put into Tophill Dock yesterday, John Thomson, his son, assisting James Naismith. Expect she will be patched up tomorrow.

#### Wednesday 11<sup>th</sup> February 1846

Lock Keepers, Artificers, & Labourers, employed in raising the upright shaft & lowering it into the pit, which we managed with the two portable Cranes very easily. I am of opinion that Timber will answer the purpose of jamming it securely in the pit better than stones. Ordered the masons to come here tomorrow to raise the Causway on the North Wharf in the Harbour which is considerably sunk from the Surface Water getting down at the back of the building.

#### Thursday 12

The weather continues most favourable. Was at No. 16, ordered the *Cyclops*, which was taken out of the Dock, to load of a Cargo of Metal from the temporary road which was made some years ago for the experimental Railway to the Banks. Artificers employed in prepairing wood to jamb the Large Crane upright. Past T.A. [Thomas Aitken] Funeral.

## Friday 13th

The weather continues most favourable with slight frost in the morning. Mr Crichton was here today, went down to the end of the Embankment, appeared satisfied with the state of the Works and the progress we have made since he was here. Approved of the outer beacon being made considerably larger than the others and to have one at the outer end on the South Embankment so as they may prove guides for the trade during the Night. The men on Mr Crichtons return applied for a rise of Wages. Ordered that I should report to him the state of their application and if considered proper to state the additional sum to which the men are entitled. Artificers & Labourers employed as above.

## Saturday 14 Feb 1846

Weather continues favourable. Men employed as above. Masons at the harbour Wharf.

#### Monday 16

The Lock Keepers & Carpenters & Masons employed in filling up the pit for the Crane. The 4 corners are filled up with plank drove down to the Bottom with the hand Pilling Machine and the intersections filled up with Roman Cement & small stones properly pounded, which I think will make a very secure Job of it. Letter from Eliza.

### Tuesday 17th

The mason in repairing the Basin Wharf wall and the Carpenters prepairing a Cover for the Crane pit. The weather continues most excellent.

## Wednesday 18th

White frost this morning. We have only four vessels in the Dock. Men employed as above.

# Thursday 19th

We got the large Crane Jib and the two stays. After the men was done with the tide went to No. 13. The *Etna* was discharging Gravel on the Canal Bank from Carron Wharf and the *Cyclops* with a Cargo Clay from the New Gas Work in the South West side of the Timber Basin where another Leak have brock out, and I happy to say got it stopt. Calvin's employed at the Leakage.

## Friday 20th

After placing the upright stays on the large Crane I found the Jib stays were a foot too long and was under the necessity to take them down to have cut and welded to the length. Masons at the causeway North Harbour Wharf.

## Saturday 21st Feb 1846

Calvin's men employed at the Embankment and Timber Basin.

## Monday 23

We had a very severe Gale from S. West yesterday with a heavy fall of rain which continued from 2 to 7 o'clock p.m., but it is fair this morning and mild. Men employed as above.

Tuesday 24 Weather continues mild with occasional showers. Calvin's men at the Embankment.

#### Wednesday 25th

I found that we will require to stretch the Beams across the Timber Basin from the West Bank to the South end of the Pig Iron Wharf erected on the East bank for the accommodation of the Messrs Bairds which will require about 550 lineal feet of logs nearly 200 feet more than it will take from the South side of the Lock.

#### Thursday 26

I find that Andrew Hendry is not fit to attend to both the Lock and the Bridge. For instance today there was two vessels in the reach going East and one in the proceeding West and had it not been for a person who happened to be present when the vessel came forward the Bridge might have been carried away.

#### Friday 27

Received 1 inch Chain for entrance of the Large Lock.

The weather continues most favourable at this season, so mild that vegetation is proceeding more rapidly. Took off 4 Yellow Pine Logs from Robt. Melville, I sent up to the saw mill to be cut through the Centre for Beams, for the Timber Basin.  $54\frac{1}{2} + 42 + 42 & 40$  feet lerry Ash. We have had the highest tide today that we have for eight years past. It rose within  $6\frac{1}{2}$  inches of the Top of the Large Lock Cope and overflowed the banks on the North side of the Carron for about three Hundred yards below the Coal Jetty. Very providentially the day was calm or the damage would have been more serious. About an Acre of Mr George Mitchells field which he is ploughing for Seed Crop is overflooded. I had Calvin's men over and prevented the water from continuing flowing over the Banks as well as at the Grangeburn.

# Saturday 28th

I have ordered young Robert Newlands to attend the Camelon Bridge until I have Mr Crichton consulted as to the necessity of having a person appointed.

## **MARCH 1846**

## Monday 2<sup>nd</sup> March

Calvin's men at the Embankment, trades men at the Large Crane. Weather continues favourable.

## Tuesday 3rde

This day is very unfavourable, heavy falls of rain and Gusts of wind from S. West.

#### Wednesday 4th March 1846

Went West with my Report & Estimate for the present Month. Met Mr Crichton & Readman who appears anxious that no more masons to be employed on the East District, but are agreed to an assistant for Camelon Bridge. Mentioned that James Wilkie had given in the lowest offer for the filling up the spaces in the Dock Wharf by £45. We have had the most severest day of wind experience for many years. Great destruction must have taken place both on land & sea from its effects.

## Thursday 5th

A great part of the Bonded Basin pailling is blown down from the effects of the Storm yesterday. Ordered the men to get it put in a temporary way until they get materials to have it repaired. Very few of the Company dwelling houses have escaped injury. Finds from the stables at Lock No. 16 store houses, shed, etc. have suffered more or less.

## Friday 6th

Wrote Mr Crichton to ascertain whither workmen will be sent down to repair the houses on the East District, or employ men here. Down the Embankment punts received considerable damage from the Gale on Wednesday and the Wooden house at the end of the South Embankment swept away. The stones facing on the South side considerably held. Calvin's men at the Embankment.

## Saturday 7th

Artificers repairing the Timber & Iron Work for the Beams across the Timber Basin. Calvin's men at the Embankment.

# Monday 9th

Men employed after the tide at the Pile driving. Calvin's men at the Embankment.

#### Tuesday 10th

In consequence of Mr Crichton having wrote me to employ tradesmen to repair the houses, I went along the line with Hugh Leishman and pointed out what was necessary to commence at No. 16 Stables, and came East to strip the slates off Lock No. 6 & 5 Houses, which are pined on rafters and we will have sarking put on and replaced.

9.3. 1/2

Length of No. 5 house is 33 by 28, say 104 yards.

No. 6 30 26 87 yards 191 yards at 11 ½

Or say 200 yards @ 11½d is 9.11.8.

## Wednesday 11th

Men employed driving Piles and Carron River. In consequence of the Tug – having Brock her Shaft, I gave the loan of the *Vesta* yesterday to the Tug Company until their vessel is repaired.

## **Thursday 12**

I took the dementions of the Shore Masters house for the purpose of ordering Cast Iron Roans and gave the dementions to Mr Gilchrist with instructions to forward them here so soon as convenient.

In consequence of the stones etc lying at Camelon Bridge, ordered the men discharging a Cargo Dung to wheel it back clear of the Road.

## Friday 13

Men employed at the Piles & Embankment. Day rather Boisterous, with heavy showers rain.

# Saturday 14th March 1846

A very course morning, strong wind from the West with heavy showers of rain. Calvin's men removing the Cargo Stones from the Basin, Crane received from M. Brown for the repairs of the Basin Wall.

### Monday 16th

We have had severe night with wind & rain this morning, it blows a complete hurricane and continued during the day.

## Tuesday 17th

The Gale took off during the night, hard frost, wind N. West. This morning Calvin's men at the Embankment. Sorrow to see the Tunnel of the Pansteen greens chocked up in consequence of the valv having been keep up by a piece of timber which was the cause of the field being flooded. Coldest day this Season.

# Wednesday 18th

Snow during the night with hard frost, wind North East with every appearance this morning of more snow. Winter appears to set in at last. Calvin's men at the Embankment and discharging the *Cyclops* 

in the Grangeburn where the slope is split in with Quarry Rubbish. The *Etna* with Stones and Gravel at the Embankment.

## Thursday 19th

The Carpenters & Lock Keepers having got the piles drove for the Beams, I have ordered the Logs to be taken Granton and taken with the Crane so as the Smith may get them Scoopt at each end with eye bolts to secure them to the piles. Frost is most severe today and will be a great deel harm to vegetation.

#### Friday 20th March 1846

This morning the frost continues most severe. Calvin's men at the Embankment.

#### Saturday 21st

Change of wind during the night to South East and Commenced at 9a.m. a heavy Gale with Snow & Sleet. Sent a Statement of the Workmen employed by the Canal Company at Grangemouth Improvements; the time they came into the Companys Service, and period from which their present wages were paid.

## Monday 23rd

The weather is still Cold with a Change wind S. East. Calvin's men at the Embankment.

#### Tuesday 24th

Calvin's men two tides at the Embankment. In consequence of Alex<sup>r</sup> Ferguson having left the Companys employment I have employed Edward Lacey, a very sober man, as Night Watchman. Canal **Dredge Boat** commenced this morning at No. 16.

#### Wednesday 25th

Went along the North Embankment which is now extended 200 yards beyond the fifth beacon and was happy to observe that the Banks are standing well and the Gullets filling up and no leakage from when the Gravel & Cay are discharged. *Henry Porchart* sailed.

#### Thursday 26th

We had rain during the night, but appears to be a fine day. Was at No. 16. The Canal **Dredge Boat** have made considerable progress in lifting the stuff opposite the entrance of the Bridge to Port Downie Basin.

## Friday 27 March 1846

This day appears favourable. Calvin's men at Embankment, Carpenters at the Beams fitting on end Plates.

#### Saturday 28th

Men employed as above. Sorrow to see such a quantity of Mud Collected inside the Lock - ordered the Sluices to be thrown up and scoured out the lose stuff, but we will have to put the Punt with Calvin's men on Monday to stir up the Mud on the outside of the Lock so as to allow the water to ebb out to the level of the River. Went up to No. 16, ordered the **Ice Boat** to remove East opposite the Stables and take out a shoal there.

## Monday 30th

Lock Keepers & Calvin's men Clearing the Mud from the Lock etc.

#### Tuesday 31s

Went to Port Dundas by the early Passage Boat, met Mr Crichton with Messrs McColl, Wilson & Craig. Mention to Mr Crichton the Complaints from the Iron Agents the want of Accommodation to lay up a proper stock of Pig iron and proposed the South Side of the Junction canal for that purpose. He appeared agreeable that further space should be provided and wished that the Iron Merchants should state in writing what accommodation they require.

# **APRIL 1846**

## Wednesday 1st April

We had considerable fall of Rain during the night which has improved the air and trust we will have no more frost for the season. Very much annoyed with the Mud outside the Gates.

#### Thursday 2<sup>nd</sup>

Went West to No. 16, ordered the men not to put away Mud into Glenfuir Park from the Punts, but to put it on the North side of Canal Bank West from the Stables and so soon as they have the Canal Cleared opposite the Stables to go into Port Downie Basin and take out other Punt loads opposite the Crane. Calvin's men at the Embankment. Met Alex<sup>r</sup> Marshall the Person who have got the Contract to finish out the wall between.

## Friday 3<sup>rd</sup>

Burnhouse and Tophill Cottage. In consequence of my Son, Robert, having stated that two of the Punts was to be sent West to the Bowling Canal, I ordered Calvin's men to load the Punts with sand for the Masons at Tophill and take them west with the **Ice Boat**; and Trade continued good in the Canal and also in the Dock.

### Saturday 4th

Large Lock Gates sustained damage from in consequence of a Gust of wind having sprung up suddenly from the East which drove the forward upon the other and brock the Rail of the Wide Gates. I should have mentions it yesterday that the *Vintage* Schooner from London when proceeding up the Forth about two miles below the Ferry on Thursday night about half past 10 o'clock; the *Water Witch*, one of the Leith Tugs ran across the *Vintage*'s Bow and Melancholy to relate the Tug went down with all hands before any assistance could be rendered from the Crew of the Schooner.

# Monday 6th April 1846

The weather have continued excessively cold with the wind from N. East since Wednesday. Calvin's men at the Embankment. Ordered the timber Buoy in the timber Basin to be taken and cut in two, as I think it will float better with the one half end up then it does at present.

## Tuesday 7th

Calvin's men at the Embankment. West at No. 16 **Dredge Boat** in Port Downie Basin. Ordered so soon as they are finished to proceed to Dalgreen and take out what is considered necessary there where the Scow sunk with the Char.

## Wednesday 8th

Men employed as above. Wind continues from S.E. Hugh Leishman, Slater, having finished the Roofs of the Lock Keepers Houses at No. 5 & 6 after being newly sarked in place of the Old System of Tile rafters. I ordered him to prepair for the North side of the Store & Dwelling Houses at Grangemouth which require new sarking.

## Thursday 9th

Frost continues in the morning. Met Mr Readman at Tophill and went down to Dalderse to show him the ground in dispute which Mr Stainton of Powflates claimes as his property and showed him the Companys March Stones placed inside the Hedge & Ditch, showing that Mr Stainton have nothing more than s Servitude for a road along the Companys ground.

#### Friday 10

Calvin's men at the Embankment. Carpenters employed in prepairing Palls. Day favourable, frost in the morning. We had visit this day from Mr Greigson, the Gentleman appointed as head superintendant over the Railways & Canals along with Crichton and other Gentlemen, but being at Dinner when they arrived I had little opportunity of conversing or going along with them. Along the Works employed a Drosky & Gig to take to the Railways.

# Saturday 11<sup>th</sup>

Went down and crossed over to the North side from the 2<sup>nd</sup> Beacon and walked down the 600 yards on the North Embankment. Was happy to observed the Bankment perfectly tight so far as it is finished, but find the work both difficult and disagreeable, having to lift the stones which were laid down there

two years ago which is now covered with Mud and tangleware. It came on to rain before I left at half past 9 a.m. and continued during the remainder of the day. Wind S. East.

## Monday 13th

I have given the loan of Cast Iron Pump which was intended for the Large Lock Gates to the New Gas Company at Bainsford.

### Tuesday 14th

Went to No. 16, was astonished to find that the Banksmen have laid down the Quarry Whin Stone Rubbish on the North side of the Canal in place of the South side which I intended for the Cart road from Port Downie Bridge. The Canal **Dredge Boat** being down in the Basin, ordered her with the punts to Dalgreen.

## Wednesday 15th

Wind shifted again to the East with rain. The Large Moveable Crane sold at the sale 29 August was taken down today and several of the Articles carted away. At Edinburgh.

#### Thursday 16 April 1846

The Smiths are employed in repairing the Bow of the *Cyclops* having stave in one of the Plates upon the Corner of the building. At Tophill ordered the Puntsmen to take the stuff taken out of the Canal at Dalgreen to the North Bank, West from No. 13 Lock.

# Friday 17th

The wind shifted to the West, calm & mild. A great Number of vessels sailed this morning chiefly loaded with Pig Iron. Came on to Rain at 2 p.m. & continued all day.

## Saturday 18th

The Rain although not heavy & Calm still continues. Calvin's men have taken down today the Larch tree for the 6<sup>th</sup> Beacon. Discharged three of the Canal Puntsmen for not attending to their work.

# Monday 20th

On passing up the Canal Bank to Church yesterday I observed a considerable leak through the North Bank a little West from Lock No. 4 and gave orders to the Banksmen to give notice to the trade and have the reach run off early in the morning, but they did not attend to my instruction and when I went west this morning at 5 o'clock nothing was done. I therefore despatched a man to order the Trade at Grangemouth to proceed West as there was a considerable number of vessels lying ready to proceed West, and was happy to observe that the Leak has not increased since I saw it yesterday.

#### **Tuesday 21**

Very fortunately the Leak was not above a foot below the Surface of the water and we got it stopt without interrupting the trade. The *Cyclops* discharged a Cargo Carron Danders East from the Bridge at the entrance of Port Downie.

## Wednesday 22 April 1846

The wind still continues from the N.E., frost in the morning. Carpenters employed at Punts repairing Bonded Basin floating Bridge. Calvin's men at the Embankment. Got the privilege from Mr Dawson, Carron, to discharge the punts into the hollow.

### Thursday 23

Ground West of Mr Hardies house. This day is favourable little or no frost in the morning. Was sorrow to observe that the masons employed at the Dyk between Burnhouse & Tophill Cottage have stopt work for want of Stone. Forwarded a letter to Neitherwood to send forward stone immediately. Pointed out the Site for the Crane at No. 16 Store have to be erected, and ordered cwt Stones to be laid to prevent the Carts tracking off the Danders laid down East of Port Downie Bridge.

#### Friday 24

It commenced to rain last night and has continued all this day, wind North East and excessively cold. Calvin's men at the Embankment.

## Saturday 25th

This is a fine moderate day, although the wind still continues from the N. East. Puntsmen employed in discharging into the Hollow Park. Went to No. 16 where the Carpenters and Banksmen are engaged placing the frame of the Crane, complained that the Upright next the house was not near enough the Canal to allow the Carts with Bulky articales to pass.

## Monday 27th

I understand that one of the men belonging to a Danish vessel was drowned in the Lock between Saturday & Sabbath morning. Made a search for him this Afternoon and found the Body. He appeared to be really young stout man about 20 years of age.

## Tuesday 28th April 1846

This morning is very calm, but rather cold. The fast day was intended to have taken place on Friday among the different Congregations in the Parish, but owing the Election of a Member of Parliament which is to take place Friday, the arrangement is completely deranged and one or two of the Congregations have appointed this day – such as the Established Church in Falkirk and the Free Church in Grangemouth.

#### Wednesday 29

The Wind is now Westerly but still continues cold in the mornings. Men employed at the Punts & Calvin's men at the Embankment.

#### Thursday 30

Went to Port Dundas met Mr Crichton, McColl, Wilson, Forest, & Craig. Mr Crichton agreed to lay before the Committee the necessity of applying to the Earl of Zetland for the ground on the South side of the Junction Canal and for the erection of two houses for the lock Keeper at No. 14 & 16.

## **MAY 1846**

#### Friday 1st May

The weather appears to take a change for the better. Men employed as above. Was at No. 16.

#### Saturday 2

The weather continues better. A Number of vessels have left the Port Chiefly loaded with Pig Iron.

#### Monday 4 May 1846

We had a most genial Day yesterday but today it commenced to rain with the wind Easterly & excessively Cold. From the Carelessness of the men attending the Punts, one of them sunk loaded with Mud opposite Carron Company house occupied by Mr Hardie at Tophill. Gave orders for levelling the timber for Bottom of the Locks.

#### Tuesday 5th

This is rather more favourable. Sent for the *Ice Breaker* from Tophill for the purpose of raising the Punt which we commenced to after Breakfast and it was 3 p.m. before we got it to Swim, being constructed of iron makes the raising very difficult.

## Wednesday 6

Ordered Hay, the Person who attends the Punt men & keeps their time, about his business from his Carelessness in allowing the punt to sink.

## Thursday 7

One of the Overseers on Central Railway have got the loan of the Pilling Machine at the rate of 10/s per week. Agreeably to Mr Crichtons Letter gave assistance to put on board of a Scow to have it conveyed to the place where the railway is to go under the Canal about 1 mile west from no. 16 [see note 27].

# Friday 8th

Employed two men for the then left employed in the Punts. Day favourable. Calvin's men at the Embankment.

## Saturday 9th

At No. 16. The Carpenters from Port Dundas have been employed in hanging a set of Upper Stream Gates at No. 11 and overhauling a few of the Lock Sills & Sluices and are now finished today having been --- from Tuesday.

# Monday 11th May 1846

Went East to the end of the Embankment and trust that we have now got past the most expensive part of the North Embankment. It has taken not less than 2000 Tons stone to fill up about 20 yards in length in the deep Gullet.

The space belonging to the Carron Company being filled up from the Punts loaded by the **Canal Dredge Boat**, I ordered them to commence upon the South side of the Canal east from Dalgreen Bridge and lay as much on the top of the Bank as a Scow will hold.

#### **Tuesday 12**

Met Mr Crichton with my son Robert by chance at No. 16 and walked along the bank to the spot where it is intended for the Central Railway is to pass under the Canal, and met Mr McCall who is appointed by the Company to attend to the operations. The two engineers, Mr Lean and Pritchard, were there but as the work have not proceeded far enough little was said as to the manner of securing the banks etc. while these operations of building the Bridge is going on. Put the *Hercules Dredge Boat* into Mr Adamsons Dock.

#### Wednesday 13th

Gave orders for Calvin's men being at Lock No. 7 tomorrow morning as the Mungle Bog is to be run for the purpose of repairing the Sill.

#### Thursday 14th

The reaches were run dry this morning and men commenced work at 6 a.m. but was unfortunate in getting the water bailed out No. 7 Lock from the dam having brock out which prevented the Carpenters getting sluices put on the Splae pieces until 4 o'clock. I never saw the Mingle Bog Bank in such a state.

## Friday 15th

Ordered Calvin's men at Mungle Bog to assist the Banksmen. Loaded the *Cyclops* with Clay to make up Banks which are in miserable state, having both sunk and rent upper to the extent of nearly 120 yards, and gave orders for Calvin's men to assist tomorrow also. Weather most favourable, warmest day this season. Wrote Mr Crichton, complained of the trade being stopt in Grangemouth reach from the *Anne Gibson* coming East & the Thornaby Schooners [*Thornaby is on the River Tees near Middlesbrough*] going west stopping the trade from 12 to 7 o'clock p.m.

# Saturday 16

Weather continues warm, strong wind from S. East. Calvin's men at Mingle Bog.

## Monday 18th

We have a considerable fall of Rain from South East since Saturday night and still appears cloudy with a change of wind from N.W. Carpenters commenced to the **Hercules** in Mr Adamsons Dock today. I am sorrow to observe Dry Rot have got into her and three Planks on each side will no doubt have to be taken out.

### Tuesday 19th

This day is favourable although a little cold, wind Westerly. Ordered the men in the **Canal Dredge** & Punts to discharge the Punts in the Part belonging to the Company West from the Bonded Basin.

## Wednesday 20th

At No. 16, ordered the **Cyclops** to be taken to Abbotshaugh Saw Mill for the purpose of loading the Plank which is Cut up for the Bottom of No. 2 & 13 Locks.

#### Thursday 21st May 1846

Carpenters & Banksmen employed loading the Planking for the Locks. Part of the slopes & 2 Logs to be taken for repairs of the punts. This is the warmest day we have had this season, considerable Thunder. One man on board a vessel in the Forth was struck with the lightning and was brought to

Grangemouth very much hurt. Mr Waddel, Controller, died suddenly. This morning was down at the Embankment and if the space between the stone facing was once filled up I trust that there will be little difficulty in getting the Embankment finished this Season.

#### Friday 22

This day is not so favourable, Rain occasionally. Calvin's men at the Embankment two tides.

#### Saturday 23

A most malicious transaction was done last night by a fellow having cut the lineards part of the standing Rigging & several ropes on board the Schooner *Jenny* of Yarmouth. The Scoundrel will be made an example of if found out. Gave the Large flute Plough for cutting groves in Piles to George Pretchard, one of the Contractors on the Central railway, on loan to cut groves in the Piles where they are engaged for crossing under the Canal West from No. 16.

#### Monday 25th

Calvin's men at the Embankment. Men in repaires of the *Vesta* Bows. Was under the necessity to send William Clouson to attend the Basin Lock in consequence of William Napier having absconded from us – is supposed a Criminal Action with a Child.

#### Tuesday 26th

West at No. 16, ordered the Banksmen to get a few Cart loads Carron Danders to make up the Truck Path in Mungal Bog having slipt in during the time the reach was run off.

# Wednesday 27th

The weather this week have continued rather Boisterous and Cold, it is however more mild this evening. William Napier returned home last night and was taken before the Sheriff & Fiscal for examined in regard to the Criminal Connection which was said he had with a Child of 11 years of age, and I am happy to understand that they found no such evidence to prove that he is guilty, but that the whole is a Malicious invention of a set of Ignorant Individuals. Mr Waddell, the Custom House, was buried today, deeply and Justly regretted.

## Thursday 28th

Gave instructions to Robert Brown to proceed West with the Canal **Dredge Boat**. On passing along the Canal Bank I heard that Mr Crichton was at Grangemouth and was sorrow that I did not meet him as he returned up the Canal Bank, which I understand he proceeded as far as Camelon Bridge and crossed to Falkirk.

## Friday 29th

The weather have continued yesterday & today most favourable.

#### Saturday 30th

Went west to Port Downie. Met Messrs Crichton, McColl, Forest, Craig, Wilson. Nothing particular was fixed except to the stoppage of the Canal for two Days either the latter end of June or July for the necessary repairs Lock No. 12, 13 & 18 & 19.

## **JUNE 1846**

# Monday 1st June 1846

This day is the warmest we have had for many years. Made out Accounts for the office to be sent by the early Boat tomorrow.

#### Tuesday 2nd

Weather continues as warm, not a breath of wind.

#### Wednesday 3

Calvin's men have been employed in the morning levelling the stuff taken out of the Canal at Carron Companys. Warm weather still continues excessively warm. Thunder heard to the Eastward about the Ferrys. Mason at the shed.

#### Thursday 4

David McColl, painter, commenced to the paint work. The Company furnishing the materials. Alex<sup>r</sup> Marshall finished the wall between Burnhouse & Tophill Cottages.

## Friday 5th

The weather continues excessively warm. Painters at the Cargo Crane & Large Lock Gates, *Hercules*. Calvin's men levelling the South Bank East of No. 2 Bridge.

#### Saturday 6

The weather continues as above and men employed as above.

#### Monday 8th

Calvin's men at the Embankment & levelling. Afternoon Complained of the stones no being good from Longannet. Mr Adamsons men throng at the Hercules, putting three strocks of 3 In Plank on both sides and ten pieces Oak timber forward, as mason & Labourers laying flags for the Sliding Doors of the Shed.

## Tuesday 9th June 1846

The Turnposts of the Large Lock having declined at the top have cause the hoop to become loose and in place of the hoop working when the Gates are wrought the hoop continues stationary and the part go round which if allowed to continue will soon ruin the head of the part. I have therefore ordered the foot hang to be taken up and the Hoop properly wedged, and a hath made above the Part so as the hoop may be greased occasionally.

#### Wednesday 10

We had a few seasonable showers today which will cause great vegetation. Calvin's men at the Embankment and levelling the South Banks. Men planking the *Hercules* and the painters painting inside. Men at the wedging up of the Turn Posts & at No. 16.

#### **Thursday 11**

Received a letter from Mr Crichton requesting the ground on the South side of the Canal to be divided into several parts for the accommodation of the Pig Iron Agents at ---

## Friday 12

The weather continues as dry as ever. Alex Ross funeral. Calvin's men at Embankment. Carpenters at Punt repairs.

## Saturday 13

Weather continues very dry. Larchen at Punt, Painter at the Docks Lampposts etc. I expect the *Hercules* will be ready to come out of Mr Adamson s Dock on Monday morning.

## Monday 15 June 1846

The weather continues very warm. Calvin's men at the 5<sup>th</sup> Beacon and levelling West at No. 16. Thos Stark very Poorly. Carpenters at Lock No. 12 Sluices. Ordered forty yards Sarking from Messrs Robt. Melville & Co. *Hercules* taken out of the Dock.

#### **Tuesday 16**

Men employed at Bow Punt. Painters at the Dock Bridge. Calvin's men at the Embankment.

#### Wednesday 17th

The weather continues excessively hot. I think this is the warmest day we have had and have not had such a long continuation of warm weather for at least 20 years.

### **Thursday 18**

Painters at the **Dredge**. Carpenters at Bow Punt Taring the Engine Shed.

#### Friday 19th

Son Robert was here, informed me that Mr Crichton is in London, that the stoppage of the Canal will take place on the 6 July.

## Saturday 20th

The weather continues very acrid although we have several appearances of a Change. O have this day given orders to the Lock Keepers not to allow One Single Fish Boat to pass through the Locks if there is another in Sight. [Saving water by putting two vessel in the lock chamber at a time].

## Monday 22<sup>nd</sup>

The weather continues excessively warm on the forepart of the day and about 4 p.m. it commenced to rain with heavy Claps of Thunder with lightening which continued to 10 or 11 o'clock at night. Was at No. 16 and sent intimation to Mr Geoff, Union Canal, that the Canal was fixed to be stopt on the 6 July.

#### Tuesday 23 June 1846

It commenced to rain this morning and has continued without intermission ever since.

#### Wednesday 24

We have not had such a deluge of rain for so short time so many years past from Monday to 10 o'clock this day to poured in torrents. Men employed at Punts. Calvin's men after Breakfast levelling the South Bank East from Dalgreen.

#### **Thursday 25**

The weather was most favourable this morning but it came on to rain about one o'clock and continued very heavy with Thunder.

#### Friday 26

Calvin's men in taking the Punts for the Timber Basin alongside the *Hercules* Dredge Boat preparatory to Commence Dredging outside entrance of the Large Lock. Measured the Wall between Burnhouse and Tophill built by Alex<sup>r</sup> Marshall which is 242 yards in length by 8 feet 6 inches in height, being 19 Roods <sup>1</sup>/<sub>4</sub> yards 6 feet, 44/ per Rood is 41.18.

#### Saturday 27

Commenced early this morning with **Dredge Boat** at the outside entrance of the large Lock loaded 10 Punts.

#### Monday 29

Men employed as above.

## **Tuesday 30**

## **JULY 1846**

#### Wednesday 1st July 1846

Went to Port Dundas this day. Sorrow to find Mr Crichton was in London. Handed the Account of Mens Wages to Mr Readman.

#### Thursday 2nd

Calvin's men assisting the Masons with cope Stone on board the Ice Boat to be taken to Tophill.

# Friday 3rd

Calvin's with the **Ice Boat** to Tophill with stones sand for the repaires, it being understood that the Canal is to be stopt on Monday for the purpose of the Repaires on the Bottom of Locks No. 12 & 13, and also the Sills on No. 18 & 19 Locks.

#### Saturday 4th

Calvin's men prepairing and conveying Materials at No. 16 for the repairs of the Locks.

# Monday 6th

Since yesterday at 4 p.m. it came on one of the most awful nights of Thunder & Rain and this morning the Country is completely deluged. The Union Canal have brock out in two different places and have been attended with considerable damage, not only to the Canal Company but also to the adjoining Proprietors. In consequence of the heavy fall of rain we did not get the water sufficiently run off the reaches.

#### Tuesday 7

Commenced this morning and got No. 13 Baild out by 12 o'clock. Carpenters and Labourers taken out the Old Planking of off No. 12.

# Wednesday 8th July 1846

Carpenters & Labourers employed in Planking No. 13 Bottom of the Lock. Mr Lean, Engineer on the Scottish Central Railway, applied to ascertain if it would be possible to run off the remainder of the water from the four Mile reach for the purpose of taken out the embankment which is now across the temporary cut now made to allow the trade to pass during the time which they intend to build the bridge under the line of the present Canal. I told him that if can get the consent of the Glasgow Committee, as Mr Crichton was in London, and agreed to furnish 20 men to be ready tomorrow morning to bail out the water so as no inconvenience may arise to our operation. I had no Objection for My Part, and advised my Son Robert to go West with Mr Lean to Consult such of the Committee as may be found to grant the Consent of the water being run. Mr Lean returned in the Afternoon and informed me that the Committee, or I should say, the Companys Man of Business and Mr Readman, in absence of Mr Crichton, agreed to allow the four Mile Reach to be run dry on Condition that it was to be filled up on Saturday night or Sunday so as to allow the trade to pass on Monday. On Ascertaining that that was to be the case, I considered it necessary to order as many men as can be got for the purpose of taken out the Sludge not only from the four Mile Reach above No. 16, but also from the short reaches, and ordered Peter Feely, the Contractor on the Scottish Central Railway, to send as many men as he could spare to assist in taken out the Sludge tomorrow.

#### Thursday 9 July 1846

We had Ninety three additional extra men from Peter Feely, including 20 men Mr McLean, also men from Mr Robt. Weston employed in No. 12 & 13 Reaches, Westons above No. 16.

#### Friday 10

Feelys Men employed in No. 12 & 13 reaches wheeling out the stuff. We had 31 Carts employed yesterday & today removing the stuff from the Banks to the ground which the Company hold of Mr Fulton.

# Saturday 11th

Water was ordered to be run to fill up the 4 mile reach at 6 o'clock tomorrow morning. Men wrought to 9 p.m.

#### Monday 13

Calvin's men employed in removing the stuff back from slopes in order to give room for the track horses.

#### Tuesday 14 Wednesday 15, 16, 17, 18

Calvin's men employed at Port Downie Basin taken out the stuff from the front of the Crane Wharf.

## Monday 20

Thos Stark died yesterday.

In consequence of having to take the men during the fortnight for the Canal repairs, men Commenced with the **dredge Boat** & Embankment out at the Outer Beacon.

# Tuesday 21

Men employed as above.

## Wednesday 22

At No. 16, ordered the Banksmen to get the hedge repaired between Glenfuir & No. 16.

#### Thursday 23

Men employed at Embankment, **Dredge Boat**, etc.

#### Friday 24 & 25

Men employed at the Embankment, three men assisting the Boatmen this week in loading the *Etna* & *Cyclops* with the stuff taken out of the Canal.

#### Monday 27

Men employed as above. Weather excessively warm.

#### **Tuesday 28**

#### Wednesday 29

#### Thursday 30

#### Friday 31

Went to Port Dundas, met Mr Crichton along with Messrs McColl, Forest, Craig, Wilson & W. Paterson, Observer on the Monkland Canal. Mr Crichton is not altogether sure as to the Company being liable for the damage Mr John Boyd sustained in consequence of the Surface Water flowing over the banks to the Temporary Cut.

I told him I had no doubts on the subject and recommended Mr Marshall, Newhouse, as a proper person to put a value on the fields of Barley which is injured. Requested Mr Crichton to come East and examine the same and to go across the Canal to examine the embankment and give his opinion as carrying out a cross embankment to prevent the Current making such a deep gulf into the entrance of the Carron. He stated that he had wrote Mr Dickson, the Earl Zetland factor, to meet with Mr Greigson next Friday, and if it proved convenient to him he will take a look at the fields and Embankment.

## **AUGUST 1846**

#### Monday 3

### **Tuesday 4**

### Wednesday 5th

I am sorry to state that the *Vesta*'s Boiler brock out this day and it will be very difficult to get it repaired. Both the *Hercules* & *Vesta*'s Boilers are in decayed state and will require thorough repairs.

## Thursday 6th

We have got the *Vesta* Boiler put in such a state as to allow her to work by wedging a plate up from the Bottom, similar to the one which we put on the *Hercules* Dredge.

# Friday 7th

We have had a most extraordinary afternoon with Thunder & Rain.

### Saturday 8th

And continued during the night from one to five o'clock this morning, it was most terrific. Complaints again of the Tunnel and Aquaduct through under the Canal not venting the water. It was most lamentable to see the ground in every direction completely covered.

## Monday 10

Wrote Mr John Marshall, Newhouse, requesting him to put a valuation on the barley fields belonging to John Boyd said to be damaged in consequence of the ground being flooded on the 5 & 6 July, but he declines having any thing to do with it, but Mr George Marshall, Farmer, I stand have promised to meet me this Afternoon at 4pm to examine into the damage.

## **Tuesday 11**

Met W. Mitchell & Morrison and gave them instructions regarding the field of Barley said to be damaged from the Surface Water flowing over the Temporary Cut.

## Wednesday 12

Went to Port Dundas for the purpose of consulting Mr Crichton on different matters, but met him on his way to Edinburgh and therefore had no opportunity of making any arrangements.

## Thursday 13th

In consequence of Henry Stein not being able to attend the Lock, ordered John Steven to attend for him in the meantime.

# Friday 14th August 1846

Mr Crichton was here today, walked to the entrance of the Grangeburn, but would go no further as he wished to see the Temporary Cut and ascertain how far the Company is liable for the damage in consequence of John Boyd's field being flooded on the 6<sup>th</sup> July. Mr C. thinks the Company are not liable and said he will write Messrs Russell & Aitken to refer the matters to arbitration. Mr C. ordered a Plan and specification to be made of a Stone Wharf & Retaining wall to be made between the West and opposite Carron Company Wharf and Dalgrain Bridge on the tracking side of the Canal for the purpose of storing Pig Iron.

# Saturday 15

Men employed with the **Dredge Boat**.

#### Monday 17

Ordered G. Calvin's men to load out the *Cyclops*, take her West the Canal, and discharge the Stones on the track Past east of lock No.5, where we intend to run the reach on Wednesday.

#### **Tuesday 18**

Considerable fall of rain during the night, wind S.E.

\*

1851		
Feby	20	Lock No 9 Lower Stream Gate carried away by [blank] Companys
		Lighter loaded with Pipes, both Lower upper swing Bars brock. Replaced
		next day with Old Gates after being patches up
March	4	Mr Haggart levelling Ballast hill finished.
	26	Messrs Wm Baird, Alexander of Airdrie, Loan, Robson, Crichton, was
		here. Very unfavourable day.
June	8	A severe Hurricane did great damage &c.
Novr	4	Massrs Douglas, Barres, Baird, Crichton, Readman & Moncrieff met Earl
		Zetland. Messrs Law, Walker & Black examined the north Carron Bank
		where the break took place 29 Jany 1835.
1852		
Jany		Messrs Robson & Crichton met & Mr McIntosh, law agent for John
		McDonald went to the Lighthouse a fearful day.
Feby	10	Scow sunk in the nearly opposite Free Church load with Pig Iron.
May	10	Commenced to Pump the water out of the Large Lock.
	12	Got the lock dry. 13 <sup>th</sup> mr Geor. Arnot Custon house Collector died.
	20	Large Lock open for the trade.
July	6	The Survey Consisting of Messrs Anderson, Douglas, Wallace Denniston,
		Baird, Robison, Crichton, Readman, M'Coll, Wilson & Craig.
Sepr	25	James Spense. Companys foreman, drowned.
1853		
Jany	4	Scow load with Railway Chairs sunk I the Dock.
May	18	Mr Melville our new Superintendent here to day.

Capt And<sup>w</sup> Graham died here 26 Feb<sup>y</sup> 1858.

# **1851**

#### FEBRUARY 1851

### **Grangemouth 17 Feby 1851**

Colvin's men employed in Cultivating the ground at the Ballast hill from which the ballast was taken for Canal purposes and which finished the transaction between the Canal Company and Mr Hogart, which I understand has continued from 1801. Smiths at the *Hercules* Boilers & c.

#### Tuesday 18th

This is a very unfavourable day, strong gale W. wind & rain. Men employed as above.

## Wednesday 19th

It has continued most boisterous with wind & rain until yesterday morning and no appearance of abatement. In consequence of the flood in the River Carron, the tide raise to within 10 inches of the hight on the 29 Jan<sup>y</sup> 1850 when the tide burst through the bank opposite the enterance of the Old Harbour.

#### Thursday 20

This day continues very squally & occasional showers. At 2 PM I received intimation that Lock No 9 Stream Gates was carried away by one of the Companys vessels. I immediately ordered the **Crane Boat** west & proceeded myself and found the North lower Gate and the swing bars of both upper & lower Gates brock. Very fortunately there was a pair of old gates laying at Tophill and got one of them patched up and placed this evening at 9 PM, but in consequence of a number of pipes rolled over into the Lock, which was on board the Lighter that carried away the Gate, I ordered the reach to be run, and the Cast Iron Pipes to be got out tomorrow morning. The north Upper Gate is considerably twisted as well as the bar brock and it is very fortunate that both was not carried away from the sudden jerk. The road is considerably ploughed up and sand & c worked over the field south side. Morrison Tracken *Ice Breaker* to Lock No 9.

## Friday 21 February 1851

We got the old Gate hung after taken the Cast Iron Pipes out of the Lock which rolled over the Lighter when she carried away the gate. Carpenters arrived and my Son from the west, and assisted to git the gate put in a workable state and commence to fill up the Reaches to allow the vessels to pass, of which a great number had collected going both ways. The cause of the accident was the man could not git a turn of the stern fast to bring up the vessel in time.

## Saturday 22d

This is a most favourable day with gentle frost & c. Carpenters at Lock No 9. Masons dressing stones for Bridge No 1. Colvin's men at the Ballast hill. Smiths & c at the *Hercules* Boiler.

## Monday 24

This day continues favourable, wind East, Cold. Men employed as above.

# Tuesday 25th

Men employed as above, four at the Screw Steamer.

#### Wednesday 26

The weather continue favourable, wind N.E. men employed as above.

## **Thursday 27**

Went west, examined the Work at the Ballast hill which is taken considerable more work than I at first anticipate, but I am glad that Mr Hagart is so well pleased with the progress of what has been done. Examined the Roof of the Stables and observed the lead which was on the Ridge of the Boiler house is taken. Called at the Fiskle Office and saw the lead Mr Geo., told me that they had the fellow in Custody who stole the lead and that it would be returned after the trial. Morrison Out to Lighthouse.

## Friday 28 Feby 1850

Went to Glasgow met Messrs Crichton, Readman, McColl, William. Craig. Thomson & Hay. Mr Robson, Engineer, was present and it is fixed to put in a Coffer dam, and to Put in and raise the Sill of the Upper gates of the Large Lock either was Stone or Cast Iron and that the Material should be prepaired by the first of June.

# **MARCH 1851**

## Saturday 1st March 1851

The weather continue most favourable. Colvin's men at the Ballast hill. Mason prepairing Stones for bridge No 2. Smiths at the Rails. Morrison Carting machinery & Coal. **Hercules** D Boat.

## Monday 3d

*Hampton* sailed this day for St Johns, America. Men employed as above. The weather continues favourable, moderate wind PM.

## Tuesday 4th

I was very much annoyed to day when up at Ballast hill to find that Mr Hagart had given instruction to Geo Colvin to take 3 feet off the round of the slope after stating to me that he was perfectly well pleased with it, which will require a days work of all the men, at least. I fully expected that the work was to be completely finished this day and have got the men to commence to John Walkers field to morrow, but I am disappointed.

## Wednesday 5th

All hands employed at the Ballast hill and I am glad that they have got the ground finished intirely to the satisfaction of Mr Hagart. We had a disagreeable job with one of the Chains in the South Upper Gate of the large lock having brock, and the Chain well being so low that we had to run the reach & Dock down 12 feet to get the Chain taken off and replaced after it was united. Morrison Carting material from Ballast hill.

# Thursday 6th March 1851

Colvin's men at Walkers field. Smiths at the Boiler & c.

Called on Daniel Stark, the Person who complains of his field of wheat being damaged at Kilns in consequence of the overflow of water from the Canal when the gate at Lock No 9 was carried away, and arranged it with him for the Company to appoint one man and he another to appertain the damage subject to the approval of Mr Crichton, of which I would inform him.

#### Friday 7th

The frost is very severe this morning. The Junction Canal is frozen across. Colvin's men at Walkers field. We had the water run to Clear away the mud from the large Lock enterance and repair one of the Chains of the lower Gates and I must say that I have never seen such a leakage from the Mid Gates as appears to day, and it must proceed from under the platform as the Gates appears perfectly tight between the splae pieces.

## Saturday 8th

We had the Water run from the large Lock this day again and was happy to observe that there was little appearance of leakage from the Platform. This may be in consequence of the gates been seldom wrought in comparison to the other two Gates. Annoyed at observing a Cargo of Stones delivered from the **Etna**, thrown along side of the Old harbour Wharf large stones where they ought not to have been put. Ordered Colvin's men to get ladders and remove the outside stones where there is the least danger of vessels receiving damage from them.

# Monday 10th

We had a sunny wet day yesterday, but this is a most favourable day. Men employed at Walker field and Old harbour. Received by the *Etna* the Wheeling Plank which was used at the Ballast hill.

#### Tuesday 11 March 1851

This morning is severe frost but dry & favourable for the Country. Colvin's men at the Punts & move Scow. Carpenters & Banksmen at the Railing No 16.

### Wednesday 12

Colvin's men at the Park and assisting the Smiths to get the flues put into the *Hercules* Boiler. Weather favourable.

### Thursday 13

Men employed as above. Met Messrs McLaren & J Lawrie who have Contracted to build the Lock Keepers house at Lock 14 who promised to have the works commenced to on Monday first.

#### Friday 14

Men employed as above. Men at the *Mars* S Steam Boat.

#### Saturday 15th

Colvin's men at the Park. Carpenters repairs of Punts. Smiths at Boiler. The weather continues favourable.

## Monday 17th

Men employed as above, Received 800 Thorns.

## **Tuesday 18**

All hands employed this day in clearing the mud out of the Old Harbour and the large Lock enterance. Son Robert was here, examined the large Lock Gates and gave him the length of the 12 Chains wanted for the three Gates, 6 Chains 87 feet & 6 Chains 63 feet each, 900 feet in whole. It came on to rain very heavy at 11 AM with wind east and high Spring tide which I am afraid will be mischief to the Banks.

#### Wednesday 19th

Went down to the Lighthouse and I am truly sorrow to see the havock which the wind & tide have made upon the East Bank since yesterday from Panstead Green to the Lighthouse the Banks have suffered more or less.

#### Wednesday 19 March 1851

Ordered Colvin's men down to the embankment in order that they may get part of the two Cargo Ruble from Garscube carried and placed on the south side where the surge is undermined the Bank. Mr Law and I went over to the other side at high water to examine the North bank. Was happy to observe all safe. The tide was within a foot of the top of the bank and twenty yards east from where the Breach was and opposite the enterance of the large Lock the tide was within 8 inches of the top.

# Thursday 20th

All Colvin's men at the Embankment. Smiths repairing the *Etna* Bank Boat, the side Plates are now become very thin.

## Friday 21st

All hand employed in clearing the mud out of the Old Harbour. Got a good days work.

#### Saturday 22d

We had another favourable day Clearing the mud out of the Old Harbour. Weather changeable.

## Monday 24th

Colvin's men at the field. Smiths at the Boiler. Carpenters at Lock No 2. I understand the masons have commenced to the Lock house at Glenfewer Gate.

#### Tuesday 25

The weather continue very Cold, wind from the east. Colvin's men at the field. The *Cart Boat* being very leaky we put her on at the Basket Point, but I am afraid that in place of stopping the leak she will be worse as she has strained so much that the decks have open<sup>d</sup> near three inches. Sent the Carpenter to Patch the Bridge at the enterance of the Grange burn which is now become very bad & will require new Cladings. Received the stobs & Rafters for Mr Walkers field.

#### Wednesday 26 March 1851

This day has rained heavly without intermission. Messrs William Baird, Alexander of Airdrie of S House, Mr Crichton & Robson Engineer arrived about half past 11 o'clock and I am sorrow the day being so unfavourable that they had not much opportunity to examine the works so particularly both Mr Baird and Alexander who had never been here since the improvements too place. Appeared highly pleased with the appearance of the works and number of shipping in the Dock. Went into Mr Wallace

Inn, where a good deal of conversation took place with regard to the reduction of Canal dues, particularly upon Pig iron which I have no doubt will take place ere long.

## Thursday 27th

For the rain that's falling from Tuesday evening to late last night it does not appear to have brought heat. The north hills are covered with snow. Colvin's men at the field. Was sorrow to observe from letters received from my daughter Marthy & David Macgill, that James Macgill, their Brother, was drowned on Tuesday night about 9 o'clock at Bowling as he was proceeding along the new quay. It being very dark he had gon over and no person being present to render assistance he last his life. The body was got early yesterday morning.

#### Tuesday 28th

Colvin's men employed at Mr Walkers field. Strong westerly wind with occasional showers. Came on wet at 8 PM.

## Saturday 29th

The weather continue very changeable. Sorrow to hear that Will<sup>m</sup> Manns wifes corpse was taken out of the Canal near the west end of Lock No 2. I am mis-unformed Will<sup>m</sup> Manns wife went out of their house last night about 8 o'clock and has not been heard of since and although search have been made with a number of men & Creepies, they have not found the Corpse.

## Monday 31 March 1851

West to Port Dundas, met Messrs Crichton, Readman, McColl, Wilson, Craig, Thomson & Hay. There was nothing particularly proposed or suggested. Colvin's men at the field & c.

## **APRIL 1851**

#### **Tuesday April 1851**

Colvin's men at the field and Screw Steamer *Henry Porchen* sailed for Quebec. Carpenters dressing a swing Bar for Lock No 9. We had another day scouring the mud out of the Old harbour.

## Wednesday 2

Colvin's men at the Old Harbour this day. We made search for the Corpse of Will<sup>m</sup> Mans wife and she was found in the South east Corner of the Bonded Basin.

## Thursday 3d

*Liverpool* sailed. Weather favourable. Colvin's men at Old Harbour & scouring the enterance of the large Lock.

# Friday 4th

Colvin's men employed as above. We had another good tide with the *Cart Boat* in the old Harbour Clearing away the mud.

### Saturday 5th

We have another scouring out of the Old Harbour and Part of the Day at Mr Walker field.

## Monday 7th

Colvin's men at the field. Ordered the Posts dressed for the Bucket frame to be put on board of the *Hercules* to be in readiness to be taken up to Mr Adamsons dock to morrow. Weather favourable. The Smiths got the Boilers canted upon end to git the bottom plates riveted. Although an expensive I trust they will make a good job of it.

#### Tuesday 8th

Mr McColl & Son Robert was here to day making survey of the works preparatory to the meeting of the half yearly meeting of the Company on the 3d Wednesday of this month.

The *Hercules* Dredge Boat was put into the Dock this evening after the logs were laid, but as the Brig, which was put out to allow the Screw Steamer to get in to be painted, required to be put into Dock again it was found that there was not length for the Brig, consequently the Dredge will have to be taken out again to morrow morning.

## Wednesday 9th

The Carpenters from Port Dundas came east yesterday with the Lower Gates for Lock No 9, which was shipt and came to Lock No 3 to put on a few iron plates for repairs of the lower Gates. The weather continues favourable. Colvin's men at the field. The **Dredge** was taken out of the Dock to allow the Brig to get in.

## Thursday 10th

Carpenters at the gates Lock No 3 and 9. The Masons have got the west Gable on the Lock Keepers house at Glenfeuer Gate and expect to have it finished on Saturday.

### Friday 11th

Colvin's men at Mr Walkers field. Weather favourable, wind Easterly, cold in the morning.

## Saturday 12th

Men employed as above.

# Monday 14th

Went over to Sands Quarry to ascertain if there was any stones there likely to suit for the intended Sill of the large Lock. The *Hercules* was put into Mr Adamsons Dock this afternoon.

#### Tuesday 15 April 1851

Employed David Hall to attend the *Hercules* dredge Boat and keep an Account of the materials & mens time while under repair. The roof was taken off the Keepers house at Lock No 3 last night, and I was very much surprised to observe that James Lawrie has only two masons employed in building the Upper lat whereas he ought to have five or six masons employed. Mr McLearns men at the sarking & c of the house at Glenfewer.

#### Wednesday 16

I find a great proportion of the plank in the Ark and the Beam—st the aft end of the Boiler of the *Hercules* will have to be taken out. I am sorrow to observe that a number of the timbers in the Ark are also very bad, and Hawse pieced also, but I am glad to Observe that the Upper works so far as we have seen looks well. We had a tides scouring of mud from the Lock enterance. Sent the *Cart Boat* for the remainder of the Tile & Soles for John Walkers field being 2400 of each. Heavy showers to day.

### Thursday 17th

The wind has shifted this evening to West with heavy showers. Sorrow to observe the state of Rob<sup>t</sup> Spence from his house being uncovered and requested James Lawrie to get other two men which he promised to do to morrow.

The whole of the Plank in the Dredge Boat Ark is intirely done and a considerable number of the timbers.

## Friday 18th

This morning is soft, commenced to rain after breakfast. I find the whole of the upright timbers in the Ark to be intirely done. Ordered 6 Memel logs from Robt Melvill & Co.

## Saturday 19

Mr Robert being here yesterday we both examined the *Hercules* in order to make a report and send it to Mr Crichton who has gone to London to attend the general meeting of the Company on Wednesday the 23<sup>rd</sup> of this month, see Copy Page 15.

## Monday 21 April 1857

Colvin's men at Mr Walkers park. Smiths at the *Hercules* Machinery. Carpenters at Punts, at **Hercules** Engine house taken it down, Wind fresh and shower from West.

## Tuesday 22d

Colvin's at the Screw Steamer, Walkers field, & G.Burn with the *Etna* Scow discharging & c. Carpenters making an inverted half round to form the Funnel for the *Hercules* Boiler.

#### Wednesday 23d

I was sorrow to observe that the both the Beams in the *Hercules* at each end of the Boiler are intirely gone and will have to take two pieces of oak from Mr Adamson, which is the only two still he has, for that purpose, being informed by my son that the Company have none that will answer the purpose. Smith repairing the *Hercules* Boiler.

## Thursday 24th

I find that the Deck forward of the Boiler is very bad and will have to be renewed which will give more room to get the Beams put in. Colvin's men Trenching Mr Walkers field. Lock No 3 house men at the sarking.

#### Friday 25th

Colvin's men at the field and Screw Steamer. This is a very favourable day for the Country. I find that in place of taken Scotch Oak for the *Hercules* Beams I have ordered Mr Adamson to procude Slectus Oak which will be considerably cheaper and should last as long as the vessel.

#### Saturday 26

Men employed as above. The weather has changed & become very Cold, wind North, heavy showers hail. Colvin's men have finished the trenching & draining Mr Walkers park and will commence to the fence on Monday if the weather is favourable.

# Monday 28th April 1851

The weather has continued excessively cold since Friday with heavy showers of Hail & Sleet from the North. Colvin's men at the fence. Mr McColls, my son Robert, was here to day after being at Brighton looking at the Quarry regarding Stones for the large Lock sill. Went west the Bank and examined the two Lock Keepers houses now in progress of being built.

### Tuesday 29th

The weather continues as Cold as ever. The hills Covered with snow. Colvin's men at the Grange burn & Screw Steam Boat.

# Wednesday 30

Went to Glasgow, met Messrs Crichton, Readman, McColl, Wilson, Craig, Thomson & Hay. Mr Crichton appeared anxious to have a statem<sup>t</sup> of the different paces of work connected with the Grangemouth Improvements, requested that Mr Dickson Earls Commissioner, should point out the spot for the erection of the Store house & office in place of the Old one agreed to be taken down.

## **MAY 1851**

#### Thursday 1 May 1851

Colvin's men at the Grange burn. Mason at Bridge No 1. Sloop upset off Bo'ness, master --- drowned.

## Friday 2d

Colvin's men scouring out the Old Harbour. Sorrow to observe the Upper Noeast of the *Hercules* is intirely gone and must be replaced.

# Saturday 3rd

Colvin's men scouring out the mud from the Old Harbour this has proved the best tide we have got having sent a very great quantity of mud out having the Punts a break. I was sorrow to understand Mr Crichton came here to day after I had gone to Church Confession. Prepairing the *Cart Boat* for passing the trace while the repairs are made on No 1 Bridge.

# Monday 5th May 1851

We got the temporary Bridge placed on board the *Cart Boat* in Lock No 1 and commenced to remove and place the new Stones & meter plated on the south side of Bridge No 1.

I was sorrow to learn this morning of the *Mars* S Steamer being sunk on Friday night off Anstruther on her passage from here to Dundee with one of the most valuable Cargos she has had from Grangemouth.

# Tuesday 6th

Colvin's men employed in spreading the Lime & dung on Walkers field and assisting at the No 1 Bridge which they have got to allow the trade to pass.

# Wednesday 7th

Mr McColl was here yesterday with the Plan & Specification of the alteration to be made on the Sill of the large Lock. Met Alex<sup>r</sup> Lawrie who is to furnish the Stones and gave him the sizes of the Blocks. His son & John Club is to give an offer to hew & dress the stones. The masons got the stones placed at the Bridge & the *Cart Boat* made an excellent temporary Bridge with the old plank which came off the *Hercules* D Boat over Lock No 1.

#### Thursday 8th

The masons have finished the placing of the stones & plates of Bridge No 1. Colvin's men at Jutty & loading & discharging stones taken off J Walkers field. We have to take out the Larboard Point Streak.

## Friday 9th

Masons at Dock Wharf grouting the Causway & c. Colvin's with another Cargo stones for Jutty.

#### Saturday 10

John Walker employed 2 Horse to Plough & prepared the field for the seed & Colvin's with another Cargo stones for the Jutty.

## **Monday 12 May 1851**

John Walker has 4 horse ploughing & 1 Horse harrowing the field this day and got the ground Sewen with 8 Bushells Barley, 12 ld Bear. Colvin's men at the Jutty & Walker field. Clover 6 lb white clover, 2 Bushells Peranial Rye grass seed. Wind continue from the East & cold.

#### Tuesday 13th

This morning a little frost but it got very warm. The **west Dredge Boat** and **Crane Boat** arrived here at 7 PM. The **Dredge** to remove the mud out of the large Lock and the other with material for the sill alterations. Also a Cargo 56 tons clay from Port Dundas.

## Wednesday 14th

We had another scouring out of the mud from the Old Harbour and Colvin's men commenced the sour the clay for Puddle for the alteration of the Large Lock Sills. Carpenter employed in discharging the material with arrived last night from Port Dundas. The *Ice Breaker* returned this evening.

## Thursday 15th

The *wester Dredge Boat* commenced to dredging in the Large Lock and loaded 10 punts and discharged at the dam by Colvin's men. Colvin's men at the Old Harbour & loading a punt & a screw steam Track<sup>d</sup> out in by the **Tug**. Scow *Campsie* 56 tons clay.

# Friday 16th

**Dredge Boat** in Large Lock loaded & discharged 10 punts. Colvin's men at the Punts & Old harbour. Received 3 Sill stones from the Large Lock sill. Towed out but not in by the **Tug**. Scow *Kilsyth* 56 tons clay.

### Saturday 17th

Loaded & discharged 10 Punts. Men employed as above. Thos Morrison Tracking the Punts.

#### **Monday 19 May 1851**

We run the Dock down to 12 feet deep for the purpose of removing the mud out of the way of the intended Coffer dam and loaded 13 Punts, Track<sup>d</sup> out & in by the **Tug**.

### Tuesday 20th

Loaded & discharged from the Lock 12 Punts out & in by the **Tug**. Colvin's men employed at the Puddle & discharging the Punts. Scow *Campsie* with 56 Tons Clay. Punts by **Tug**.

# Wednesday 21st

Colvin's men employed at the Clay & Grangeburn. The **Dredge boat** have taken out 6 Punt loads from the Lock which is 48 Punt loads & 13 Punts out of the Dock enterance of the Lock. I found two strecks of Plank bad on the larboard side of the **dredge Boat** in the Graving Dock which must be taken out. This is the first day of the Railway Co<sup>y</sup>. Commenced to Cart the grain from the Dock after taken Dalgreen Toll Bar.

#### **Thursday 22d**

Colvin's men at the S. Steamer taken out & discharging the 6 punts loaded yesterday. Thos Morrison Tracking Cart to Lighthouse. **Dredge Boat** in Junction Cut.

#### Friday 23d

Colvin's men taken out and discharging 8 Punts at the enterance of the Grange burn taken out of the Junction Cut and 4 Punts loaded & taken to the Timber Basin. The **Dredge** was taken to opposite Mr Adamson where there is a considerable accumulation of mud, loaded 4 punts.

#### Saturday 24

Colvin's men at the Punts 4 & 8, loaded & discharged south west end of the timber Basin from the Canal opposite Mr Adamsons Dock.

#### **Monday 26 May 1851**

Colvin's men discharging 8 Punts at north west end of the Timber Basin.

#### **Tuesday 27**

John Club who was contracted to hew & dress the stones for the alteration of the large Lock, commenced this day. Colvin's men discharging Punts taken from the Canal opposite Carron Wharf & placing the Stob railing fence between the Bo'Ness road & Mr Stark's rope work. Son Robt & Mr McCall was here to day arranging with regard to the Alteration of the large Lock sill & was informed that Mr Readman was here also, but did not see him, having gone west the Canal Bank with Messrs McColl, McLaren & Laurie to examine the two houses which are now finished at Locks No 3 & No 14.

## Wednesday 28th

Colvin's men assisting the *Hercules* D Boat which is this day taken out of the Graving Dock, discharging the old materials, and making Puddle.

## Thursday 29th

Colvin's men at Puddle and assisting the Carpenters to put the Boiler on board of the **D Boat** preparatory to the vessel being taken to the Crane for being lowered down into the seat. I was sorrow to hear that Mr Crichton was here while I was at Falkirk Consulting Mr Gilchrist regarding a Cast Iron Block & Pivot for the alteration of the large Lock sills. Mr Crichton passed over Dalgrean Bridge when I was within two hundred yards of it & would have called if I had see it was him.

# Friday 30th

All hands employed in Putting the *Hercules* to Cran after getting up the Shears & we got the Boiler lowered by the Crane & Tackle as safely into the seat. The weather continues excessively hot and great want of rain.

# **Grangemouth Saturday 31 May 1851**

Calvin's men employed in making the Puddle and getting it collected into smaller bounds. Went west to Glasgow, met Messrs Crichton, Readman, McColl, Wilson, Craig, Thomson & Kay. Mr Crichton appeared to wish the proposed alterations of the large lock to lay over for another year as some considered it proper to have the materials prepaired. Mr Readman requested that I would give him an Acc<sup>t</sup> of the expence of the Jutty at the large Lock jutty and the Lighthouse. In consequence of information being lodged of Will<sup>m</sup> Brown, Keeper of the junction Canal, having been put in Prison in January last for receiving a few pieces of Coal. Mr Crichton stated that I was very much to blame indeed, for allowing the circumstance to pass over without at once given a report of the circumstance to him and that Brown cannot be allowed to remain in the Comp<sup>y</sup> any longer.

# **JUNE 1851**

#### Monday 2d June

Men employed at the **Dredge**, and at the Puddle. There is no appearance of rain, which is very much wanted, particularly for the safety of the Barley and the Hay Crops.

#### Tuesday 3d

It came to rain moderately this morning but at 12 noon the wind shifted suddenly into the East and the rain commenced very heavily.

#### Wednesday 4

Carpenter fitting up the timber work of the *Hercules*. Colvin's men at the Puddle & G Burn. The North Hills are clad with snow this morning and N West wind & cold.

#### Thursday 5

Carpenter & *Hercules* men employed in shipping the heavy machinery of the *Hercules*. Colvin's men at the Screw Steamer & Puddle. This is very changeable.

## Friday 6th June 1851

Men employed at the **Dredge Boat**, Grangeburn, and making Puddle. Went west to No 16 gave directions concerning the repairs of Camelon Bridge to commence on Early on Monday morning and to have a man placed at west end of Camelon to warn the traffic to pass round by Lock No 16. Met Geddes the Clark with Mr Craig at Tophill who informed me that as Mr Readman would not allow the Boatmen more than 8d per Ton, they would not take the Cash as it was considered 11d a fair Price. J Morrison tracking Punts down the run.

## Saturday 7th

Sent a letter to Mr Readman with a Copy of Peter Mungals offer to Boat the materials from the different stations and a letter to Mr Crichton referring to James Rodger applications as Lock Keeper for the Junction Canal Lock. Colvin's men at the Puddle. T Morrison.

## Sunday 8th

This day 25 years My Oldest daughter died.

#### Monday 9th

2 Mr McLarens joiners employed at the *Hercules*. We had a complete hurricane yesterday. I do not recollect of such a storm at this season, several accidents occurred. Trees unrooted, chimney cans & slates blown off, but nothing has occurred to the work that I am aware of, except the thatch of the Bridge Keepers house at Dalgrean, and have ordered a Thatcher to commence to it immediately to prevent further damage. Men commenced to Camelon bridge this morning at 4 o'clock. Ordered John Stein to give directions at the west end of Camelon & the Bridge Keepers for the traffic to pass by No 16. Got the stones & plates fixed so as to allow the trade to pass during the night and to commence at the same hour to morrow morning with the south side. Employed two joiners to assist in Erecting the Engine house on board the *Hercules*.

## Tuesday 10th

The Capt<sup>n</sup> of a Sloop belong to Montrose fell over the north Quay Old Harbour opposite David Sinclairs and was choked with the mud this morning. Men employed as above. We got the stones placed and plates laid so as to allow the trade to pass by 5 PM.

#### Wednesday 11 June 1851

Carpenters employed at the *Hercules*. Colvin's men at the Puddle. Carpenters, Masons & Banksmen at Camelon Bridge.

#### Thursday 12th

Commenced to rain this morning, wind East, very Cold. Intended to have a scouring at the large lock enterance this morning but the weather being so unfavourable deferred it. The weather has proved very unfavourable so far as the season has advanced for vegetation, the rain continued without intermission this day.

### Friday 13

We intended to have a scouring this morning at the large lock eneterance but in consequence of the heavy rain yesterday the River was considerably flooded which prevented any thing being done. Colvin's men at the East Embankment. Artificers at the *Hercules* morrow working Punts on the Canal.

# Saturday 14th

We got an excellent tides work at the large Lock enterance the morning with the *Cart Boat & Punts*. The enterance was made considerably wider at the out end of the jutty and I trust by Mondays tide we will have it put in such a state as will allow the largest vessels to turn in or out without obstruction.

## Monday 16th

We have had a continuation of N Westerly gales for a long period with few exception. Yesterday there was heavy showers and this morning a strong gale & cold, very unlike weather at this season, and much against vegetation. We intended to have another scouring of the large lock enterance to day, but the river was considerably swollen from the rain yesterday which prevented any thing being done. Colvin's men at the Puddle this morning and at East Bank afternoon, rest of men at the *Hercules*.

#### Tuesday 17 June 1851

We brought the *Hercules* back for to get the remainder of the heavy machinery for the Bucket frames Put on board. Went to No 16, ordered the masons to Put up the Coal houses at end of the houses north side of the Lock, which is run in a dilapidated state, and to order a Cart of Lim from John Frazer for the farm and to build the retaining wall, part of which has falling down on south side of the canal nearly opposite Lock 7.

## Wednesday 18th

Men employed at the *Hercules* Dredge. Colvin's men at the Grange burn. Ordered the Lighthouse Keeper to get the inside of house cleaned out so as we git coated with paint provided the walls can be put in such a state as to take on the paint.

#### Thursday 19th

The weather continues very boisterous. In consequence of the proposed alteration of the Large Lock sills being postponed I received a letter from my son Robert to send west the Raft timber intended for the Coffer dam & Pilling machine. Men employed in putting the remainder of the timbers on board the Raft & c.

## Friday 20th

The weather is more favourable to day. Mr Morrison sent west the raft of timber early this morning. Mr Readman was here to day, went down the Embankment as far as Colvin's men are forming the trench between Panstead Greens & the Embankment forming by Earl Zetland to reclaim the Sleetch. Mentioned to him the disagreeable feelings which the new bylaws have caused amongst the merchants regarding the additional charge of one shilling pr ton on materials transhipped into vessels or landed on the wharfs which is not taken by the Canal. Mr Mackay also thinks it will act against the interest of Company. Mr Readman stated that the bylaws was enacted chiefly with the view to charge on Goods Carted from the Dock to the railway.

## Saturday 21 June 1851

This is a very favourable genial day. Colvin's men at the East Bank. Artificers at the *Hercules* machinery. Day moderate.

#### Monday 23rd

Men employed as above. Wind again N West & Cold.

## Tuesday 24th

Men employed as above. We got the Bucket frame & funnel put on board at the Crane to day. Son Robert was here.

#### Wednesday 25th

Colvin's men at the G Burn and East Embankment in forming the ditch from which they are removing as many Stones as will be required for raising the Bank where it is subdivided. Men at the heavy part of the scoop & c. Three painters employed.

#### Thursday 26

Messrs Alex<sup>r</sup> Baird & Crichton was here to day, had a meeting with merchants regarding the alteration on the dues. It was agreed that they are memorialize the Committee which sits next Tuesday on the subject. Mr Crichton shewed an Account between five & six hundred Pounds sent him by Mr Dickson Earl Zetlands Commissioner of the Claims by the different Tenants upon his Lordships Estate, and the Expense of the Breach which took place on the morning of the 29 January 1850 from the extra high tide and demanding payment from the Canal Company who in my opinion is not intitled to pay a farthing of it, but the most ludicrous part of the demand of the claim made by Messrs Alex<sup>r</sup> Thomson & Alex<sup>r</sup> Simpson whose farm ground was flooded from the tide overflowing the banks above where the Company has no connection what ever.

## Friday 27th

Carpenters & others at the *Hercules*. Colvin's men with a Punt & wheeling Plank at Lock No 3 to convey the mud taken out of the Canal into the stagnant pool. This is only warm day we have had this season.

# Saturday 28th

Men employed as above. This day is excessively warm.

### Monday 30th June 1851

Colvin's men at the Embankment. Ordered two of his men to assist the Punts men discharging the Punts at Lock No 3. The *Hampton* arrived this morning from Quebec. The Corpes of a man was found in the Canal Basin this morning. I took his watch to Falkirk to ascertain if the watchmaker could identify who the man is. I found however that the boy in the shop was rather at a loss and it turned out to be a Ploughman with Alex Simpson, Town Croft. Went to Glasgow met Messrs Crichton, Readman, McColl, Wilson, Craig, Thomson & Kay. It was agreed that we must dispense with the two Carpenters and endeavour to put them into the two first vacant Locks, and also the Smith if he will take charge of one at a moderate salary. Yesterday & to day excessively hot.

## **JULY 1851**

#### Tuesday 1st July

Went down to Greenock. Men employed as above. Returned to Bowling.

#### Wednesday 2d

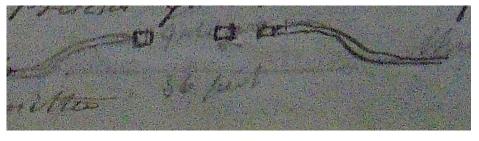
Liverpool arrived this day from Quebec. Men employed as above.

#### Thursday 3d

Men employed in scouring out the mud of the Large Lock enterance assisting at the Screw Steamer & Hercules D Boat. Considerable frost this morning. Went west to No 16 informed by the masons that Messrs Baird, Camelon house, had prevented them for proceeding with repairs of the Coal houses. Saw old Mr Baird who is near blind and Miss Baird and they stated it was their intention to raise the wall, and they did no wish the roof of the coal houses to come in contact with the wall. I told that it would be attended to, but to Keep the end of the Coal house separate eight inches from the wall will prove injurious to both parties and prove a receptacle for filth. Miss Baird agreed that we should proceed, and to place the roof so as not to come in contact with the wall. Mr & Miss Baird complained again of the Track Boat Men with their horses annoying them at the gate and wished the present Gate to be brought forw<sup>d</sup> in a lin with the Wall. Promised to represent this for approval of the Committee.

## Friday 4th July 1857

Colvin's men at the East Embankment. Carpenters & others at the *Hercules* & c. The weather has continued excessively



warm since this day eight days. Arranged with David Hall that he was to take Charge of Lock No 4 and that Stewart Adamson is be removed to the Junction Lock Bridge, and that Rob<sup>t</sup> Newlands is to take Charge of Camelon Bridge, and his Son the Present Keeper must look out for some other situation.

### Saturday 5th

Colvin's men at the East Bank Pig Iron Wharf and pumping Punts, & c. The *Hampton* sailed for Alloa to take 200 tons Coals.

## Monday 7th

We have a fine genial showers to day which will do much good to the Country. Ordered the Iron Punt down from the timber Basin to have it examined on the Slip as it making a good deal water, before it is sent west to the Bowling Canal under the charge of Mr Hay.

# Tuesday 8th

Men employed at the *Hercules*. Smiths at the Iron Scow or Punt. The **Canal Dredge Boat** have returned to the enterance of the Timber Basin and taken out 20 Punt load and went west to Kerse Brickfield Wharf where I have ordered a few Punt loads to be dredged out to allow the Scows & other vessels to get nearer the Quay, and then proceed west where the Canal is so much filled up at the tail of No 4 & 5 and Bainsford Reach.

#### Wednesday 9th

In consequence of receipt of a letter from my Son Rob<sup>t</sup> stating that he had arranged to send off with **Ice Boat** by the middle of the week to do the following repairs, viz, Windford stop Gates, Crane & safety Gates at No 16, & Parts for the shed there, and cast iron hollow Quoins of Locks 6 & 8. I ordered Geo Colvin's men to put 30 Tons sand for mortar, Plank for repairing Punts, and Pitch & Tar to put on board the *Etna* Bank boat, with two punts for repair in Tophill Dock. The sand to be discharged at Lock No 6 & 7. Martindales horse tracking the *Etna*.

#### Thursday 10th July 1851

We have had most seasonable showers yesterday last night & this morning which will benefit the Country. Colvin's men with the Etna discharging the sand & ordered him to load the whole of the old border stone laying in different parts of the Bank, which are subject to thrown into the Canal, assisting in putting the Punt into the Dock & c. I was surprised to see when I came back to observe the *Agnes*, one of the Companys lighters, laying aground on the top of the lower sill of the Canal Sea Lock. I understand that the master was aware that the tide was too far ebbed to allow the vessel, but that Will<sup>m</sup> Hardie, the person who attends the basin floating Bridge, had taken it upon himself to order the vessel west in absence of the master.

#### Friday 11

I was glad to observed that the sill is not injured from the Lighter laying last tide on the sill. It was fortunate that we got Chains under the keel forward, which was a great help to prevent the vessel straining. This circumstance occurred in consequence of Will<sup>m</sup> Munn, the Lock Keeper, not being present from absenting himself from duty for several days past, and from Wm Hardie, the Derran who takes some charge in the Lighters, ordering the Lighter out against the wish of the master.

# Saturday 12th

The *Liverpool* sailed to day for St --- and the *Maria* Steamer. I Rolgart which has been declaired these two weeks for the Fluu being Collapsed in the waye to Gmouth. In consequence of Wm Mann being absent from duty I have suspended him and appointed Stewart Adam, keeper of Lock No 4, to his place during Mr Crichtons pleasure. I have also suspended Robt Scott, having absented himself without leave and as he has been in the Practice of taken upon him to do. I have reported the case to Mr Crichton.

# **Monday 14 July 1851**

We have had a continuation of strong Gales, S West Winds since Saturday. Yesterday it came on rain most heavily from 11 AM and to day it stil continues to blow very hard. Colvin's men at the Old harbour clearing out the mud and taken the Etna with three Punts be in readiness to morrow morning to commence at the retaining wall of Lock No 7.

## Tuesday 15th

Men commenced this morning employed at Lock No 16 shipping a set of lower Gates. Canal Punt & Dredge men cleaning out the mud so as to allow the safety Gates which is not hung to work. Prepairing for Cast Iron hollow Quoins for Lock No 9 lower Gates; loading the *Etna* & two Punts between Locks No 7 & 8. Masons prepairing and commenced to the wing wall at the tail of Lock No 7. Men wrought to 9 o'clock PM. Employed 3 extra Mason, 2 from Mr McDonald.

#### Wednesday 16th

Four extra masons employed from Mr Macdonald & 1 at No 7 wing wall. Colvin's men discharged the *Etna* last night, loaded her and two Punts between Locks & 9 with the assistance of the Canal Punt men. Men wrought up to 10 PM.

## Thursday 17th

Mason at Lock No 7 retaining wall Wester. Masons & Carpenters at Locks No 13 new Anchor Cope & Locks 9 & 16 Cast Iron Hollow Quoins, which I am happy to observe will make a very tight job and will no doubt be adopted in all the Locks.

#### Friday 18th

In consequence of this being the Glasgow fair week, all the men from Port Dundas was absent to day. Masons at Lock 7 wing wall. Colvin's men discharging the *Etna* & two punts. Was sorrow to observe the state of the Tophill Dock and find it will not be adviseable to repair the Punts there and have agreed to send the five which is laying there to Mr Adamsons and employ a few of Mr James Adamsons Carpenters to assist in repairs of the Punts at Grangemouth.

## Saturday 19th July 1851

Colvin's men employed at Lock 7 assisting the Masons and Collecting the materials. The *Henry Porchar* arrived in the Dock this morning after discharging part of the Cargo in the Forth since Thursday.

#### Monday 21st

Colvin's men employed in the Timber Basin Cutting the weeds which have now sprung up from the Bottom and accumulate to such an extent as to prevent the timber being measured. The masons are employed at Lock No 6 borring holes in the Copes for a belt of wood 6 inches thick to enable 6 inched more water in Mungal Bog. This is surely very stupid work considering the building & particularly the Copes in such miserable state.

#### **Tuesday 22d**

Colvin's men again employed in Cutting the weed in the Timber Basin. Employed two of Mr J Adamsons men to assist in the repairs of the Punts and was astonished to observe when raising the one, commenced to, that the Bottom Plank dropt down from the nails being completely corroded.

## Wednesday 23d

Colvin's men at the Basin collecting the weeds and Carting it to the dungstead. Carpenters at the Punts & c. Carting weed to the dungstead.

## Thursday 24th

Colvin's men at the S Steamer and assisting & c. Carpenters & Masons at Lock No 16, 15, & 10. I was happy to observe the Safety Gates I now almost tight, and the Carpenters were employed in repairs of the Up Stream Gates. On observing the splae pieces which very much split & shattered, I ordered them to be taken out and a set of African Teak ones which was at Tophill put in their place, and although it will take the men to work to midnight or early to morrow morning to get the new splae pieces put in and finished, I considered it was better to do this than to allow the old ones to remain and be under the necessity to stop the trade another day for that purpose. At No 18 the masons & labourers were employed in putting in a new Anchor Cope and Ashlar on the South side, and the masons & labourers at Lock No 10 Anchor Copes on both sides for the Up Stream Gates.

## Friday 25th July 1851

Colvin's men employed at the East Embankment. Masons & Carpenters at the Locks; Carpenters at the Punts. Son Robert was here and we arranged regarding the Lock Keepers as follows: Stewart Adam from Lock 4 to Sea Lock No 1, David Hall Carpenter to Lock No 4 with a Carpenters wage on

Condition that he is to have a Servant or one of his family capable to attend the Lock in his absence when employed in repairs of the Locks, that Wm Stein Lock No 5 be removed to Lock No 8, and John Leishman the Present Keeper be removed to the Junction Canal Lock & Bridge, that Will<sup>m</sup> Munn be removed to Lock No 5, that the night watchmen occupy the house now occupied by Robt Scott, and that James Naismith Smith and the Night Watchmen should do the duty of an assistant at the large Lock in place of Robt Scott, that Robt Newlands Carpenter should be employed in the mean time for repair Barrows & c, that we should dispense with one mason & labourers, and employ an additional Banksman.

# Saturday 26th

Artificers & Labourers employed as above. The weather continues most favourable.

#### Monday 28

We had a heavy fall of rain since last night and continued until mid day very heavy. Colvin's men at the Embankment. Carpenters at the Punt & c.

#### **Tuesday 29**

Men employed as above. Port Dundas Carpenters arrived and commenced to clad Bridge No 1.

#### Wednesday 30th July 1851

Colvin's men employed to day scouring the mud out of the Old Harbour and Carpenters at the large Lock enterance. Port Dundas men at Bridge No 1 with the masons assisting in placing the working gear on the north side & c.

#### Thursday 31

In consequence of having received a letter from Mr Readman informing me that the meeting of overseers is to be on Friday I remained at home and made out the accounts. Colvin's men at the Banks & taking the Iron punt west to 16 to be sent west with the **Dredge Boat** to the Bowling Canal. Carpenters at the Punts.

## **AUGUST 1851**

#### August 1st

Went to Glasgow, agreed that Will<sup>m</sup> Munn be appointed to the Junction Canal Lock & Bridge and that Stewart Adam be appointed to Lock No 1; that David Hall should be appointed to Lock No 4; and that Robert Mercer be appointed as a successor to Robt Scott as an assistant at the large Sea Lock. Launched 2 Punts No 12.

## Saturday 2d

Colvin's men assisting the Carpenters in taking up two Punts on the Slip & c. Mr Adamsons two Carpenters at the two Punts taken off. At No 16.

## Monday 4th

Colvin's men at the East Embankment. Charged the Schooner *Hlyn* of Drymen 5/ for damage passing the West dock bridge & c per Mr Mackay.

#### Tuesday 5th

Colvin's men at the enterance, Jutty, and Embankment. Smiths & two Carpenters at No 6 Lock prepairing No 16 old lower Gates for No 6. I was glad to see Tophill Dock so tight.

# Wednesday 6th August 1851

Colvin's men at the East Bank. Carpenters at the Punts. Clerk  $P^d$  the men. The weather is very favourable & warm.

#### Thursday 7<sup>th</sup>

Men employed as above. Met my son Robt, went to Tophill. Carpenters employed in shiping No 16 lower Gates in Lock No 6, also at a Punt in Tophill Dock and two on Mr Adamsons slip & c.

## Friday 8th

Men employed as above. Weather continue favourable.

## Saturday 9th

Men employed as above. Went to No 16. The two punts on Mr T Adamsons Slip. Men employed and the Punt in Tophill Dock Comp<sup>ys</sup> two Carpenters & four from Mr Adamson.

## Monday 11th

The wind continues from the East, commenced to rain at 12 noon. Colvin's men at the East Bank. Carpenters at the Punts & c.

## Tuesday 12th

Men employed as above. This day is very sultry & warm.

## Wednesday 13th

Men employed as above. Walked down the north Carron bank to the Outer Beacon. I find that a Cargo of stones and Brushwood will be required about 60 yards east from the 4<sup>th</sup> Beacon and another at the Gap at the 6 beacon to prevent the tide which is now forming a ditch along the base of the bank and will do injury if allowed to continue. In consequence of the water being run off the reaches between Locks 13 & 16 I have ordered the Boat *Etna* and two Punts to taken to the Old harbour for the scour the mud to morrow morning.

### Thursday 14th August 1851

Colvin's men employed scouring the mud out of the Old Harbour. This is the best tides work we have had this season with the *Etna* & two Punts. Two Extra masons from John – assisting to hew off the stones in the recess of Lock No 16 there not being sufficient space for the new Lower Gate being a little broader than the old ones.

# Friday 15th

Men employed at the Punts. Colvin's men at the east Bank. Messrs Alex<sup>r</sup> Lawrie & John Club measuring the stones intended for the Large Lock Sills No 186 stone contents 3847 <sup>9</sup>/<sub>12</sub> feet.

## Saturday 16th

Men employed as above. Heavy fall of rain.

### Monday 18th

Men employed at the Punts & East Embankment.

#### **Tuesday 19**

Men employed as above.

# Wednesday 20th

Colvin's men removing timber from the Store house to the Store Yard, and have sent two men with the *Cart Boat* to Windford with Martindale horse. Wrote my Son to take the Boat from thence to Port Dundas. Thos Adamsons men & Comp<sup>y</sup> two C-at Punt repairs.

#### Thursday 21st

Colvin's men at the East Bank. Carpenters here and Tophill employed at Punts.

#### Friday 22d

This is a very disagreeable day, heavy fall of rain which very injurious to the Crops, having commenced this morning but was stopt at 9 AM.

## Saturday 23 August 1851

The weather continues very unfavourable for the Harvest. Carpenters at the Punts & the **Dredge** long Boat. Colvin's men at the Banks.

## Monday 25th

We launched two of the Punts & brought down two from Pt Dundas. I was sorrow to see the state of the G Burn at the bridge. A great proportion of the Stones are removed & carried down which must be attended to for the security of the Bridge. A roe of Piles will have to be drove about thirty or forty feet and filled up with heavy Quarry Rubbish.

## Tuesday 26th

This is another wet day. Carpenters putting another punt on the Slip. Colvin's at the Grangeburn & assisting them at the Punt. Wrote Mr Readman for twenty four Piles for the G.Burn.

#### Wednesday 27

Men employed as above. Colvin's men at Grange burn.

#### Thursday 28th

Carpenters at the Punts and Coal house at Lock 16.

# Friday 29th

Carpenters & Labourers as above. Ordered the *Ice Breaker* down from Tophill to lift the Punts sunk in the Timber basin.

# Saturday 30th

Went to Glasgow, met Messrs Crichton, Readman, McColl, Craig, Thomson & Hay. Agree to pay Stewart Adam three Pounds per month as Keeper of Lock No 1 and that David Hall should be apprentice to Lock No 4 at a wage of 8d above the usual wage say 3.5 per month, and if that arrangement is not likely to answer his purpose that another Carpenter must be employed when required.

## **SEPTEMBER 1851**

#### Monday 1st September 1851

Carpenters & at Punts. Colvin's men at the Embankment & Grangeburn.

#### Tuesday 2d

Colvin's men assisting to get another punt upon the Slip and at the East Embankment. I have a call from a Mr John Norwell, the first person who has applied as a candidate to contract for Dredging and removing the mud agreeably to the specification. I walked down to the Pilothouse with pointed out where the stuff is to be deposed and gave him what information I considered necessary on the subject.

## Wednesday 3rd

Carpenters employed at the Punts. Colvin's men at the East Bank & preparing for the pilling & Grange burn enterance. I am sorrow to say that there is only two vessels this day in the Dock.

## Thursday 4th

Colvin's men commenced this day to Pilling at the Grange burn & c. Punts.

# Friday 5th

Men employed as above. The weather continue favourable for the harvest. Colvin's men Pilling at Grangeburn Bridge.

#### Saturday 6

Men employed as above.

#### Monday 8

We got two three in plank bolted across the top of the pile and a body of puddle put in, but I am afraid the puddle being to dry it will not be tight.

# Tuesday 9th September 1851

Colvin's men at the Grangeburn securing the Puddle & removing the stones carried down towards the river back to have them replaced between the Piles & the Bridg Pillars. Carpenters at the Punts.

## Wednesday 10th

Colvin's men at the Grangeburn for part of the day. Ordered them to take the *Etna* Bank Boat up the River and take a load of Gravel from the Pay Bridge tomorrow mornings tide & c. I had a Call from Abraham Liddle, Contractor, Greenock, about the Dredging & c.

## Thursday 11th

Colvin's men loaded the *Etna* from the bottom of the River of the Pay Bridge. Was towed down to Bank and discharge at the Gravel. Carpenters at the Punts & weather continue most favourable.

## Friday 12th

Colvin's men spreading the Gravel which is excellent for the Surface and the Cargo has covered [blank] yards in length.

#### Saturday 13

Colvin's men at the East Bank & Grangeburn. Mr Readman was here, went over the new weekly list of the men's time and explained. Requested that I should make out a Specification for repairing and raising the Carron River Embankment. Received accounts of a Scow belonging to Mr Forsyth having turned over in Lock No 13 loaded with English Coal. Ordered Geo Colvin to get the Wheeling Plank Barrows, & c, put on board Mr Forsyth's other Scow laying here and proceed west tomorrow afternoon with all hands to git the Coal taken out of the Lock in time to allow the trade to pass early on Monday morning.

## Sunday 14

Went west to Lock 13 at 7 PM, found the Scow heeled on its beam ends and the Bottom resting on north side of the Lock. Ordered the reach to be run off and the empty Scow brought into the tail of the Lock. Got the Wheeling Plank laid and men commenced to move the Coal out of the Lock into the empty Scow.

#### Monday 15 September 1851

It happened fortunate enough that the Scow was canted on its beam ends, which left very little of the Coals on board and got as many of the coals out of the Lock, clear of gravel as we considered necessary & filled the Lock and got the Scow into the upper reach where the water was pumpt out and we got Scow afloat and the tools & c laid up on the side of the Lock 12 by 4 o'clock AM. Reach home a little after 5 o'clock.

## Tuesday 16th

Carpenters at the Punts. Colvin's men at the East Bank. I have sent an order for four Cargos building whin stone for the Grange burn Bridge as I find the few stones left is not suitable for the purpose. Weather continues foggy in the morning but excessively warn during the day.

# Wednesday 17

Men employed as above. Son Robert was here to day, informed me that the men when employed on Sundays is charged double time and to such as the owners of vessels who does damage to the works. Artificers are charged @ 6d extra pr day and the Labourers at the rate of 2d per day.

#### Thursday 18th

Carpenters employed at the Punts. Colvin's men commence to Pitch and raise another hundred yards east from where Earl Zetland has taken in the Sleetch. Went west & examined Lock No 9 to ascertain if there is a great quantity of Coal remain in the Lock, but was glad to find that there was none to be found.

#### Friday 19

Kilsyth Scow with 56 Ton Rubbish for the G Burn, but it is unfit for the Pitching. Men at the Punt. Weather favourable.

## Saturday 20th September 1851

Men employed at the Punt & East Embankment. Mr Crichton was here to day, went down to the Lighthouse, examined the Bank facing, was pleased with the East side which was hand pitched, and the west side which is now finished between Panstead greens and the bank which was lately made by Earl Zetland to reclaim 14 Acres of land. Mr Crichton appeared satisfied with what is already done and as there is still between 80 & 90 yards on the east side to be Pitched and on the north west side which require to done from where it is already finished to the lighthouse. Mr Crichton wishes a statement of the work finished and the probable expense to finish the banks which require to be done. Mr Crichton stated that John McDonald & Co are the lowest offer for dredging and to git the 20 Punts in a proper

state of repair before they commence work. Mr Crichton to apply to Mr Craig to pay 9/ pr week to assist Will<sup>m</sup> Stewart to procure a man to keep the floating Bridge & c.

Examined the Bank adjoining the east building of the Swing Bridge at the Tail of the Lock No 9. Mr Crichton is of opinion that as that part of the building was erected to form the side of an additional Lock that the Company cannot expect that the Railway Company should be at any further expense & that we must fix upon such a plan as will secure the bank from any contingency.

#### Monday 22d

Men employed as above.

#### Tuesday 23d

Men employed as above.

## Wednesday 24th

In order to git forward with the Punts to allow the Contractor to git commenced with the Dredging, I have applied to Mr Adamson for the additional Carpenters.

#### Thursday 25 September 1851

Colvin's men loading a Cargo burder stones from Reach No 1 for the East banks. Carpenters at the Punts. The *Etna* was discharged about two hundred yards east of Earl Zetlands Bank, but it was with difficulty she was brought back for want of a Tug, the wind being high from the N West.

#### Friday 26

Colvin's men loaded the *Etna* with Gravel at the Pay Bridge and brought it down to the Basin with one of the Tug. Grangemouth Regatta.

## Saturday 27

Colvin at the Lock enterance Jutty discharging the Gravel from Pay Bridge. Carpenters at the Punts.

#### Monday 29th

Colvin's men loading the *Etna* at the Pay Bridge with Gravel for East C Bank.

# Tuesday 30th

Went to Port Dundas, met Messrs Chrichton, Readman, McColl, Wilson, Craig, Hay & Thomson. Mr Readman complained that I should put in my estimate for Tons of Coal & for the Lighthouse Keeper, 1 for Wm Hunurts Offer, One for the Bothy at Canal Lock No 1, one for the Bothy at Junction Canal lock, 1 for the Dock Bridge bothy, & 1 for the Bothy at the large Lock. Mr Crichton appeared at a loss to say whither the Coal should be given or not. I did not git the estimate returned until a few days afterwards when it was marked Coals deferred. Matters are now come to a poor pass. The poor man Brown was not only imprisoned, not for taking but receiving a few pieces Coal, and was discharged from the Companys employ into the bargain and yet it now appears the Company will not forward them with coal.

## **OCTOBER 1851**

#### Wednesday 1st October 1851

Carpenters employed at the Punts. Colvin's men at the East Bank.

# Thursday 2<sup>nd</sup>

The wing wall at the tail of Lock No 5 have slipt down and will require to be rebuilt and raised two feet above the level of canal water. John Shaw requires a wash Box and the working year gear of the north leaf of Bainsford Bridge requires to be bushed. The space keept between the old & new building in at Lock No 9 is very dangerous for vessels receiving damage and ought to be protected, with two Memel logs.

## Friday 3d

Colvin's men at the East Bank, discharged two Cargos Whin building stones from R Russell. Carpenters at the Punts & Boating By Will<sup>m</sup> Douglas & John Davie.

## Saturday 4th

Colvin's men at the East Bank. Carpenters at the Punt repairs. A distressing circumstance occurred about 2 o'clock, one of Messrs Robt Melvill & Co men fell off a raft in the timber Basin and was drowned.

## Monday 6th

Colvin's men employed at the N East Slope of the Bank; the Carpenters at the Punts. John Macdonald having Contracted for the dredging, we took an Inventory of the materials belonging to the **Dredge Boat**.

## Tuesday 7

Men employed as above.

## Wednesday 8

Men employed as above. Earl Zetlands Land Servant from England with Mr Black examined the G Burn with respect to drainage. Agreed to recommend a Tunnel west end of the ditch across to end of the large lock building.

## Thursday 9th October 1851

Colvin's men loading & discharging a Cargo Stones from the South side of the Bank opposite the ground taken by Earl Zetland and discharging it on the north side east from the 2d Beacon. Carpenters at the Punts – launched two got up one.

# Friday 10th

Colvin's loading & discharging stones. Carpenters at the Punts &c.

# Saturday 11th

Men employed as above. Took an Inventory of the Dredge Boat Stores – see a Copy of larger Book Page 161.

# Monday 13th

Colvin's men at the East bank. Carpenters at the Punts & c.

# Tuesday 14th

Men employed as above. There is 74 yards on the south side next the Lighthouse and 520 lineal yards on the north side from the Lighthouse west that require to be relaid similar to 830 yards which is now finished.

## Wednesday 15

Men employed as above. Yesterday being the last Falkirk Market for the Season, It is said to be the best for a number of years past.

## **Thursday 16**

The *Neptune* S Steamer arrived from Dundee being the first trip after being lengthened. Colvin's at her and the enterance Jutty.

# Friday 17th

Colvin's men at the East Bank. Carpenters at the Punts. Canal Banksmen at Cleaning ditches south side at Dalderse.

## Saturday 18 October 1851

Colvin's at the East Bank. Carpenters at the Punts & c. It rained very heavily this afternoon.

# Monday 20th

Men employed as above. One of the upper stones in Lock No 1 gave way this day and [blank] of Perth brock one of the lower Gate wash boards. The *Liverpool* arrived late night from St Louis N America.

#### Tuesday 21st

Carpenters at the Punts, one at Lock No 1. Colvin's men at the East Bank.

## Wednesday 22<sup>nd</sup>

This is a very pleasant day. Men employed as above. I sent west the two Naphtha lamps for Mr Readman to make a trial of them for the Black hill Locks.

## Thursday 24th

Colvin's men employed in loading & discharging a Cargo gravel at the Pay Bridge and at the East Embankment. Carpenters at the Punts & *Hercules* Dredge ---- Mr Crichton was here to day, ordered that I should make out a Specification to Keep the South & North Banks in the River and the Grangeburn in repair say for five years. Went to Carron & met Mr Dawson regarding the proposed shed on the Dock Wharf for the accommodation of their Screw Steamers. Mr Crichton along with Mr Dawson are both of opinion that the wharf south from the jutty is most eligeable Birth, even although another vessel should not have room to lay alongside the Jutty when the Screw Steamers are in the Dock. Mr Crichton ordered me to call on Mr Law regarding the Erection of the shed and to git the Sanction for its erection from Earl Zetland before he leaves Kerse.

# Saturday 25th October 1851

Colvin's men employed Boating Stones. Carpenters at the punts & c.

## Monday 27th

Colvin's employed at the East Bank. Carpenters at *Hercules* Boat and Punts. John Mackdonald commenced his Contract this day. The **Dredge Boat** & 17 Punts taken out to the enterance of the large Lock. Day most favourable, gave Robt Macfarlane a gage to ascertain the quantity of mud shipt on each punt & acct book to keep an account of the same. They started with five punts and returned & took other five & returned with them this evening. 17 Punts loaded – 281 Tons.

### **Tuesday 28**

The tug towed out the seven punts loaded last night but it came on to blow & rain which prevented any work being done. 18 punts loaded - 293 Tons.

## Wednesday 29th

This being the parish fast day, Labourers & Artificers were not employed.

# Thursday 30th

Colvin's men at the East Bank. Carpenters at the *Hercules* Boat. I was sorrow to observe the leakage at Lock No 3 still continues worse – and will therefore take notice of it in my report. 27 punts loaded – 416 tons.

# Friday 31

Went to Glasgow, met Messes Crichton, Readman, McColl, Wilson, Craig, Thomson & Hay. Mr Crichton thinks the Repairs of Lock No 3 should be commenced with immediately. Stated that the Committee was to be at Grangemouth on Tuesday next. 27 punts loaded -411 tons.

# **NOVEMBER 1851**

### Saturday 1st November 1851

Earl Zetland, Messrs Dickson & Law was here. I pointed out the site for the Carron Company propose to erect the shed on the west wharf for the accommodation of their Screw Steamers. His Lordship at once agreed to it. His Lordship considered the south east side of the Companys boundary east from the Junction Canal Bridge as the most convenient site for the store & my office, and requested that it should be gone into immediately and the fence along the south boundary from the BoNess road to the Necessary. The pailing shall be close and of the same hight as that lately put up by his Lordship opposite Waterloo Place.

#### Monday 3d

Sent the East District to Tophill to be over hauld & c by [blank]. Colvin's men & employed at the East Bank.

#### Tuesday 4

Colvin's men at the East Bank. The Committee arrived here to day Consisting Messrs Campbell, Douglas, Burns, Baird, Crichton, Readman & Moncrieff Agent. The first business taken into

Consideration was the Breach in the North Bank opposite the Old Harbour or Basket Point which took place on 29 January 1850. Earl Zetland being present along Mr Love, Mr Walker & Alex<sup>r</sup> Black, surveyor, & Mr MacKay, all went across from to the North Bank and examined the spot where the Breach took Place. They then returned and examined my office & store house which was to be removed twelve months ago, and it was resolved that the said premises is to be taken down and another erected on the boundary on the south side of the Wet Dock east from the Junction Canal Bridge and that a fence five feet in height and a hedge planted on the Companys boundary from the BoNess road east to the necessary. The Committee then proceeded to the Light house & returned. Earl Zetland having invited them to call at Kerse on their return to the Railway Station, which they left here at ½ to 4 PM.

# Wednesday 5 November 1851

Colvin's men at the E Bankment. Carpenters at the *Hercules* Boat & c. Gave the Plan of the Grangeburn to Mr Geddes to convey to Mr Crichton Port Dundas.

## Thursday 6th

Colvin's men dressing the hedges along the Comp<sup>y</sup> boundary south from the Dock. Carpenters at the *Hercules* Boat.

## Friday 7th

Colvin's men at the hedges. Carpenters at Punt 21. In consequence of receiving a letter from Mr Readman I met him & Mr Forbes who had come there with the view to obtain some information regarding that most unfortunate business of the Canal north bank between the road to Dalderse and the wide part of the Canal where there was a road 40 or 50 years ago to a farm stdg which was than in existence, Powflats. The matter in dispute is between the present proprietor, Mrs Henry Stainton, & Canal Copy now, in the process before the Court of Session. Mr Stainton claims the Bank to within 12 feet of the margin of the Canal which is certainly most ridiculous. Examined John Smith, Kerse brick field, and And Glen, late Carpenter in the Companys employ.

## Saturday 8th

Colvin's men employed as above. Ordered the Bankmen to take the *Ice Breaker* from Tophill to Port Dundas to be overhauld as the expense of Cleaning and Pumping Tophill Dock will cost more than double the expense of putting the Boat on the Slip.

#### Monday 10

Sent a Sketch of the Site to Mr Crichton where it is Proposed to erect the store & office. Colvin's men at the steam[?]

## Tuesday 11<sup>th</sup>

Sent the Accounts to Mr Readman. Colvin's men at the --- & Gravel for the Banks. Ordered David Hall to attend and keep acct of men & time at the *Ice Breaker*.

# Wednesday 12 November 1851

Went down to the Lighthouse. I am rather afraid that Puntmen are discharging the mud west from the River enterance too near the margin of the River. Son Robert was here today, went with him to Lock No 3 where he has the *Wester Breaker* with the Diving Bell which was let down to examine the state of the Sill & c. The men reported that the splae piece was raised up, but the leakage proceeded chiefly from heel of the Gates and it appeared that the Pots or Pivot were wore so much that the Gate occasionally did not get back into the hollow quoins. It was therefore agreed that the gates be raised up so as to ascertain more accurately the cause of the leakage.

## Thursday 13th

The Upper & lower Stream Gates of lock No 3 were raised and find leather put on the turn posts & Close bar which appears to have stopt considerably the leakage in the meantime.

I should have stated that owing to the leaky state of the Dock and trouble & expense of pumping out the water I considered it for the interest of the Company to send the *Ice Breaker* to Port Dundas Slip and having examined her there this day I was sorrow to observe several of the Planks above and the after Gabert stock intirely gone. I therefore ordered them to be taken off. The sheathing Iron is much corroded and rub<sup>d</sup> through along the bildge.

I observed considerable traffic between Glenfuir Gate & No 16 occasioned by the different works and I ordered John Fraser to Lock Keeper to put across the bar so far as to prevent any further carting until he receives notice to allow them to pass. Write Mr Law regarding a fence which is placed on the south bank opposite the farm of West Mains. *Henry Porcher* arrived in the roads from A Je---

## Friday 14th

I am sorrow to learn that more of the Plank in the *Ice Breaker* is turning out bad.

## Saturday 15 Novr 1851

Went west & examined the *Ice Breaker*, was sorrow to observe this we will require to take out another plank on both sides and also the Wings. Gave orders to Peter Trotter mason to get the that part of the building on north side next the recess for the lower Gates of Lock No 15 where the truck line have formed a large gutter between the two upper course to be cut & the piece of hard wood 6 inches thick placed & secured with bats and plate of iron to cover all.

# Monday 17th

We had severe frost this day, wind N West. Carpenters at the *Ice Boat* at Port Dundas. Wrote my son Robert to send two more bundles sheathing Iron for the *Ice Breaker* and One cwt sheathing Paper.

#### Tuesday 18th

Went to Port Downie where they have got the larboard side Plank<sup>d</sup> & commenced to the Calking, which I think will be ready to get the wing on and the sheathing put on to morrow & commence to the starboard side. This day is moderate and frost continues.

# Wednesday 19th

Winter seems to be setting in early this season, heavy fall of snow this morning. Men employed as above.

## Thursday 20th

The weather continues very moderate, gentle frost this morning. Men employed in making Ice tools & c. Colvin's men at the Canal hedge west from Dalgreen Bridge and the Screw Steamer. Carpenters at the *Breaker* Calking and planking.

# Friday 21

Men employed as above. Colvin's at the East Bank.

#### Saturday

Men employed as above.

## Monday 24th November 1851

We had a very heavy rain yesterday from morning to 5 PM. Colvin's men employed at the East Bank & c.

# **Tuesday 25**

I went down the Banks this morning with the intention to go out with small boat at low water to examine where the mud is discharged from the punts dredged by the *Hercules* at the enterance of the large Lock, but the day being so foggy it was impossible to see at the distance of a dozen yards. Colvin's men will get the Pitching east side of the bank next the Pilot house finished this day.

## Wednesday 26

This day being moderate & clear, went down the river with the small boat and was sorrow to observe that Mr Macdonald, the Contractor, does not appear to pay proper attention to the terms of the Contract in discharging the punts within the distance of Eighty yards from the Extremity of either Embankments, or from the margin of the Forth at low water mark of Spring tides. It appears that the greatest proportion have been discharged on the west sleetch and at least 1500 Tons have been discharged into the Forth and within twenty yards of the margin of the same at low water.

#### Thursday 27th

Colvin's men employed at the East Embankment. Carpenters at the Locks.

## Friday 28th

The weather continues excessive calm and frosty which appears to set in much more severe than it has done for many years.

# Saturday 29th

The frost continues so intense that I was under the necessity to send the *Ice Breaker* west to Mungal Bog. Mr F Morrison with Horse [blank] hours. Went to Port Dundas, nothing of any consequence meantime except Mr Readman proposed the Smiths & Wm Clause house for the store house & my office

## **DECEMBER 1851**

## Monday 1st December

The frost continues very severe, more than I remembered of at this season of the year. In consequence of the arrangements made with my son on Saturday the *Cart Boat* which is now fitted out as an *Ice breaker* was to start from Pt Dundas on Saturday. I therefore started the *Ice breaker* from here this morning at 8 AM and proceeded west with the Companys three vessels, one schooner & Lighters & five other vessels following.

## Tuesday 2d

The *Cart Boat* brock up the Dock this day at 11 AM, went west and met our *Breaker* and returned at 3 PM back here and the *Breaker* from Windford.

### 3d Wednesday

The frost continues as severe as ever this last night in particular. The *Ice Breaker* started this morning at 8 AM with Horse to Proceed west until the meet the Breaker from Port Dundas. Jas Crawford, Thos Gibson, -- ---- [Mat Butler?], & John Chalmers, in the *Breaker*.

## Thursday 4th

We have a Change during the night with appearance of a ground thaw. Mr Readman was here enquiring at the state of the Dredging. He insisted that the stuff discharge within 80 yards of the river should not be paid for. Stated that I had no doubt in my own mind that a Part of it was discharged, but to state what quantity is, is out of my Power or any other person to state. Mr Readman made out Mr Macdonalds acct from the 27 October to 27Novr

amount of tons 7599 @ 4d is £126 13/ Deduct 10 pr cent £12.13.3

Reserving a right to the Company to deduct for the quantity of stuff that has or may be deposited within 88 yards of the verge of the Forth at low water spring tides.

# Friday 5th Decemr 1851

The Thaw continues with a Breeze from the west. Two of Carron Companys vessels arrived this morning, other two due. Colvin's men at the East Bank & attending payment of their wages.

#### Saturday 6th

Carpenters at the small Bank Boat. Colvin's men at the East Embankment.

## Monday 8

We have a complete hurricane since last night about 9 PM and I am afraid there will be serious accounts of damage to the shipping on the West Coast. The Bridge Keepers house at Dalgreen which is the only thatched house on the East District was partly tirred. Sent up Colvin and his men with some old ropes and prevented further damage.

The *Mary* Scow belonging to Mr Forsyth brock No 9 lower first young [thing] on Saturday night, charged 7/6.

## Tuesday 9th

I understand that the late Gales have done considerable damage in this neighbourhood, particularly to the Roofs of houses. No 10 Lock house several of the slates are stript off and the roun blown off and rendered useless, and last night several of the Gas Glob tops have been blown off & lost. A considerable leak brock out through the Bank at the Sluice which carrys the mud away from the Graven

Dock Gates & for Cleansing the Common House. Colvin's men employed at the same having run up at off the week but I am afraid we will not git it made properly tight until the reach is run completely off.

# Wednesday 10th

The weather continues very boisterous. Colvin's men with the *Etna* for a Cargo Gravel from Carron Companys vessels.

#### Thursday 11 December 1851

Colvin's men went down with the *Etna* this morning at 4 PM tracked by one of Mr Morrison horse, discharged and returned in the evening. Went west & observed two of the roans blown off Lock No 3 house & a number of slates, all the roans on back side of Lock house No 14 & several slates blown off. Gave orders to David Draper to attend and get the necessary repairs done according to Contract.

### Friday 12th

Weather moderate. Colvin's men at the Embankment. It now appears that the Contractor have got the enterance to the Large Lock pretty well cleared out and as there is still several shoals in the Dock I have ordered the **Dredg** to be taken in to morrow for that purpose as we cannot have a better opportunity there being only two vessels laid up till the Spring.

# Saturday 13th

**Dredge Boat** in Dock. Men employed as above. This day quite very foggy. Gave orders to put the **Dredging Boat** into the Dock and take out the shoals which still obstructs the vessels from shifting when the water is low at neap tides.

# Monday 15th

Men employed as above. The **Dredge Boat** employed this day in the Dock. Ordered the *Etna* to be taken round from the Dock to the Old Basin to be in readiness to morrow morning to take a Cargo from Carron Comp<sup>y</sup> vessels.

#### **Tuesday 16**

**Dredge Boat** employed in the Dock. I find in several places particularly opposite the West Wharf where Carron Steam Ship intend to lay that the mud & clay is five & six feet above the sill. Colvin's men loading the *Etna* from the Carron vessels.

### Wenesday 17 Decembr 1851

**Dredge Boat** working in the Dock. Geo Colvin's men at the Embankment. Went down and ordered the sides of the space round the Lighthouse to be Caused and raised. This will require 6 inches to be taken off the lower part of the door into the under cell so as to give a decline for the water to run off. I am happy to observe the men is getting on so well with the North side from the light house inwards which is the most exposed part of the Embankment.

# Thursday 18th

Colvin's men at the Embankment. Mason & Newlands at Locks No 4 & 14 at footgangs & repairing door steps. It appears that a Horse & Cart have gone over the road opposite Mr Potters Woodyard, that is the spot formerly complained of by Mr Wilkie, and it appears to me to be a doubtful question whither the road trustees or the Canal Company have a right to keep up the said road. I recollect of the retaining wall being built by the Company opposite the Wharf farther west to prevent accidents where there is considerable traffic in discharging grain & c, but that was done mearly to accommodate the trade.

# Friday 19th

The **Dredge Boat** employed as above in the Dock. Colvin's men with the *Etna* discharging the Gravel taken out of Carron Comp<sup>y</sup> vessels.

## Saturday 20<sup>th</sup>

The Scow *Kilsyth* discharged 56 Tons Netherwood Rubbish at the North enterance Jutty. Colvin's men discharging the *Etna* and dressing hedges opposite the Dock & c.

## Monday 22d December 1851

The Alum Company at No 16 sent down a Scow load of clay & rubbish. I ordered to be discharged on the Jutty at the enterance of the large Lock. Carron Company having another lot of gravel ordered Colvin's men to take up the *Etna* to put it on board for the banks, it being an article which will not be so easily got after their Steam Ships Commence.

## Tuesday 23d

We had a very heavy fogg during the night and for part of this day, so much so that the men employed in the punts after being discharged got into the small Boat and after rowing about all night landed at Kincardine at 3 o'clock this morning. Went west and examined that part of the road east from Bainsford Bridge, between the House possessed by Mr Robertson & the house belonging to Mr Wilkie, extending to about 30 yards by 10 feet hight, see Report on the subject.

## Wednesday 24th

The Frost continues very foggy and severe frost. My son Robert was with me, examined the working Gear of the Junction Canal Lock lower gates proposed in continuing the present mode of workg the Gates & adopt the old plan of Swing bars with a platform for the men to open & shut the Gates.

## Thursday 25th

Colvin's men at the East Embankment. Weather moderate & still foggy. Observed the Bells at Abbotshaugh having formed a road on the Bank in front of their Gates. I ordered Alex<sup>r</sup> Muir, Banksman, to fill it up, they not having received permission to do so,

## Friday 16

Men employed as above. Weather still continues very foggy.

## Saturday 27 December 1851

In consequence of so many reports that Mr McDonalds men was emptying the mud into the River from the Punts I went down the River with a small and examined the Banks along the margin of the Forth and I could see nothing that there is much reason to find fault with during the present month. I received a letter from Mr McDonald in reply to mine of 23 inst – see both letters at Page [blank].

Mr Crichton came here to day. I should write him more fully on the subject of Mr McDonalds terms of agreement & c. Mr Crichton gave orders to have the fence put up as agreed upon with Earl Zetland & Canal Comp<sup>y</sup> on the 4<sup>th</sup> November. Walked up the bank. Mr Crichton ordered the Slap, or open space of the fence between Dalgrean bridge and Lock No 3 where the Tenant used to convey the produce along the bank to & from the farm to be closed up with stob & rail & a hedge planted to correspond with the rest of the fence, and that all the open spaces in the fence along the Companys boundary should be attended. Mr Crichton ordered the Crib stones at the enterance of Messrs Bells Gate & turn of the road to Dalderse to be taken out, which were put there without the sanction of the Comp<sup>y</sup>.

Mr Crichton also examined that part Mr Robertson & Mr Wilkes property. He is of opinion that the Company has nothing to do with it, and that the matter rests with the Road Trustees & adjoining proprietors. 225 yards of Bank to finish.

# Monday 29th

Colvin's men at the fence parallel with Boness Road and prepairing the ground for the Hedge south from the Pig Iron Wharf. Gentle frost.

# Tuesday 30th

Men employed as above, employed at the Pig Iron Wharf. See my Daughter Helen. It is & Agnes left for Liverpool.

# Wednesday 31 December 1851

Went to Glasgow, met Messrs Crichton, Readman, McColl, Wilson, Craig, Thomson & Hay. Had some conversation regarding the damages which occurred to the different proprietors, or I should rather Tenants, from the high tides which brock or overflowed the different banks in the neighbourhood on Sunday night 29 January 1850. Mr Crichton requested that I should ascertain if Mr George Michell had received any damage from the tide overflowing the north east pert of the outlets and as to the extent and Rent his Farm, and to get on with the fence of the Companys boundry south from the Pig iron Wharf and Wet Dock. The Carron Screw Steam Ship arrived here this day.

# 1852

## **JANUARY 1852**

## Thursday 1 January 1852

Men employed at the different jobs, at accounts & c. Wind moderate. Charge **Glasgow packet** 5/damage 14 foot gangs.

### Friday 2d

Colvin's men at the East Embankment & c.

### Saturday 3d

It came on to rain very heavily this day after nine o'clock. Men employed as above.

## Monday 5th

In consequence of being informed that one of Carron Companys vessels has 40 to 50 Tons Ballast, I ordered Colvin & his men to take round the *Cart Boat* which was got loaded and brought round to the Junction Cut, but finding the boat was making leakage I ordered the half to be ashore with Pig Iron Wharf to fill up part where it is sunk considerably due of the Pig iron.

# Tuesday 6 January 1852

Colvin's men employed in discharging the *Cart Boat* at the Pig Iron Wharf and Lord Dundas Old Quay in consequence of the boat being leaky.

# Wednesday 7th

Having got intimation that the Sloop *Alert* of Dysart having sunk in the Reach between Locks No 4 & 5, I ordered Geo Colvin and his men to proceed west and found part of Larboard Bow stove in. I therefore ordered David Hall calk up and cover the damaged place so as to get the vessel to float, which was done and taken to Grangemouth by 12 o'clock. Expence D Hall 3/6, G Colvin 3/, seven men @ 2/3, is £1.2.3.

The weather continue very boisterous, strong Gales S West.

# Thursday 8th

This is most fearful day, notwithstanding Messrs Crichton & Robson came here to ascertain how far my report is correct regarding the deposit of the mud dredged by McDonald is in conformity with the Contract. We went down the Bank along & a Mr McIntosh, Writer to the Signet, and examined the Banks along to the Lighthouse. We there ferryed over to the West Bank. The matter in dispute is, has Mr McDonald fulfilled the terms of his agreement in depositing the stuff loaded into the Punts along the outside slope of Carron River Embankment cuts when it was actually found that not one punt load has been discharged in that direction except a few Cargos since I wrote the complaint.

# Friday 9th

The Weather continues most furious, the Gales variable from almost every point of the Compass during the last 24 hours. Letter from Mr Crichton regarding the deposit of the mud along the tail of the out side slope of the Eastern embankment & c. Copy of two letters have on the other side of this Book. Sloop *Jane Mcpherson* Grave line brock Lock No 13 foot gang from the stern fast having brock -7/6. Charged the *Olive* of Crail 2/6 damaged No 4 foot gang.

# Saturday 10th January 1852

The weather is much more favourable to day. Went down the bank & observed the Punt discharged up from the Lighthouse, but I am afraid one of them has sustained damage in consequence of laying & breaking two of the pile. Colvin's men at the West Bank.

# Monday 12th

There was the highest tide last night during the Spring and which floated off one of the Punts whoch was on the Slip and was floated away with the ebb tide. I also understand that in consequence of the Punts having been left on the sleaches with being moored, that the drifted on the slope of the East Bank and have brock several of the piles and damaged the stone facings.

## Tuesday 13th

Went west the Canal bank where the mason & Carpenter are employed in placing a long bat at the corner of the recess of Lock No 12 where the Track Chain have wore through the joints of the manury. These Chains are most destructive to the works and several of the Locks will have to be attended to.

## Wednesday 14

Went down & examined the stone facing east side near the lighthouse, found about a dozen of the piles brock and the stones dislodged in and brock from the Punts dashing against them by the strong wind & surge.

## Thursday 15th

This is rather disagreeable day, wind & rain. Ordered the Booms which have been drifting about on the timber basin from the Eye Bolts having drawn out of there ends to be taken down near the Smiths Shop to be repierced.

#### Friday 16 January 1852

Heavy showers. Colvin's at the East Embankment, Smiths & Carpenter at the Timber Basin Booms.

# Saturday 17th

Men employed as above. This day is much more favourable.

## Monday 19th

Men employed as above. Received by the Lighter *G* the for materials for the fence south from the Pig Iron Wharf from the BoNess road east to the Park which the Comp<sup>y</sup> hold off Mr John Walker --- 580 yards Rafters, 100 short poles, 100 stays, & 63 Posts. Employed Mr Morrisons Cart to take them to the Pig iron Wharf.

## Wednesday 21st

Men employed as above. Colvin's men came up to take the *Etna* which is loaded with Gravel down the River to near the light house, but after they got the vessel out it came on to blow a complete Gale with rain at about 1 o'clock that we was Glad to get her back to the Dock and it continued without intermission until past 6 PM.

### Thursday 22d

This day continues very boisterous, occasional heavy showers rain. Ordered Colvin's men up from the Bank at 12 o' & commenced to prepair for the fence south from the Pig iron Wharf.

#### Friday 23d

The weather continues very squally. Colvin's men at the Fence.

# Saturday 24th

This is another tremendous day with wind & rain. Mr Crichton was here to day being anxious to see the state of the Harbour where the **dredge boat** is working and requested that none of the mud accumulate in the Cadge should be taken out and that the dredging should terminate so soon as the Old Harbour is cleared out.

## Monday 26

Colvin's men at the fence south from the Pig iron Wharf. Men at the Timber Basin Booms.

# Tuesday 27th

In consequence of the heavy Gales of Southerly winds the timber in the Basin was blown to the enterance which Completely chocked it up and no vessel could git passed which required all hands the wind being still South to git it removed. Received the spare for the fence with Cargo clay.

## Wednesday 28

Colvin's men after discharging the materials for the fence got the Scow *McGoin* round to the G Mouth Coal Cos Wharf, but the tide being too far spent did not get the Clay discharged and is therefore prepairing a bed for the Clay opposite the Old harbour at the place where the Breach took place two

years ago to morrow which has subsided. Carpenters & Smiths getting the Booms placed in the timber Basin. This day is favourable.

# Thursday 29th

Colvin's men at the Bank opposite the Old harbour. Carpenters at the fence. The *Bowling* Scow with 60 Tons Clay – 40 Tons for the West Bank & 20 for the Junction Canal Lock.

#### **Friday**

Men employed as above. Weather Boisterous.

## Saturday 31 January 1852

Colvin's men at the West Bank. Went to Glasgow, met Messrs Crichton, Readman, Wilson, Craig, Thomson & Hay, McColl being unwell. Having reported again the dangerous state of the Bank adjoining the Railway Bridge. Mr Crichton appears not to understand that the Canal Company have any thing to do with it. I should think however that if any accidents happen there the Comp<sup>y</sup> will be liable for the consequence. Very wet.

## **FEBRUARY 1852**

## Monday 2d February

Yesterday was a fine warm day to be at this season, but this is quite the reverse – cold with heavy showers.

# Tuesday 3d

Worse & worse, heavy showers of snow, sleet, rain & Gales. Westerly wind and looks very bad. Very high tide which has flowed over the banks from Panstead Greens to the bank lately made by Earl Zetland.

#### Wednesday 4

This is the most serious day we have had for many year, the whole lands are flooded there last night. It has continued to blow and rain without intermission during the whole of the day.

# Thursday 5

This day is more moderate. Colvin's men at the West Bank and ordered them to take the Etna which has been loaded with Gravel to be taken down to the Embankments provided the wind keipt calm.

## Friday 6

Colvin's men discharging the Gravel from the *Etna* on the East bank.

#### Saturday 7

Colvin's men at the West bank. Mr Crichton & Craig was here for about half an hour intended to see *Clyde* Screw Steamer sail but was ½ hour too late having sailed ½ past 4 PM.

## Monday 9 February 1852

Colvin's at the West Bank. Carpenters at the Fence. Sleet & rain fore part of the day. I am sorrow to learn from the very high tide last night that the East Bank has suffered considerably.

#### Tuesday 10th

Colvin's men at the West Bank. This morning a Scow load with Pig Iron sunk in Canal opposite the free Church from the Rudder post having catched the leaf of Dalgrean Bridge. See my letter to Mr Crichton to day on the subject.

We got about ten ton out the Scow and attempt to bail the water out but found it was of no use and will have to run the reach nearly dry. Dropt at half past six and to commence again at half past seven PM by the time the water had fallen so as to allow the men to commence to git out the Pig iron on board the *Etna* and *Ice Breaker*, which was managed 11 PM. Ordered Rob¹ Newlands to morrow the whole of the Lock Keepers to run both sluices and get a man from Mr Morrison to ride up Underwood and intimate the four Lock Keepers No 17, 18, 19 & Windford Lock to run the water also so as to prevent any mistake or danger to the trade.

Wednesday 11th

I was glad to observe that although the Scow is so much bent and strained that it floats and can be taken wherever the owner may think proper. Men employed to Breakfast time to git materials put right.

## Thursday 12

Colvin's men at the Junction Canal Lock searching to find out and stop the leack on the south side where the ground has sunk repeatedly.

## Friday 13 Feby 1852

In consequence of the tide having washed down the south side of the East Bank between Panstead Greens and the bank formed by Earl Zetland, Colvin's men are employed collecting turf for the said slope. Carpenters at the fence & c.

## Saturday 14th

Colvin's men commenced to form the bed for thorn hedge along the Comp<sup>y</sup> boundry south from the Dock. Ordered the Banksmen to put up a sufficient fence south side Bainsford Bridge to prevent accidents & c.

# Monday 16th

This morning very boisterous with heavy showers. Colvin's men commenced after breakfast to plant the hedge.

## Tuesday 17th

This day is more favourable. Men employed as above. Mr John Thomson Carronflats died this evening at 11 o'clock which will cause universal regreat in this neighbour hood.

# Wednesday 18th

Colvin's men at the Pig iron Wharf fence and at the W Bank discharging a Cargo whin Rubbish from R Russell.

# **Thursday 19**

Colvin's men at the north Bank. Carpenters repairing the south Middle large Lock Rails having been damaged by the *Clyde* Scow which arrived on Tuesday by the anchor hanging over the Bow. Although cautioned formerly that it was against the regulations our Lock Keeper received abusive language from the mate of the vessel who I understand appears to act with despotic authority.

# Friday 20th

Colvin's men at the west Bank facing and away with the *Etna* for a Cargo of soil taken out of the Canal between Locks 3 & 4 to lay on the slope of the West bank.

# Saturday 21st February 1852

Colvin's men loaded the *Etna* & brought it down to the Junction Cut. Carpenters unshipt the Tooth & Pinion rod from the south Gate of the Junction Canal Lock to get it renewed & c.

## Monday 23d

This is the most favourable day we have had this season. Colvin at the West Bank. Carpenters at the tooth & pinion rod for the Junction Lock gates. John Thomson funeral.

## Tuesday 24th

The weather favourable. Men employed as above.

# Wednesday 25th

Colvin's men employed at the West Embankment and assisting the Lock Keepers to Clear the mud out of the flood Gate sills. Severe frost to day, wind shifted to the East.

## Thursday 26th

The West Crane Boat came here with the Diving Bell to ascertain the state of the large Lock Sills. The Upper gate Sill was first examined but the men in the Bell could not observe any thing from the quantity of mud. The Middle Sill and Segment was them examined and it was observed that the south Gate wrought very heavily when it came within six or eight feet of the Metre which show that the building is still subsiding a little. There appeared to be considerable leakage from about the Centre of

the Sill and from the foot of the third south lower Gate, but after the Lock was empty<sup>d</sup> & filled again there was not the least appearance of Leakage. Colvin's men at the remainder of the Posts for the fence. Son Robert was in the Bell.

## Friday 27 February 1852

Colvin's men Collecting stones off the Pig iron Wharf for the Jutty at the large Lock enterance. The weather favourable, Farmers busy sown Beans.

## Saturday 25th

Colvin's men at the Jutty & lifting Turf for the East Bank. Went to Glasgow, met Messrs Crichton, Readman, McColl, Wilson, Craig, Thomson & Hay. Mr Crichton agreed that the Stoppage should take place on Monday 10 April for repairs of Lock No 3 and to pump the water out of the large Lock to get the Gate cleared out and valves put on the Gates. He also agreed that we should plough up the field which the Comp<sup>y</sup> hold of John Walker and sow it with oats. Moderate frost, favourable.

# **MARCH 1852**

# Monday 1st March 1852

Colvin's men with the *Etna* up the Canal between No 2 & 4 for Cargo Pail taken out of the Canal for the East Embankment. Carpenters at the Fence. Moderate frost.

#### Tuesday 2d

Colvin's men with two Carts from Morrison, carting the Dung collected from the Wharfs, layed upon John Walkers field. Carpenters at the fence. *Pure Hart* left the Port for Coal Clackmannan.

## Wednesday 3d

Colvin's at the West Embankment. Commenced to face the Junction Canal with stones & soil. Carpenters at the fence & Gates.

#### Thursday 4

Colvin's & Carpenters employed as above. Weather continues very cold. At Tophill, Newlands & Muir taken asunder a pair of old up stream Gates for Polls.

## Friday 5

Colvin's men loading the *Etna* with a Cargo small stones from the Ballast hill to be discharged at the east end of the jutty to straighten the Cous of the fainery to the large Lock.

## Saturday 6th March 1852

Colvin's discharged the Cargo stones at the East end of the Jutty and as the tide was answerable for to scour away the mud which has accumulated since the **dredge Boat** left of, the *Etna* was laid at the end of the Jutty where the stones were laid, and with the use of the Punt we scoured away the mud from the run of the water from the Dock.

## Monday 8th

Colvin's men scouring the mud from the large Lock enterance and loading the *Etna* with earth & turf for the East Embankment opposite the ground lately taken in by Earl Zetland. Mr Crichton was here to day while I was west the Canal. I understand he walked to the Grangeburn and examined the state of the outlet where the late floods have casued such a disruption in removing the stones. Geo Colvin pointed out where I intend to drive another range of piles towards the River, which he seemed satisfied with. I understand however that Mr Crichton is against pitching the slope of the Junction Canal Slope so that we will not proceed further.

## Tuesday 9th

Went west to day, met Mr McColl & son Robt, examined Lock No 4 sill preparatory to the stoppage and found that seven sill stones at all events will be required.

## Wednesday 10th

Colvin's men discharged the *Etna* with the Earth & turf yesterday and returned with a quantity of brushwood and Stones last night, which they discharged at the Jutty at the Large Lock enterance which

I trust will have the effect of forcing the fairway more to the south and form a better channel to the Lock.

# Thursday 11th

Colvin's men prepairing sods & soil and went down after Breakfast to prepare the south slop on the East Bank for the Grass seed.

Carron Company having applied for the use of the *Ice Breaker* to bring a Cargo heavy lumps of Calcined Iron Stone from Calder to Carron Basin, I ordered John Main, one of our Banksmen, to go along with her. Carron Comp<sup>y</sup> to pay for the use of the *Breaker* & the mans time.

## Friday 12 March

George Colvin's men went down the East bank after prepairing sods & soil to commence to the north side pitching with instructions to bring up wheeling plank in the evening to commence to the outlet of the Grange burn to at low water, and at the pitching when the tide prevented them at the Burn &c. Barrowed it to day, ploughing & harrowing to cost 3-/

## Saturday 13th

Colvin's men carting the 25 piles from the stone house to the Grangeburn and at the pitching of the E Bank. The weather has continued during the week most favourable for country work. A man was dragged out of the Canal this morning between Camelon Bridge & Lock No 12. He had fallen into the water between Tuesday night & early on Wednesday morning as a violin & a parcel and a cape was found floating in the water that morning. I have not heard if the body has been Claimed.

# Monday 15th

The weather continued favourable although a little frost and foggy. Colvin's men at the East Pitching. Carpenter at the fence gates.

### **Tuesday 16**

Men employed as above. Mr Law died this day. He never was able to get out after exposing himself on the 4<sup>th</sup> Nov<sup>r</sup>, the day on which the Committee met with Earl Zetland. I find the South Swing Bar of Lock No 15 in such a state that it will be necessary to put on the new one without delay and Cluck Block at the enterance of Carron Co Basin. The timber wharf to be reported this month.

# Wednesday 17 March 1852

Colvin's at the Embankment. Carpenters at Fence gate & Swing Bar for Lock No 15.

#### **Thursday 18**

Men employed as above. The weather still continues most favourable for the Country, calm & foggy.

# Friday 19

Colvin's men at the pitching. Carpenters Taring the fence at the Pig iron Wharf & c. Weather favourable, frost in the morning.

## Saturday 20th

Colvin's men employed loading the *Etna* with soil & turf for the East Bank & c. Hard frost this morning.

# Monday 22d

Colvin's with the *Etna* discharging the soil & turf at South side of the East Embankment. Fine showers after part of the day.

# Tuesday 23d

Colvin's men at the East Bank pitching Mr Readman was here to day, complained when down at the Light house of McDonald not fulfilling his engagement in laying down the stuff along the slope of the Embankment and requested that I should report of the same and as to the state of the Punts & **Dredging Machine** & c.

This is the most congenial day we had this season, warm & sunshine.

## Wednesday 24

What a difference there is between this and yesterday. Wind East with rain and excessively cold.

## **Thursday 25**

The **Dredge Boat**. The mud at the enterance of the Sea Lock cannot be taken out by the **dredge Boat**. Men employed with the Punt and got it cleared away. Frost again this morning.

## Friday 26 March 1852

Colvin's sowing grass seed on the South side of the East Bank & pitching the north side. Sent No 21 Punt to relieve the floating bridge at the Bonded Basin for repair.

# Saturday 27th

White frost this morning. Colvin's men at the pitching. Brought up the floating Bridge on the slip for repair. It came on to snow this evening, which is the greatest fall we have had this season.

# Monday 29

Colvin's as above. Wind Easterly, excessive cold. The screw steamer *Clyde* arrived at the enterance and if the tide had answered she would have arrived by one o'clock.

### Tuesday 30th

This morning rains heavily, wind east and continues. Colvin's men at the pitching.

## Wednesday 31

Colvin's men as above. Went to Glasgow, met Messrs Crichton, Readman, McColl, Wilson, Craig, Thomson & Hay. Had considerable Conversation with regard to the Dredging operations. Complained that I had not reported that I need not reported as to Mr McDonald not depositing the mud along the Outside Slope of the Eastern Embankment as ordered by Mr Robsons report on the 8 Jan<sup>y</sup>. I mentioned that was not in the Power of McDonald or any other person do so except at the height of Spring tides and even then if the wind was strong from the east he could not send the Punt up in that direction. Ordered that I should state in his last months acct whether or not he had discharged the stuff in conformity with his agreement.

# **APRIL 1852**

## Thursday 1st April 1852

The wind continues from the East a little cold, but moderate & favourable for the country. Made out Mr Readman's acct of the dredging for the Month of March & c.

Forth & Clyde Canal Company

c/o John McDonald

To Dredging & removing mud from Grangemouth Old Harbour

From the 1<sup>st</sup> March to the 27<sup>th</sup> 1852 4499 Tons @ 4d p ton £74.19.8

I hereby certify that 4499 tons mud was dredged and removed from Grangemouth Old Harbour and was discharged east & west from the enterance to Carron River beyond 80 yards of the margin of the River Forth at low water, that no portion of the said stuff was deposit along the outside slope of the Eastern Embankment at Eighty yards up from the Light house.

1<sup>st</sup> April 1852 Thomas Wilson

# Friday 2d April 1852

Colvin's men at the Pitching East Bank & c. Weather favourable. *Liverpool* Barque sailed to day for Quebec.

# Saturday 3d

Ordered Colvin to come up at 1 o'clock to take the *Etna* to Carron Bank for a load of Gravel to be taken to the East Embankment. That is the remainder of the Gravel and it is not likely that there will not be any more Gravel there from London by Carron Comp<sup>y</sup> vessels.

## Monday 5th

Colvin's men employed in loading the *Etna* with Gravel at Carron Wharf and taken down by one of the Tugs. Carpenter at the floating Bridge & c.

# Tuesday 6th

Colvin's men discharging the *Etna*. The *Carron* Steam Ship on entering the Large Lock this morning came in contact with **Dredge Boat**, brock the upper rail & stanchion & c. Intend to apply to Carron Comp<sup>y</sup> to make good the repairs.

# Wednesday 7 April 1852

The Carpenters at the Bonded Basin float<sup>g</sup> Bridge. Colvin's men employed in collecting the brush wood from the ground taken in by Earl of Zetland on board the *Etna* and Stones to be taken across and put in the Gaps out side Slope of the West Embankment where the tide Water has formed two large Gutters so as to prevent damage to the slopes.

# Thursday 8

In consequence of part of the Pig iron Wharf off the building having subsided where the iron is removed, ordered Colvin's men to level up the same, but there was not near enough for that purpose and must get a Cargo from some convenient place. The weather continues favourable.

# Friday 9th

Colvin's men at the West Embankment filling up the Gutters with the Brush wood & Stones. Carpenters prepairing materials for the Large Lock to lift up the mud during the Stoppage to work with the **dredge Boat**.

## Saturday 10<sup>th</sup>

Colvin's men employed loading the *Etna* with Gravel at the Ballast depoit and discharging it where the ground has sunk at Pig iron wharf from the weight of Iron. The weather continues favourable.

## Monday 12th

Colvin's men at the East Bank pitching & c. Was at No 16 saw nothing particular. Banksmen at the north slope between Lock 7 & 8.

#### Tuesday 13

Colvin's men employed as above. I believe there is no person in life that can remember such a long continuation of fine weather so favourable for the husbandman.

# Wednesday 14

I went to Glasgow to day in consequence of having received a letter from Mr Crichton to meet at 2 PM in Mr Moncreiffs office, which I found was for the purpose to disjoin the Contract between the Canal Company and Mr John McDonald, and the Conditions on which it was agreed to separate was as follows: that John McDonald is to receive the Sum of Seventy Pounds of the Cash due him, the balance which is about say Sixty Pounds to remain in the Companys hand until the Dredging machine, Punts, & Stores, are put in a proper state of repair in conformity with his Contract.

# Thursday 15 April 1852

Colvin's men at the pitching & c. Went west the Canal, nothing to remark.

### Friday 16

Men employed as above. Carpenters at the Junction Bridge, back late. Weather continues most remarkable, great want of rain now.

# Saturday 17th

Men employed as above. The weather is usual cold and foggy with frost in the morning and excessive heat after 11 AM.

## Monday 19th

Colvin's men at the Grangeburn & assisting with materials and Punts. I have ordered such of the Punts as are likely in a proper state repair to be taken up on the Slope north side of the Jutty and on the Beach at Basket Point to have they Bilges examined so as to have them ready to Commence work on Wednesday in the large Lock.

# Tuesday 20th

Colvin's men at G Burn with the *Ice Breaker* at Lock No 4 & Timber Basin. Employed three Extra men preparing for the Dredging & examining the Punts.

# Wednesday 21

Colvin's men at the Grangeburn & Timber Basin stopping Leaks. Commenced in the Lock with 8 extra men. Had great trouble with the lower north Gate to get it to shut and then loaded 7 Punts which was towed out & discharged & returned by 7 PM.

## Thursday 22 April 1852

Employed 10 Extra men. Loaded 12 Punts, but the Wind being so strong from the East we durst not venture them out. The small Pump Engine from Port Dundas arrived. Colvin's men and all hands employed after part of the day employed in giting it ashore with the rest of the material.

## Friday 23d

The Wind continues so high this morning prevented the Punts being discharged. All hand employed in attending to the Punts and discharging the Small Pump Engine and other materials from Port Dundas.

#### Saturday 24

Colvin's men and thee extra men employed in Scooping out the mud from the large Lock into Punts loaded 2 Punts & c. Carpenters at the Pump Engine.

## Monday 26

I was sorrow to observe the North outer North Gate in large Lock will not work and as it is attended with the greatest of danger to attempt to shut it as was done on Wednesday, I set off to Glasgow by the Early train and fortunately found the Diving Bell on board the Crane Boat which I ordered off immediately after I arrived at the Old Basin. I then went over to the office and met Mr Crichton and stated the circumstance in which we were placed with the Gate, and having sent off the Crane Boat with the Diving Bell to Grangemouth to ascertain the Cause which prevents the Gate from shutting. Mr Crichton showed me a plan of a Clay Pipe which he received from Earl Zetlands Factor proposed to be placed across under the Canal near the Church west from Grangemouth. I stated that it was quite out of the Question to allow a pipe of that description, that it ought to be Cast Iron from the perpendicular of the slops of the Bank on both sides of the Canal, which he thinks is proper and will lay it before the Committee to morrow.

# Tuesday 27 April 1852

The **Wester Crane Boat** with the diving bell arrived here late last night, but it was near 12 noon before the tide was low enough for the Bell to work. I am sorrow to say although every part of the Recess was searched, front of the splae pieces and along the face of the Gate, nothing could be observed. We was at last under the necessity to get another Purchase with the Chain, but it had no effect to force it over the impediment. We then got the **Crane boat** with a Chain through the Sluice and have up two sluiced from the Gate above which forced it over and will remain to until the stoppage that have keep all hand employed during the day.

# Wednesday 28th

The Diving Bell was again let down this morning at 3 o'clock inside the Gate but observed nothing. Men employed in scooping out the mud from the Bottom of the Lock.

### **Thursday 29**

Men employed as above. Had 4 Punts evening & morning tides. Messrs Wm Crichton & Alex<sup>r</sup> Baird, one of the Committee, was here to day. Mr Baird complained of the difficulty in discharging the Pit Iron at the wharf with the water so low. It was stated that could not be help in neap tides until the Dock was regularly filled up by the Canal.

### Friday 30

We had a fine shower rain this morning which will do great good.

# **MAY 1852**

## Saturday 1 May 1852

Men employed at the Punts this morning and discharge 11 in the River.

## Monday 3<sup>rd</sup> May 1852

Men employed this mornings tide and loaded punts out from the bottom and evening tide. Loaded 2 from 6 to 11 PM.

### Tuesday 4th

We was rather annoyed this morning with extra leakage from the Upper Gates but after filling & emptying & filling the Upper Lock twice we made it considerably tighter. Commenced at 5 PM and got other two Punts loaded. Men wrought to 12 o'clock.

## Wednesday 5th

The **wester Crane Boat** arrived last night, got the large pump lowered into the Lock. Men employed assisting with the pump. Got no scooping to day & clearing out back of the Inner Gates.

#### Thursday 6

Men employed at scooping the mud & other work at the Pump. Extra men went out and discharged 12 Punts taken out of the Lock.

# Friday 7th

Men employed in scooping the mud, cleaning the Gates & c. Appearance of rain to day.

# Saturday 8th

Men chiefly employed in prepairing to start the Engine by one o'clock to in morrow morning Carring water from the Pump to the Water Engine, carting puddle for the Junction Lock & Dock Bridge.

## Monday 10th

We commenced with the two Pumps at one o'clock yesterday morning, but was sorrow to observe they had no effect to clear out the Lock. The water increased as the tide rose and was under the necessity to give it up until ebb tide. We again commenced at one PM, but it was no better and as we were certain there was Leakage from the Inner Gates we concluded that it must --- Proceed from the deficient state of outer valves or from under the sill of the flood gates. I therefore ordered a tarpawelin to placed on the one and a Boat sail on the other and to fill up the enterance to the valve with Clay of which we have a good supply, and was happy to observe that it had a good effect and observed the Pump gaining and 10 o'clock the water was reduced 6 inches. Mr Crichton came here and about 8 PM and after examining the Lock we walked up to Lock No 4 and was sorrow to observe the stone wharf which was erected a number years ago had bodily slipt into the bottom. Mr Crichton is of opinion that the stone should be taken out of the Canal and a wooden Wharf erected in its stead. He stopt in Grangemouth all night and went away early this morning.

## **Tuesday 11**

The Pumps have now gained on the Lock, at 1 o'clock fully four feet. It has blown a complete Gale of Wind from the west with heavy showers rain.

#### Wednesday 12

We have now got the water so much out of the Lock as to allow 27 Extra men to commence work with the three derrecks and three Horse from Mr Morrison to remove the mud out of the Lock & four Carpenters from Mr Adamson to Calk the Gates & c. Mr Crichton was here to day & left with the late train. 27 labourers, 4 carprs, 3 --- at.

### Thursday 13th

All hands employed at the mud. Twenty seven Labourers & 4 Extra Carpenters employed, whole 53. Got a great proportion of the Mud taken. Ordered four diagonal plank to be taken off between the lower Sluices and the splae piece of the Middle Gates. Was astonished to observe the interior of both completely choked up quite at a top four it is to be got out. Heavy rain with wind East from 2 PM. Very much against the operation.

# Thursday 13<sup>th</sup> May 1852

Mr Arnot, Collector of Customs, his two sons and George Adamson, went out with a small Boat to fish being Hollow day held on account of the Queen, and returning the boat upset between the outer Buoy and the light house. Mr A youngest son struggled ashore through the mud and the oldest also some time after considerably exhausted. The youngest son came up where we was working and gave the alarm. The Steam boat got under weigh so soon as the steam was up but lamentable to say by the time she arrived at the spot poor Mr Arnot had breathed his last, Geo Adamson being a young stout man along side of him, although in a feeble state was recovered in life.

# Friday 14th

In consequence of it having rained all night and this morning we got no work done till 10 AM which has considerably retarded out operation. It is most astonishing that the south side of the Recess Middle Gates is now down 15 ½ inches whereas in August 1849 it was 14 inches, which shows the building must either have sunk 1½ inches or the Recess much have raised in the Centre that much. I got McBride to go into the Interior of the North Middle Gate and it was astonishing the quantity of mud that was taken out. Carpenter calking and prepairing for the Iron Chains. Mr Crichton was here, informed him that I could see nothing particularly wrong with the outer North gate nor the Cause of the stoppage except a piece of Cast metal which was found in the recess and might have been on the Segment in the way of the rollers.

### Saturday 15th

Commenced at 4 AM. The leakage from the South outer valve still continues to increase as well as the leakage from the Upper Gates, which is very annoying. The Bride at the south Middle Gate which also pack<sup>d</sup> like an egg.

### **Monday 17 May 1852**

Mason employed in having off about 1 inch from the Centre of the Recess. Carpenters employ in Placing the new Bolts & shakels in the Gate and Placing the valves. Got the loan of three Screw worms from Mr Adamson to lift the Gates.

# Tuesday 18th

Commenced all hands to the South Middle Gates. We had no trouble with the forelock to get them out of the collar. We placed a spar log Memel through sluice and got a--- on both sides which we got up as high as to allow the Brass Plate taken out and I was glad to see that it is not reduced more than  $1\frac{1}{2}$  inch. We then placed the iron plate 1 inch thick above the Brass one and lowered the Gate, which I trust will prove a great benefit. We then commenced the North Gate and got it up and down with not so much trouble. Labourers scooping out the Recess of the Upper Gates.

## Wednesday 19th

We commenced to the North lower Gates at 4 AM and got it raised by 6 o'clock and let down, and in order to let the Carpenters finish the planking & calking where the they were taken off to get the mud taken out we did not commence the South outer Gate until the after noon. Very much ret—in consequence of One of the Worms being over screwed which rendered it unfit for use until repaired. Got the Chains shakeled to the Gates, the three plank in the flood gate Platform lifted & relayed and all the material to the out of the Lock to be ready for the trade to morrow.

## Thursday 20

Made out the Extra Labourers wages and hand the pay sheet to the Collector for payment. Commenced 40 scoop out the mud at the Back of the flood Gates which has accumulate to a great extent. Got them up as far as to allow the trade to pass. So to observe the flood Gate floated out from the valve not being attended to.

# Friday 21 May 1852

Commenced to the flood Gate this morning at 3 AM and we got it again shipt by 6 o'clock and in order to get the Anchor placed as formerly we got a quantity of metal with strength and weight brought it to its original state. The Cope Stone where shivered must be renewed with oak plank.

#### Saturday 22d

Men employed in Scooping out back of the Gates and Collecting the material.

## Monday 24

Carpenters employed with the mason at the flood Gate Cope. Colvin's men collecting & returning back the Pig Iron on loan from Mr Robertson, collecting the mud in heaps.

## **Tuesday 25**

Carpenters & mason as above. Ordered the punts which was loaded with mud from the Lock and Recess of Inner Gates to be taken to the south west Corner of the Timber Basin so as to make it level with the bank.

## Wednesday 26

Carpenter & mason at the Causway & Gate foot gangs. *Hercules* men Cleaning the Engine. Colvin's men discharging & loading the stuff taken out G Mouth Reach. I am sorrow to observe the state of the Engine Boiler. The smoke Box is intirely done and I think the Copper pipes or flues are considerably corroded at the ends as well as the end and bottom of the Boiler itself.

## Thursday 27th

Mason & Labourer at the Dock Lock Causway. Carpenters at the Gate Rails. Colvin removing & discharging the stuff taken out of G mouth reach. The **Canal Dredge Boat** arrived last night and commenced in the Canal Basin to remove the mud in the Centre to allow the water to run off so as to allow the bottom of Lock No 2 to be examined.

# Friday 28 May 1852

In consequence of Mr McDonald having not fulfilled his promise in regard to the repairs of the punts I advised Thos Adamson to go to Glasgow and advise Mr Crichton on the Subject, and he has informed me this morning that Mr Crichton told him to commence in receiving a written writer from Mr McDonald to that effect, and he will see him paid from the balance due him by the Company. Mr Adamson commenced to the punts. Colvin's men in removing the stuff taken out of the Canal, and the Canal Dredge Boat men at the same from the basin to South Bank.

# Saturday 29th

All hand employed as above discharging the mud taken out of the Canal basin over the Timber Basin South Bank.

# Monday 31

Men employed as above. Went to Glasgow met Messrs Crichton, Readman, McColl, Wilson, Craig, Thomson & Hay. Mr Crichton stated that he considered there was no use for a Master to attend the **Dredge Boat** along with the Engineer. Considers it will be proper to git a new Boiler for the Pump Engine rather than repair the old. That the timber Wharf should be taken down and filled up. Refers consideration of the Stone house & office for the present,

# **JUNE 1852**

# Tuesday 1st June 1852

Colvin's men the **West Dredge.** Punt men and west Carpenters were employed at Tides Work Scooping out the Water from Lock No 2 for the purpose of examining the flooring in consequence of one of the Plank having floated up. Found a number of flooring started from the nails being corroded. Nailed & bolted them anew. The planking otherwise good. Was surprised to see the state of the mud in the after 66 Punt load or say 726 tons taken. There is still from 5 to 6 feet except in the Centre.

# Wednesday 2d June 1852

Colvin's men discharging the mud taken from the Basin at north east Bank of the timber Basin. *Hercules* men & smith at Stays for the Boiler. The Wind at last have shifted round to the S West after such a continuation of northerly winds.

## Thursday 3d

Colvin's and **Canal Dredge Boat** men scouring mud from the Old Harbour. Employed the sawers to cut the two oak swing bars for the Junction Lock. Mason at the large Lock Causway.

# Friday 4th

Colvin's men with the **Dredge** Boatsmen scouring mud from the enterance of the large Lock and discharging Punts & c over the Timber Basin Banks.

# Saturday 5th

Men employed as above at discharging the mud from the Canal over the South side of the timber Basin Banks.

## Monday 7th

Colvin's men and the **West dredge** men employed as above. According to Mr Crichtons instruction I examined the Scow *Cliftonhill* on the Slip at Port Downie which received damage from the Company Lighter *Hugh* in passing on Monday 2d Inst and found a piece shattered off the stern starboard Belt brock the decks started; and consider the expense for repairs of said damage will not cost more than 35/. Wrote Mr Crichton to that effect. I had a call from Mr Normale who has charge in deepening the Forth at Stirling, who appear<sup>d</sup> anxious to get the loan of the *Hercules* D. Boat for three months to finish out the work. Advised him to consult Mr Stevenson, Engineer, and if he thinks proper apply to Mr Crichton. The *Clyde* S Steamer arrived this forenoon. A most lamentable case having run down the Sloop *Beehive* of Glasgow off the Nore. The master and two men drowned, the mate saved.

## Tuesday 8th June 1852

Jeanie & John. Colvin's men employed in discharging the Punts as formerly.

# Wednesday 9th

Men employed as above.

### Thursday 10

Men employed as above. Men on *Hercules* employed in taken the Punts to the Timber Basin to get them cleaned.

# Friday 11th

Colvin's men removing the mud taken out of the Canal to South side of lock No 4 as the most Convenient place for a deposit. I find the foot gangs at Lock No 8 & 14 require new foot gangs for the Upper Gates & c.

## Saturday 12th

I find that 57 Punt loads mud were taken out of the Canal basin on the 4 last days in May @ 12 tons per Punt is 708 Tons, and from the 2d to  $9^{th}$  June inclusive 75 Punt out Grangemouth reach 900 Tons, and discharged along the out side banks of the Timber Basin being 1608 Tons south , and 28 Punts 336 Tons discharged on the south bank on the 10-11 & 12 at Lock No 4, which will require 30 Punt loads say 360 Tons to fill it up; & there to deposit the remainder of the stuff which is to be dredged on the south Bank at the two wide places of the Canal between lock No 3 & 4.

# Monday 14th

Colvin's employed in discharging the stuff taken out of the Canal & mason at the Causway & c.

# **Tuesday 15**

Men employed as above. Mr Crichton was her to day, mentioned that as we can now dispense with the *Hercules* for three or four months and as I understand that a Dredge Boat is still wanted to finish out the – of the Forth near Stirling, I consider it will be advise to let it out Provided that proper terms are agreed upon. Mr Crichton thinks there can be no objection to this provided that it is done on proper terms. Mr Crichton ordered a report to be made of the state of Mr Mackays house and expense of repairs.

# Wednesday 16 June 1852

The wind is check<sup>d</sup> round to NE, it blows & rains heavily, cold. Men employed as above.

## Thursday 17th

Men employed as above. Ordered Robt Brown to go to Kirkintilloch with the brock tooth & pinion of the *Hercules* Bow Crab to get one cast for the one unfit for service.

## Friday 18th

Men employed as above. Wrote Mr Crichton advising him to Lease the **Dredge Boat** to Mr Alex<sup>r</sup> Wilson provided he can make such arrangements for the time it may be used in finishing the work in deepening the Forth near Stirling.

## Saturday 19th

Was at No 16, observed nothing wrong with the works. The *Mary* Schooner, Kidd master, from Dundee, arrived early this morning with a Cargo Bale Goods for Liverpool. Not knowing that the Bowling Canal was to be stopt this night, I advised Mr Morrison to put 4 or five horse upon the vessel and Mr Mackay to sent a express by the 12 o'clock train informing Mr Crichton that the vessel was on the way, and if possible to allow her to proceed. Ordered the men employed in discharging the stuff from the **Dredge** Boat employed in Bainsford reach to take no more of the Punts down to the South bank east from No 4, but to discharge the stuff east from Lock No 6 on the north side so as to save the waste of water and which is much nearer to the **Dredge**.

### Monday 21st

The weather is changed for the better, a very heavy shower this afternoon and genial. Colvin's men at Bainsford reach. Carpenters at the Gates of Large Lock. Master & Engineer repairing the large Crab of the **D. Boat**.

# Tuesday 22nd

Men employed as above. Heavy fall of rain to day.

## Wednesday 23d June 1852

Carpenter at the large Lock Rails, dressing Swing Bars for Junction Lock gates. Colvin's men at Bainsford reach & c.

## Thursday 24th

Application for the **Dredge Boat** in Carron Basin, also in the Cut to Rennies Flour Mill and to scoop out the front of Mr Melvills Wharf lately erected. I told James Crawford if the Machine was not wanted west before the middle of the week he may git the work done. Ordered Geo Colvin west as there will be no further space for the stuff on the north bank east from Lock No 6 he must convey it above Lock – where there is a little room, & if more was taken out than could be laid down there it must be taken to the south side and laid on the ground which the Comp<sup>y</sup> have in tack from the late Mr James Fulton.

#### Friday 25

Men employed as above.

# Saturday 26

Mason & Carpenters at Bainsford Bridge & Wharf. Heavy showers rain.

# Monday 28th

We had a considerable quantity Rain since Saturday. Carpenters employed at Tools, large lock gates, & Masons at the Dock Wharf. The *Porchant* arrived last night from St Louis America with timber in the roads.

# Tuesday 29th

Colvin's men employed in discharging the mud taken out of the Canal by the **dredge Boat** on the south bank possessed by John t--- No 6 Lock. The Tenant of Marcheston Hall complains of the mud being laid to the wall and raised so high as any disposed Persons can very easily get over it and ordered the stuff to be removed immediately.

# Wednesday 30th June 1852

I received a letter from Mr Crichton intimating that as the overseers are so busy with the repairs at present, their monthly meeting in the office at Port Dundas is put off till Tuesday the 6<sup>th</sup> July at the usual hour of Ten o'clock. I therefore did no require to go west this day.

# **JULY 1852**

## Thursday 1st July

I was sorrow to understand when I went to Bainsford that the Canal **Dredge Boat** was ordered west last night, consequently the Carron basin and the front of the Wharf at Milns Granary is left without any thing being done and which is very needful. I ordered Colvin's men so soon as the Punts are discharged to commence and remove back the stuff from Merchiston Hall.

#### Friday 2

The silt in front to Merchiston Hall is too soft and must remain as it is to the beginning of the week. Colvin's men discharging the *Cart Boat* with Rubbish from the Lock head and levelling the mud discharged in the timber Basin. Heavy showers this morning and strong Gale, westerly wind.

# Saturday 3d

Colvin's men employed at Grangeburn and Cutting the weeds off the Banks. Carpenters at the Gates and repairing Barrows.

# Monday 5th

Saturday, Sabbath, & to day, are the warmest we had this season. Men employed as above. The *Hampton* arrived this morning tide from Quebec which was very fortunately, another tide would have been too late till next Spring tides. Excessively warm to day.

## Tuesday 6th

This morning is soft & Calm. I am Glad at the appearance of the Dock on account of the new Directors being expected here to day. We have two Screw Steamers, one ship, 4 Barques & about 14 Brig Schooners & Sloops, which is satisfactory in comparison to what it was last week. The Directors arrived at No 16 at ½ past 3 PM, consisting of Messrs Anderson, Douglas, Wallace, Dennistoun, Baird, & Robson, with Mr Crichton Superintendant, Readman Cashier, McColl, Wilson & Craig, overseers. After their arrival all went into the Union Hotel for a lunch, which consisted of a few Straberrys and a glass of wine, with a little fresh butter and a few biscuit which was got in the house by Chance. Messrs Anderson, Douglas, Robson & Crichton with myself outside in the first Carriage. Messrs Dennistoun, Wallace, Baird & Readman, & McColl the outside, on the 2d Carriage. Proceeded down the Bank, pointed out the Spot at Castlelaurie where Mr James McAlley wants one inch pipe to supply his works which he intends to erect for chemical purposes, which the Committee is to take into after consideration. Arrived at Grangemouth, examined the Hercules Dredge Boat, it was agreed that a new chain & purchase Block should be got in the meantime and from the appearance of the Bucket frame it was considered it would work for some time yet. All went on board the Tug st---. Proceeded outside the Light house, returned, went ashore to the north bank where the breach took place 29 Jany 1850. Examined the timber Wharf, refered their opinion until it was asc--- how the greement was made by his lordship Earl Zetland. Examined the repairs wanted in the apartment occupied by the Collector. Set off about ¼ to six to Falkirk where they are to dine at 7 PM.

# Wednesday 7 June

This is another very excessive warm day. Colvin's men discharging the materials used in wheeling the mud taken out the Canal by the Steam Boat and levelling a Cargo whin stones at the West bank below the enterance of the Grangeburn.

#### Thursday 8th

The weather continue excessively warm. Men commenced to the Pilling at the Grangeburn Bridge.

# Friday 9th

Men employed as above. Discharged the Cart Boat at the Jutty. Commenced to the Pilling at 4 PM.

## Saturday 10th July

Colvin's men Cleaning hedges and at the G Burn Pilling with Carpenter & *Hercules* men. R Newlands at Lock No 7 Swing Bar & c. The *Porchant* left the Roads for Quebec. The Corpse of young man was taken out the Junction Cut this morning, his name was Burns.

## Monday 12

Colvin's men discharging the *Cart Boat* at the enterance Jutty, dressing the hedges and spreading the mud taken out of the large Lock.

# Tuesday 13th

Colvin's men employed at the East Carron Bank facings, the tides not being convenient to work at the Grangeburn Pilling. Mason at Causway.

## Wednesday 14th

I do no recollect of such dreadful Thunder claps and heavy plumps rain as we had here this morning between half past 3 and ½ past 5 o'clock. We expected it would have cooled the air but it continues as warm as it as been these eight days past. It looks still like more thunder this after noon. Banks men and Carpenter taken the Spare Swing Bar to Lock No 7 lower North gate which is brock. Colvin's men at the East Bank. The Thunder & lightening commenced about 7 PM, continued as awful in the morning.

## Thursday 15th

Colvin's men at the East Embankment, removed & relaid 144 square yards these two days past, say at the rate of 1½ per square yard. This morning is very sultry and still looks like more thunder. Carpenter & Banks engaged in putting on the new Swing Bar Lower north Gate No 7. It will be necessary to report as to the trees over spreading the sheds and Lock Keepers house at Tophill.

#### Friday 16

All hands at the Pilling during the tide this morning. Colvin's spreading the stuff taken out of large Lock & c.

## Saturday 17<sup>th</sup>

Men at the Pilling. Heavy rain from noon to 5 PM.

## **Monday 19 July 1852**

Colvin's men with others at G Burn Bridge during the tide. Newlands at prepairing the timber work for the painting Gates & c. The *Clyde* S Steamer arrived in the Dock to day at 2 PM. The weather continues with heavy showers Rain & thunder.

# Tuesday 20th

It commenced to rain this morning and continued with intermission to 11 AM and has done great injury to the Crops which are exuberant. I was astonished to observe the state of the Grangeburn. Of all the heavy Thunder & rain fallen of late, the burn was little effected, but to day a deluge have completely inundate and carried away the greater part of the stones which we had piled up for the pitching after the Piles are drove, which we expected to have got finished today if the weather had been favourable.

# Wednesday 21st

Colvin's men removing the mud taken out of the large Locks prepairing the Jutty to have it raised. The flood in the Grangeburn is considerably fallen but it is not in such a state as to allow the men to finish out the Pilling. The two *Hercules* men at the additional length of Pump for the Engine. This day has continued dry.

# Thursday 22d

Colvin's men at the Grangeburn during the tide and at the Jutty discharging the stuff taken out the large Lock. I observed three Copes of the Falkirk Iron Works removed out by one of their vessels having taken the ground and heeled off, which will require to be replaced. One Ashlar stone to be put in at Lock No 3 and three Cope and Ashlar wanted at the South enterance. The Gate Chain at Lock No 4 to shorten<sup>d</sup>, two Bridge Stones for north side of Bainsford.

## **Friday 20 July 1852**

Colvin's men loading the Canal Boat at the Ballast hill and discharging at the Pig Iron Wharf to make up the hollows. This another warm favourable day. Returned a Dozen round & 1½ dozen square mouth shovels with 96 old useless shovels. The 2½ dozen shovels returned was for them formerly received for the repairs of the Lock in May last.

# Saturday 24th

The weather continues most favourable for the Country. Colvin's men at the Jutty & at tide time will continue to take out all the Stones at the G Burn bridge between the two set of Piles and Prepairing for the Puddle and laying the Pitching.

## Monday 26

We had heavy showers of rain to day. Colvin's men loading and discharging the *Cart Boat* with Sand for raising the ground at the Pig Iron Wharf. We have a few arrivals of foreign vessels with Grain & timber since Saturday.

# **Tuesday 27**

Excessively warm the morning with sunshine. Colvin's men commenced again to the E Bank Pitching. Mason at the Causway.

## Wednesday 28th

The weather continues excessively warm. Men employed as above. Ordered the mason to commence and provide Lums & c for Repairs of the building at the enterance of Lock No 1.

#### **Thursday 29**

Colvin's men <sup>3</sup>/<sub>4</sub> days each @ the East Bank, Pitching the remainder of the day. 3 men taken up the *Cart Boat* and bring down the *Etna* which was east with a Cargo Clay to the watering place between Locks 3 & 4. Mason Commenced to pin up the building at enterance of Lock No 1.

## Friday 30

Colvin's men at the Grangeburn and loading the Etna with mud taken out of the large Lock.

## Saturday 31

Men employed as above.

### **AUGUST 1852**

## Monday 2d August 1852

Colvin's men at the Grange burn and discharging the *Etna* at the Jutty. This day is not so very warm as for ten days past, it looks like a change.

# Tuesday 3d

Colvin's men and Mason at the Bridge pitching & c. Went to Glasgow, met Messrs Crichton, Readman, McColl, Wilson, Craig, Thomson, Hay. Mr Rob<sup>t</sup> Baird, one of the Commissioners, none of the others being present as was intended, regarding the Trees at Tophill and enfringement on the Canal Banks by Montgomerie & Murdoch as mentioned in my Report. Mr Crichton stated that he would take the advice of the Committee and let me know what steps should be taken. Daughter Janet married in my Son Roberts.

## Wednesday 4th

Colvin's men & Mason at the Bridge Pitching & c. Occasional showers.

## Thursday 5<sup>th</sup>

Colvin's men employed in loading the *Etna* with Stones & Puddle for the Pitching at the G Burn and convey her down.

### Friday 6th

Colvin's men employed at Grangeburn removing the Pitching at the upper Pillars and Puddling.

# Saturday 7th

Men employed as above and Basket Point.

## Monday 9th

Men employed in dressing the hedge south from the large Lock before breakfast. At the Burn after part of the day. We had heavy showers and the Thunder & Lightning was dreadful.

# Tuesday 10th

In consequence of heavy rain nothing was done at the Grange burn. Colvin's men at the East bank facings. Harvest commenced to day. More heavy claps of Thunder & lightning.

# Wednesday 11 August 1852

More heavy falls rain after 10 AM and Thunder. Colvin's men at the Stone facing. Tides are very low. The *Liverpool* is still detained from the want.

## Thursday 12th

Colvin's men at the G Burn before breakfast and then at the Pitching East Bank which is now finished at that part. Ordered the Old Border Stones which have been taken out of the Canal Banks to be taken down tomorrow, if they can get the *Etna* taken out of the Grangeburn for to bring them down to the bridge. *Liverpool* sail<sup>d</sup> this day for St Jones<sup>g</sup>.

## Friday 13th

Colvin's men at the G Burn and taken the *Etna* west the Canal for the Border Stones & c. This day very warm.

# Saturday 14th

Colvin's men loaded the *Etna* with the old border Stones and conveyed them down to the G.Burn. Heavy peels Thunder and rain this afternoon. Informed that Mr Potters Scow was sunk at his wharf at Bainsford and wished me to run 2 feet off the reach which I would not consent to until the evening when the trade is past and after the Falkirk iron Works had dropt work.

### Monday 16

Banksmen & mason at the Grange Burn. It came on to rain, the wind from the East, rain very heavy after half past one. Mr Readman was here, complained of Slope being Placed along the Slopes of the Canal opposite different dwelling houses. I told him it had been a Custom since I knew any thing about the Canal and considered it better to allow the Slope to be put in than allow people to trespass on the Slopes, and also as regard the Pipe to supply the Revd Mr Cochrane house from the Basin.

# Tuesday 17th August 1852

In consequence of the heavy fall of rain last night, the men did not employed at the Grangeburn this morning, dressing hedges & c.

## Wednesday 18th

Colvin's men at the timber Basin Bank south from the large Lock stoping leaks, leaks which appears when the Basin is full and above the ordinary level. Received a letter from Mr Crichton stating that Thos Morrison to get the Crop of oats at £10.5/.

## Thursday 19th

Colvin's men at the Timber basin Bank in the morning, at the G Burn Bridge during the tide, and conveying Stones & Rubbish to the jutty at the large lock afternoon.

# Friday 20th

Colvin's men discharging a Punt with Stones at the enterance Jutty in the morning and after part of the day at the G Burn. Carpenter yesterday & to day at the enterance of the large Lock repairing fenders.

# Saturday 21st

Men employed as above. Weather continues very warm and favourable for the harvest, wheat loading in the Barn yard.

# Monday 23d

This morning is very foggy. Colvin's men at the Timber Basin Slopes in the morning and at Grangeburn after Part of the day. There was a very heavy rain which continued from 12 to 5 PM.

#### **Tuesday 24**

Colvin's men at the East Embankment. Lock Keepers at fenders and decks of Hercules D Boat.

# Wednesday 25th

There been a heavy fall of rain during the last night & until 8 this morning. Colvin's men removing the *Etna* for a Cargo Stone & c for the --- of the jutty.

# Thursday 26 August 1852

Colvin's men at G Burn & loading the Etna with Sand & Clay for the Pitching.

### Friday 27th

Colvin's men employed as above and conveyed the *Etna* with a load Sand & Clay to fill up the crevice in the Pitching at the G Burn Bridge.

## Saturday 28th

Colvin's men employed as above. Received 56 Tons Rble Whin Stone from R McCallum.

#### Monday 30

Colvin's at the Burn to dinner and then Cleaning hedges. Ordered them to Commence with two Scows to morrow to Scour the mud out of the Old Harbour.

## Tuesday 31st

Colvin's men Scouring the mud out of the Old Harbour. West to Glasgow, met Messrs Crichton, Readman, McColl, Wilson, Craig, Thomson & Hay. Left the Estimates as it appears they must be laid before the Directors before being approved of by Mr Crichton. Mentioned that James McAllay was to get a pipe from the Canal on condition that he is to pay Five Pounds per annum. Stated that Mr Dawson wished 15 inches run off the Bainsford reach to raise part of the building in Carron Basin. Mr Crichton was not disposed to allow the watter to be run off for that Purpose although there is no searches at Present.

# **SEPTEMBER 1852**

## Wednesday 1 September 1852

Colvin's men at the G Burn Bridge and Cleaning hedges.

## Thursday 2d

Colvin's men at G Burn Bridge and loading the *Etna* with Sand for the Pitching.

# Friday 3September 1852

Colvin's men employed in loading the *Etna* before Breakfast and at G Burn after part of the day, and examining the West Bank. Found that it will be absolutely necessary in to order to prevent the Run of the water which has encroached upon the tail of the bank to git stone and clay placed across the rivulet so as to prevent the run of the flow or ebb of the tide from encroaching on the last of the Bank.

# Saturday 4th

Colvin's men at the Grangeburn. Carpenters at Barrow and *Hercules* Decks. Weather continue most favourable.

## Monday 6th

Mason employed at Necessary. Colvin's men at the Burn. This day rained occasionally.

## Tuesday 7th

Men employed cleaning hedges and in consequence of a Leak from the Timber Basin parallel with the Bo'Ness road ordered Colvin's men to open up the Bank after Breakfast.

## Wednesday 8th

Colvin's men at the bank and was glad to understand that the leak was found out and stopt. My son Robt came last and Mr McColl this morning for the purpose taken an account of all the Pipes which is placed from the Canal for the supply of Public works and private houses and we commenced at the Timber Basin including the Pipe to my house, west to No 16 including the Camelon Foundry & Alum works. Mr Crichton came here after 6 PM having been at Edinburgh at a meeting of the Committee and Deputation of the Glasgow & Edinburgh Rail way Committee where arrangements have been agreed to which it is hoped will prove Ultimately for the benefit of the Company.

## Thursday 9 September 1852

Colvin's filling up and levelling the Cut where the leak was in the Bank and Slopping up the Stuff taken out of the Basin & Canal . Carpenters & mason assisting the wester men at No 10 & 9 Locks where they entered to ship a set of Upper Gates in each.

# Friday 10th

The run off the short reach at Tophill and the reach above Lock 9, mason employed taken out the Anchor Cope at north upper Gate of No 9 and ashlar which is very bad and must be replaced before the gates are shipt. Carpenters fitting the new Up Gates at Lock 10. Colvin's men at Basin Bank.

## Saturday 11th

Colvin's men at the G burn and brought up the *Etna* at Timber Basin Bank afternoon. Mason, Smiths, & Carpenters at No 9 10 Lock which I trust will be finished to day.

## Monday 13th

Colvin's men at the Burn and Timber Basin Bank afternoon. The weather continue most favourable for the Country. A great proportion of the Victual will be in the Barn yard to morrow if the weather continue. The Steamer *Carron* got grounded last tide and did not get away until 12 noon yesterday.

### Tuesday 14th

Colvin's men at tides work at the enterance of the large Lock scouring away the mud, loading Stones for the Jutty.

## Wednesday 15

Colvin's men at the Grange burn and load<sup>g</sup> sand & c for the Jutty. The weather continue most favourable, a little frost on morning.

#### Thursday 16

Colvin's men at the Jutty discharging Stones & c..

# Friday 17

Colvin's men at East Bank removing the Boothy & c.

#### Saturday

At Grangeburn and clearing Mr Cochrane's Pipe.

# Monday 20 September 1852

We had a favourable day yesterday although it had the appearance of change and this morning at 6 o'clock it came on to rain with the wind from the East & cleared up at 12 noon.

# **Tuesday 21**

Colvin's men at the Jutty discharging the *Etna* mud taken from the large Lock in May last. Cold wind North.

# Wednesday 22d

Colvin's at the Jutty and loading the *Etna* with Gravel & Clay for the G Burn. Ordered the *Ice Breaker* to Place the Anchor and Mooring Buoy at the enterance of the large Lock. Only two vessels this day in the Docks.

## Thursday 23d

Colvin's men as above. The *Wester Crane* arrived last night with the Diving Helmet and was sent down this morning to examine the South valve at the outer end of the Tunnel of the large Lock, and gave us so much trouble when the water was pumpt out of the Lock in May last. The Helmet Man found that the face was covered with Gravel & c which prevented the valve from shutting. He came up and got a Masons truant and when he came up again stated that he removed two or three barrows full and the valve now shuts completely close. The Helmet was again sent down at 2 o'clock to examine the north valve but all was not except a few small stones lodged in the face of the Tunnel.

## Friday 24th

Colvin's men loaded the Etna with sand & Gravel for G Burn.

## Saturday 25

Colvin's men at the Grangeburn. It was with deep regret that I heard of James Spence being drowned at Castlecary last night about 7 o'clock. After being here with the Diving Helmet on Thursday he proceeded west with the **Crane Boat** where they were employed in repairs of Lock 19 and it appears in taking the Crane Boat out of the Stern foremost the Tiller struck James and he fell overboard and as the rest of the men was about the Lock they did not observe the spot where he dropt overboard and although the young lad Crawford dived several times the body was not found until 20 minutes had expired when life was extinct. It is believed that James could not swim, which is to be lamented for there is nothing to prevent a person saving themselves when the fall into the Canal if they have learnt to swim except they are severely hurt or rendered useless from intoxication which I am certain it could not be from the latter. I am certain my Son will feel sadly grieved at his loss. He was a most active clever tradesman and thoroughly acquainted with canal work in all its branches.

#### Monday 27

Colvin's men loading the **Etna** for the Jutty & dressing the hedge inside between and the G Burn Bridge.

### Tuesday 28th

Colvin's men discharging the *Etna* at the Jutty & at the West Bank Slope.

# Wednesday 29th

Colvin's men at the Jutty levelling up the South Timber Basin Bank with the Silt taken from the Canal & c.

## Thursday 30<sup>th</sup>

This morning is very wet, I therefore did not go west until the forenoon. Met Mr Crichton but by that time all the other officers had left. Gave him my report and showed him my specification for rough Casting the houses on the East District which he approved off.

# **OCTOBER 1852**

### Friday 1st October

Colvin's men at the timber Basin Bank and assisting to discharge a Cargo Whin Rubbish on the West Bank near the 5 & 6 B-----.

# Saturday 2d October 1852

Colvin men at south side of Timber Basin Bank for part of the day and assisting to discharge another Cargo Whin Rubbish for the West Bank.

## Monday 4 October

Colvin's men employed at the West Bank & south side of the Timber Basin.

#### Tuesday 5th

We have four arrivals to day which is more in the Dock than we had this fortnight past. Mr McColl & son Robt was here to day on their half yearly survey. Colvin's men at the Timber Basin to day.

## Wednesday 6

Colvin's men down with the to the west Bank at 6<sup>th</sup> beacon where the Cargo Stones was discharged which they are removing to stop the Current of the Water from forming a trench along the inside of the West Bank. Carpenters in removing the Oak Swing Bars to be placed up the Junction outer Gates.

## Thursday 7<sup>th</sup>

Men employed as above. On examination the Bank above the **Aqueduct** [see note 28] east from Lock No 15 I am of opinion that from the steepness of the Slope from the top of the Bank to the end of the Aqueduct is such that it is very dangerous for either people or Cattle passing them, especially when it is dark and that a sufficient fence should be placed there without delay.

### Friday 8th

Men employed as above. Wind continues long from the northward.

# Saturday 9th

Men employed as above. Weather changeable, rain from 12 noon until 4 PM.

## Monday 11 October

Colvin's men loading Cargo Stones for West Bank. Carpenter at the fenders for the enterance of Junction Lock. Mason pointing the front of Pig iron Wharf.

## Tuesday 12th

Trade continue very dull, only four vessels & *Clyde* Steamer arrived this day in the Dock. Colvin's men employed in Boating surplus Stones from the East to the West Bank & c.

## Wednesday 13th

Colvin's men employed as above. Mason placing found stones for the Crab Purchase for taken the Punts up on the Slip.

## Thursday 14th

Ordered a Cart from Mr Morrison to take down a Barrel fresh Water & Lime & c to the Lighthouse to get it white washed but was not done in consequence of Mr Morrison not having a spare horse.

#### Friday 15

George Colvin's men assisting in Clearing the mud away from the flood Gates & prepairing the punts for the **Dredge Boat** & c. Colvin's men brought up the *Etna* to Pay Bridge for a Cargo gravel.

#### Saturday 16

Colvin's men loaded the *Etna* with Gravel at the Pay Bridge and brought her down to the Dock. Mason at the Lighthouse taken down materials to Plaster & White wash the Lighthouse.

# Monday 18th

Mason & Carpenters at the Light house Painting the woodwork and roof. Mason White washing. Colvin's men discharging the **Etna** near the Lighthouse & c.

# Tuesday 19th

Men employed as above.

# Wednesday 20 October 1852

Colvin's men at the West Bank & land farm. Carpenters at the Light house.

### Thursday 21st

Colvin's men assisting on board the **Dredge Boat** which Commenced at the enterance of the large Lock and loaded 8 Punts 120 Tons after taken the Dredge and Punts out into the River.

## Friday 22d

Colvin's men employed in tracking the Punt to the G Burn discharging them, but the tides were so very low they were with difficulty got up under the Bridge and discharged where the bottom is much below its original depth.

## Saturday 23d

Two Carpenters painting inside of the Light house. Colvin's men assisting to load 16 Punts at the enterance of the large lock.

## Monday 25th

Men employed as above. Colvin's men discharging the Punts west from and in the Grange burn, Punt brought up during the night.

#### Tuesday 26

Men employed on loading the Punts. There was considerable frost this morning with fog, wind shifted to N East with heavy rain. Strong gale. The Dock looks now respectable mostly from foreign vessels,

The S Steamer with grain from W---- and the *Clyde* S from London arrived during the night. Loaded only 12 Punts from state of the tide.

## Wednesday 27

We have strong gales N East wind & rain during the night. It was with difficulty we got the Punts out & discharged but the Wind & rain continued so the men could not get the Punts off again.

#### **Thursday 28**

Got only 10 Punts, the Wind continuing so strong of the bank east from enterance of the Grange burn.

# Friday 29 October 1852

The weather continues very boisterous, wind for N East. We loaded 12 Punts and got the 2 empty Punts taken of the bank.

# Saturday 30th

Colvin's assist loaded 4 Punts and got them taken down east from the enterance of G Burn.

## **NOVEMBER 1852**

# Monday 1st November

Colvins discharging the 16 Punts. It came on to blow & rain heavily at 1 PM.

#### Tuesday 2

Colvin's men at the West Embankment. Sent Pay sheet & weekly return to Mr Readman and letter to Mr Crichton regarding the sale of materials used in the manufactory for Creosoting Railway Sleepers near Tophill.

## Wednesday 3d

Colvin's men away with the *Etna* to take a Cargo of the stuff taken out of the Canal laid near Lock No 6 for [blank]

Mr Readman was here to day as usual. Complained of the general expenses, considered it quite out of the question to put a fence up on the Bank above the aqueduct near Lock 16 as no person had a right to walk along the Canal bank at that place. He also considered a Chain would be much better as a fence at the Dock Bridge than sockit posts & rail which I cannot approve of.

# Thursday 4th

This is a fine moderate day. Mason at Lock No 1 raising the stones at the crossing of the up Gates where they are wore & form a Puddle on both sides. Colvin's men loaded the *Etna* near Lock 6 for the Grange burn.

# Friday 5th

The Wind changed during the night with torrents of rain, but got quite clear after 12 noon. Mr Crichton & Craig was here respecting a reduction of the men. Mason, Carpenters & Smith.

### Saturday 6 November 1852

Colvin's men at the West Embankment. This day has keep moderate. *Henry Porchant* arrived from America.

# Monday 8th

Colvin's men cleaning hedges west from Dalgrean Bridge. Strong Gales of Wind yesterday, but it is moderate to day.

# Tuesday 9th

Men employed in taking the *Etna* to the G Burn loaded with stuff take from the Canal, and taken up the 14 Punts which was laid upon the Bank during the neap tide.

## Wednesday 20th

Men employed in loading the Punts near the out enterance of the Large Lock.

# Thursday 11th

Men employed in taken out the Punts and discharging.

### Friday 12

This is a most excessive Cold day, wind NE. Hills covered this morning with Snow. Men discharging & bring up the Punts.

#### Saturday 13

The Wind continues from NE with every appearance of Course Weather. Colvin's men at the Grange burn. A foreign Sloop, the *Dagman Monkland*, laden with Grain, got on the north Bank close by the 1<sup>st</sup> Beacon and oppeared in a dangerous state, so much for Stranger Pilots being allowed to bring vessels into the Port [see note 29]. The vessel, however, raised with the tide little the worse. Charged 1/.

## Monday 15th

The wind continues from the East with rain without intermission since Saturday and no appearance of abatement.

#### **Tuesday 16**

The Wind & Rain continues. Colvin's men at G Burn.

## Wednesday 17th Novr 1852

One of the Punts brock drift last night and was found at the north side of the outer Beacon. It was not in the power of the men to bring the Punt up owing to the strong current in the river. Colvin's men employed in Cleaning ditches & dressing hedges between Locks No 3 & 4.

#### Thursday 18

Colvin's men at the Ditches & hedges. Observed the north outer Gate metre Post of Lock 15 a piece split off the inside which require to be instantly attended to. Lock Keeper is in want of two Boathooks and Ice Tools.

# Friday 19th

This being the Parish fast, there was no work with mechanics & Banksmen.

### Saturday 20<sup>th</sup>

Colvin's men at the Ditches & Hedges between Locks No 3 & 4. Received one log Red Pine Cut into Rails & c and one log for the Upright Shaft for the Crane at Bainsford Bridge from Robt Melvill & Co. Ordered the Punts up to the Timber Basin.

# Monday 22d

Colvin's men at the Ditches & Hedges as above. *Hercules* men in removing the *Hercules* into the Dock & punts into the Basin.

# Tuesday 23d

Men employed as above. The frost was commenced with the appearance of continuing at least for a few days.

## Wednesday 24th

Men employed as above.

## **Thursday 25**

Colvin's men with the *Etna* to Lock No 6 for a Cargo of Stuff taken out the Canal for the Grangeburn. Hard frost this morning but looked like a Change this afternoon.

## Friday 26 Nov<sup>r</sup> 1852

Sudden change of Weather with heavy fall rain during the night. Colvin's loaded and brought down the *Etna* which it will not be proper to take to the Grangeburn until Monday provided the weather is favourable.

## Saturday 2th

Colvin's men are this day at the Grangeburn levelling the Earth of the last Cargo.

## Monday 27

Colvin's men at the Old Harbour & Scouring out the mud and wheeling Gravel at Pig Iron Wharf.

#### Tuesday 30

Colvin's men at the Old Harbour and taken down the *Etna* loaded with Soil to the Grangeburn. At Glasgow met Messrs Crichton, Readman, McColl, Wilson Craig, Thomson, & Hay.

## **DECEMBER 1852**

## Wednesday 1 December 1852

Colvin's men at the Grangeburn discharged the Cargo of Soil.

#### Thursday 2d

Colvin's with the *Etna* loading Lime & Stones intended for the Repairs valve at Lock 15.

#### Friday 3d

The **Wester Crane Boat** arrived with Anchor Cope from Gascabe Quarry. Calvin's men employed discharging them.

#### Saturday 4

This day is very foggy with rain. Colvin's men employed loading Cargo Soil for Grange burn.

#### Monday 6

Colvin loading out the **Etna** and tracking her to the Timber basin. Mason commenced the building above the Culvert at Lock 15.

#### Tuesday 7

Colvin's men levelling the last Cargo Soil at the G Burn.

## Wednesday 8 December 1852

Colvin's men Spreading a Cargo Gravel to make up part of the ground sunk by the weight of Iron at the Pig iron Wharf. The *Liverpool* from America and number of vessels for the Canal arrived to day. Wind East.

## Thursday 9th

Colvin's men discharging Soil at Grangeburn Banks and tracking up the *Etna* to G Mouth.

## Friday 10th

Colvin's men taken up the *Etna* to Tophill for another Cargo Soil for the Grangeburn. Masons taken Stones from Tophill for the Retaining Wall above the Culvert at Lock 15.

### Saturday 11

This day has rained incessantly, wind S West, strong Gale. Colvin's men loading out the *Etna* and brought her down to the Timber Basin.

# Monday 13th

The wind and rain continued till late on Saturday night but got moderate yesterday. Rain commenced at 12 noon continued to 6 PM. Colvin's men taken down the *Etna* and levelling the bank of the G Burn.

## Tuesday 14th

This has been another most disagreeable Wet day, Wind from the East. Colvin's men at the Burn and assisting to load the Scrap Iron & c into the **Wester Crane Boat**. Mr Morrison track<sup>d</sup> from No 15 to G Mouth. 4 Ton 6 Cwt Cast iron Scrap for Mr Gilchrist.

## Wednesday 15

This is another very wet day. Colvin's men discharging the *Etna* in Grangeburn. Mr Morrison tract the **Crane Boat** to Tophill where the Scrap Iron was shipt and Proceeded west.

# Thursday 16 December 1852

This is a more moderate day but little appearance of settled weather. Colvin & men taken up the *Etna* for another Cargo of Soil taken out the Canal at Lock No 6.

## Friday 17th

The Wind shifted round to the N East last night and the Rain again commenced and to blow without intermission during the night.

## Saturday 18th

Colvin's men at the Canal Banks Dressing hedges. This day is Calm with Gentle frost.

## Monday 20th

We have had a Complete deluge of rain since Saturday, continued without intermission until this morning and it still continues although considerably abaited. The Grangeburn is swoln to a great extent and I am afraid we will considerable damage have taken place if once the water is subsided. The lands on the South side of the Canal have been completely flooded from Wm McLarens Chymical Works westward which often take place and this is owing to the Culvert under from Messrs Melvills wood yard being to small and nothing will prevent the damage to the lands in future until a wooden tunnel is Placed west from McLarens Work across the Bank the bottom of which to be level with Canal Water which will allow a considerable quantity of the surface water to escape when it rises above the level of the Canal Water. It will require to be from 50 to 60 feet in length & 3 ½ feet wide.

#### Tuesday 21

This day is quite Calm with gentle frost. Colvin's 8 men Dressing hedges & Ditches east from Lock No 4.

## Wednesday 22

This day is Clear & frosty. Men employed as above. Ordered Charles Graham to attend Lock No 9 in consequence of Thos Watt being badly.

### Thursday 23 December 1852

Another Change of Weather, it commenced to rain yesterday afternoon and continues during the night with strong Gale westerly winds. Colvin's men dressing hedges East from the large Lock & c.

#### Friday 24

Colvin's men discharging a Cargo Soil at the Grangeburn & c. Wind blows hard. Charles Graham not able to attend Lock No 9.

## Sunday 25

We had another fearful night with wind & Rain with Thunder. Colvin's men at the G Burn and will bring up the **Etna**. Weather more moderate but came on again heavy squalls & rain in the evening.

# Monday 27th

As usual the Storm & Rain Continues without intermission. Colvin's ½ Day forming a metal road for the Carting to the Steam Ships round the corner at the Garden fence. It continues a complete Hurrican.

## **Tuesday 28**

We have another tremendous night which has blown down the fence at this office. Luckily we have material fit to repair it which was intended for another spot if the present office & store had been removed. All hands at work erecting the fence. I have just heard that Thos Watt, Lock keeper No 10, died this day.

## Wednesday 29th

In consequence of the weather being so boisterous the Scow with the 56 Tons Quarry Rubbish for the West Bank could no go down the River with safety. I was under the necessity to order the men to discharge the Stones into the *Etna* and it being moderate this morning the *Etna* went down and

discharged the Stones and was brought back, although it came with great difficulty from the Storm having commenced and continues as severe as ever. Wind East South East & west.

# Thursday 30th

Of all the Gales of wind I think during the night and still continues, exceeds if possible all that we have had for these two months from S West. Men employed at the Timber Basin removing the timber floated and joined up the Passage between Junction Lock & Canal. Sent the **Etna** for a Cargo Ashes from Camelon Foundry.

## Friday 31 Decr 1852

Went to Port Dundas with 12 o'clock but being to late for the meeting did not see Mr Crichton and hand my Report & Estimate of materials to McColl. Received £6.10/ to pay Thos Watts funeral expense who is to be intered this day. In consequence of the Lock Keeper at No 3 informing me that the north upper Gate was unshipt, ordered the men here and G Colvin's men to attend this morning and put to rights, the cause was some stone had got into the recess.

# 1853

## **JANUARY 1853**

## Saturday 1 January 1853

Colvin's men brought down the *Etna* with a Cargo Ashes for the Pig Iron Wharf. The weather continue Boisterous.

### **Monday 3 January**

Colvin men discharged the Etna at the Pig Iron Wharf.

## Tuesday 4th

The Scow *James* belonging to Alex<sup>r</sup> Thomson loaded with Railway Chairs turned over Keel up in the Dock this morning or late last night. Got our men to work and turned the Scow back this afternoon. Wrote Mr Crichton to order my son to send down the **Crane Boat** with the Diving Bell as the most expeditious plan to lift the Chairs. We have had another tremendous last night of wind and rain.

# Wednesday 5th

The weather continues boisterous with occasional showers. Colvin's men west with *Etna* for another Cargo Ashes for the Pig Iron Wharf. The men employed in scooping the water out of the Scow. I observe the flooring plank blown up and several Trenails in the bottom started.

# Thursday 6

The men employed in loading out the *Etna* which was brought down to the Pig Iron Wharf. Wind changed to the S East with heavy rain. I understand a poor Boat [Boy] about 7 or 8 years ago was drowned at McLarens work owing to the unsufficeint state of the Bridge across his ponds & c.

## Friday 7 January 1853

This another tremendous day Gales and rain from S East. Colvin's men discharging the Ashes at the Pig Iron Wharf. Messrs Crichton, McColl & Wilson came east the **pay Boat** and after some conversation regarding the method of lifting the Chairs which was upset into the bottom of the Dock, we went down to the Grangeburn but unfortunately there was too much flood in the burn to observe the Plunge which the current have made of late, and we than walked the Sides Pointed out the unsafe state of the Slopes and we returned to the office. Made a rough calculation of the expense to pile and Pitch at the enterance and also to pitch the slope of the burn for 600 yards by piles (30 - £18 ft @ 1/1) £9.15, driving £10; Pitching Stones 150 Tons at 1/8d £12/10; work £10 - £42.5. 600 yards bottom & slopes 60 Tons whin Rubbish to every 12 yards in length is 3- Thousand Tons & 1/160 = 1.00 is 150 and say £50 for works is £200, say for both £250.

## Saturday 8th

This another boisterous day and no appearance of the weather becoming more moderate. Colvin's men ½ day at the Pig Iron Wharf.

# Monday 10th

We commenced this day with a few Boathook made to go through the holes of the Railway Chairs and we have picked up 180 Chairs which is a great deal more than I expected.

# Tuesday 11th

Men employed when the tide was out say ½ day each at raising the Chairs and have picked up 221, say 401 whole.

## Wednesday 12

Men employed as above. The **Crane Boat** with the Diving Bell arrived last night and commenced this morning the number of Chairs got to day is say 273 & 601, say 674.

## Thursday 13th

This day appears to be unfavourable for our operations. The bell appears to work better to day. Wind East & heavy rain. 30 Chairs which make in all 986. Weather cleared up in the afternoon.

#### Friday 14 January 1853

This morning is moderate with gentle frost with the appearance of Settled weather. I find as we proceed with the Chairs it more difficult to get them up, although we have managed 289 this day being 1273.

## Saturday 15th

We have had another most disagreeable day. The wind shifted round to the South E this morning and has Blown a Gale with heavy Rain & Sleet so that all our expectations of settled weather have vanished for a time. There was no more work with the Diving Bell and Crepers in raising the Chairs. Colvin's men discharged the Chairs out of the Punts.

## Monday 17th

Rain & sleet yesterday, frost to day. Commenced with the Bell and Creepers and brought up 147 Chairs, being 1422 in whole, which is 178 stil remains in the Dock. We will make another trial of the Bell to morrow, but as the Chairs are so much suposs—and sunk so deep in the mud it is difficult to make progress.

# Tuesday 18th

The frost continued moderate. Commended this day again with the diving bell & Creeper but have made Little progress, got out only 83 Chairs. Change weather, heavy rain in the evening.

# Wednesday 19th

Another Gale S West wind with occasional showers. We had the Bell employed to day for the last time & brought up with it and the Boathooks only 45 Chairs.

# Thursday 20

We had another tremendous night & morning of S West wind & deluge of rain. The **Crane Boat** with Diving Bell left this day, however, as it got moderate in the afternoon the men got up with the Creepers & Boat hooks 35 Chairs.

## Friday 21st

This day is moderate with occasional showers. Colvin's men dressing hedges & Ditches west from Dalgrean Bridge.

## Saturday 22 Jany 1853

This day is moderate with frost, wind North. Colvin's men at the Drains & hedges.

## Monday 24th

The weather has continued moderate with regular frost since Saturday and as the Canal was covered with Ice which prevented the trade Gitting down from Lock 16 I started the *Etna* with 2 horse at half past 9 AM for No 16 and to return if the frost continue. Will start the *Ice Breaker* from this to morrow morning. Colvin's men at the Drains & hedges. The *Etna* was track<sup>d</sup> to the Westerhouse on the 4-mile reach and returned at half past 5 PM, being 8 hours of the horse.

## **Tuesday 25**

This morning has the appearance of a Change, Wind S East. Colvin's men at the Drains & hedges. I observe the north end of the Culvert under the Canal is rather a dangerous state. Ordered the mason to git stones prepaired for it of which there is a supply which was formerly use for the Wharf at Abbotshaugh. I examined Lock No 9 House now occupied by Peter Aitken. The Wester gable is in very damp & uncomfortable State which require to be lathed & plastered and the Kitchen floor to be repaired. There is about 9½ yard of lath & plaster and about 18 yards flooring. I was sorrow to observe the damp state of both houses in consequence of the Railway operate and intend to write to Mr Peter Wilson, Assistant Engineer, to the Railway Co, to get a drain Cut through the mound which they have made which is the Cause of the damage which the Companys houses are subject to in consequence of their operations.

## Wednesday 24

Colvin's levelling gravel at the Pig Iron Wharf. Carpenters & punts & c.

## Thursday 27th

Colvin's men with the **Etna** up to Tophill with a few Barrow full Smiths Coal & to bring down the brush wood cut from the hedges east of Lock No 5. But was much detained by the trade and stoppage from vessels being lamed[?]

## Friday 28th Jany 1853

Colvin's loading the *Etna* with Stones for the Jutty at Large Lock enterance and at the Grangeburn.

# Saturday 29th

Colvin's men discharging the Stones and Brush at the Jutty which I think will prove a great benfit after a Cargo or two is laid on the top to Straighten the course from the large Lock into the River.

## Monday 31st

Went to Glasgow, met Messrs Crichton, Readman, McColl, Wilson, Craig, Hay & Thomson. Mr Crichton read over the Estimates and Reports, made no remarks so far as I was concerned except in aluding to the weights & John Walker's field. See Copy of my report.

# FEBRUARY 1853

### Tuesday 1st February 1853

Colvin's Men discharging Cargo Gravel at the Jutty

## Wednesday 2d

Colvin's Men at the West Bank repairing the 1st Beacon which is most fallen down and repairing the facing.

# Thursday 3

This is another disagreeable day. It has rained insesently. Colvin's men at West Bank repairing the Jutty Beacon.

#### Friday 4

Men employed as above. Mr Crichton was here to day along with the Clerk paying the Men's wages. Went round the Dock, wished to get the Mud removed as soon as possible which cannot be done until there is a Slackness of Vessels & c.

# Saturday 5th

Men employed as above turning over the Mud taken out of the Dock and dressing hedges.

## Monday 7 Feby 1853

Colvin's Men loaded & discharged the *Etna* with Gravel at the enterance Jutty. Ordered them to take up the **Etna** and assist in taken the Wood from Melville yard to the Spot where the <del>Jutty-</del>Furnace is to be made & c.

## Tuesday 8th

Colvin's Men up with the Canal with the *Etna* assisting to take the sawen timber from Messrs Melviles wood yard for the Tunnel is to be placed across the bank east from No.6 Lock and also to take the flooring & c for Lock No.9 house and then load a Cargo Clay which was Put out the enterance of the Ballast hill for the Grange burn banks. This day is Calm but appearance of a Change.

## Wednesday 9th

The Wind has shifted again round to the N East with Cold Sleet & rain. Colvin's Men returned with the *Etna* loaded with Clay & Soil.

### Thursday 10th

Robt Newlands & Bankmen commenced to the Tunnel & excavation across the Bank, west from Melvells wood yard. Colvin's Men loading the Stuff at the end of the Jutty and trucken the *Etna* to the G Burn with the Clay & Soil.

#### Friday 11th

There is appearance of a fall of Snow. Ordered the Mason & Banksmen to take the *Ice Breaker* from G Mouth to the Wharf at Abbotshaugh to repair the Wharf, the east end Cope being in the state of falling into the Canal. Colvin's Men at the G Burn.

# Saturday 12th

We have a considerable fall of Snow and the Canal is frozen over this Morning, and trade prevented from starting from here. I therefore ordered the *Ice Breaker* from here to No.16 and returned at 5PM, with two horse.

# Monday 14th Feby 1853

The frost stil continuing we started the *Ice Breaker* this Morning at 8 AM with 4 horse, for Windford at 5 PM and to return tomorrow with the east coming trade. Colvin's men with the *Etna* breaking up the Dock Basin & c. *Breaker* arrived at Windford @ 8 PM

#### Tuesday 15th

The frost stil continues with occasional showers of Snow. The *Breaker* left Windford this Morning with 6 horse at 7 AM and arrived here at 2 PM. The wind continues from the North with every appearance of frost. Six horse in *Breaker* today 7 hours work.

### Wednesday 16th

We had little frost during the Night until 6 o'Clock this Morning. Continues severe. Started the **Ice Breaker** at 7 AM with 4 horse for Windford, arrived there at 2 PM with 4 horse.

#### **Thursday 17**

The frost still continues after day light. The *Ice Breaker* started from Windford at 7 AM, arrived here at 2 PM with 4 horse.

## Friday 18th

The frost still continues. The *Ice Breaker* started again this Morning at 7 AM with 4 horse, arrived at Windford at 6 PM.

# Saturday 19

The *Ice Breaker* started from Windford at 7 AM & arrived here at 2 AM with 6 Horse. The frost being very severe today.

# Monday 21

The frost still continue. The *Ice Breaker* started this Morning with the *Breaker* @ 7 o'clock & arrived at Windford at 6 PM with 6 Horse.

# Tuesday 22<sup>d</sup> February 1853

There is a change of weather, a gentle shower and Mild. The *Ice Breaker* started this Morning at 7 AM and arrived at Gmouth @ 2 PM with 6 Horse. Colvin's Men with the *Etna* loaded with Stones for the Gburn.

## Wednesday 23rd

Colvin's Men at the G Burn & carting the Piles from the Dock to G Burn Bridge, Carpenters at Punt. I expected that there was to be no more use for the *Breaker* this Season but it now appears otherwise. This is most cold day with North wind and frost so that the *Breaker* must again to morrow.

#### **Thursday 24**

The frost having continued intense through the Night, the *Breaker* started this morning with 5 Horse at 7 AM, arrived at Windford at 2 PM.

#### Friday 25th

Colvin's Men assisting in scuring the Mud away from the enterance of the large Lock and loading [blank] Tons into the *Etna* as she was too light this morning for sendg the Current past for carriing off the Mud. The *Ice Breaker* had to proceed this Morning to break up the Ice in the Bog. Started at 7 AM with 4 horse and returned to G Mouth @ 2 PM.

#### Saturday 26

We had a very Stormy Night & day, wind N. Colvin's Men loading the *Etna* with Gravel for the Jutty. The weather being so course this morning there with nothing done scouring away the head.

#### Monday 28

Started the *Ice Breaker* with 4 Horse to Windford at 8 AM, arrived at 4 PM. Went to Glasgow, met Messrs Crichton, Readman, McCall, Wilson, Craig, Hay & Thomson. Mr Crichton is to lay the removal of the Wood Warf at the Cage before the Committee so as to fill up the Space with the mud taken from the Dock & c.

## **MARCH 1853**

#### Tuesday 1st March 1853

The **Ice Boat** started from Windford at 7 AM and arrived here at 3 PM with 4 Horse. I trust this will be the last of Icebreaking, but there is no appearance of a change yet, the wind still North. Colvin's men at the G Burn.

#### Wednesday 2d

Calvin's men at the Burn tak<sup>g</sup> down the pill<sup>g</sup> machine & c.

#### Thursday 3d

Calvin's men discharging the Scow 60, loaded with whin Stone Ruble for the outlet of the G Burn & c.

#### Friday 4th

Ordered the *Ice Breaker* to open up the timber Basin to allow the merchants to remove their Rafts. Calvin's Men at the Island Embankment.

#### Saturday 5

Calvin's men employed on repair<sup>g</sup> fences along the South Bank where thorns are required.

#### Monday 7<sup>th</sup>

Received a letter from Mr Crichton requesting the Pilling of the Cage to be commenced instantly. Wrote him (see my letter of this date respect<sup>g</sup> Charles Graham and my agons regarding the Cage).

# Tuesday 8th

Colvin's employed at the G Burn & loading the *Etna* & wide head to be laid to masonry to scour off the mud from the enterance of the large Locks. Sorrow to hear that Mr Crichton has retired from his Situation as Superintendent for the Coy. (McWilliams).

#### Wednesday 9th

Colvin's men employed at Large Lock enterance scouring out the Mud. (Mr Mackay will please pay the bearer one shilling for the trouble in taken a Mooring Pall out the Junction Dock. [in pencil]).

#### Thursday 10 March 1853

In consequence of the Chains of the Inner large Lock Gates I brock, we run off the Water in the Dock, but from the Carelessness of Men not attending to the Ship *Liverpool* whose Cutwater catched the building we did not get the water run down to within three feet of the eye bolt in the Gate. Men employed scouring the mud from the Lock enterance, loaded 5 punts & discharged them east from the enterance of the G Burn.

#### Friday 11th

I find it requires the water in the Dock to be run down to within 10 feet 9 inches of the up part of the inner Sill to bair the Sheckles which rather retarded our operations with the **Dredge boat**, having got a ground on the mud upon giting the water filled up again from the Canal after the New Chains were fixed we loaded 15 Punts and tracted them out to the south side of the east embankment with 2 horse from Mr Morrison.

## Saturday 12th

Men employed in discharging the 15 punts at the back of the embankment towed by two horse from Mr Morrison.

#### Monday 14th

We loaded 18 Punts to day but the Weather is course, wind easterly, that we cannot attempt to take then out until tomorrow if the weather is moderate.

#### **Tuesday 15**

The 18 Punts were towed out by one of the Steam Boats but the wind continuing strong from the east they were taken to the west Bank, but did not git them discharged to git back. Mr Black is here to day taken the levels of the G Burn and North Carron Bank to ascertain the expence to highten them in so far as the Canal Company is concerned or bound to maintain them. 18 brought back 1.10 for -----.

#### Wednesday 16

We loaded 18 Punts to day but I am afraid from the Wind being still strong & cold from the east, we will not be able to take them out to morrow.

#### Thursday 17 March 1853

There has been the heaviest fall of Snow since last night & this morning that has been for several years past and I trust it will prove the prelude of fine Spring weather. The Punts in consequence did not git taken out for discharging.

## Friday 18th

The frost continue very severe with occasional showers Snow. The men discharged 15 punts down the Cut and loaded 16 punts which make up their time for yesterday.

Mr Morrison 2 horse.

# Saturday 19th

The frost have been severe during last night and this morning, the wind however has changed to West, clear & trust we will now have a Continuence of genial weather then. Ninteen Punts taken out for discharge & was brought back at 9 PM with 2 Horse from Mr Morrison.

#### Monday 21st

The frost still continues with wind from N East. We got only 14 punts loaded in consequence of several arrivals, but will get the other 5 loaded as soon as the trade gits into the Dock.

#### Tuesday 22d

Frost & N East wind. Continue discharged 18 Punts, one having got damaged from a Norway Brigs Anchor having cut a hole in its bottom, which they must be compel<sup>d</sup> to pay the expence of repairs. 2 Horses from Mr Morrison round the lighthouse. Sorrow to learn of the Carron Screw Steamer having Run down a foreign Sloop off Flambourgh head, Crew saved, the master Sister drowned.

## Wednesday 23

Loaded 18 Punts track<sup>d</sup> out 9 round the lighthouse with 2 horses.

# **Thursday 24**

Took out the other 9 Punts and brought back the 18 Punts to day with the two horse to the Dock. Frost during the night.

# Friday 25th

Loaded and track<sup>d</sup> out 18 Punts round the Beacon. Received a Cargo Ruble Whin Stone for the outlet of the Grangeburn. 2 Horse.

#### Saturday 26 March 1853

Discharge 18 Punts round the Lighthouse & brought them back with 2 horses from Mr Morrison. Mr Crichton was here to day regarding the G Burn.

#### Monday 28

There is this day a complete change of weather, mild, may be considered the first day of spring. Loaded and removed 18 Punts, two horse from Mr Morrison.

## Tuesday 29th

This is another favourable day. Brought up the 18 Punts after being discharged. Another excellent day for the country.

#### Wednesday 30

We have loaded 18 punts but as the wind is high from the East deferred taken them out until to morrow morning.

#### Thursday 31st

The Punts were taken out discharged and brought back from the Light house with 2 horse from Mr Morrison. Attended the meeting of ---scan along with Mr Crichton & Readman. No business was done except looking over the Report. Discharge 18 Punts at the Lighthouse, 2 horse from Mr Morrison. Weather moderate, wind S East.

#### **APRIL 1853**

## Friday 1st April 1853

Loaded 19 Punts.

#### Saturday 2d

The Punts were taken to the north side opposite the outlet of the Grangeburn, discharged 19 Punts opposite outlet of G Burn. Mr Morrison 2 Horses 6 Hours.

### Monday 4th

Loaded 19 Punts. Weather favourable.

## Tuesday 5

Men employed taken out the 19 Punts, discharged & brought back with two horse from this side of G Burn.

# Wednesday 6

We have had a very course night, wind & rain. Loaded 18 punts and discharged the *Etna* at the Jutty which was loaded with Ballast from a Brig in the Dock. Wind high from the So. Loaded 6 Punts.

#### 7<sup>th</sup>

Towed the 19 Punts out, 2 Horse to opposite the outlet of the Grangeburn & brought them back to the Dock. The wind being so strong from the north could not take them out to S Bank

# Friday 8th April 1853

We loaded 19 Punts and the wind being high from the North I was under the necessity to employ the Tug Co Steamer to tug the punts out round the light house and found it was difficult enough to manuvre them out in consequence of the North wind being so high.

## Saturday 9th

The **Tug** brought back the 19 Punts after being discharged on South Bank up from the Lighthouse.

## Monday 11th

Loaded 19 Punts & towed them round the Lighthouse. Wind strong – with the Tug Boat

#### Tuesday 12

Discharged the 19 Punts brought them back by the **Tug**. Men employed in loading the *Etna* with Gravel to make up the hollow in the Pig Iron Wharf. Met John Arnot the Company's Smith from Port Dundas to examine the Pipes which convey the Water from the Canal to Tophill Cottage. Finds it will be necessary to Procure about 15 feet Lead Pipe. Came back and sent up by one of Mr Morrison's Carts as Much Pipe as will answer the purpose.

#### Wednesday 13

Loaded 19 Punts – to be taken out by the Steam Boat tomorrow.

#### Thursday 14th

The Punts were taken out this Morning at 8AM and brought back at 5 PM.

#### Friday 15

Loaded 19 Punts – Wind still continues North and Cold

#### Saturday 16

Discharged 19 Punts taken out by the **Tug** & brought back them back from the West Bank.

#### Monday 18

Loaded 19 Punts. Colvin's Men discharging the *Etna* with a Cargo Stones & Gravel at outside Jutty. This day appear to be fresh and likely to be rain ere long. Our new intended Superintendent Mr Miln was here to day but did not see him being at Dinner when he called.

#### Tuesday 19 April 1853

The weather is favourable, wind at last changed to South after being about two months from the North. The 19 Punts was tract out by 2 Horse from Mr Morrison.

### Wednesday 20th

The 19 Punts was brought back to the Dock by Mr Morrisons two horse this morning which was loaded and was taken out of the Dock with the intention of being Truck<sup>t</sup> or towed down but neither horse nor **Tug** could be got and the Punts must lay outside till next tide.

# Thursday 21st

The Punts was tuget out this Morning discharged and brought back at 2 P.M. Wind changed to S East and although cold once dry it is favourable for the Agriculture of seed being sowen & c.

## Friday 22<sup>nd</sup>

Loaded and towed out 19 Punts round the Light house.

# Saturday 23rd

We was much troubled the day in consequence of considerable leakage appearing at the three large Lock Gates and not having a spare Punt we did not get the Recess properly cleared out. I am sorrow to state that when the 19 Punts were towed up by the *Rob Roy* the wind blowing strong from the N West, and the *Dan* towing down two Schooners, they came in contact with the Punts, damaged the *Dan*'s larboard Paddle Box Float & c, tore out one of the Punt's timber heads on the one side and tore off two of the Planks on the other wrote Mr Readman on the Subject.

#### Monday 25

Colvin's Men at the Jutty. Loaded 18 Punts but as the wind was high from the East refered sending them out until tomorrow

### **Tuesday 26**

Colvin's at the G Burn, discharged and Spread the two Cargos of Whin Rubbish. The 18 Punts was loaded up.

# Wednesday 27th April

Colvin's Men at the Grangeburn. The third Cargo Whin Rubble discharged, loaded 18 Punts. Heavy shower of hail and the weather more mild.

#### Thursday 28th

Discharged and brought up the 18 Punts. Colvin's Men at the Grangeburn.

#### Friday 29

Frost severe this morning, Wind strong from the East. This being the Parish fast day there was no work.

#### Saturday 30th

Went to Port Dundas, met Messrs Crichton, Readman, McColl, Wilson, Craig, Hay & Thomson. Nothing of consequence transpired.

## **MAY 1853**

#### Monday 2 May

This is an exceeding Cold day. Wind from the East. Men employed at the Punts but owing to several arrivals it is most difficult to find space to load them. Colvin's Men loading Stones for the G,Burn. 19 Punts loaded.

#### Tuesday 3rd

The Wind still continues from the east and Cold. The Punts towed out to the West bank, the tides being low, 19 Punts discharged.

### Wednesday 4th

The Punts were towed up but in consequence of several arrivals and a number of Wind bound vessels in the Lock I ordered the *Hercules* to be taken round to the Old Harbour with the Punts where there is from three to four thousand yards of Mud to be removed. Colvin's Men employed at the Culvert removing the Soil for the found & c. 4 Punts loaded in the Old Harbour.

### Thursday 5

Loaded the remainder of the 11 Punts & brought them back. Colvin's Men at the Culvert west from No. 3 Lock and discharged the 15 Punts.

#### Friday 6 May 1853

Colvin's Men employed during the tide in clearing away the Stones at the Outlet of the G.Burn to give room for the Boat with the Pilling Engine to lay to drive the Piles and than went next to assist at the Culvert. Loaded 15 Punts.

### Saturday 7th

A number of the Men Mending the **Dredge Boat** have left us in consequence of the Steam Boat not I forward to take out the Punts this Morning and did not get work done nor the Punts taken out.

# Monday 9th

The Hills intirely covered with Snow this morning, Wind N East. Towed out the Punts and discharged 15 today. Only 6 Men.

# Tuesday 10th

Colvin's Men up the Canal and loaded a Cargo of Old border Stones at Lock, No 14 & 13 which was of no use except for the G Burn. Loaded 15 Punts

### Wednesday 11th

Colvin's Men loaded a head of Soil with the Border Stones at Tophill and brought down the *Etna*. Discharged 15 Punts. Heavy rain but still cold.

### Thursday 12th

Colvin's Men repairing the Stone facing west from timber Bridge at enterance of the G Burn. Load 16 Punts.

#### Friday 13

Colvin's Men employed as above. Discharged 16 Punts.

#### Saturday 14

Colvin's Men employed as above. Loaded and discharged 10 Punts.

#### Monday 16

The wind continues strong from east, still very cold and no vegetation which is sadly against Agriculter interest of the Country.

# Tuesday 17th May 1853

The wind continues easterly, no appearance of a change. Colvin's Men employed in filling up the back of the building at the end of the Culvert west from Lock 3.

#### Wednesday18th

The wind still continues east, but it is more Calm and Mild than for many days Past, but no appearance of rain which is much wanted. Mr Milne our new Superintendent arrived this evening. With my Son Robert, walked east to the Grangeburn and round the Dock, he stopt in Mr Wallace Inn for the Night.

#### Thursday 19

Mr Milne and Son walked down this Morning to the lighthouse, got Breakfast along with Mr McColl who came east with the early train, went again round the Dock, examined the South side Wharf east from the large Lock where there is still the appearance of the building subsiding. Considered it proper to lift and relay the Causeway and throw in a quantity of small stones & soil in front is the most likely thing to adopt for prevent further slips. We than walked up the Bank to Lock 16. Pointed out the tail of Lock No 5 and other Locks which require to have retaining Walls built as well as the state of the Slope on the South Bank near Lock 15 & c.

#### Friday 20

Colvin's Men at the West River Bank with the *Etna* filling up the Gutter near 6<sup>th</sup> Beacon with Stones & 1 head Soil.

#### Saturday 21

Men employed as above and raising the Causeway east from the large Lock. Weather very warm, wind still from the East. Great drought.

#### Monday 23d May 1853

(Grandchild Black died at ---- yesterday morning).

I was sorrow to observe after we had taken up the Causway east from the large Lock to observe the Puddle completely separate from the building. I therefore wrote Mr Milnes to come here tomorrow afternoon or early on Wednesday to consult as to what may be considered best for the safety of the building.

# Tuesday 24th

Calvin's men employed at the west Bank. 5<sup>th</sup> Cargo Rubble Stone delivered in the G Burn. The wind still continues from the east and no appearance of rain.

#### Wednesday 25th

Mr Milnes came here this morning, examined the front of the wharf wall where a number of the joints, both horizontal & vertical, are open and stone brock from the building having gradually subsided. Mr Milnes is of opinion that the joints should be filled up with cement to prevent the water getting ingress through the mason but thought it would be as well for Mr McCall to examine it previous to it being done. Mr Milns then examined the tops where we have removed the Causway, and agreed that a spade depth should be taken out from the rents of the puddle and again filled up with fresh puddle and recauswayed without delay. Mr Milnes after examining the Grangeburn, is of opinion that the pitching

should be divided into compartments, say a Cargo of 60 Tons to be divided into two or three, and keept 30 feet apart.

## Thursday 26th

Commenced this day to fill up where the Casuway was reproved and conveyed the puddle to the top of the masonry. Colvin's men have employed others half of the day at the G Burn.

#### Friday 27th

Mason & Calvin's men at the Causway & loading Stones &c for front of the buildings. Having heard that the Outer Beacon had given way I went out with the small boat and to my astonishment found that more than one half of the east side have fallen down and must be repaired without delay.

#### Saturday 28 May 1853

Calvin's men Casting the *Etna* with Gravel &c for the front of the wharf at the south west end of the large lock. This is the most favourable day for the benefit of the Country we have had this Season. Vegetation was almost dried up, indeed it is first genial rain we have had, which will cause a wonderful growth.

#### Monday 30

Calvin's men at the wharf discharging Gravel in front the wharf east from the Large Lock.

#### Tuesday 31st

Went to Glasgow, got Plan of a Smithes Shop & Bothy for the men attending Carron Cos Steam vessels, to be laid for the Committee, which Mr Dawson wish erected opposite the south end of their shed. Met Mr Milne superintendent in a Room above the Old Ticket office where there was not a seat except a Desk and a Stool for himself.

## **JUNE 1853**

#### Wednesday 1 June 1853.

Calvin's men discharging a Cargo Stones from a Vessel which will answer the pitching of the G Burn, 60 Tons being a considerable saving to the Company say forty shillings.

# Thursday 2d

(See Mr Readman letters)

We have an easterly har this morning with a gentle shower, but it cleared up during the day and appears to be as dry as ever. Mason & one Banksman at the Causway. Three Banksmen at the G Burn and East Bank facings at Lock No 16. Banksmen at Harder Stone.

# Friday 3<sup>rd</sup>

Three Banksmen at the G Burn & Bank facing. Mason & 1 Banksman at the Causway. Very warm early part of the day, wind east and Cold afternoon.

### Saturday 4th

The weather continues dry & wind east see appearance of w--- Calvin's men at the East Bank facings.

#### Monday 6<sup>th</sup> June 1853

In consequence of the Pitching being 4 inches too high at the G Burn Bridge to run off the Water so as to clear the bottom of the lower Tunnel, which is placed under the West embankment [blank] yards up from the bridge, I ordered the Banksmen to raise about 6 yards in length of the Causway and to have it laid 4 Inches below the present level, which I have no doubt will Prevent reflection afterwards. Mason at the Causway.

# Tuesday 7th

Colvin's men discharging the 60 Tons Stone from the *Etna* which was taken out of the Vessel as Ballast in three different Punts about 50 yards above the Grangeburn Bridge. According to the suggestion of Mr Milnes, went up No 16 ordered the Banksmen so soon as the got the 20 yards Border Stones placed, which finishes the reach between No 12 & 13, to get the Stones removed from the Banks at and east from Abbotshaugh and discharge them on the south Bank near Lock No 5 – and

remove the retaining wall at Bainsford Bridge Keepers house which congregate such numbers of idle fellows and cause such a nuisance. Weather still dry & sultry.

# Wednesday 8th

There is two Cargo whin Rubbish up the Grangeburn this morning from Auchenstorrie. Colvin's men employed there and clearing away Mud from the Outlet.

#### **Thursday 9**

Mr Milns was here to day, examined the state of the Timber Wharf in the Cage. The *Hercules* Dredge preparatory to sending her to Stirling, and the Grange burn. Gave orders to place the Quarry Rubbish 40 feet apart and about 8 feet wide across the bottom and about six feet up each slope.

### Friday 10th

Discharged another Cargo in G Burn. This morning Colvin's men at the G Burn. There is now appearance of Rain which is much wanted for the benefit of the Country.

#### Saturday 11 June 1853

Rain Commenced last night and continued in moderate showers during the day. Colvin's men employed at the fence along the Bo Ness road. Mason & Labourers at the Causway &c.

### Monday 13

The Rain continued almost without intromission yesterday which has proved most fortunate for the Country. Colvin's men at the fence before Breakfast and at the G Burn after. We had arrived to day from foreign which have cause a considerable we---- Water from the Canal to Keep up the Water in the Dock to flood the ---in the ---- in the Junction Cut and Mr Milne to consult the Directors on the practicality of obtaining a supply from the Union Canal.

## Tuesday 14th

Colvin's men employed at the BoNess road fence 1/3 at the G Burn. 2/3d Mason & Labourer at the Causway & loading 20 Tons Gravel. This is an excessive day with the heat.

#### 15<sup>th</sup>

Colvin at the G Burn & BoNess road fence.

#### 16

Mr Milne came this evening & remained all night. Men employed as above. Mr Milne seems anxious about the scarcity of water & promised to have 5 or 6 Cargos Whin Rubbish for the G Burn sent down next week.

#### 17<sup>th</sup>

Mr Milne after I round the Works and having intimate to James Naismith that as there will be no more work for him here in the meantime to make up his mind and let him Know whither he will come to the Old Basin or not by the beginning of the Week.

#### Saturday 18

Colvin's men at the Grangeburn and forming a drain on South side of the Causway east from the large lock.

### Monday 20th June 1853

Mr Newton, Earl of Zetland's Factor, was here to day with the Plan of the Works at Grangemouth and Grangeburn wishing me to Point out the spot where Carron Company propose to erect a Smiths Shop & Boothy for the men who attend the loading and discharging the Goods to & from the London Steamers, which I did. Mr Newton appeared satisfied with the Site. On examining the Plan of the Grangeburn I observe the width at the BoNess Turnpike road to be 57 feet; 470 feet up from Timber Bridge to be 59 feet; near the Bridge 75 feet; and along the Bridge at the near where the Pilot house stood to be 100 feet wide – and that the whole length to be 2636 feet.

Mr Newton also mentioned that the Company had applied for 220 from North to South, and 178 feet in width from East to West parallel with the Companys boundry on the west side of the West side of the Wet Dock & Colvin's men at the Grangeburn & loading a Cargo Gravel.

### **Tuesday 21**

Colvin's men Clearing away the Stones & Mud across where the Piles are to be Placed at the outlet of the Grangeburn and assisting in discharging a Cargo Whin Rubbish for the pitching the Slopes.

## Wednesday 22d

In consequence of having received a letter from Mr Milne last night informing me that the Person who prepare to rent the *Hercules* for dredging in the Forth near Stirling is to be here on Thursday morning and as there appears to be escape of Steam from the bottom of the Cylinder. I ordered 14 Punts to be laid in the Old Harbour this morning in such a position as to run the water from the Basin to clear away the mud and allow the Carpenters from the Old Basin to get the Gates of Lock No. 1 overhald.

## Thursday 23

Mr Milne came here last night and my Son, and after Breakfast we met. Mr Wilson, who has the Contract for deepening the Forth near Stirling, and after examining the *Hercules*, particularly the Buckets link pieces & c. Mr Wilson seemed afraid to risk the expense of Breakage that he would Before paying five Pounds additional weekly which Mr Milne would not agree. It was therefore resolved that Mr Wilson should bring Mr Normal to examine the machinery to morrow and then decide whither or not he can come to agreement According to the conditions specified by the Company. Walked up the Bank to Port Downie, examined One of the Schooners on the Slop sold to. Mr Craig and Mr Milne left for E & G Railway Station for Glasgow at 3 P.M. The Eight men on board of the Dredge ---ting at ---- the Piles of Outlet of Grange burn.

#### Friday 24th

Men Employed as above. Messrs Wilson & Normall came here to day and after carefully examining the Engine and working gear of the *Hercules* Dredge Boat they considered from the defective state of the Bucket Links pins and the Tumbler, and the hard rough nature of the bottom of the Forth near Stirling where the Dredging is required, that they could not venture to take the Dredge on the terms on which the Company is disposed to lease out the Boat. That they had no objection to agree to the amount demanded and they would have objection to run the Risk of the Unsafe appearance of the Working Gear provided the Company would not charge them for the time the Boat was rendered unfit for work while any of the above articles require to be repaired.

# Saturday 25th

Colvin's & Puntmen at the Grangeburn before Breakfast & at the Outlet pilling during the rest of the tide.

## Monday 27th

We had very refreshing showers yesterday Afternoon, during the night and this morning. Men discharged the *Etna* along side the Wharf before Breakfast and then at the Pill<sup>g</sup>.

#### Tuesday 28 June 1853

Puntsmen & Calvin's men loaded the *Etna* with Ballast before Breakfast and then at the Pilling. Occasional showers to day.

## Wednesday 29th

9 men employed discharging the *Etna* at the Jetty at Large Lock enterance. 3 men assisting to discharge small stones from one of the foreign Gun Boats lately arrived to be converted into Canal lighters by Mr Sylverson and to bring the *Ice Breaker* to the Old Harbour to ascertain what can be done to stop the Leakage.

## Thursday 30th

Men employed in loding & discharging another Cargo Gravel at the Jutty.

#### **JULY 1853**

# Friday 1st July 1853

Men employed in loading another Cargo Gravel for the Jutty and pitching G Burn.

Men employed in discharging the Cargo Gravel on the North side of the Jutty and Clearing Mud away from the Piles at G Burn Outlet.

# Monday 4th

All hands employed at Outlet of the G Burn clearing away Mud and removing the Pill<sup>g</sup> Machine from the west to the east side to get other two Piles drove to morrow morning to 10 AM, and loaded the *Etna* with small Stones taken from the foreign Gun Boats for the Grangeburn.

#### Tuesday 5th

Men employed in driving the two last Piles at the Outlet of the Grangeburn and removing the Pill<sup>g</sup> Machine & c to the Bank to 10 AM and taken down the *Etna* with the Cargo small Stones.

# Wednesday 6th

Men employed at the Outlet and discharging the *Etna* in the G Burn.

### Thursday 7<sup>th</sup> July 1853

All hands this morning at the Outlet Planking across the Piles to be in readiness for Pitching, afterwards loading *Etna* with stones & Gravel Ballast. Mr Milne arrives at one o'clock, went across the Carron and up the north side where the men employed by Earl Zetland are at work raising the banks. Mr Milne got the loan of the plan from John Smith, the Person who has charge of the men, so as to see that part of the bank east from the Coal Wharf which the Company have to raise. The Plan to be returned on Wednesday next week. Mr Milne stated that as there was now no prospect of Mr Wilson hiring the *Hercules* D Boat & Punts to deepen the Forth near Stirling, I may lay them in the most convenient place until there is sufficient water in the Reservoirs to supply any waste that is required to fill the Dock when Dredging. Mr Milne examined the Railes connected to the Pump Engine, ordered all the rust to be scrapt off, and bad rivets to be bored out, and the Old Smoke Box to be sent west to P Dundas, and would give orders for a new one to be made.

# Friday 8th

Colvin's men load<sup>g</sup> the *Etna* and at the G burn assisting to discharge Stones and at the outlet. Master & Engineer at Pump Engine Boiler & c.

# Saturday 9th

Colvin's men at the Boating outlet of the G'Burn & c, and taken the *Hercules* Dredge Boat from old Harbour to the Dock.

## Monday 11

Colvin's men at discharging *Etna* with Stones on G'Burn & in part of the Wall east from the large Lock and at the outlet of the G Burn.

### Tuesday 12th

Colvin's men assisting to discharging a Cargo whin Rubbish and Out let of G Burn.

## Wednesday 13th

Ordered the men who brought down the 56 Tons Whin Rubbish to call at Burnhouse house and load a Cargo old Stones which was laid down there some time ago, and was discharged this morning at the outlet of the Grange burn.

#### Thursday 14th

Colvin's men employed in loading out the Etna, at G Burn outlet, dressing hedges & Pitching & c.

## Friday 15th

Colvin's discharging the *Etna* at front of the Wall east from the large Lock, loading again & dressing hedges. Very wet.

#### Saturday 16th

Colvin's men at the Burn in the morning, discharging the *Etna* in G Burn a little above the Bridge. Heavy Showers rain.

## Monday 18th

Colvin's men at the G Burn pitching and discharging the *Etna* with another Cargo in front of the Wall east from the lock, and levelling off the West Carron bank.

## **Tuesday 19**

*Liverpool* arrived from America. Colvin's men at the outlet & pitching of the Grangeburn. One Cargo Whin Stone Rubbish received for the Burn.

#### Wednesday 20th

Colvin's men commenced to the Pitching outlet of the Grangeburn & Carting Clay for a Dam. Received another Cargo Whin Rubbish for the Burn.

#### **Thursday 21**

Colvin's men at the Pitching & Clearing away the Rubbish. Ordered the dam above the bridge to remain until to morrow morning and remove it as tide ebbed so as to prevent the risk of the water from the Burn filling up the space for the Causway. Received another Cargo of old Bricks & stone from Burn to be discharged at the Jutty out side large Lock.

#### Friday 22d July 1853

Colvin's men at the pitching and assisting to discharge Company Scow. Received a Cargo Old Border Stones 56 tons from the Reaches west from Camelon Bridge for the Pitching outlet of the G Burn.

#### Saturday 23d

Men employed as above.

#### Monday 25th

Ordered the *Etna*, which is nearly loaded with Stone, to be taken to the out end of the Jutty with two Punts so as to get the Mud scoured out from the enterance of the large Lock at low water. We got a pretty good Clearance. Men at the North bank, two at the Pitching, and others scouring away the mud.

## Tuesday 26th

I intend to make an experiment with the view to carry out the Channel or run of the water from the large Lock in a direct line into the Carron River by Placing the *Etna* & any other Lighter we can git and lay them in the direction required alternately at low water and trust they will form such a cavity in the mud as will answer the ends. Colvin's men at the North Bank and outlet pitching after Breakfast.

#### Wednesday 27

Colvin's men employed to Breakfast discharging 50 Tons Stone from Auchensterrie at the North Bank to Breakfast time, and then down to the G Burn.

#### **Thursday 28**

Men employed as above.

# Friday 29

Men employed as above. Met Earl Zetland.

#### Saturday 30<sup>th</sup>

Men employed as above. For this fortnight past we may say that we have not had one single dry day. John Robertson has the *Etna* to day.

# **AUGUST 1853**

## Monday 1st August 1853

Colvin's men at the G Burn and the North Banks.

#### Tuesday 2d

Men employed as above. Received a Cargo soil for the North bank from the Middle district. John Robertson has the *Etna*.

#### Wednesday 3d

Men employed as above. The  $\emph{Liverpool}$  sailed to day.

John Robertson 1 day with the *Etna*. Weather favourable.

# Thursday 4th

Colvin's men in the morning at the outlet & Pitching G Burn. Carpenter repairs of Junction Lock Gate Clading. Mason pointing Old Harbour Wharf. *Etna* with J Robertson. Mr Readman was here to day.

#### Friday 5th

Colvin's men this day at the North Bank. Rest of the men as above. Clerk paid the men. Received a Cargo Rubbish pr Dollator 60 Tons.

### Saturday 6th

Colvin's men at the North Bank & c.

# Monday 8th

Men employed as above.

#### Tuesday 9th

Men employed as above. 1 Cargo 60 Tons Rubbish.

## Wednesday 10

Men employed as above. 1 Cargo do.

Loaded and discharged a Cargo Soil from off the Bank at the Smith's Shop under Lease to And<sup>w</sup> Cowie for the North Bank. Mr David McCall was here to day. Son Will<sup>m</sup> left for Montreal.

## Thursday 11th

Colvin's men loading the Scow to 12 noon, at the grange burn pitching the bottom & c.

## Friday 12th

Men employed as above. Mr Readman. Wm Sailed from G.

#### Saturday 13

Men employed as above.

# **Monday 15**

Colvin's men cutting Turf and placing them on the north of Carron Bank. Weather moderate, wind easterly.

# Tuesday 14 August 1853

Colvin's men employed at the North Bank. Mr Milne was here to day. The Screw Steamer *Maria* arrived to day and on entering the Lock brock of the Stanchions & feet of the Uper Rail of south outer Gate.

#### Wednesday 17

Colvin's men half day at the G Burn Pitching, other half loading & discharging Soil for the North Bank.

### Thursday 18

Men employed as above, at 16 all in ordinary.

#### Friday 19

Colvin's men Scouring mud at outlet of G Burn. Carpenters &c Scouring do at Large Lock enterance.

#### Saturday 20<sup>th</sup>

Colvin's men at the G burn and North Banks. At No 16 took notes of the different houses in want of repair &c.

#### Monday 22d

Colvin's removing materials from G Burn to the South side of Large Lock before breakfast and then at the North Banks. Being informed by Milnes that the Committee are to meet Earl Zetland this day, Mr Milne came down at 12 noon and then his Lordship, Messrs Dickson, Newton; Messrs Robt Baird, Wallace, Robson, Readman & Milne, and examined the Cadge which was agreed to be filled up after conveying as extensly the Tunnel from the Junction Cut to the line of the Piles prepared to be drove to confine the Stuff which is to be put in to fill up the Cadge, and that my office store house & Barber Shop is to be removed at Whitsunday. The Grangeburn was then examined, the Banks of which are to be raised after the Crops are off the ground.

#### **Tuesday 23**

Colvin's men at the North Bank. In consequence of the *Hercules* D Boat having sprung a leak, I ordered her out side the Large Lock but did not find Leek, but a peace of Plank in the other side we found very bad. It will require to be taken

#### Wednesday 24 August 1853

Colvin's men - six at the North Bank, two at the Gas Pipe opposite the Carron Co Shed. Carpenters & men stoping the Leak of the *Hercules* D B.

#### Thursday 25th

In Consequence of the Pipe from the wood Basin to supply the Rev<sup>d</sup> Mr Cochran having been stopt, there was three of Colvin's men employed the whole day and five men one quarter day @ Cochrane Pipe.

#### Friday 26

Colvin's men <sup>3</sup>4 day at the North Bank. *Hercules* men at the Pipe for conveying water to Rev<sup>d</sup> J Cochran.

#### Saturday 27

Men employed as above. Mr Milne came here last night. Requests the length of the Wood tunnel which was put in by Earl Zetland for carrying the Water from the Common shore into the Cadge when it was made, the cost of making, the Roup of the plank and the expense of removing & placing it in front of Mr Robertsons house into the Old Harbour. Also the Size of the Tunnel which convey the water from the Junction Cut into the Cadge, the quantity of wood and length required to carry it into the Old Harbour in the event of the Cadge being filled up. Went west to No 16 and pointed out the houses which require to be painted and rough cast.

## Monday 29th

This has been another heavy days rain and continued without interruption the whole of the. Colvin's men ½ days work.

# Tuesday 30th

Measured the length (dementions) of the two Tunnels which require to be placed before the Cage is filled up. The Tunnel which at present joins the Common shore put in by Earl Zetland three years ago is 100 feet in length, 2 feet 7 inches wide and 16 ½ inches deep, out side measure, the sides are 3 inches, Bottom and Top, 2 inches thick which is proposed to be taken out and Placed at right Angle from the end of the Common shore in front of Mr Robertsons house and extended to the front of the Wall south side of the Old Harbour, the distance being about 170 feet. It will therefore require 70 feet of new Tunnel provided the present one will be found sufficient.

We also took the dementions of the Tunnel which convey the water from the Junction Cut into the Cage and is 2 feet 7 inches deep, the sides 3 inches and the Bottom & top 2 inches thick which was made in 1841 and consists of Memel planks. An additional length required is from 170 to 180 feet to connect it of Quebec Yellow Pine, the sides to be 3½ bottom & top 2½ inches thick. This day appears to be more favourable than for many days past. Colvin's men at the North bank.

### Wednesday 31st

Colvin's men at the north Bank. Occasional showers to day.

## SEPTEMBER 1853

## Thursday 1st September

In consequence of the late heavy falls of rain I observed the flood in the Grange burn have worked away a number of the Base stones at the out let and formed a hollow above where the Pitching is laid on the east side next the Pilling. I therefore ordered Colvin's men to carry up the Pitching using the spare stones & c and they were employed at the north bank after breakfast.

#### Friday 2d

This appears to be the most favourable day we had for the harvest work these few weeks. Colvin's men at the Outlet of the G Burn – and North Bank.

## Saturday 3d

Weather continue most favourable. Men employed as above.

#### Monday 5

Mr Black was here taken the levels of the Bottom of G Burn. Three men assisting, intend to be him on Friday to take the levels & c for a Plan of the Works as the are at present.

#### Tuesday 6th

Weather excellent. All hands Clearing mud in day. Colvin's men Boating stones for N Bank.

#### Wednesday 7 September 1853

All hands scouring mud & c. Weather fine from enterance of the Large Lock.

#### Thursday 8th

All hands employed in scouring mud from Old harbour, but we did not git so much washed way in consequence of the *Etna* and Punts having slipt down from the ropes breaking & c.

#### Friday 9th

All hands employed Scouring the Old Harbour and assisting Mr Black in surveying with the intention to make a New Plan of the Works at G'mouth.

## Saturday 10th

In consequence of receiving notice from Mr Milne to send west 6 Punts which are required at Bowling I ordered Robert Brown & Marlone to get them ready to start on Monday morning Provided Track horse can be got. Calvin's men at the North Bank. Punts to be sent is No 1 & 3 & 10 & 11 & 14 & 18.

# Monday 12

Colvin's men at North Bank. 3 men with the Punts to Port Dundas or Bowling.

#### **Tuesday 13**

Colvin's at G Burn, men with the Punts.

# Wednesday 14

Colvin's men at the grange burn and cutting Turf for the North Bank. Men with the six punts to Windford.

## **Thursday 15**

Colvin's men at the Grangeburn & finishing the North Bank. Men at the Punt & *Hercules*.

#### Friday 16th

Colvin's men at the G Burn and removing the material from the North Bank to the G Burn.

# Saturday 17

All hands employed in scouring the mud from the enterance of the large Lock. Have no doubt there was more sweept away this tide than would have been with the Dredge Boat in a month.

### Monday 19 September 1853

All hands employed this morning in scouring the mud from the enterance at the Large Lock. An excellent tides work of A.

# Tuesday 20th

Colvin's men at the Grangeburn and taken down a Cargo Soil taken out from the space excavate for the new Gasometer Dumfermline. Carpenters at Punts.

#### Wednesday 21

Colvin's men discharging the *Etna* for making up the Grange burn Banks.

### Thursday 22d

Colvin's men loading the Etna for the G Burn.

#### Friday 23

Colvin's men discharging the *Etna* at the G Burn. This is rather a Boisterous day, heavy rain. The *Eagle* of Glasgow charged 5/.

## Saturday 24th

Colvin's men at the grange burn bringing up the **Etna** and commenced to discharge the heavy Casting from Paisley to be shipt for London.

## Monday 26

Colvin's men removing materials from the ground where Carron Company is to erect their Smiths shop and Boothy, and at the G Burn.

#### **Tuesday 27**

Colvin's men at the grange burn. Carpenters at Punts.

#### Wednesday 28

We have had a most Boisterous day, wind & rain for several days past. Colvin's men at G Burn Slopes.

# Thursday 29th

Colvin's men at the Grangeburn. Mr Milne came here this night.

## Friday 30th

Went round the works and Grangeburn with Mr Milne. Ordered the Pitching at the timber Bridge at the outlet of the G Burn to be lowered 6 inches. That nothing was to be done in raising the Banks as that Portion of the work was to be contracted for and that Part of the bottom which are rather High was to be lowered and the Slopes to be made as they were in progress of being done as present.

# **OCTOBER 1853**

#### Saturday 1st October 1853

Colvin's men at the Burn. Carpenters at the Punts.

#### Monday 3d

All hands to day scouring mud from the enterance of the large Locks.

### Tuesday 4th

We had another excellent tides work to day and Cleared away a great quantity mud from the large Lock enterance. Heavy fall of rain & high winds from S.W.

#### Wednesday 5

Men employed scouring the large Lock enterance and at the Jutty levelling the Brick & c & track<sup>d</sup> the *Etna* up the G Burn with a Cargo Soil from the excavation for the Gasometer. We have very high tides to day.

## Thursday 7th

Wind N.E., heavy rain. Men at the G Burn & Punts.

#### 8

Men employed as above. Moderate wind easterly.

# Monday 10th

Weather continue very unfavourable, occasional heavy showers. Colvin's men loading the *Etna* for the G Burn Slopes.

#### **Tuesday 11**

Men at the placing notice Boards at the Canal Sea Lock and Timber Basin.

#### Wednesday 12

Mr Miln was here to day inform men that the Cran intended for the Steam Boat on the South side of the Dock, next the large Lock, is to be down by one of the Companys Luggage Boats. We went round the Dock & up the Grange Burn. He seems anxious to have the Pitching attended to at the timber Bridge and ordered all the materials to be sent west.

#### Thursday 13 October 1853

The Luggage Boat arrived this morning with the Crane. Commenced and got the Upright and two Stays Placed after lifting the Causway where the Cross Pieces are placed to secure the stays, but I am afraid the Crane will not prove a very handy article for the purpose required.

#### Friday 14th

After we got the Machinery placed and the stay ready for the Crane, the men commenced to select the materials in the Smiths Shop Put on board the luggage Boat and sent west to Port Dundas. The remainder to be taken from Tophill & sent from here.

5 old single Bucket Links 2.00,		3 double	2 1s 4d		
<b>Bucket Pins</b>	3.3.0	1 old Bucket	1.3		52
Mandrels & c	6.1	Bars & c3.1		9.2	
Iron of different descriptions & Serss				42.8	
Angle iron					16.3
Scrap Cast iron				10.3	

Smiths Tools 50 pair Tongs, 17 Pair Crosses, 9 Punches

12 feet Hammers, 1 Fore hammer, 3 Hand Hammers,

1 Set barring Rods,

The Luggage started at 3 P.M.

### Saturday 15<sup>th</sup>

In consequence of the Rev<sup>d</sup> John Cochrane having complain that he had had no supply of water by the Pipes from the Timber basin which the Company are bound to do, the men commenced this morning and to my outer astonishment there was found at several joints of the Pipes Vegetable fibres of such extent as completely chockt up the Pipes so that it was impossible for water to pass.

Material sent from Tophill to Port Dundas

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Bolts 4.2.0; Scraps 7.2.8; Chains 4.3.16 – 16.3.24
Cast Iron 7.0.14
1.4.0.10
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# Monday 17 October 1853

Colvin's men at Revd John Cochranes Pipe. Mason at the Coarse Causway.

# Tuesday 18th

Son Robert came last night, went over the works here and up to Lock 16. Examined the locks & particularly the Bridges at Camelon and Lock 16 where we ordered the Old Ballast to be taken out and Large Pieces Put in. Colvin's men discharging the *Etna* in the G Burn. A Scow load of Causway stones arrived in place of heavy Ruble for the Outer Beacon but as the Cargo was by far too small for such a Purpose ordered them to be discharged south of the Junction Lock.

## Wednesday 19th

Colvin's men discharging and taken the *Etna* west to Carron Bank for 30 Tons Stones to be put on board from a vessel, and Prepairing Puddle & c to lower the Pitching under the bridge near the Out let of the G Burn.

#### Thursday 20th

Colvin's men, mason & Carpenters putting in the Dam and removing the Pitching at the G Burn bridge & Pig iron to the crane.

#### Friday 21st

Colvin's men and mason at the G Burn Bridge, but this has proved a most unfavourable day, torrents rain and a Gale if S West wind that I am much afraid will put stop to our operations in pitching for some time. G Burn being flooded. Mr Milne came here last night and went of this forenoon intended to go to Alton to look at some oak timber with Mr Wm McLaren.

#### Saturday 22d

The weather continues most boisterous. Nothing can be done at the Pitching from the G Burn being flooded. Men at the Wharf & conveying metal to the Crane & c.

## Monday 24th October 1853

Since Friday there has been a continuation of Torrents of rain and high winds which have sweept away the two runs at the bridge coffer dam. Stones & Puddle placed to allow the Pitching to raised and relaid 6 inches below the former level.

# Tuesday 25th

Men employed in prepairing and endeavouring to Collect the materials sweep down the River from the late flood.

#### Wednesday 26

Colvin's men employed in removing the Clay intended last year for the Large Lock further west to allow the Castings from Paisley to be load on the Wharf.

#### **Thursday 27**

Colvin's men removing the Puddle. This day it has rained from 9 AM to 6 PM,

# Friday 28th

Colvin's men brought up the Rone & 2 Plank which was Sweep away from the G.Burn Bridge by Flood on Sunday and loading the *Etna* with soil to finish the North Bank.

# Saturday 29

Colvin's assisting to raise the Old Coal Boat which sunk outside the large Lock on Sunday last, but could not get it up before this owing to the flood in the River.

# Monday 31

We commenced to get the Coffer Dam Put in but owing to the rain during the night we found it almost impossible to get any thing farther done than nearly to get the runs place it and retired before the tide rose.

# **NOVEMBER 1853**

#### Tuesday 1st November 1853

Got the three runs and the dam at the G Burn Bridge secured, and got a good tides work done considering the trouble attending such a flux of water rushing past.

#### Wednesday 2d November 1853

The weather continues most unfavourable for our operations at the pitching. Considerable fall of rain during the night. We have however managed to get feet wide of the Pitching relaid on the South side and if the weather continue anything like moderate as to rain we will get on progressively.

### Thursday 3 Novr

This day appears to continue more favourable and got a good tides work done at the Pitching to day.

## Friday 4th

This continues favourable for our operations at the Grangeburn and got the whole wideth pitched to within eight feet of the log across from the two upright posts of the timber bridge.

### Saturday the 5th

Men employed as above. Got the Pitching laid and the 6 inch log taken which I think there will be little occasion in further to complain of the bottom of the Burn not being low enough at the bridge.

# Monday 7th

Colvin's finishing the Pitching and tak<sup>g</sup> up the materials.

## Tuesday 8th

This is a very unfavourable day, heavy rain before breakfast. Colvin's men removing Puddle from the Crane south side.

#### Wednesday 9th

This is a more favourable day, dry. The *Colgreen* Iron Schooner and Gun Boat, the first in Pass struck the West Building at the enterance of the Timber Basin and she struck it this morning which has completely removed the whole of the Cope Stone a few inches and it will be necessary to get fenders to protect it in future & a bed 2 feet long Put in to one of the Cope. Colvin's men discharging the **Etna** soil & stones for the North Bank.

#### Thursday 10 Nov<sup>r</sup> 1853

We staked off that Part of the North Bank which stil requires to be raised and for all that it requires only about 4 inches it is hardly worth the trouble to be at that expense, however, as we have the soil boated over we must finish it according to the Plan.

## Friday 11th

I was informed late last night that the Scow *James* belonging to Samuel Brookman No 2 bridge and on examining it this morning I found the south east bar entirely brock through and it being the one to which the Quadrant working Gun and stations are fixed it will be attended with considerable more expence to put another in its place than if it had been any other of the Bars. The damage occurred at half past seven o'clock last immediately after the Railway Omnibus past over. The Bridge Keeper declared that the tracker gave no warning to lift the bridge until the Scow was within a few yards of it and the d—before he could get near it to raise his side.

# Saturday 12th

The two Carpenters at Dalgran bridge got the Bar placed and Railing in a temporary way until Monday. Colvin's assist<sup>g</sup> at the Large Lock and removing Puddle.

## Monday 14th

The Two Carpenters at the Bridge & c. Colvin's at removing Puddle in the morning and North Bank.

#### **Tuesday 15**

In consequence of the floating bridge having become so leaky that it is difficult to keept it not from sinking but from up---ting I ordered to be taken round to the Slip north side of the large Lock and a --- Vessel put in its place until over hauled.

# Wednesday 16

Severe frost this morning. Colvin's men at the North Bank – the raising of which is now finished.

## Thursday 17<sup>th</sup> November 1853

Colvin's men at the Puddle removing. Mason & Carpenters at Lock No 8; 1 Carpenter at the floating bridge.

# Friday 18th

Parish Feast.

#### Saturday 19

Colvin's men employed removing the Puddle. R N at Lock 2 ---- P.I at Locks. J.G. at Timber Basin Bridge.

#### Monday 21

The *Julie*, P.A. Boyd master, brock both rails of the South outer Gate of the large Lock from the Carelessness of the Pilot. Mr Miln was here to day, gave orders to commence with raising the Bank of the G.Burn so soon as the work can be under taken.

#### Tuesday 22d

Colvin's men loading the *Campsie* Scow with Soil for the G.Burn.

#### Wednesday 23

Colvin's at the Puddle on south bank the tides being too low for taken the Soil up the G Burn.

#### Thursday 24th

This day continued wet. Was sorrow to observe the *Thames* Screw ship detained this morning for want of water in the large lock, the mud having accumulate above the level of the mud outside.

#### Friday 25

The *Thames* Screw Ship started this morning at 9 AM drawing 14 feet and as the tides were so low and not having a Steamer to keep her in the middle of the River she went upon the South Slope near the first Old Beacon and could not be taken off the Tug which went of to assist. This was a very disagreeable day with high wind & gale of wind. Colvin's men at the Puddle.

#### Saturday 26

Colvin's men at the Puddle and levelling Gravel at the South Dock Wharf. The *Thames* Steamer did not get off till 11 AM.

#### Monday 28 November 1853

Colvin's men with the Campsie Scow to the G. Burn with a Cargo Soil.

# **Tuesday 29**

Colvin's men at the G.Burn Slopes. This has been a very disagreeable day with wind & rain.

## Wednesday 30th

Mason at Lock Keepers house No 16. Carpenter at No Bridge Cleading & Punts. Colvin's men at raising the G.Burn.

# **DECEMBER 1853**

#### Thursday 1 Decembr

Men employed as above.

#### Friday 2d

Colvin's men at the G.Burn. Carpenters & Mason at Bridge No 2. This day is more moderate than some others.

#### Saturday 3d

Men employed as above. Weather changeable.

Monday 5th

Colvin's men at the G.Burn. Carpenters at the Punts.

# Tuesday 6th

Men employed as above. Good deal white frost this morning.

## Wednesday 7th

The frost continues with de—fogs. Colvin's men clear<sup>g</sup> the Pipe to Mr Cochrane and assisting to raise a Punt. Mason & Carpenter at Bainsford bridge & removing the baskle stones to allow the bridge to work easy.

### Thursday 8th

The frost continues moderate and foggy. Colvin's at G.Burn Banks. Carpenter & Mason at Lock 8.

#### Friday 9th

Men employed as above.

#### Saturday 10

Colvin's men employed in filling up holes at the south end of Cage next the road; the Slope having slipt down which rendered it very dangerous for People meeting with accidents.

#### Monday 12 Decembr 1853

Colvin's at the G Burn. Mason & Carpenter at Lock No. 8. Banksmen trying to get a Log Sunk in the Reach west from Camelon bridge. Mr Milne was hear to to day.

#### Tuesday 13th

Having heard that the *East Breaker* which was sent to the Old Basin for repairs is finished and sent to Castlecary last night, employed R Brown & the Banksmen to go there and take her to G.mouth. Horse 6 hours.

#### Wednesday 14

This day is wet, wind easterly. Men at the G Burn & c.

#### Thursday 15

Men employed as above.

#### Friday 16

Men employed as above.

# Saturday 17

Carpenter at Lock No 1 she--- with Robt Brown, & one of the Compy Lighter sunk at enterance of the Old Harbour.

## Monday 19th

We look the line of south east Wharf wall west from the large Lock and there is no alteration in the Curved face of the building since the 23d June last when the bulge was 6 ¼ at the Centre. We then look the line of the South east Dock wall and found the Bulge to be 4 inches and that the building at the Crane has subsided 1 inch. We then took the line of the North East Wall and found the Curve or bulge to be 6 ¾ Inches in the centre but no appearance of the Wall subsiding.

# Tuesday 20th

Colvin's men employed at G Burn. Mr Black was here and measured out the Ground at South east boundary of the Dock for Earl Zetlands Bonded Yard.

### Wednesday 21st Decemr 1853

Colvin's men at the Burn. Received a Cargo Soil, but the tides being so low the Scow only got about 20 yards above the bridge which put us to considerable trouble to Wheel the Soil such a distance.

## Thursday 22d

Colvin's men at the Burn, ordered them to go up to the South Bank and Cut a Boat load of Turf opposite the late Walter McT. Rope works.

#### Friday 23

Colvin's men at the Turf Cutting & c deferred to next week.

#### Saturday 24

Colvin's men assisting R Brown to get 6 Stone from Coal Wharf to the *H* **Dredge Boat** but as the tides was low and dangerous for the punt to lay in the mud we thought it better to put the punt into the Burn and put the Coal on board an vessel morning. I find it will be absolutely necessary to include in the face of the Lock 12 North wall as several narrow escapes of Lighter being turned over in the Lock from the Gunwales catching the Projecting stones.

#### Monday 26

Colvin's assisting to take the *Hercules* round to the Dock.

#### **Tuesday 27**

In consequence of the frost being so severe the Canal was complete froze over and ¾ in thick. I have therefore started the *Ice breaker* with 8 horse A ---- and returned at 4 PM.

#### Wednesday 28

We had a strong Gale North wind which keeps the Canal open where exposed to the Blast, but as that continue severe and as the Canal in several parts is froze over, I have ordered the *Ice Breaker* west to clear these parts. I have just received account that the Carron Lighter going west is brought up west from Bsr;ey--- although there was eight horse tracks her and ordered the *Breaker* to proceed west to Castlecarry.

## Thursday 29th Decem<sup>r</sup> 1853

Colvin's men employed removing the pailing where the Bonded yard is to be erected. Met Mr Milne near CastleLaurie. He came east to ascertain matters regarding the *Ice breaker*. Informed him that our *Breaker* was sent west yesterday morning and as I understand the *Wester Breaker* was not to leave Port Dundas until 8 this morning I have no doubt that our *Breaker* will Proceed west until it meet the *Wester Breaker*. Mr Milne left me at No. 16 with the intention to proceed west until he met the *Breaker* and it was his intention to have the *Easter breaker* at G Mouth to Start by 8 AM to morrow, and the *Wester Breaker* to start from Pt Dundas at the same hour. Frost severe but like a partial change.

## Friday 30th

This is very like a feeding Storm. Colvin's men with the *Cart Boat* Breaking Ice & c. Went to No 16, and returned with 3 horse. The *Easter Breaker* went to Kirkintilloch yesterday and returned to Windfired from Windford to day & returned to Castlecarry.

#### Saturday 31st

Ordered the *Cart Boat* round from the Store house to open up the Docks.

# **1854**

# **JANUARY 1854**

#### Monday 2d January 1854

The *Ice Breaker* started this morning at 8 AM but. I am afraid from the frost being so intense since Saturday that she will be pinched to proceed with 10 Horse, arrived at N Kill.

# Tuesday 3

This is most severe morning of frost we have had since the Commencement. We commenced to break up the Junction Cut and Dock in consequence of the Screw Steamer having come up to the River enterance and will be up in the after sea with the tide. 5 horse from 11 to 4 PM but we made very little progress for want of a sufficient number of Horses.

#### Wednesday 4 Jany 1854

We had another most severe night frost. The wind has shifted round to the east with appearance of Snow. Sorrow to learn that the *Breakers* are making very little progress to the west and it is not likely that our *Breaker* will return to night.

## Thursday 5th

The *Ice Breaker* have returned no further than No 16 to Day and it is likely it will be late before she reach this. Strong Gales Easterly wind, hard frost and every appearance of a fall of Snow.

#### Friday 6th

Commenced with the *Breaker* round, brock up the Junction Cut, Dock, back into the Basin at 10 o'clock, returned at 2 with 10 horse and started at 2 o'clock with 14 Horse for Tophill and arrived there at 6 PM.

#### Saturday 7th

----- started from here for Tophill to take the *Breaker* to Castlecarrie with 14 horse, arrived there at 2 PM. Started again after being very much detained at the bridge being completely blocked up with heavy boards of Ice and arrived at No 16 at [blank] PM.

## Monday 9th

The *Ice Breaker* started from No 16 at 8 AM, went to Windford, arrived there at 4. West with 6 Horse. The weather still continue fresh but excessively cold and I am much afraid from the wind continuing inclined to the north that we will have frost again before morning.

#### Tuesday 10

Wind N East and frost again this morning. The *Breaker* left Windford & arrived at G.Mouth at 3. Rolls past continues.

# Wednesday 11

The *Breaker* started from here at half past 7, arrived at No 16 at 4 PM. Got no farther in consequence of both Bows having got Cut with the Ice. Got three Carpenters from Pt Downie for repair the Bows.

#### Thursday 12

The *Ice Breaker* started from No 14 with 14 Horse. We have a heavy fall Snow to day, wind incline to the South east.

# Friday 13

The Snow continued during the night and is now 12 Inch in depth. Commenced the **Iee Boat** *Cart Boat* to break up the Junction Cut in order to release the vessels to get round to the Basin, it was my intention to have carried on to Bainsford but having only 6 horse we proceed no farther than opposite Carron Wharf and brought it back alongside the ---- house.

## Saturday 14th

The *Breaker* arrived at No 16 last night at 6 PM. It started from No 16 at 9 AM arrived at G Mouth at ½ past 2 PM with 14 horse. It a very difficult work and if a change does take Place before Monday it will be out of the question to Proceed in consequence of *Ice Breaker* having got some of the sheet<sup>g</sup> tore off and making a great deal of leakage. Ordered bars to be taken round to the Basket Point early on Monday morning.

#### Monday 16

Got the *Ice Breaker* round to the Basket Point at 4 AM and after the tide left got part of the Sheathing Put on but as we could not find the leak nor get at the other side for any repair resolved to send her to Tophill Dock.

#### **Tuesday 17**

Got the *Breaker* into Tophill Dock, found a considerable leak in one of the Bottom plank forward about two feet from the Keel. Repair the Sheathing and taken out the Dock at 4 PM, arrived G Mouth at 8 PM with 6 Horse.

#### Wednesday 18th

*Ice Breaker* started from here at 8AM with 8 horse. Mr Milne was here to day, complained at Mr Forrester not having sufficient number horse to take the trade west.

#### Thursday 19 January 1854

The weather continues moderate with a fine thaw. The *Breaker* left Windford at 8 AM proceeded west to the Hirst, returned to Grangemouth at 6 PM with 8 Horse to 2 PM and 2 Horse to 6 PM. Colvin's men at the G Burn.

### Friday 20th

The Thaw continues and mild. Intended to have brock up the Timber Basin but was prevented for want of horse. Colvin's men at the Burn.

#### Saturday 21

The weather continues soft. Men Breaking up the Timber Basin.

## Monday 23d

In consequence of Mr Salvesen having removed the Pig Iron which was placed at the foot of the Slop to support the Cran on the South Side of the Dock, three of Colvin's employed in conveying & placing heavy Stones to support the Crane. G Colvin with Mr Black who is surveying the G.Burn.

#### **Tuesday 24**

We had a most tremendous gale last night & this morning. Wind S West. I am afraid there will be fearful accounts of it. Colvin's men removed the thorn fence where the Bonded yard is to be Placed south side of the Dock. Several vessels brook adrift from their moorings. I am glad no damage was done either to the works or vessels. Heavy showers hail & rain.

#### Wednesday 25

It commenced to rain this day 9 AM and continued ---.

#### **Thursday 26**

A very heavy fall Snow during the night and continued till 10 PM. The Coffin of a young Seaman was taken out of the Dock – he belonged to the Schooner Pilot which sailed from this port about 2 months ago. Colvin men landing gravel.

## Friday 27th

Strong Gale, wind from the west. Colvin's men at the gravel Timber Basin Banks. Weather very Boisterous.

# Saturday 28th January 1854

This day is rather a little more moderate than for several days past. Colvin's men at the G Burn.

#### Sunday 29

In consequence of receiving notice that the Scow *Nancy* loded with Gas Coal was sunk west from No. 16, I ordered the vessels lying west of the Lock to be brought into the reach below and then off the 4 mile reach as low as git the water taken out of the Scow. Went up in the afternoon but found very little progress made in running off the water from a Scow at Bonny Bridge not being attended to as it had to be removed after the Reach was again filled up.

# Monday 30th

The Water was run off the 4 mile reach this morning and after part of the coals was taken off the Scow and the Water Pumpt out orders were again sent west to fill up the reach and the scow taken into the Reach by 10 AM. In consequence of Mr Craig informing me that my Thomas had got himself severely hurt from part of an iron Lighter which they are repairing at the Old Basin having come in contact with his head, I went by the Railway to see him and was glad to find that he is to all appearance getting better. Colvin's at the G.Burn discharging a Screw.

# Tuesday 31

Colvin's men at the G Burn.

# FEBRUARY 1854

### Wednesday 1st February 1854

I was surprised to learn this morning that the North Middle Gate of the large Lock was unshipt during the night and that none of the Lock Keepers can give account of the occurrence as it was not observed until they came out this morning and it took considerable trouble to get it shipt. I much afraid that the Plate of Iron which was put in above the Pivot has Slipt out.

### Thursday 2 February 1854

I am happy to observe from the manner the Middle gate of the large Lock which was unshipt yesterday works that the Plates are still on the top of the Pivot. Colvin's men at the Burn.

#### Friday 3d

I found to day I was in a Mistake regarding the North Middle Gate. Both the Plates are out and the whole weight upon the Rollar, so that the Gate will not work and must be unshipt so soon as the tides will answer and the *Middle District Cran Boat got* east which will be on Wednesday next. Mr Readman, Milne, with Mr Rankine, to Point a Birth for another Steamer which Mr Rankine is to be Agent for, when it was greed that the most convenient Place will be at the west end of the Pig Iron Wharf. Colvin's men at G Burn and assisting Scooping mud out of the Middle Recess. A very fine day.

## Saturday 4th

Colvin's men assisting at Scooping the Dock, attend<sup>g</sup> the Clerk paying the men.

#### Monday 6

Colvin's men at the G Burn say dressing & Planting hedge.

## Tuesday 7th

Colvin's men at the Hedges. Most Boisterous weather.

### Wednesday 8

The Wester Crane Boat arrived this morning to assist in the shipping the North Mid Gates to get the two Plates put in and wedged into the Socket heel of the Gate. Mr Milne and Son Robert was here and remained.

#### Thursday 9th

Mr Milne, Son Robert, & self, made a survey of the Lock masonry from Lock 8 to Lock 16. Colvin's men assisting to take the *West Breaker* to Lock 11 for repairs of the Splae pair of the Lower Gates.

#### Friday 10

Colvin's men loading the *Campsie* Scow with Soil near Lock 6 for G Burn and brought her to G Mouth.

#### Saturday 11 Feby 1854

Colvin's men assisting to take *Hercules* D Boat round from the Dock to the Cadge. Carpenter & mason at Cope of the large Lock.

#### Monday 13

Colvin's men taken the *Campsie* Bank Boat to the G Burn.

### **Tuesday 14**

All hands loading 2 punts mud out of the large Lock. Carpenter & Mason at the Cope.

## Wednesday 15th

We got very little done to loading the Punts from the Lock to day in consequence of the tide not having ebbed low enough for the men to work with the shovels.

#### Thursday 16

Colvin's men at the G Burn Bank & assisting to load two Punts with mud from the Bottom of the large lock. Carpenter & Mason at Wood Cope. 4 punt load taken down to east enterance of G Burn. A man

fell over board from the S Steam ship *Caroline* loading Gas Coal and was discovered in the men belonging to a Scow from Bowling.

### Friday 17

Colvin's men at the G Burn & assisting at the large Lock in Scooping mud into a Punt, the tide being not low enough to through it in with shovels. This has been a most boisterous day with wind & rain. Snow and frost in the evening.

#### Saturday 18

We had a strong gale from the north & heavy fall snow. Men employed at G Burn & mud out from the Lock, got one Punt load out of the Outer gate recess.

#### Monday 20

This day is a little more moderate than we have had for several days past. Colvin's men at the G.Burn. Carpenters at Bridge No 1.

#### **Tuesday 21**

Mr Black was here to day at the G Burn, pointed out the Boundarys for the March Stones & c.

#### Wednesday 22

This is a very Boisterous day, Winter rain. Colvin's men Placing march Stones.

#### Thursday 23 Feby

Colvin's men with the Bank Boat up lock No 16 for a Cargo Soil for the G Burn banks, Mason at march Stones & c. No 5 Lower Gates & No 15 North Uper Gate Sluice attend to.

#### Friday 24

Mr Milne came here last night went down to the Grangeburn, pointed out part of the Bank lately raised as being too high to get it put righ and a few more March Stones placed on both sides. Colvin's men loading out the Bank Boat & c at Lock No 6. Carpenter at Lock No 5 Lower Gates & c. Mr Milne left this morning. This has been another tempestuous day.

# Saturday 25th

Heavy Gales during the last night and this morning more moderate in afternoon. Colvin's men dressing Hedges. Gave orders for the vessels to prepaire for running the Dock down to 12 feet on Monday morning to get Part of Mud scooped out of the Upper Gate recess so as to allow the Gates to work.

#### Monday 27<sup>th</sup>

Commenced this morning to run off the water in the Dock to within 9 feet 3 inches of the Upper Sill. Observed accumulation of mud about 30 feet off from the Wall opposite the Necessary south side of the Lock, also at the turn of the wall next the Lock and at about 30 feet from the south side of the shed Jutty, also in front of all the Walls where the **Dredge Boat** cannot Work. The Corpse of Mr Robt Lisars of Schooner *Duke Portland* was got in the Junction Cut after the water was run off.

# Tuesday 28th

Men at Scooping the Upper Recess the same as yesterday but sorrow to say we did not get the quantity out from the mud being so very hard.

# **MARCH 1854**

### Wednesday 1st March

Men employed in scooping out the middle Reach.

#### Thursday 2d

Men employed as above.

#### Friday 3d

Men employed scooping out the Outer Gate recess.

### Saturday 4th

Men employed at the Outer recess, scooping out the mud. This is the most favourable day we have had this Season.

#### Monday 6

Colvin's men at the G Burn. Mason at March Stones & at Punts & c.

### Tuesday 7th

Colvin's men repairing the fence and Planting hedge at Timber Bonded yard. 2 Carpenters cladding the Junction bridge. Mason at March Stones.

#### Wednesday 8th

Colvin's men at the Grangeburn, two men at the Junction Bridge & c.

# Thursday 9th

Men employed at above. Heavy Gales wind & rain.

#### Friday 10<sup>th</sup>

Men employed as above. Weather continues boisterous. Mr Milne and Son Robert was here, went round the Dock and up the Grangeburn. Seemed Pleased with our operations and ordered Post for One side of the Road along the Bank at the Turnpike Bridge and a fence to join it and Masonry of the Bridge.

## Saturday 11th

Men employed as above. Went west with Mr Milne to No 16. Stopt at Castle Lawrie where Falkirk Iron Comp<sup>y</sup> have applied for additional Wharfage. Examined Lock 6 & 16 where the masonry is in a very decayed state.

#### Monday 13

Colvin's men discharged the Bank Boat and brought it up for part of a Cargo Stones so as to lay the Boat in the Old Harbour to scour out the mud & c. This is another tremendous day of wind from S West. A number of arrivals.

# **Tuesday 14**

The *West Ice Breaker* with the **Diving Bell** arrived early this morning for the Purpose of having the upper Recess of the large Lock inside Gates cleared out but owing the heavy Gale of Wind last night two of the vessels which arrived could not be got out of the Lock in time to run of the water. The men was employed Levering Bar for Lock No 2.

# Wednesday 15 March 1854

Commenced to run off the water in the Dock with the tide got very little done with the Diving save clearing out the mud and Rubbish from the Recess of the north Relles Inside Gates.

## Thursday 16th

The men was again employed with the **Diving Bell** in Cleaning out the Recess in the South Side of the Inner gate for the Roller and the Crane Boat proceeded west to Lock No 4 where the ----. The North lower Gate to get the dementions of the Plate on the Metre Post part of the old one housing been brock off. Mr Milne was here, having come to Lock 16 with Thos Lithgow, the Mason, to take the dementions of the Stones required for the repairs of the Locks. Sent Peter Trotter our Mason from this to assist him in taken the dimention of the Stones. Mr Milne after having carefully examined the quantity of Pipe and other Casting said to be intended for a Gas Work laid upon the Pig Iron Wharf intended to be shipt for Denmark returned about 12 noon.

# Friday 17

Colvin's men, Mason, Engine man & Carpenters at the Old Harbour clearing out the mud, but having so few hands did not get the vessels properly lade for carrying away the mud. My Robt was here and requested him to send the four Carpenters which he has with the **Crane Boat** to assist in scouring the mud out of the Old Harbour to morrow.

### Saturday 18

With the assistance of the four men from the **West Crane Boat**, we got a good tides work done in scouring the mud out of the Old Harbour, all hands employed.

#### Monday 20th

Colvin's men and others employed in assisting the West District Carpenters driving Piles in four mile reach for a Wharf to Carron Company.

#### Tuesday 21 March 1854

Colvin's men at the Grangeburn conveying March Stones.

Mason at March Stones, Carpenter at the Lock, observed the Stones on the North side upper enterance of Lock No 9 removed outwards from a vessel passing upwards having pressed upon the corner stone and there being nothing but Rubbish to prevent it. Ordered the Mason to get the rents filled up in the meantime with lime & mine dust.

#### Wednesday 22d

Colvin's men assisting Mr Black along the West Carron Bank. Severe frost in the morning with fog, sunshine after part of the day.

#### Thursday 23rd

Colvin's men employed with a Cargo stones & Gravel Ballast from a vessel discharging at the Jutty. Hard frost this morning.

# Friday 24th

Men employed as above. Mr David McColl died yesterday morning @ 9 Am.

### Saturday 25th

Colvin's men dressing the G Burn Banks for to receive the Grass seed.

#### Monday 27

Colvin's men placing March Stones in G Burn, and shifting the *Ice Breaker*, *Old Cart Boat*, & Punts to commence scouring out the mud from Old Harbour tomorrow morning.

# **Tuesday 28**

All hands scouring out the mud from the Old Harbour.

#### Wednesday 29

All hands employed as above.

#### Thursday 30th

All hands employed as above. Mr Milne was here to day, arranged to Pay the three Carpenters at an advance of 3d per day. Robert Mercer to Paid 3/ per day and 4/ for two Sundays for pr month. Robert Newlands to have a rise of 4d per day or 19/ pr weekly.

#### Friday 31

We had another days scouring of the mud from the Old harbour and made a very good tides work of it.

# **APRIL 1854**

#### Saturday 1st April 1854

Colvin's men planting thorns at the G Burn bridge and taken down the Privy at the Stable west from the Collectors house being considered a great nuisance. A very strong and wet day.

# Monday 3rd

Colvin's men employed at a fence G Burn and assisting Mr Black who is again surveying.

## Tuesday 4th

Colvin's men at the Grange burn.

### Wednesday 5th

Colvin's men stoping Leaks west side Timber Basin. Men pd to day.

### Thursday 6

Colvin's men leading Clay for the Bank Timber Basin.

### Friday 7th

Men employed as above.

#### Saturday 8th

Colvin men Sowing the Rice grass seed on the west Bank of the G Burn.

## Monday 10th

Colvin's men at the timber Basin Bank & preparing Puddle for the Junction Lock to Prevent the water which git out of the Recess for opening & shutting the lower Gates into the Back tail Cistern for working the Bridge.

#### **Tuesday 11**

Colvin's men at the Junction Lock.

Employed as above 12

Thursday as above 13 Mr Milne came last night.

Friday do 14

Left at 12 noon.

# Saturday 15th

All hands employed to day scouring mud from the enterance of the Large Lock.

## Monday 17th

All hands employed to day as above, had an excellent tides work. Mr Robert Melvell died of Cholera this morning.

# Tuesday 18 April 1854

The Canal Committee Consisting of Messrs Dennistoun, Douglas, Baird, Houlsie, Readman, Milne, met Mr Dickson the Earls Commissioner & Newton, Factor. The Gentlemen, seemed disposed to give encouragement for the Erection of Public Works. Mr Douglas in Particular stated that he never saw a place better adapted for Building iron vessels. A deputation of the proprietors for the Poor of Bothkennar met the Committee with a Claim for Poors rate for Part of the ground occupied by the Company by the Wet Dock and other erections in 1842. It was agreed to pay the deputation £120 and at the rate in time coming on £500 value.

#### Wednesday 19

Colvin's men as above.

# Thursday 20

Colvin's men as above.

## Friday 21

Loading the Bank Boat with Stones & c for Jutty at S Lock cut.

#### Saturday 22

Mr Milne with one of the Clyde Inspectors was here examining the *Hercules* D Boat with the view to get his report as to the State of the vessel prepairitory to having it sold. Colvin men removing Stones at Ballasthill & Hercules D Boat.

## Monday 24th

The Canal Dredge Boat arrived on Friday Night & the Punts, ten in number, on Saturday, but I am much afraid from the Crowded state of the Dock Junction Cut and inconvenience of transmitting the mud that it is to be a very Diliatory Job. See my letter to Mr Milne on the Subject. Colvin's men discharging Stones & gravel at the L Lock enterance Jutty. Dredge Boat loaded 6 Punts.

## Tuesday 25th

Tuesday 3 Punts loaded. Colvin's men assisting to take out 9 Punts to discharge, but owing to the wind and low tide they did not get them further down the River than east of enterance of G Burn. 1 Horse from Mr Morrison (-ouck) and one Horse & cart with Saved to Lock No 6.

## Wednesday 26th April 1854

This being the national Fast Day there was not trade on the Canal and Works connected.

# Thursday 27th

Men employed in scouring the mud from enterance of the large Lock and bringing up the Punts, 14 in number, from east of the G Burn.

#### Friday 25th

We had another scouring of the mud this morning from the enterance of the large Lock. Took down the Punts, 5 Punts loaded yesterday to get down at high water, 4 Punts.

#### Saturday 29

The 14 Punts were brought up early this morning load to sent out and returned. Three of the punt loaded Sunk during the night. Mr Milne being here ordered the Stop gates to be shut, the water to be run off the Junction Cut. They were got up and taken round to the Basket Point at 5 on Sunday morning.

# **MAY 1854**

## Monday 1st May 1854

Mr Milne gave direction that no vessel was to ly outside of another next the Pig iron Wharf so as to allow the dredging to proceed with interation. 9 Punts loaded & discharged.

### Tuesday 2d

All hands employed but did not get the **Tug** only half way up and had not time to get the 10 Punts discharged in time to get back. Brought them up at -gh

## Wednesday 3d

Loaded & discharged none.

# Thursday 4th

Loaded & Discharged 10 Punts up from enterance of G Burn.

#### Friday 5

Loaded & discharge 10 Punts up from G Burn.

### Saturday 6th

Loaded 8 and discharged 8 Punts.

## Monday the 8th

We got 8 Punts taken out but was not got back in consequence of the **Steam Boat** not coming to take up the Punts again.

## Tuesday the 9th may 1854

We had 8 Punts taken out and discharged, and got them up with the 8 which were not got up yesterday.

# Wednesday 10th

Loaded & towed out round the Outer Beacon, discharged and towed back, 10 Punts.

#### Thursday 11

Mr Milne was here, did not see him. Loaded & discharged same number taken out & in by **Steam Boat**.

#### Friday 12

Same number Punt loaded, dischered, taken out & brought back by the **Steamer**.

#### Saturday 13

Same number Punts taken out discharged & brought back.

#### Monday 15th

Loaded & discharged 10 Punts.

#### 16

Loaded & discharged 12 Punts.

#### Wednesday 17

Loaded & discharged 12 Punts.

#### Thursday 18th

Loaded & discharged 10 Punts.

#### Friday 19

Loaded & discharged 10 Punts.

#### Saturday 20th

Loaded & Discharged 10 Punts.

#### Monday 22d

After 10 Punts were loaded, 10 was taken out & discharged, and in consequence of not gitting the **Dredger** alongside of the timber Wharf I ordered her down to the large Lock and commenced there so soon as the trade passed and the tide low enough at 4 PM to commence to the Dredging and loaded 8 Punts. I was surprised to be informed by John Stairie at 9 PM that the North Tunnel valve will not Screw down next the Outer Gate of the Large Lock. We made every attempt to find out the cause without avail. I therefore resolved to go to Pt Dundas to morrow morning.

#### Tuesday 23 May 1854

I started with a gig and got the early morning train and met Mr Milne at his office Port Dundas. Mentioned to him the Circumstance of the large Lock Tunnel will not screw down and there was no other method which I could suggest then to send down the Diving Helmet to ascertain the cause and if it cannot be found out or remeded by it, there will be no other alternative than to Pump the water out of the Lock, which will prove a very serious consequence at Peinl. Mr Milne & I went over to the Old Basin, met my Son Robert, Ordered the Diving Helmet to be put on board a light Iron --- to proceed early. Expect will arrive at No 16 to night & early here to morrow. Returned with the ¼ to 12 from Glasgow Station.

# Wednesday 24th

The Boat with the Diving Helmet arrived here in good time for the tide. John McLochlan went down three different times but could not find any thing the raising or lowering of the valve. I then ordered the machinery to be taken of the portable Crane to be brought round, and after taken off the Cross head and the main Screw taken up, we replaced the crosshead, lifted up the valve & rods with the Crane, and found the west or right hand Rod when the lower end is set & secured into the Socket of the valve was considerably wore, and loose, and the valve being so neatly fit when into the Guide in the face of the Tunnel that it got jamb<sup>d</sup> on be screwed down about 8 inches. I was therefore under the necessity to order the valve & rods to W Cousins Smiths Shop and new end made and put on to fit the Socket of the valve and by ½ past 8 PM got finished the valve in it is Place and will I trust work as well as ever after a thin washer is put in to the Crop head on the top of the Rod that was repaired.

My Son Robt was here & returned for late train. Punts.

### Thursday 25th

Men employed at the Sluice machinery. Load and discharged 12 Punts from the Large Lock. The Boat with men and Helmet Machinery Proceed west early this morning.

## Friday 26 May 1854

Loaded and discharged 11 Punts to day, the wind being strong from the East it was with great difficulty the Punts were discharged. Several of the mooring Chains were brock & last night ordered the Dredge to be taken back to the Junction Cut to take out the remainder of the Stuff along side the Wharf.

# Saturday 27th

Dredge Boat commenced this morning in Junction Cut. Loaded and discharged 7 Punts. This finished the Cut there being no less than [blank] Punt loads dredged and removed.

#### Monday 29th

Ordered the **Dredger** to the enterance of the Bonded timber basin this morning where the mud has accumulate to such a hight that heavy Rafts can hardly get out or in. Loaded 6 Punts from the enterance to taken west and discharged south side near Lock 4.

#### Tuesday 30th

Colvin's men went with the 9 Punts & discharged 6 at Lock 4<sup>th</sup>. The **Dredge Boat** following.

#### Wednesday 31st

Colvin's men tracking the remainder of the Punt to No 16.

### **JUNE 1854**

# Thursday 1st June

Colvin's men discharge the *Campsie* Bank Boat at the Jutty Large Lock enterance. Mr Milne was here last night, went west to Tophill this morning to arrange about removing the Material from the Work, Mr Crostwait having taken a lease of the work for the Purpose of Erecting a Foundry. Mr Milne left to take the 9 AM train after agreeing to have a Shed erected at the West end of No 11 Lock keepers house to hold Carpenters Tools & c.

### Friday 2d

Colvin's men loading the *Campsie* with Stones for Grange burn. Mr Mackay will please charge Rennie, master of Carron Comp<sup>y</sup> Lighter No 4, Five Shillings as a fine for abusive language and breaking of one Glass in the house occupied by John Frazer, Lock Keeper No 16, at 1 o'clock morning Tuesday last 30<sup>th</sup> May. Thos Wilson.

#### Saturday 3d June 1854

Colvin's men taken down & discharged the Bank Boat at the outlet of the Grange burn.

## Monday 5th

Colvin's men at the out let of the G Burn & dressing hedge.

#### Tuesday 6

Colvin's men dressing Hedges. Clerk paid the men.

### Wednesday 7

Colvin's men employed as above and Outlet of the Grangeburn.

#### Thursday 8

Men employed as above.

# Friday 9th

Colvin's men at the Out let and prepairing the *Ice Break Cart Boat*. Punts and *Campsie* to be laid in the Old Harbour to morrow morning to Sludge out the mud.

#### Saturday 10th

We had all hand employed on Sludging the mud out of the Old Harbour and made a good tides work of it.

# Monday 12th

Being fortunately we had a very heavy fall of rain during yesterday which will more than make for the loss by sludging the mud out of the Old Harbour to day. We had an excellent tides work, but if the Carron had not swoln with yesterdays rain we would have got a greater quantity of mud cleared away. Owing to the frequent heavy showers to day I am afraid it will be no better to morrow.

#### Tuesday 13

We have occasional showers. A good tides work on the harbour to day.

#### Wednesday 14

We have now had four tides work from which a great quantity of mud have been sludged out of the Old Harbour and had it not been for the River being flooded we would have a vast quanity more.

#### Thursday 15<sup>th</sup>

Colvin removing the Punts, *Ice breaker*, *Old Cart Boat*, and *Campsie* Scow, to the Timber basin out of the way.

## Friday 16 June 1854

Colvin's men loaded a Punt with Puddle & taken down to the Grange burn, and taken the *Camspie* Scow to No 3 Reach to load the Ruble Stone for the Grange burn.

## Saturday 17th

Colvin's men loading the *Campsie* with stones for the G Burn. This has been a heavy fall of rain.

#### Monday 19

The Grangeburn is so much flooded with Saturday's rain that we have got Nothing done to the Grange burn to day. Men dressing hedges.

# Tuesday 20th

Colvin's men Collecting Stones at the G.Burn Outlet and Clearing the Drain round the Lock Keepers house at the large Lock.

#### Wednesday 21

Colvin's men at out let in the morning taking down the bank Boat with stones & Punt with mud to G Burn.

#### Thursday 22d

Colvin's men at Do. Rather unfortunate with the Dam, the bottom of the Burn being lowered at the bridge 15 inches last year has --- cause all that more height and will not stand. I have therefore ordered to take the Puddle up about 200 yards where there is a shallow to morrow and get all prepaired for Monday if the weather keep dry.

#### Saturday 24

Colvin's men prepairing to commence the Pitching on Monday.

#### Monday 26

We had a most disagreeable day – heavy showers rain. Colvin's men were employed in Placing a Dam to allow them to get on with the Pitching, but the Burn got so much flooded that nothing was got done after the Dam was put in.

#### **Tuesday 27**

The Burn is still in such a state that nothing was got done to the Pitching. Colvin's men dressing hedges and prepairing the *Ice breaker* to be taken west to morrow morning to load stone for the repairs of the Outer Beacon.

## Wednesday June 28th 1854

Colvin's men started early this morning with the *Ice breaker* to load the Old refuse stones taken out of Locks 16 & 6 to repair the Outer Beacon. Thos Moirice have trucken. Great deal thunder to day, wind easterly.

#### **Thursday 29**

This is a rather disagreeable day with cold rain from N East. Colvin's men brought down the *Ice Boat* load with the refuse stone from Lock 16 & 6.

#### Friday 30th

Colvin's employed in repairs of Timber Basin Banks.

## **JULY 1854**

## Saturday 1st July 1854

Colvin men employed Cutting & discharging stone from *Ice Breaker*.

#### Monday 3d

Colvin's men commenced to load the *Campsie* with Clay for Timber Basin Slopes. It rain heavy this morning which is much against the Hay Crops. The Rain continued the whole day without intermission.

#### Tuesday 4th

I ordered Colvin's men to bring up the Punt which was in the G Burn and load one with the Stone brought down from the Lock to repaire the Outer beacon. Occasional showers.

# Wednesday 5th

The rain continues without interruption, which will hurt the Crops if we have not a sudden change. Colvin's men at the Dock Ballast hill, clearing away from the Gutter to allow the surface water to git into the Drains.

#### Thursday 6th

The Rain fell in torrents last night. I do not remember such a long continuance and must prove very hurtfull to the Crops. Colvin's removing back the Ballast was to git the drains cleared to allow the surface water being carried away of the North Wharf.

# Friday 7<sup>th</sup>

Colvin's men Clearing Drains at Ballasthill.

#### Saturday 8

Men employed as above. Went to Newcastle.

## Monday 10th

Colvin's men Clearing Drains and taken Punts, *Ice Breaker*, Bank Boat, & c, to be placed for scouring mud from the Old Harbour.

# Tuesday 11 Wednesday 12th Thursday 13th

Men employed in scouring mud from the Old Harbour.

#### Friday 14

Colvin's men employed taken Boats & Punts employed in scouring the mud from Old Harbour to Timber Basin and loading a Punt with Clay for a Dam at G Burn.

#### Saturday 15th

Colvin's men taken down the Punt with Puddle for the G Burn.

## Monday 17th

Colvin's removing Clay & Rubbish from opposite one of the Bonded Timber Yards & Pumping the *Old Cart Boat*. In consequence of so many complaints of late from the state of the Canal water, being impregnate with some abnoxious filth that it is rendered unfit to be used for food, either for man or

beast, and the smell is most intolerable. I therefore went west to No 16 and learn that Mr James Ross, who carrys on a Chemical work about half a mile further west have been in the practice of allowing the refuse of his work to run into the Canal.

# Tuesday 18th

Went down to the Outer Basin and ordered Colvin's men to commence and remove the Stones so as to commence with the foundation of the east part of the Beacon with the large and most heavy stones.

## Wednesday 19th

Colvin's men pump<sup>g</sup> Punts and at the Outer Beacon.

#### Thursday 20 July 1854

Colvin's men at the Outer Beacon. Weather continue favourable.

## Friday 21st

Men employed as above.

#### Monday 24th

Men employed as above. The New S Steamer *Firence* Mr Rankine, arrived here to day first time.

### Tuesday 25th

Colvin's men at the Outer Beacon. Mason at the Cope Stones enterance of the Large Lock. This is the warmest day this Season.

# Wednesday 26th

Colvin's men and Mason at the Outer beacon. Weather fine.

### Thursday 27 - Friday 28, Saturday 24, Monday 31 July

Men employed as above. Son Robert here to day.

# **AUGUST 1854**

# Tuesday 1st August

Colvin's men at the Outer Beacon. Occasional showers to day.

#### Wednesday 2d

Men employed as above.

# Thursday 3d

Colvin's men loaded a Punt and took it down to the Beacon. Mr Milne was here to day with Mr Rankine and marked off the Ground for the Shed west end of Pig iron Wharf.

#### Friday 4

Men employed as above. 2 Punts sent west to No 16, 2 Punts No 15 & 18 with Poll Boathook and Cadge Anchor east to Clackmannan.

# Saturday 5

Colvin's men load the Punt again for the Beacon with Stones.

# Monday 7th

Colvin's dressing hedges to day. Mason at Junction bridge.

# **Tuesday 8**

All hands scouring mud from the Large Lock enterance and got a very great quantity sweept away and as the day is so favourable and moonlight ordered the men to attend again by 6 o'clock to get the *Cart Boat* and *Campsie* Scow properly Placed. Ordered the Lock & Bridge Keepers to assist and got another good tides work.

# Wednesday 9th

Commenced to get the Boats placed at 5 AM and got another great tides work but sorrow to observe the tide did not take off neither last night & this morning as it did yesterday morning.

# Thursday 10th

We had another very good tides work to day.

## Friday 11

Men employed as above. The two Punts taken away on this day was brought back to day. Charge 6 Days @ 5/ £1.10

# Saturday 12th

In consequence of the *Old Cart Boat* having Sunk at the enterance of the Large Lock during the night, we did get much done in sludging out the mud after the water was scoop out, however the enterance has not been in such a Clear state for some time.

# Monday 14th

Colvin's, Butler, Gibson, & Murray, & Trotter Mason, employed at the Outer Beacon.

# Tuesday 15th

Colvin's men taken down a Punt and the *Campsie* with small stones & Gravel for the beacon – with P Boat.

# Wednesday 16, Thursday 17

Men employed as above.

## Friday 18, Saturday 19th

Men employed as above. Colvin's brought up the *Campsie* & Punt with Steam Boat.

# Monday 21 August 1854

Colvin's mason commenced this morning to get the Dam and roan laid for the Pitching outlet of the G.Burn and dressing hedges in the afternoon.

#### **Tueday 22d**

Commenced to the Pitching this morning.

# Wednesday 23d

We got about 6 feet width of the pitching laid to within a few feet of the Piles next the upper pitching.

### **Thursday 24**

Commenced to the west after removing the roan east above that punt which was laid yesterday and expect if the weather keep moderate to have about 12 feet in wideth laid to morrow, which will allow us to despense with the Roun. The water will then pass along the bottom of the Invert. Mr Milne & my Son Robert was here to day, the two walked down the bank from Castle carrie and left with the Bush at ½ past 5 PM. Requested two offers to paint the *Hercules* D Boat.

# Friday 25th

Colvin's men at the Pitching. Got the Middle part brought up to join the upper part formerly laid.

## Saturday 26th

Commenced to the south side of the Pitching.

# Monday 28th

Colvin's men employed at the Pitching. Weather most favourable for the Harvest, great numbers of Irish employed to day.

# Tuesday 29th

Colvin's men employed at the G Burn.

## Wednesday & Thursday 30 & 31

Men employed and Carpenters at the Dock Platform Monday 28th. Weather continue most excellent.

# **SEPTEMBER 1854**

## Friday 1 September

Men employed as above. Finished with the Pitching.

## Saturday September 2d 1854

Colvin's men at removing a Shoul of Sand in bottom of the G Burn below the bridge at Turnpike road.

## Monday 4th

Colvin's men assisting to take water, plank & ladders down to the Lighthouse and prepairing Puddle for Timber Basin Banks. Carpenters at the Dock Platform.

#### Tuesday 5th

Mason & Labourer at the Lighthouse. Colvin's men prepairing Puddle for the timber Basin Banks and taken a Punt & Plank to the Grangeburn to take out the shaol near the Turnpike Bridge.

#### Wednesday 6th

Colvin's men at the grange Burn. Mason at the Light, Carpenters at the Dock Platform.

# Thursday 7th

Colvin's men taken the punt from the grange burn after being discharged with the Gravel taken out of the bottom yesterday. Mr Milne and Son Robert was here to day. They have agreed to run the Bainsford Reach on Sunday to allow Carron Comp<sup>y</sup> to git the Basin cleaned out, and the Falkirk iron Comp<sup>y</sup> to Clean & deepen the front of their Wahrf.

## Friday 8th

Went up to Falkirk Iron Works and arranged to send four Punts and the *Campsie* Bank Boat for to put the stiff taken out.

# Saturday 9th

I took the advantage of running the water to clean out the mud from the Old Harbour and got good tides work of it. Sent the 4 Punts & Campsie west to Bainsford reach. We had another tides work this evening commenced at 10 PM. Ordered the water in Bainsford reach not to be run off til 8 o'clock on Sunday morning so as to allow any trade to pass during the night. My Son Robert being here gave instructions to that effect.

## Monday 11 Septem<sup>r</sup> 1854

Colvin's men employed assisting at Bainsford in clearing out the dirt from the bottom of the reaches, Gravel from the bottom of Lock No 6. Two days having wrought to 2 AM, Carron Basin partially cleaned out and the Wharf in front of Falkirk Iron Works. There was 4 Punts & 4 Scows loaded. Ordered to be discharged at the west end of Lock Keepers house at No 4.

# Tuesday 12th

Colvin's men employed at Discharging the Punts & c at Lock No 4.

# Wednesday 13

Men employed as above.

# Thursday 14th & Friday 15th

Men employed as above.

#### Saturday 16

Mason & Carpenter employed at the Canal Locks. Colvin's men discharging the stuff taken out the Bainsford reach.

#### Monday 18th

This is a Boisterous day with wind & rain. Colvin's men finishing discharging the Scows & Punts & Tuesday 19<sup>th</sup> taking them to G Mouth.

#### Wednesday 20

Colvin's men at the Timber Basin Banks. Heavy falls of rain & thunder to day. Mason & Carpenter still employed at the Locks.

#### Thursday 21, Friday 22d

Men as above and Friday. Colvin's men loading the *Campsie* with Gravel intended for the Timber Basin Banks and to draw more water for running the water to Clear out the sludge at the basin enterance.

# Saturday 23d

I am Sorrow to observe the tides are not taken off so low that streem, however, I think we may have two good tides to sludge out the mud from the Old harbour on Monday & Tuesday. Colvin's men loading the *Campsie* and taken it and the *Old Cart Boat* round to the Old Harbour to commence of ----

## Monday 25th Septr 1854

We would have done a very good tides work to day, but did not run so much water I could have wished in consequence of receiving a latter from Mr Milne requesting us not to run any water from the Canal until next spring tides as the Reservoirs on the north side are still very low. I have ordered the bank Boat, *Old Cart Boat* & Punts round to the large Lock enterance for tomorrow.

#### **Tuesday 26**

All hands employed at the large Lock enterance sludging out the mud.

# Wednesday 27

Colvin's men at the Timber Basin Banks. Carpenter painting the **Dredge Boat**.

#### **Thursday 28**

Colvin loading *Campsie* with sand for Pig iron Causway.

# Friday 29 & Saturday 30

Colvin's men discharging sand at Pig Iron Wharf.

# **OCTOBER 1854**

#### Monday 2d October 1854

Colvin's men at the Timber Basin Banks.

#### Tuesday 3d

Men employed as above. A most lamentable occurrence took place late last night or early this morning – the Company Lighter left Kirkaldy in tow of the *Samson* Tug and when between Pettycur & Inch Keith the Tow line brock at blewing a complete gale at the time, and the Sea running very high, the Lighter went down & sunk in an instant and being dark at the time the men on board of the Tug neither saw nor heard – I accept something which appear block which they thought was either the hatches or a Tarpallen, consequently all on board perished. The master, 2 men and woman, the mates wife, shortly married.

# Wednesday 4th

Colvin's men at Timber Basin Banks.

#### Thursday 5 October 1854

Colvin's men loading the *Campsie* with sand to be taken round to the Old Harbour for Scouring the mud to morrow morning.

#### Friday 6th

All hands employed to day scouring mud from the Old Harbour. Got a very good rides work of it.

## Saturday 7th

All hands employed at the Old Harbour. I am sorrow that we did not git the south corner sweept off being afraid of two much water being run from the Canal. Ordered the *Campsie*, *Old Cart Boat*, and two Punts to be taken round to the enterance of the Large Lock to have a Sludging there on Monday morning.

# Monday 9th

The Rain commenced very heavy this morning after the men got round the Craft for sludging at 5 AM. We have now got a very good tides work and sludged a great quantity mud away from the south east turn at the enterance.

#### Tuesday 10th

Colvin's men & Mason at Pig Iron Wharf Causway lifting the surface.

#### Wednesday 11

Mason & Banksmen commenced to the Casuway this morning inside the Shed.

#### Thursday 12

Mason & Banksmen at the Shed, Carpenters at the **Dredge Boat** taring the Buckets.

#### Friday 13

Men employed as above.

## Saturday 14

As above.

#### Monday 16

In consequence of the Pipe being again stopt for conveying the water from the timber Basin to the Rev<sup>d</sup> Mr Cochrans house, Colvin's men and one of the Carpenters employed there and it is astonishing to find that at two different parts opposite two the Saugh trees the pipes were completely chocked up with the fibres from the Root of the trees, similar to what was taken out of them on the 15 October 1853.

#### **Tuesday 17 October 1854**

Colvin's men at the Pipes and finished. Trust we will not be troubled with them for a long time to come.

#### Wednesday 18

Colvin's men & masons at the Pig iron Wharf. Wind shifted round to N.E. last night and Blowed very boisterous with rain, but rather moderate and dry to day.

### **Thursday 19**

The same.

## Friday 20th

Colvin's men one half loading and removing the *Campsie* from the Pig iron Wharf which we intend to discharge at the Basket Point to morrow so as to send the course of the water at the enterance of the old harbour farther to the eastward.

#### Saturday 21st

Colvin's and two Canal Banksmen discharging the surface taken from the Pig Iron Wharf at the Basket Point.

#### Monday 23d

Colvin's & two Banksmen loading the *Campsie* with sand, discharging part of it at the Pig Iron Wharf & taken it, the *Cart Boat* and two Punts, to the large Lock to commence sludging at the enterance to morrow. Met Mr Milne at Lock 13 and down the Bank and arranged with Mr Potter for wharf opposite his yard. Examined the works at G Mouth & returned with the Buss at 5 PM.

## **Tuesday 24**

We had a very fine tides work this day at the entereance.

#### Wednesday 25

All hands sludging mud from the Old Harbour. Did not get so much sweept away as I could have wished from the River being swelled with last nights rain.

#### Thursday 26

Colvin's removing the *Campsie & Old Cart Boat & Punts*.

#### Friday 27

Colvin's men at Pig Iron Wharf.

## Saturday 28th

We had a very heavy Gale from S. West with Rain. Men at the Pig Iron Wharf.

#### Monday 30 October

Colvin's men & Mason at the Pig Iron Causway. Carpenter at Bainsford bridge Railing.

#### **Tuesday 31**

Men employed as above. Sent Paybill estimate and Weekly return to Port Dundas.

# **NOVEMBER 1854**

# Wednesday 1st November 1854

Parish fast day.

## Thursday 2d

Colvin's men employed placing Polls for mooring the Screw Steam Boat & others at the Pig Iron Wharf.

#### Friday 3d

Men employed as above.

#### Saturday 4

Men placing Polls and taken the *Old Cart Boat*, *Campsie* round to the Old Harbour for the purpose scouring out the mud on Monday.

# Monday 6th

All hands scouring out the mud from the Old Harbour. I was sorrow to Understand this morning that John Mitchell of the *Jennie* Lighter, which is in the Dock loaded with wheat, left his house this morning about 3 o'clock to ascertain if the vessel was tight. Serch was made in the Dock and every Place where it was thought he may have fallen into the water, but it was of no avail. And what make it so mysterious is the morning being clear moon light and him a person sober and so well aquainted with the place.

#### Tuesday 7th

All hands sludging out the Old Harbour. Got a good tide work. The Corpse of John Mitchell was found this morning in Corner at the west end of Carron Wharf. No person can form the least idea how they come to be there, unless it is considered that he got deranged and walked over the building.

#### Wednesday 8t Novr 1854

John Fraser got himself burnt with vitriol yesterday and will be on the Sick Fund. Colvin's men at the Basket Point discharging the *Campsie*.

Colvin's men loading the *Campsie* with causeway stones & c. Received 6 Creepie, 14 li<sup>t</sup> white line; 2 lamp irons, & bolts, 2 line for Mason & banksmen, 1 Ball small twine.

## Friday 10

Mr Milne come here last night, started this morning for Bainsford where we met Mr A Black, Surveyor, examined the ground where we consider belong to the Canal Company with the intention of him making a plan of the same. We then went to Underwood where Mr Robert Binnie, the proprietor, is anxious to have the boundarys ascertained. Walked over the ground and observed where the march stones are placed. Mr Milne is anxious to get every information on the Subject. Colvin's men at the Pig iron Wharf.

## Saturday 11th

Son Robert came here last night, went over to Alloa this morning and returned at 1 o'clock and then set off for Glasgow. Colvin's men at Pig Iron Wharf.

## Monday 13th

Colvin's men at the Causway, and Hedges clearing.

#### **Tuesday 14**

Men employed as above.

## Wednesday 15

Do, cold Easterly wind.

#### Thursday 16

Colvin's men Cleaning Hedges from BoNess road east & south of the Wet Dock. Wind N E, heavy rain.

#### Friday 17, Saturday 18

Men employed at the hedges. Wind continues from N East with rain.

# Monday 20th Novr 1854

Colvin's men one half day at the hedges south from the road, other half taken down the Bank Boat, *Old Cart Boat*, & Punts, to the large lock for scouring away the mud to morrow.

#### Tuesday 21st

All hands employed to day sludging mud from the large Lock enterance. Did not get such a good tide work as I expected from the Cart and Bank Boats having broch from their moorings. Ordered a quantity of stone to be put into Bank Boat so as she will not be so apt to shift to morrow.

# Wednesday 22d

Men employed scouring mud from the large Lock enterance. We have had a continuance of heavy showers of rain & Sleet, and did not get so much done as I could wish.

# Thursday 23

We had a very course night and it has continued all day strong Gale NE Wind with snow. Got a very bad tides work in the Old Harbour to day.

#### Friday 24

Colvin's men removing the Bank *Old Cart Boat* & Punts to the Timber Basin. Received a letter from Mr Milne – I meet him in Mr Blacks office to morrow at 10 AM.

# Saturday 25th

Colvin's men at the Hedges. Met Mr Milne in Mr Blacks Falkirk and after looking over the different plan referring to the Company Boundary at Bainsford, walked down and Robt Newlands pointed out a spot where he considers are placed, but are now three feet under the surface in consequence of the Ground in Mr Potters woodyard having been raised since these stones were and forgot. Mr Potter former Foreman and he located out a spot where one of the march stones are placed. As it is covered with timber it was agreed that Mr Potter is to remove the timber early on Monday and the Companys

men will then remove the surface to find out the stone so as allow Mr Black to make out a plan of the Ground occupied by Mr Potter.

Met Mr Milne at Mr Potters Wood Yard, and commenced with the two Banksmen along with Robert Newland, where he pointed out a spot where there is a march stone, but after excavating the ground and extending the excavation until we came to the covered drain which is north of Companys boundary, we did not find a stone. We then sent for Mr Melvilles foreman, who was long employed with Potter and he pointed out a spot farther west which stated there was a stone, but as there was a great quantity of timber to be removed it was agreed by Mr Milne and Mr Black that soon as the timber is removed to morrow morning the men should commence to excavate the ground.

## Monday 27

The men had part of the timber removed and commence, but as there was no stone found so near the Shed as pointed out and as the timber is still laid which must be removed, our men was mostly engaged in removing it out of the way and excavate outwards until they found the main drain 32 feet north from the front of Mr Potters wood sheds. Ordered Mr Black to inform Mr Milne by letter of our proceedings to day, which I did this evening.

#### **Tuesday 28**

After a good deal of trouble the men found the roots of the hedge in Mr Potters Timber Yard about 18 feet north from the front of Wood Shed, which has been considered at all times the boundary of the Company grounds. Wrote Mr Milne to that effect. Weather very boisterous.

#### Wednesday 29 October 1854

Colvin's at the hedge. Men still working at Mr Potter yard.

## Thursday 20th

Went up met Mr Black, observed the Roots of the hedge distinctly 18 feet 4 inches from the front of Mr Potter Wood Shed. Agreed that he should write to Mr Hamilton, Mr Forbes factor, to meet on the spot and see the roots before the holes are again filled up so as to prevent any misunderstanding afterward.

# Friday 1st Decr

Colvin's men placing gravel at Lock No 1 where it is got into a complete puddle.

## **DECEMBER 1854**

## Saturday 2d

Colvin's men dressing hedges on Canal Bank west from Dalgreen Bridge.

## Monday 4th

Colvin's men loading *Campsie* with Gravel for the Jutty and large Lock enterance.

#### Tuesday 5th

Colvin's men discharging the *Campsie* - No weather so course – at Canal hedges. Heavy Gales Wind & Rain since Saturday.

#### Wednesday 6th

Colvin's men at Canal Hedges.

#### Thursday 7<sup>th</sup>

All hands engaged in Scooping the mud out of the North Mid Gate Sill.

#### Friday 8th

Men employed in Scooping the mud out of the South Mid Gate Sill.

The *Wester Ice Breaker* employed by the Mason there arrived here to day to be used during the winter if required to keip the Canal open.

#### Monday 11 Decem<sup>r</sup> 1854

Colvin's men at the Canal Hedges west from Dalgreen. Say at Mr Potters wood yard.

#### Tuesday 12th

Colvin's men at the South Bank.

# Wednesday 13th

Colvin's men at the jutty discharging the Campsie.

#### Thursday 14

Colvin's at the Jutty.

#### Friday 15

Colvin's men Clearing drains along Dock Wharf.

#### Saturday 16

Colvin's men loading the *Campsie* for the Jutty.

#### Monday 18

Colvin's men at the Jutty & discharging the *Campsie*. Ordered 38 Boathook handles & 12 Set Polls to Junction Lock to be forwarded to Old Basin from Henry Stark.

#### Tuesday 19th

Colvin's men at the Jutty & discharging the *Campsie*.

#### Wednesday 20

Colvin's men at the Jutty. Weather changeable. Wind N.N.E. which keep back the trade from the southward.

#### Thursday 21st

In consequence of the Plate round the Sluice of the South lower Gate of the Junction Lock having wore and part of it brock off, the Sluice Valce would neither open nor shut. We was therefore under the necessity to unship the Gate after taken off the Swing Bar. Employed Mr Cowies Smith and got a new Plate put on with a new sluice valve and Gate. Re-shipt by 2 PM. Ordered sludging south sill of the Outer gate of Large Lock tomorrow.

# Friday 22d

This morning was so very unfavourable that it was considerable time before we got the Chain removed and the Punts properly placed, however we got a considerable quantity scooped up out of the Recess.

## Saturday 23rd December 1854

Ordered the Banksmen with the Campsie to Bainsford to bring down the stones of the wall which was placed about 5 feet distant from the bridge Keepers house and which stood parallel with the road. This wall has been long complained as a nuisance where idle person met and caused considerable disturbance. Mr Morrison Horse.

## Monday 25th

Colvin's men loading out the *Campsie* with Clay & stones from the timber. Most Boisterous weather.

#### **Tuesday 26**

Colvin's men at the Jutty. Weather continue bad.

#### Wednesday 27

Heavy fall snow last night, hard frost to day, appearance to continue. Colvin's men at Jutty and at Canal Puddling Pipe for the Ice Pond.

#### **Thursday 28**

Colvin's men at the Jutty. Carpenter at Bridge Slops.

#### Friday 29th

Colvin's men as above. Mr Milne & Robt Wilson was here today. Mr Milne requested that we should send him the sounding in the Dock and if we can recollect of the soundings which was taken last year to send it also so as to ascertain the quantity of mud accumulate during the year.

#### Saturday 30

The weather continue very boisterous. Colvin's men at Jutty.

# **1855**

# **JANUARY 1855**

## Monday 1st January 1855

We have had a complete hurricane from N West since Sunday morning, and tide being above the ordinary hight the surge made a complete breach over Carron River banks from the first Old Beacon to the Lighthouse. The Pitching in a number of Places have been torn out and the Gravel on the footpath sweept away.

#### Tuesday 2d January 1855

Colvin's men employed at the Jutty. This day is more moderate than we had for some weeks past.

### Wednesday 3d

Men employed as above.

### Thursday 4th

Men employed as above and taken soundings in the Dock.

#### Friday 5

Men employed as above and taken soundings in the Dock. Mr Milne came here this day, went down to the Lighthouse for the purpose of examining the damage sustained on Monday the 1<sup>st</sup> int. Mr Milne is of opinion that we should take a Cargo of Clay and fill up the hollows on the top of the bank and get the holes in the Pitching put right as soon as possible and promised to send labourers from Port Dundas to assist in furthing the works.

## Saturday 6th

Colvin's men at the Jutty.

## Monday 8th, Tuesday 9th.

As above.

## Wednesday 10th

Colvin's men and seven Punt men sent down by Mr Milne commenced this day to the Carron River East Embankment. Went down to the Lighthouse and gave them instructions to commence.

# Thursday 11th

Colvin and west men employed at the Embankment. Mr Milne was here to day, went down the Embankment, give orders to have the Clay taken down so soon as the tide will admit, to have it spread along the top of the Bank and the gravel beat over it. Agreed to pay the expense of the Large Lock Keepers Putting the gas into their dwelling houses. Cap<sup>n</sup> A Watt & Mr Galt, Carron Comp<sup>y</sup> Clerk, complained for want of a distinguishing light on the South side enterance of the Large Lock. Mr Milne promised to take it into consideration.

## Friday 12 Jany 1855

Colvin & the other men at the Carron River East Banks.

# Saturday 13

Several arrivals this week. Men employed as above. This is a very foggy day.

#### Monday 15

Colvin's men and west Country men employed at the East Embankment. Ordered them to load a Cargo Clay from the Spoil Bank intended for the repairs of the Large Lock Site to take down for the Surface of the track path.

### Tuesday 16th

Men employed in loading the Clay.

## Wednesday 17

Track<sup>d</sup> down the Bank Boat, but could not git it near enough the Bank. Men employed in Collecting Survace so soon as the Clay is spread to cover the Clay.

#### **Thursday 18**

The tides being better to day got the Bank Boat near the Slope and commenced to discharge the Clay.

#### Friday 19th

Colvin's men at East Bank. The other men scouring the mud from the large Lock enterance. Pretty good tides work.

## Saturday 20

Men employed as above. I am sorrow from the tides not taken off so low as usual that we have not been able to carry off the quantity of mud as on former accasions.

#### Monday 22

Colvin's men at East Embankment discharged the Bank Boat with surface for the East Bank and brought up the Boat from the Light house.

#### Tuesday 23

Colvin's men at the Pitching and two men dressing the hedges. Last night and to day are bad, the most severe frost this winter. Ice on the Carron one inch thick.

# Wednesday 24th January 1855

Having received intimation last night to start the *Ice Breaker* from here to Windford this morning, I have ordered the man to git the Ropes and Articles ready, but as there have been little frost during the night and the trade passing without interruption, I do not think it necessary to start the *Breaker* today to cause unnecessary expense.

## Thursday 25th

The Banksmen employed at the Jutty. The frost continue very moderate, and the Canal almost clear of Ice. Traveling Crane.

#### Friday 26

Banksmen employed as above. Weather changeable.

# Saturday 27th

Banksmen as above. Frost & snow this morning, and if the frost continue as it is at present we may start the *Ice breaker* on Monday.

## Monday 29th

The frost have continued so intense yesterday and particularly during the night that we commenced the **Ice Breaker** and started at 7 AM to day with 6 Horse, arrived at Windford at 5 PM.

#### Tuesday 30

The weather moderate and the frost continue severe. The *Ice Breaker* started from Windford at 7 AM, arrived at G.Mouth at 8 PM.

#### Wednesday 31st

The *Breaker* started with 6 Horses at 7 AM and arrived at Windford at 5 PM. Mr Milne was here to day and requested that it should order the six men which followed the *Breaker* with the small tradesmen Boat to return back and keep them employed in sludging out the mud at the large Lock enterance & I therefore sent Wm Clauson on horse back to order them to return, but they were as far west as Windford before he overtook them.

# FEBRUARY 1855

## Thursday 1 February 1855

The *Ice Breaker* started from Windford with six horses at 7 AM and arrived here at half past 3 PM. The weather still continues moderate but no appearance of a thaw.

#### Friday 2d

The *Ice Breaker* started from here at 7 AM, arrived at Windford at 5 PM with 6 Horses. Malcolm McGregor and the men having returned according to Mr Milnes orders employed in sludging at the enterance of the large Lock but made a very poor go of it from the tides neither running nor taken off from the state of the weather.

#### Saturday 3d

The tides did not take off to day and got nothing done to the sludging. *Breaker* arrived leaving Windford at 7 AM, arrived here at 2 PM. Brock up Carron Basin. We have had a complete thaw since last night and trust the *Breaker* will not required again this season.

# Monday 5th

Banksmen employed loading the *Campsie* Boat with Surface for the East Bank and taken down by the Steam Boat. Until last night the Spring tides never raised within 6 feet of the ordinary spring tides & expect however that we will have a high one this afternoon and that the Boat will be got near the Bank & discharged.

#### Tuesday 6th

The frost being severe and the broken ice being floated into the enterance of No 3 Lock, the trade could not proceed. I therefore ordered the *ice breaker* to proceed with 2 horses at 10 AM and returned after proceeding through the Lock at 3 PM. Banksmen at Carron Bank brought up the Bank Boat with Steam Boat.

# Wednesday 7 February

The frost being intense this morning, started the *Ice Breaker* at 9 AM with 4 Horses, arrived at Windford at 4 PM. Banksmen loading the *Campsie* with Ballast for the Jutty.

## Thursday 8

The **Ice Breaker** started from Windford at 7 AM with 6 Horses - to 12 men and 4 Horse to half past 3 PM. Wind & Snow from N.E. Men not able to work.

#### Friday 9th

The Wind, frost & Snow continuing and the trade stopt at Lock No 3 started the *Breaker* at ½ past 9 AM with 5 Horse to 11 AM & 6 Horse to Windford @ 5 PM. The Cold very intense, occasional showers Snow.

#### Saturday 10

The frost continue most severe. The *Breaker* started from Windford at 7 AM and arrived at Grangemouth at half past four PM.

## Monday 12th

The frost continue and more severe this morning. The *Breaker* started at ½ past 7 Am with 8 Horse.

# Tuesday 13

Frost continue as severe as ever. Banksmen at the Jutty. The *Ice Breaker* started from Windford at 7 AM with 8 horse, arrived at G Mouth @ 4 PM, broch up the Cut. Mr Milne here to day.

## Wednesday 14

The *Breaker* started from G Mouth @ 7 AM with 8 horse, arrived at Windford at 5 PM. Banksmen load<sup>g</sup> *Campsie* with Clay.

### **Thursday 15**

The *Breaker* started from Windford with 8 horse at 5 AM, arrived at G Mouth at 5 PM. Brock up the Junction Cut.

#### Friday 16

This is the most severe frost this morning. *Breaker* started with Horse @ 7 AM. We was also under the necessity to break up the Dock to allow the *Phy--- Earies* to get out. Men employed at sludging.

#### Saturday 17 Feby 1855

We had another tides work sludging at the large Lock enterance, but did not get so much carried off as I could have wished owing to hindering the loading of the **Clyde** S Ship. The frost continues as severe as ever.

**Breaker** started at 7 AM from Windford to here & after breaking up the basin it was 6 PM before got clear. Break out the **Old Cart Boat** and had her employed with 4 horse breaking up the Dock to allow the Screw Steam Ship to proceed.

#### Monday 19

The frost still continues. Started the *Breaker* in the Junction Cut, considerable detention with 10 Horse at 7 PM, but it was near 9 before it started from the Canal. We had a very good tide work to day.

#### **Tuesday 20**

The frost still continues. *Ice* **Breaker** arrived at – PM to day. We had another good tides work to day. Mr Milne was here to day.

#### Wednesday 21

The *Ice* breaker started again with 10 horse. Considerable delay from Carron Companys two Lighters and one loaded with pig Iron nearly opposite the F Church. Proceeded west until we come past Bonny Bridge where the *Nancy* Lighter, a Scow loaded with Char, and the small Falkirk Boat, was right in the centre of the Canal which detained us an hour & half. Arrived at Underwood ½ to 6 PM. I returned with train from Castlecary, arrived at Windford at 8 PM.

#### Thursday 22d

**Breaker** arrived here after Breaking up the Canal Basin. At 8 PM.

# Friday 23d

The *Ice Breaker* started at 7 AM with 12 Horses, arrived at G Mouth after Breaking up the Canal basin & c at 8 PM.

## Sunday 24th Feby 1855

There us every appearance to day of a thaw. Wind Westerly with appearance of snow or rain. The *Breaker* started from Windford at 7 AM with 12 Horse, arrived here at 4 PM this day continues to thaw, with rain & trust by Monday if it comes a breeze of wind that the Ice will be pretty well dissolved.

# Monday 26th

We started the **Breaker** this morning with 12 horse but Mr Milne having met them at Dalgreen ordered them to return as there was several vessels still jambed in the Canal which he wished to be taken to Port Dundas as the frost have again set in, and thinks it will be as well for the *easter breaker* not to start until to morrow morning, of which he would write by the Rail so as to let us know whither we should start or not. Capt. And Grahame of the Carron Screw died this morning at 6 AM. Mr Grahame was going about in his usual health on Thursday, was out on Friday, went home, complained with a shivering of Cold which proved fatal. Men employed in gitting a plate, which was made by Andw Cowies Smith, fixed on the *Breakers* Starboard bow, the old one being wore through.

# **Tuesday 27**

This morning is Calm with moderate frost.

#### Wednesday 28

Mr Milne was here this morning, ordered the *Breaker* to start at 9 AM with 12 horse. Went west to Castle carry, had an enough to do between Bonny Bridge. Took the three horse off the Lighter and made fast to the *Breaker*, arrived at Windford at 5 & 30 Pm.

# **MARCH 1855**

#### Thursday 1st March 1855

We have now got a complete thaw. It has blown strong from the west with heavy fall of rain. *Breaker* started from Windford at 7 AM, arrived here at 6 PM after breaking up the Carron basin which was attended with considerable time & trouble.

#### Friday 2d March 1855

The Ice this morning is considerably dissolved but as there must be a considerable quantity still adhering to the sides of the Canal, order the *Breaker* off this morning with 6 horse at 7 AM to go west the 4 mile reach & return. Proceeded to Windford, reached at 3 PM. Was ordered to take the *Breaker* to Castle carry after putting the whole of Matereals on board the *wester Breaker*.

## Saturday 3d

The men returned from Castlecarry on foot, left the *Breaker* there after putting the Ropes on board the *Wester Breaker* with other Tools which is certainly very strange knowing that the timber Basin requires to be brock up to allow the merchants to get out their timber.

#### Monday 5th

Banksmen & mason employed taken the *Old Cart Boat* from in side the large Lock to timber basin to break up the Ice, but got little done from want of horse and will have to try it tomorrow with the men on board of a Punt with Ice mells.

#### Tuesday 6th

Men employed breaking Ice in the timber basin. Mr Milne was here to day. This is the most favourable day we have had this season.

#### Wednesday 7

And Glen died this afternoon. A touch of frost this morning. Men employed break Ice in timber Basin.

#### Thursday 8th

Men employed as above. Frost still continue in the ---

# Friday 9th

Men employed as above. Frost continues six ½ Inch thick.

#### Saturday 10th

We have had a heavy fall of Snow during last night & this morning, which I trust will bring more genial weather.

## Monday 12

The Snow continued to fall during yesterday and last night with little or no wind and frost in the morning. All hands employed again to day in breaking up the Timber basin.

#### Tuesday 13 March 1855

Men employed in the Timber Basin. I was sorrow to observe such a quantity of floating Ice as far west from No 16 as the Notice Board. Ordered Robert Newlands to send up the Clading and two or three main Plank which is intirely gone on the Bridge at No 16.

### Wednesday 14

Men employed as above, A very thick fog this day and breath calm.

#### **Thursday 15**

We had another nights severe frost, but thaw sets in as the day advance with appearance of wind from S East. Colvin's men & mason commenced to raise and relay the Causway south of the Large Lock. Mr Readman was here to day, went round the works with him,

### Friday 16th

The weather continues calm & foggy, little thaw. Ordered the *Pay Boat* away west but it appears the tiller was lost before Malcolm McGregor left, which detained them till 11 o'clock. Sent Michael Butler & Tho Gibson west and expect they will meet the *Easter Breaker* at no 16 and return with her.

#### Saturday 17

Ordered the men to take the *Ice Breaker* & *Old Cart Boat* to out side enterance of the Large Lock to sludge out the mud on Monday morning.

#### Monday 19

We had a very high tide this morning. All hands employed in scouring away the mud at the Large Lock enterance. *Surprise* sailed.

#### **Tuesday 20**

Men employed as above. Wind NE, sleet and axcessively cold.

#### Wednesday 21

National fast day.

#### Thursday 22d

Colvin's men & Mason at the Large Lock Causway. This is one of the most cold stormy & sleet day we have had this year.

#### Friday 23d

Men at the Causway & repairs of the ice Breaker. Hard frost this morning.

#### Saturday 24

Severe frost Wet Dock covered with Ice. Men employed at Causway & c.

# Monday 26 March 1855

Men employed at the Large Lock Causway and at No 2 Bridge.

# Tuesday 27th

Boatman drowned at Lock 14.

Men employed as above. Frost in the morning.

# Wednesday 28th

This morning the Dock is again foze over. No appearance of a change which is rather serious to have such a continuous at this day in Spring for we have none of it as yet.

#### **Thursday 29**

The Dock is again froze over this morning. The frost was very intense, not a breath of wind. Mason & Banksmen at the Causway.

## Friday 30th

The frost more moderate. Men employed to raise a Punt at lower end of the Slip, the bottom plank having completely fallen down from the stern, the nails being completely corroded, and loading the *Campsie* with earth for the East Bank & c. Alex<sup>r</sup> Mitchell drowned by his Brother And<sup>w</sup>.

#### Saturday 31st

Men employed as above. Frost more severe.

## **APRIL 1855**

### Monday 2 April 1855

The frost was very severe yesterday. This morning more moderate. Men employed in sludging, but the tide being low and not taken off so well as ordinary, we did not run the usual quantity.

#### Tuesday 3d

Frost continues in the morning. Men at the sludging & c.

# Wednesday 4<sup>th</sup>

Men employed as above.

# Thursday 5th

Robert Russell by permission of Mr Readman got the loan of a Punt to go out for the purpose of collecting that kind of mud which is used for some purpose in the Glass works. Mr Milne was here to day, examined the leakage from the Large Lock inside Gates, and Pump Engines. Promised to send down an Engineer and a Smith to put the Boiler in repair. Agreed to sludge the mud out the Old Harbour by taken the water from the Basin and filling it with the tide.

#### Friday 6 April 1855

All hands employed in scouring the Outer harbour, got a good tides work but was afraid to run too much water from the canal.

## Saturday 7th

Mason & Colvin's men at the Causway. Wind still continues in N West, cold in the morning, little vegetation.

#### Monday 9th

Men employed as above. Charged the Schooner *Euphemia* 5/ damage Lock No 4 foot boards. Strong breeze N West rather more mild today.

#### Tuesday 10th

The weather continues unfavourable, strong Gales N West wind & cold. Men at the Causway. The Carron Company having taken some heavy machinery with one of the Lighter to put on board of the Screw Ship Clyde, the shaft of their Portable Crane brock. They then took it across to the Companys Crane on the South side of the Dock and when in the act of raising it out of the Lighter, one of the stays gave way, down came the Crane, brock the Jib in two Parts and stays strap & c. But I am happy to observe from present appearance the machinery does not appear to be injured.

## Wednesday 11th

This is a good moderate day. Men employed at the Causway & c. The Corpse of a Poor sill man, Singing Jamie, was found in No. 16 Lock this morning between the gates & splae piece sill, considerably lacerate either from a Vessel of from the gates jamming the body. The Lock Keeper gave information to the Poor Inspector and a Coffin was sent and the body taken to Falkirk for burial.

#### Thursday 12th

Dr Woodford examined the School.

Men employed as above. A complete hurricane from N. West.

## Friday 13

We have a change of wind, cold S. East wind with heavy rain. Son Robert was here to day, took the dementions of the Crane Jib which was brock by Carron Comp<sup>y.</sup> Lighter James Adamson --- of the *Cart Boat* to & from Castle carrie.

### Saturday 14

Men employed as above. Wind back to Swest, Cold to day.

# Monday 16 April 1855

Men at the Causway and giting the *Campsie*, *Ice Breaker*, Punts, and *Cart Boat* placed to run the mud out of the Old harbour to morrow.

# **Tuesday 17**

We had a good tides work in the Old harbour to day, ordered the *Campsie*, *Ice Breaker*, *Cart Boat*, & Punts, round to the large Lock enterance to have sludging there to morrow.

### Wednesday 18

All hand employed in sludging the mud from the outer enterance of the Large Lock, got a large quantity sweept away.

## **Thursday 19**

All hands employed as above. Got a good tides work but the tides have now taken off. We did get so much water run as yesterday. A master McLeran called to day for the purpose of inspecting the *Hercules* dredge Boat which I showed him. The engine & machinery he told me was employed by a company at the Port Blyth who propose to Purchase the vessel for the purpose of improving the harbours and wished my candid opinion as to the state of the vessel. I told him the vessel got a thorough repair in May & June 1851 and except on the following year the vessel has done nothing since.

#### Friday 20th

Men employed at the Causway & c.

#### Saturday 21

Men employed as above.

## Monday 23

Men employed as above. The Brig *Harbinger* of Montrose got a ground on the north of the River last night about 100 yards east from the enterance yesterday and from the tides taken off was not got off to day. I therefore allowed them the use of the *Campsie* Bank Boat to lighten the vessel to day, charged to the master of.

#### Tuesday 24th

Men employed as above. Frost during the night, very worse during the day. Per Mr Mackay 10/ from the master of the Brig *Harbinger*.

#### Wednesday 25 April 1855

The wind after many months of N. Westerly winds have now changed to the south east and trust have got completely clear of the frost for a season. What is wanted is Genial weather and a good shower of rain for propagation. Men at the Causway.

#### Thursday 26

Masons & Banksmen at the Causway. Another favourable day. Mr Milne was her to day.

# Friday 27

Men employed as above.

#### Saturday 28th

Men employed as above. I had another call from Mr Dougal Stewart appointed by the Harbour Commissioners at Blyth to examine the *Hercules* Dredge Boat. He sent for Mr Adamson after examining the Vessel to ascertain he could take her into the Dock and the Probable expense it will take to put her in complete state of working order. Mr Adamson told him unless something appeared of which he was not aware the expense would not amount to £50. I was surprised to be informed that Mr McLearn, the person who was formerly appointed to examine and report on the vessel, had not returned to give his report.

#### Monday 30th

Men employed at Causway and repairs of the Crane on south side of the Dock brock down by Carron Company.

## **MAY 1855**

## Tuesday 1st May 1855

This a very Cold day, wind easterly and slight showers of rain.

#### Wednesday 2d

Colvin's men at the Causway. Went to Glasgow having been summoned to give exculpatory evidence for And<sup>w</sup> Mitchell as to the death of his Brother Alex<sup>r</sup> on the 30<sup>th</sup> March. The Rev<sup>d</sup> Mr Welsh & Peter Gardner were the only two witnesses examined and after the Prisoner Council having stated his former good Character and the Advocate for the Crown having nothing to say against it, the Lord Wood addressed the Prisoner and sentenced him to 3 months Imprisonment. Mrs W Cowie died.

#### Thursday 3d May 1855

Men employed at the Causway.

### Friday 4th

This being the parish fast day there was no work with tradesmen and Banksmen. Hard frost.

# Saturday 5th

Men employed at the Causway & c.

## Monday 7th

Mrs W.C. funeral. We had a heavy fall of Rain sleet & Snow, the Hills are completely covered. We has the wind from all the different points of the Compass and extremely Cold.

#### **Tuesday 8**

Wind North, and continues as cold as ever. Men employed at the Crane and Dock Causway.

# Wednesday 9th

Frost this morning, wind shifted round to south east, snow & sleet. Men employed at as above.

## Thursday 10th

This is another disagreeable day, sleet & rain during the day.

## Friday 11th

The Dock was never so much crowded with vessels as it is at present. Chief with Grain and Vessels in ballast to load Pig iron and it will be difficult for the **Wolgust** Steamer [Wolgost is a port on the Baltic coast of Germany] which is in the Lock to get a Birth, *Thame* Steamer to get in, the *Rotterdam* Steamer to get out to-morrow &c. *Campsie* to Bank.

## Saturday 12th

This rather a more favourable day although it continues frost during the night. A Screw arrived from Hamburgh load with Goods. Men at the Causway & c. Tom came.

# Monday 14

This day is rather more moderate. Men at the Causway & removing Punts round to the Cage. Mr Milne came here this afternoon, he appeared anxious to make a trial of raising the Piles on Cage for the Purpose of Pilling it across and having it filled up with Ballast, and getting a house erected for the Dock Bridge Keeper.

# Tuesday 15 May 1855

Men employed in remaining Punts and taken the *Campsie* to third Lock to load surface earth. Son Robt was home to day.

#### Wednesday 16th

This is the mildest day we have had this season with genial showers. Men employed taken materials & wheeling surface to load the *Campsie* for the Banks.

#### Thursday 17th

Received 2 logs from Robt Mevill & c sawen into Wheeling Plank and 2 Inches for Sluices & Bridge Clading. Men taken down the Plank with a punt and loading the Campsie for the East Bank. Mr Milne was here to day, again appeared anxious to have mooring Polls placed along the Timber Basin Banks. Two Banksmen employed at that work. The *Campsie* was taken down to the East Carron Bank this afternoon.

### Friday 18th

1 Bag Grass seed.

Colvin's men discharging & spreading the surface on the Banks. Fine mild day.

#### Saturday 19

Men at the banks. This is the most favourable day this day with genial showers & c.

#### Monday 21st

Colvin's men at the East Bank, sewen grass seed.

#### **Tuesday 22**

Men employed as above. David Con 1.6 -

#### Wednesday 23

Mr Readman was here to day, but did not see him.

#### **Thursday 24**

Colvin's men assisting at the Causway.

#### Friday 25th

Colvin's men and Mason west with *Campsie* for a load of earth which was taken out of the Canal west from Bainsford for the East Carron Bank. The Dock & Harbour continue to be so much crowded that several vessels on the outside cannot be taken.

#### Saturday 26

Men employed as above. The wind continues from the East. There is little vegetation, ground parched for want of rain.

#### Monday 28 May 1855

The wind continues from the East with cold weathering wind. Colvin's men employed in taken a Raft of timber which was taken out of the Basin last week to give room for Vessels, which has broch adrift and floating up to Dalgreen Bridge and stoping the trade.

# **Tuesday 29**

This is as Cold a morning as we had in February, heavy Gale Wind N. East. Colvin's men at the Causway.

## Wednesday 30

The weather continues as Cold and frost. Men employed as above.

#### Thursday 31

Weather still more severe and wind high.

# **JUNE 1855**

# Friday 1st June 1855

Colvin's men employed with Steam Boat out with a Cargo surface for the East bank. Weather still severely Cold, showers of rain, wind N. East.

## Saturday 2d

The Working Gear on the North side of the Junction Lock here got into such a state that the lower Gate will neither open nor shut without a rope to the end of the Swing bar. Employed Mr Cowie's Black Smith to git it repaired, being rather of a Complicate kind it is attend with considerable trouble to put it right. Colvin's men at the East Bank.

## Monday 4th

We have at last got a change of wind with genial showers rain since Saturday night, which is much wanted, particularly for the vegetation of g---. Colvin's men at the East Bank. Carpenters at Junction Lock gates. Brought back the *Campsie*.

## Tuesday 5th

Colvin's men at the Banks. Men at different Jobs, 2 shelves wanted for the Companys house lately the Ticket office at No 16. The weather continues favourable.

#### Wednesday 6

Colvin's men clearing the stuff off the Dock Wharf & c.

#### Thursday 7 June 1855

Colvin's men at the Carron Bank.

#### Friday 8th

Colvin's men sowen the Grass seed on the Banks. Mr Milne was here to day, proposed to get a man to travel between G Mouth & Windford to ascertain as to the running of water of which there is a danger of the Reservoirs being run dry. I told there is no person more likely to answer that Purpose better than Alex<sup>r</sup> Muir, Banksman, provided another Person can be found to take his place while so employed. Mr Milne stated the Directors were or had been prepairing to build a range of houses in Grangemouth for the accommodation of the workmen employed at Grangemouth, the want of which is much complained of, and considered the Site for the erection of said buildings should be in John Walkers field adjoining the road at the south side of the Timber Basin. Mr Milne agreed that the Dock Keepers house should be erected south from the Bridge near the boundary between the Companys & Rope Work.

## Saturday 9th

Colvin's men & mason putting the Swing Bar at North lower Gate and other materials for repairs of Lock & Bridges on board the *Campsie* Bank Boat and to bring a Cargo of soil from Tophill for repairs of the Carron banks.

#### Monday 11

Colvin's men discharging the materials sent up and brought the *Jean* back below Lock 5 & loading surface for the Carron East bank.

# Tuesday 12th

Men employed as above. In consequence of the Canal Company having sold the *Hercules* Boat to Mr Scott who is the Person connected with the improvements of the Port of Blyth, I received a letter from Mr Readman to deliver up the vessel to Mr Stewart, Mr Scotts foreman, who is to take the vessel down to Leith for repairs.

# Wednesday 13 June 1855

The *Hercules* Dredge Boat starts from here this morning to be in tow of Steam Boat for Leith to be repaired previous to sailing to Blyth for to commence work. I am informed the Company have made a good sale of her above £3000 – which will enable them to proved another suitable both for G.Mouth and the ---. A most lamentable circumstance occurred with Robert Menzie on Monday evening, having gone into the shed and carried away about 2 fathoms Inch rope, having met the Constable he threw the rope on board the *Dan* Steam, saying to the men this is the rope you left in the Lock. The Constable suspected that the rope belonged to the Company, he inquired at Mr P Feely the owner what was the meaning of the rope being put on board his vessel. When he replyed he knew nothing about and the rope was taken back. I told the Constable that such conduct must be reported to the Fiscal and an example made of him. A man of all others who has been so long in the Companys Service and always believed soberly and attentive to his work to think he should bring such a disgrace upon himself and his respectable wife & family is most grievous and painful to my feelings and every one who knew.

#### Thursday 14

Colvin's men at the East Bank with the *Campsie*.

#### Friday 15<sup>th</sup>

Men employed as above. Mason at the North Causway.

#### Saturday 16

We have occasional heavy falls of rain since Thursday evening which will prove greatly in favour of vegetation and trust the Reservoirs will have got a supply.

## Monday 18th

Colvin's men at the Embankment. Son Robert was here to day informed Mr Milne is to send down the *Canal D Boat* to begin in the Dock & c now that the trade have got slack.

#### Tuesday 19 June 1855

In consequence of the fibres of the Laugh Trees chocking up the Pipe which convey the water from the Timber Basin to the Revd J Cochrans dwl<sup>g</sup> house, the men commenced to lift up the pipes but they have found none next the Basin.

### Wednesday 20th

Colvin's men still lifting the pipes as the proceed east the find the fibres chocking up the pipe at every tree.

#### Thursday 21st

Men employed as above. The Companys *west Crane Boat* was here to day and removed the Crane on the south side of the Dock which is required for the erection of a Bridge near St Rollox.

#### Friday 22

Men employed as above. Wrote Mr Milne advising him to lay the Pipes from the Timber Basin to supply Mr Cochrans dwelling house across and under the north side of the road where there is no saugh tree to interfere with the pipes.

#### Saturday 23d

The *Canal Dredge Boat* arrived last night, and the Punts today to commence on the Lock & outside the Large Lock enterance. Calvin's men removing the earth from the top of the drain pipes to Mr Cochrans. Mr Smith Brick Work Kerse will furnish us with drain tile more suitable for the purpose at 3/ pr Road of 40 yards, and ground Clay for the joints which will not trouble us again for many years provided there are placed on north side of the road.

## Monday 25

Yesterday & today fresh Gales from N. West, cold at this season. Punt men employed pump<sup>g</sup> *Ice Breaker* & *Old Cart*, brought the Dredge into the large Lock. Considers it as well to commence to clean it out in the first place. Loaded eight Punts in the Lock. Son Robert here to day.

# **Tuesday 26**

The 8 Punts were taken out by the Steam Boat. Colvin's men at the pipe.

#### Wednesday 27

Loaded, sent out 11 Punts loaded & taken out.

# Thursday 28 June 1855

Mr Milne & Son Robert was here to day, walked out the Lighthouse. Arranged for the Punts to be discharged south from the Lighthouse when the tides are high and on the north side of the Outer Beacon when the tides are low. Went up the Grange Burn and examined the course of the pipes for Conveying the water from the timber Basin to Rev<sup>d</sup> Mr Cochrans dwelling house. Agreed that the pipes be laid on the North side of the road and whatever additional is wanted to get them from Kerse brick work and the Clay on which these pipes are laid to get it from the same place. Examined the sluice where there is a great leakage opposite the Dry Dock to endeavour to stop the leakage and to secure the Sluice with bolts & Padlock and not to allow it be be raised until a heavy fall of rain to supply the Canal. 10 Punts loaded & taken out. Mr Milne agreed to pay Tug Co 2/ pr Punt.

## Friday 29

Colvin's men at the Sluice excavate to the bottom of the sluice, stopt a consider portion of the leak. Ordered a Bolt & Padlock to be put on the working Gear to prevent the Sluice being raised until we have a supply of water to keep the reach up to the hight. 10 Punts loaded & taken out.

# Saturday 30

Colvin's men to excavate the north side of the road to allow the Pipe for conveying the water from the timber basin to Rev<sup>d</sup> J Cochrans dwelling house being laid. 10 Punts loaded & taken out.

# **JULY 1855**

#### Monday 2d July 1855

Colvin's men at the Ditch cutting for the water pipe. 10 Punts loaded & taken out.

#### Tuesday 3d

Son Robt arrived this evening. Forth new S Steamer arrived. 10 Punts loaded & taken out.

## Wednesday 4th

Son Robt went down to the Lighthouse to see the Punts discharged. Colvin's men at the ditch cutting for the pipe. 10 Punts loaded & taken out.

#### Thursday 5 July 1855

Colvin's  $\frac{1}{4}$  day at the ditch, remainder conveying sand for the repairs of the Causway & c. 10 Puts loaded & taken out.

# Friday 6th

Colvin's men at the ditch & c. 18 punts loaded & taken out.

#### Saturday 7th

The two Banksmen cutting the ditch. 10 punts loaded & taken out.

# Monday 9th

The two Banksmen & Mason commenced to lay the Pipes across the west end of the Turnpike road. 10 punts at enterance.

## Tuesday 10th

Men employed as above, 10 Punts.

## Wednesday 11

Men employed as above in consequence of Peter Crotter being required to go to Glasgow to assist in the repairs by the Comp<sup>y</sup> he left after Dinner hour to get the late train. 10 Punts.

### Thursday 12th

We have two Carpenters 3/4 Days each from Mr Adamson assisting at repairs of Punts. 10 Punts.

## Friday 13

4 Carpenters from Mr Adamason. Thunder & Rain. 10 Punts.

#### Saturday 14

4 Carpenters from Mr Adamson at the punts. Two Banksmen at the water pipes. We had great deal of Thunder, Rain to day, which I trust will give a Supply to the Reservoir.

# Monday 16

Colvin & 2 men employed at the water pipe. In consequence of the Springs not rising high enough to fill up the Dock without a supply from the Canal, the **Dredger** was taken out to commence again at the enterance, no work being done since Friday.

# Tuesday 17th

Men employed as above. 10 Punts loaded & taken out.

#### Wednesday 18

Punts loaded in morning, 16 Punts and 18 Punts on evening & discharge 18. Mr Welch.

### Thursday 19 July 1855

Colvin's men at the Drain. 6 Punts taken out & discharged this morning from the enterance.

#### Friday 20

Colvin's men got the Drain tile laid to day and the water let in which appears to run well. 20 Punts towed out and discharged. James McGill grandchild drowned @ 7 PM.

## Saturday 21st

20 Punts discharged.

Colvin'smen filling up where the pipes were taken out and put in.

#### Monday 2

Colvin's men commenced to cut the Drain from the Pit of the weighing machine occupied by the Coal Comp<sup>y</sup> for weigh<sup>g</sup> the Coal. 20 Punts.

## **Thursday 26**

Colvin's men employed as above. 4 extra Carpenters still employed at the Punts. Barque *Liverpool* arrived, grounded on the mud and lay drawing 14½ feet. Wrote Mr Milne to send east the Diving Bell & Helmet to try and git the splace pieces of large Lock examined so as to prevent so much leakage. Found he reach above 16 full and ordered more water to be run to allow the trade to pass there being 16 inches off the reach above G Mouth. 10 Punts.

#### Friday 27th

Ordered the *Dredge Boat* into the Dock and commence to morrow morning. Mr Milne & my Son who stated that the Reservoirs have not increased with all the rain that has fallen lately in the neighbourhood and that every Precaution must be used to save the water. That no water shall be run into the Dock except in passing the trade & c. 10 Punts.

#### Saturday 28th

Colvin's men Cleaning the hedges east from the Pump Engine. The Dredger commenced and filled 10 Punts. The weather continues excessively hot. Tremendous Thunder & lightning this afternoon. 10 Punts discharged.

#### Monday 30 July 1855

Colvin's men dressing hedges. 10 Punts loaded in the Dock.

### **Tuesday 31**

Men employed as above. 20 Punts loaded and discharged being 80 Punts at the ----. Heavy showers today, S. East wind.

# **AUGUST 1855**

#### Wednesday 1st August 1855

Colvin's men wheeling sand to the Causway, and assisting Carpenters to get the Punts on the Slip. Occasional heavy showers. 20 Punts.

#### Thursday 2d

*Liverpool* sailed. Colvin's men assisting mason at Causway and taken the *Campsie* to get loaded outside for the Jutty. Rain<sup>d</sup> very heavy after 7 PM. Punts 20.

### Friday 3d

Colvin's men loading the *Campsie* and discharging at the Jutty. Punts discharged. *Dredge Boat* taken out at the enterance of the Large Lock.

#### Monday 6th

I had a Call from Mr Robt Bennie, proprietor of Underwood, who stated that he has made an arrangement with Messrs Readman and Milne as regards the boundary there accept the cellar in front of the Granary which the Company thinks was intirely built upon their property. I told Mr Benny that I was of same opinion, but at same time I considered from the state the Bank was both narrow & dangerous previous to the wall being built. It is of no consequence whither the Old retaining at the tail of the Slope or the front of the Granary was the boundary. The improvement was such for the benefit

of the Company by the erection being arched over and Causwayed as to entitle the proprietor to hold it in possession in all time coming. Colvin's men at loading the *Campsie*.

#### **Tuesday 7 August 1855**

We have had a continuation of Rain without intermission one day since Saturday 28<sup>th</sup> last month and this day is even worse than any – a complete torrent. Son Robt here to day.

#### Wednesday 8th

This is another of Thunder & Rain, from which the Crops are suffering much, particularly the Barley & potatoes. Colvin's men at loading the *Campsie* with stone for the Jutty.

#### Thursday 4th

Colvin's with the Campsie at the Jutty. Fine day.

# Friday 10<sup>th</sup>

Men employed as above.

# Saturday 11th

Men employed as above. In consequence of having observed one of the Causway stones on the track side of Camelon Bridge having sunk a few inches close to the back tail hatch, I considered it dangerous for horse or other Cattle passing. I therefore ordered that Peter Trotter, Rob<sup>t</sup> Newlands & two Banksmen to come along early on Monday morning to lift the stones and ascertain the cause of the, being sunk. Ordered the *Dredge Boat* into the Dock to come along on Monday morning.

## Monday 13th

I went up to Camelon Bridge early this morning and found the Beam across the Back tail pit intirely rotten and in a very decayed state. We got an Old Gate Splae Piece put in and all put to right before Breakfast time. I am glad it was taken in time, this being the first day of the Falkirk Tryst market. Mr Milne came this evening preparatory to the Survey of the Directors of the Comp<sup>y</sup> which is intended to be here to morrow.

# Tuesday 14

The Directors arrived this forenoon, consisting of Messrs Robt Baird, Robson, Douglas, Hosea, King, Readman, & Milne. Considerable conversation commenced into the propriety of filling up the Cage and also in the event of Putting it in repair at Cost of £800 according to Mr Milnes calculation, and Erect a Lock at the enterance of the Old Harbour, which will cost less than 25 or 30,000 pounds. The Directors considered that would attended with much less expence to take the ground occupied as Gardens and the gas work widen the Junction Cut to the extent required so as to form a Basin to accommodate the Steam vessels which will be required as a greater number is expected to the Port. This suggestion appeard to be the unanimous opinion of the Directors and agreed as the first preliminary step to advise his Lordship on the business and ascertain upon what condition the ground can be got. The next point of their business was to examine the ground on the south side of the Timber Basin on which they propose to erect workmens houses. This they also considered a proper site for the purpose. Mr Robson proposed that the houses should be placed on the Road, and place a new road on the south side of the boundary which the Company require for the houses, and that Mr Dickson should be consulted as to the Price of the ground & c. The Directors then walked along the road and down to the Grange burn, from thence to Grangemouth, Dined in Mr Wallace, where there was a very friendly meeting. Parted at half past five PM. Son Robt came shortly after Gentlemen went away.

#### Monday 15th

Peter Trotter & Thos Gdner assisting the Companys men at Bainsford. Calvin's men at the Jutty, *Dredge Boat* in the Dock. Since Monday the weather continue most favourable for the Crops.

# Thursday 16

Men Employed as above. Weather fine.

#### Friday 17

Men employed as above.

#### Saturday 18

Men employed as above. No work with *Dredge Boat* today.

# Monday 20th

Men employed as above.

#### **Tuesday 21**

Men employed as above.

## Wednesday 22 & Thursday 23

Men employed. The weather continue most favourable for the Country.

#### Thursday 23d August 1855

Colvin's men at the Jutty and Carting sand to the Causway. Son Robert came last night, went out to No. 16 then Pt Dundas. Carpenters finished with the repairs of 16 Bridge lightning a --- of the Lock Gates & proceeded east. Received a letter to meet Mr Readman & Milne at Castlecarrie tomorrow at one PM.

#### Friday 24th

Hired a Dog Cart from Wallace, went west with Mr Salvesen to git the privilege to open the sluice to get the sludge washed away from the Dry Dock Gates so as to allow his vessel to get out of the Dock. Met Messrs Readman and Milne with Robt Newlands & James Stein. After considerable conversation it appeared they came to an agreement as the Sack Celler in front of the malt Barn, that the Comp<sup>y</sup> retain the Surface of the Bank and that Mr Robt Bennie is to retain possession of the Cellars in all time coming.

#### Saturday 25

Mr Milne was busy to day taken the depth of the Dock wall and the Bridge Dock Sill to day. Heavy showers.

#### Monday 27th

Colvin's men at the Jutty and Carting Clay to form a dam at the Sea Lock, it being our intention to morrow to run off the Basin to tighten the Uper Gates and Put in the sluice on the north side which has been closed up for some time.

# Tuesday 28th

Carpenters & Colvin's men employed at the Basin & tightening the Upper gates and a new sluice. I find the mud in the Basin has accumulate on an average to the height of  $3^{4}/_{12}$  feet which is at the rate of [blank]. The Carpenters got the leather and Gates made pretty tight, but did not do anything to the north side Tunnel sluice and is prepair<sup>g</sup> the materials for to morrow.

## Wednesday 29th

Colvin's men at the Jutty. The Carpenters employed at the two sluices from the Basin. The leather put on the Upper Gate was found to thin and it will be necessary in order to prevent the leakage to put on thicker leather tomorrow.

#### Thursday 30 August 1855

Men employed sludging mud from the large Lock enterance. Carpenters at No 1 Gates and the two Tunnel sluices. *Dredger* in the Dock. Son Robert ordered the *Ice Breaker* up to Bainsford to commence a Wharf at Castle Laurie.

#### Friday 31st

Colvin's men at the Jutty. Weather continues most favourable.

## **SEPTEMBER 1855**

## Saturday 1st September 1855

Colvin's men at the Jutty with a Cargo ballast. *Dredger* working in the Dock.

#### Monday 3d

Colvin's men taken the *Campsie* with Cargo Ballast for the Jutty. The *Dredger* was taken out the Dock to commence again on the out side of the enterance Buoy.

# Tuesday 4th

Men employed as above. The *Dredger* Commenced near the enterance Buoys yesterday afternoon tide.

#### Wednesday 5th

Colvin's men conveying sand for repair of the Causway.

#### Thursday 6

Mason at Caslte Lawrie & 1 Banksman. Banskmen loading the Campsie.

## Friday 7th

Banksmen at the Jutty & Cleaning hedges.

#### Saturday 8

Men employed as above.

# Monday 10th

The three Banskmen sent west to assist driving the Piles at Castle Lawrie. Colvin dressing Hedges. 1 Boat 55 tons Rubbish for the Jutty.

# Tuesday 11th

Men employed as above. The *Dredger* in the Dock.

#### Wednesday 12

Men employed as above.

Last day this week in Dock.

#### Thursday 13

Same.

# Friday 14

Same.

#### Saturday

No work with *Dredge Boat* to day.

# Monday 17 september 1855

Colvin dressing hedges, the other three at Castle Laurie assisting at the Wharf. *Dredge Boat* out again to the entereance. 4 Punts taken out of the Dock ---.

## Tuesday 18th

Men employed as above. **Dredge** outside, but the **Tug** was not be got in consequence of some damage.

#### Wednesday 19

Men employed as above. The Large Lock men commenced this day to ascertain what progress the **Dredge** has made in the Dock after removing 380 punt load. The depth upon the Sill being  $19^{-7}/_{12}$  feet when we took the soundings on the east space 25 dry 150, and north from south line of the Jutty, and when we commenced after Dinner to the south side 300 by 200 feet the depth on the sill was 19 feet 9 Inches.

# Thursday 20th

Went to No 16 to ascertain the cause of the bridge being unshipt – am informed at 12 o'clock one of the Carron Co Lighters was going through to the Lock, the men allowed the Bridge to come down too soon and catched one of the timber heads which unshipt the gate, but having got Robt Newlands with the assistance of the men in the Lighter got it replaced in two hours without farther detention.

#### Friday 21

Mr Milne having come here yesterday and my Grandson come here this morning, they were engaged all day taken the levels or dementions of the Ground proposed to be taken in to give greater accommodation to the trade.

#### Saturday 22

Colvin & men taken two Punts up to Castle Lawrie to remove part of the Slope for the new Wharf. Mr Milne & Grandson got finished with their survey this afternoon.

## Monday 24

The *Dredge Boat* commenced this morning again in the Dock. Colvin's men employed at Castle Lawrie.

#### **Tuesday 25 September 1855**

Colvin & men at Castle Lawrie. *Dredge Boat* in the Dock. Ordered two Punts & the *Campsie* Bank Boat which is loaded and to get the Puntsmen and Dredge Boatmen with Clats to scour away the mud when we run of the water to morrow morning.

#### Wednesday 26h

We had all hands employed to day sludging out the mud from the enterance at the large Lock, particularly with the view of removing the mud which still remains at the south east turn near the Buoy. We no doubt got a considerable quantity sweept away, but not having any more than the *Campsie* and two punts to sent the run in the proper direction, we did not make the progress expected.

#### Thursday 27

We had another scooping out the south upper Reech of the Large Lock. We got nothing done to the Roller recess in consequence of not having a Person to go down with the Helmet. Mr Readman was here to attend a meeting of Stent Masters regarding the Claim made on what is called Buchan stent. Mr Readman thinks the best and moderate expense to enlarge the commodation will be to convert the Timber basin in a Wet Dock.

## OCTOBER 1855

# Monday 1st October 1855

Men employed in re-opening out the north upper recess of the large Lock.

#### Tuesday 2d

Colvin's men at the Jutty and assisting to get the Chains on the Upper Gates hung.

#### Wednesday 3

Colvin's men at the Jutty. Port Dundas Carpenters brought east the Diving Bell for the Purpose of examining and clearing out the large lock sill and three logs Timber with two *Ice breakers* to lift the front piles in the Cage made fast to one and we will see what effect the will have with the tide in raising them with the view of having the Cage filled up.

## Thursday 4th October 1855

We made a sounding in Carron River yesterday opposite the Lighthouse & outer beacon to the enterance of the Old Harbour about low water when there was about 8 feet depth at the large Lock enterance. Found 12 feet opposite the Lighthouse 12/4 at the Beacon, 9-9 next, 9.6 next, 9-6 next, 10-6 next, 10 next to G Burn, 8-6 toward didy upwards 8+8-6+8+7-9+0 Old Harbour 7-6, but as the wind was rather high and not having a person to watch the rise or receding of the tide we did not get the depth accurately taken and it will be necessary to a section every 100 feet to get it properly done & person to watch the tide. I tried one pile in the Cage the breakers and a heavy lever being made fast at low water, but when the tide rose it had no effect in starting the pile. Mr Milne & son Rob<sup>t</sup> here to day.

# Friday 5th

One Pile pull<sup>d</sup> up 33 feet long. Colvin's men at jutty & repairing fences.

### Saturday 6

Another pile taken up 34 feet long. Mr Milne was here to day, ordered Colvin's men up to Castle Lawrie to assist in loading the Punts which was sent up to day to take out the slope in front of the new Wharf at Castle Laurie.

# Monday 8th

Colvin's men discharging the Punts taken out of the slope at Castle Laurie.

#### **Tuesday 9**

Colvin's men ½ day discharging the Punts, other half getting the Punts and *Campsie* Bank Boat taken to the old Burn to be ready to morrow morning to sludge out the Old harbour. Was informed that one of Carron Companys lighters carried away the North lower gate of Lock 5. Fortunately the Men was here and my Robert was at Castle Laurie at the time. Sent west the Cran boat from and the other crane boat being at Tophill where there is two old gates, which was patched and luckly one will likely do until a new set is made.

#### Wednesday 10

The Old Gates was shipt by 5 o'clock this morning and trade allowed to pass, but had to be unshipt again there being plank on the metre which was taken off at Widely the Gate being rather long. We had tides sludging in the Old Harbour from which a great quantity of mud was swept away. But it will take three or four Spring tides to clear out the great accumulation.

## Thursday 11 October 1855

We had another good tide work to day.

#### Friday 12th

Men employed as above. The west Carpenter with our own at the South recess with the Diving Bell and I was glad to observe they got all the rubbish taken which will allow Gate to come Close back.

# Saturday 13th

Men employed sludging out the Old harbour. Puntsmen was employed in assisting during 4 Days Past we have got a great quantity of mud swept away but we must commence again next Spring if the weather is favourable.

#### Monday 15

The lever of the flood gates brock at the same place & three different Parts. All hands employed in sludging out the mud from the Outer flood Gates and the Wester Carpenters with the Diving Bell examining the Upper sill of the Gates next the Dock, and was surprised at the Rubbish they brought up among other things the Corner of one of the Steam Boats propellers which must have brock off in going out of the Lock. This has made the gates quite tight.

# **Tuesday 16**

Men employed with the Diving Bell at the Middle Gates and trust will have the same effect as upon the Upper.

# Wednesday 17

The men so soon as the tide ebbs will commence with the Diving Bell to examine the outer Gates sills, found a great quantity of Rubbish. I have ordered Mr Cowie to git his Smith to commence to the flood Gate lever. He will require to get a piece Iron from Carron of the size required.

#### **Thursday 18**

Colvin's men assisting the Carpenters in taken and removing materials from the wester Breaker.

# Friday 19th October 1855

Colvin's men employed in removing the Wheeling Plank from Carron Banks & at the Railing round the Cage.

## Saturday 20

Colvin's men employed at the Cage. Mr Milne was here yesterday and gave orders for the Piles in the Cage to be pull<sup>d</sup> up by the Cart men.

#### Monday 22

Colvin's men loading the *Campsie* with stones & Gravel to be ready to have it placed when we commence to run the water to sludge out the mud from the Old Harbour on Wednesday morning.

#### Tuesday 23d

Colvin's men employed conveying Gravel for a foot path along east side of the Cage, at Lock No 1 and, placing the Campsie, *Ice Boat*, *Cart Boat*, & Punts for sludging the mud from the Old Harbour.

# Wednesday 24th

All hands to day sludging mud from old Harbour. Strong Gale and heavy showers for part of the.

## Thursday 25th

This is another very course unfavourable day. We had however an excellent tides work and got a great quantity of mud sludged out of the Old Harbour.

#### Friday 26

The weather continues very boisterous and heavy fall of rain and I am afraid from the Carron being so much flooded we will not git so much done this tide as I could wish. I am glad however that we have sludged a much greater quantity away than I expected. Very heavy showers continue.

#### Saturday 27

Hard frost this morning. Commenced sludging.

## Monday 29th

Another days sludging but the tide did not take off so well as Saturday.

### Tuesday 30th

Colvin's men removing the Punts & c and repairing the Bridge at the Grange burn. A vendor shoal of fish have covered both nets.

## Wednesday 31st

Colvin's men at Carron River Banks. Hundred of People carring the fish.

# **NOVEMBER 1855**

## Thursday 1st November 1855

Colvin's men dressing Hedges.

#### Friday 2d

The whole people for several miles round have gine done the Banks to catch the fish.

## Saturday 3rd

Colvin's men dressing hedges.

# Monday 5th

Colvin's men at hedges and placing the two *ice Breakers* to remove the Piles in the Cage. Mr Mcleod Son Robt was here, went down the Bank and was astonished to find the destruction by the people in catching the fish having tore up the the greater part of the stone.

## Tuesday 6

Colvin's men & Carpenters employed at the Cage. Drew one Pile during the night and one longitudinal stringer. Went down to the Outer Beacon and I must say that never was there such destruction wantonly committed from the 300 yards this side the outer beackon. The whole of the stones have been literally lifted and removed on Friday. Mr Milne went down both Banks of the Carron and complains very severely that I should allowed such destruction to the bank without using my influence to put a stop to it. That being the fast day, I had no idea that it would have entered into the head of any to commit such a mischief.

## Wednesday 7th

Colvin's men at the north bank & Dressing Hedges.

# Thursday 8th

Colvin's men at the Cage and mooring the Scow & Cart Boat & Punts, to be ready to sludge the mud from the Harbour.

#### Friday 9

We had good tides work to day.

# Saturday 10th

We had another tide to day, but was considerably retarded in consequence of two Rafts timber come in the harbour and grounded in the centre of the Harbour. However, after got the Punts past we got a considerable --- swept away.

#### Saturday 10 November 1855

Carpenters removing the Piles. Colvin's men and the Punt men at the Old Harbour sludging out the mud.

## Monday 12

Men employed as above.

#### Tuesday 13

Colvin's men at the north Carron Bank. Carpenters at the Piles removing & c.

#### Wednesday 14

Having received information of several Casks of Alum having roll<sup>d</sup> off the Deck of the Small Iron lighter belonging to the Comp<sup>y</sup> in hire by Widow Gillespie at Works, went west from Lock 16 at 12 o'clock last night. I got up and got Colvin's men & John Spence and ordered the Crane Boat out the Cage to proceed west, but unfortunately there was not a horse to proceed west. I therefore got a Gig from Mr Wallace and proceeded west with John Spence to No 16 where we was informed that 17 Casks about 10 cwt each was in the bottom of the Canal. I therefore commenced with Boathooks and one of the Companys Punt and by the time the Crane Boat arrived the whole of the 17 Casks were brought up the slope level with the water and had them landed on the Boat by 12 hours.

## Thursday 15

Colvin's men employed removing the Lime & c arrived for the house to be erected for the Dock Bridge Keeper.

# Friday 16 Nov<sup>r</sup> 1855

Colvin's men with *Campsie* at the Brickfield for a Cargo brick for the Bridge Keepers house. Mr Milne was here and the mason laying of the ground for the house.

# Saturday 17th

Colvin's men discharging the Brick & c.

## Monday 19th

Colvin's men discharging the Brick, that & other men commenced this day to the Dock Bridge house. More arrivals to day, chiefly timber loaded & the *Hampton* from Quebec with timber.

#### Tuesday 20th

Colvin's men up for another Cargo brick. Trotter and others at the Bridge Keepers house.

# Wednesday 21

Men employed as above.

#### Thursday 22d

Men employed as above.

#### Friday 23d

Colvin's removing the large beacon Stones at the north side of the Large Lock to give room for Battens.

# Saturday 24th

Colvin's men as above. Men at the Bridge house. The *Helen* of Glasgow damaged enterance of Lock No 1.

#### Monday 26th

We have moderate calm, frosty weather since Friday. Since last night and this morning is much more severe and ice upon the Dock. Masons at the Bridge house Prevented from the frost till after breakfast. Colvin's men discharging the remainder of the Brick. Charged 10/ from master of a foreign Schooner damage at basket Point.

## Tuesday 27th

This day the frost continues. Sent the *Ice breaker* west to Port Dundas for the purpose of being repaired. The *Helen* of Glasgow Damaged the enterance of Lock No 1 on Saturday. Colvin's men discharging the brick and assisting at the Piles.

#### Wednesday 28

The frost continue severe.

## Thursday 29 Nov<sup>r</sup> 1855

Colvin's men & Mason commenced to the excavation for repairs of the South Tunnel between the Basin & Old harbour.

# Friday 30th

Colvin's men Newton & Trotters at the above. Frost continue.

# **DECEMBER 1855**

## Saturday 1st December 1855

Colvin's men employed at the above. Appearance of a Change.

# Monday 3rd

Change, rains heavy this morning.

#### Tuesday 4th

Colvin's men & Mason employed at the Excavation expected to have got the earth all clear to get the Tunnel repair but the tides being so high at ebb, the men could not get the Stones replaced. In Place of the Cover being injured I find the – is one of the side stone which is lying across the Tunnel in this form [illus].

#### Wednesday 5th

We got little done this morning and commenced afternoon tide and got all properly put to right after a great deal of trouble with the excavation. Moderate frost.

### Thursday 6th

Colvin's men and mason filling up the excavation and building the air tunnel.

#### Friday 7

Men employed as above. Frost continue moderate.

# Saturday 8

Commenced this morning to sludge out the Old Harbour but did not get such a good job as I expected from the tide not take off so low as usual. Fall of snow & frost.

## Monday 10th

The frost has continued most severe since yesterday. Ordered the *Ice Breaker* to be taken out of the Cage at 2 o'clock this morning same the tide and started with 4 horse at 8 o'clock. The ice is 1 Inch thick. Arrived at Kelvin head at 4 PM.

# Tuesday 11th December 1855

The *Breaker* started from Kelvin head at half past 7 this morning and arrived here at half past 3 PM. The frost continues but not so severe as yesterday.

# Wednesday 12th

The frost moderate during the night but it became more intense after day light. The *Breaker* started at half past 8 o'clock with 4 horse. Mr Milne was here to day, ordered James Colvin to git the Room which Robert Mercer occupied. Met Mr James Robertson respecting the Smiths Shop which Mr Readman promised as a Stable. Mr Milne mentioned that it would be unconvenient not only if any thing serious was to take place with the works, and wished he would take the store next my office which could be fit up at very little expense. Mr Robertson could not think of that as he had applied to Earl of Zetland to have the whole removed which he agreed to, but as he did not wish to put the Company to any inconvenience he would not insist upon the Smiths Shop at present and perhaps the Company in few months would provide a Stable more convenient for his purpose.

#### Thursday 13th

The frost was very severe during the night, but towards afternoon there was appearance of a Change. *Breaker* started from Windford at 8 PM and arrived at the Dock Bridge at 4 AM with 6 Horse.

## Friday 14th

We have a Complete Change, strong gales & West wind. Ground thaw does not think it will be necessary to start the *Breaker* this morning. Men breaking up the Dock.

#### Saturday 15th

This is one of the best thaws that I recollect of mild and without rain. Colvin's men breaking up the timber Basin.

#### Monday 17 December 1855

We have another Change of weather, very foggy with frost and where the Ice in the Basins were not brock it is freezed again, and as timber merchants are anxious to get the rafts into the Bonded Basin, if the frost continue we will have to break it by hand to morrow with tools.

# Tuesday 18th

Wind S East cold but no frost. Colvin's men at the Bonded Basin breaking the ice to allow the timber floating in the Canal to be taken in. Lower Gate No 11 requires to be replaced.

## Wednesday 19th

Wind continue from the S East. We have a number of arrivals yesterday. Men employed as above. The frost appears to set in again.

# Thursday 20th

Colvin's men at the hedges west from Dalgrean. Frost more severe. Wrote Mr Milne that it was my intention to start the *Ice Breaker* from here to morrow morning.

#### Friday 21st

The frost continued to be more intense than ever. Started the *Breaker* from the Dock Bridge at 8 AM but was much retarded from the floats of timber opposite Canal Street where thirteen vessels is to follow the *Breaker*. During the whole time I have been connected with the Canal I never witnessed such an accumulation of Ice in so short a period. The strong easterly wind forced the broken Ice into the Locks and so being several Billy boys, it was almost impracticable and five vessels got no father than Mungle Bog.

### Saturday 22d

The frost continues most severe. I understand there has been no work between Underwood & Windford. The *Breaker* started from Windford at 7 AM and arrived at the Dock Bridge at 9 PM. The night looks like a Change.

#### Sunday 23

We had a fall of snow during the night. Wind S West and a gentle thaw.

#### Monday 24th December 1855

Since last night the thaw continues with a strong gale S West wind. Started the *Breaker* at 7 AM from Dock Bridge with 5 horse. Men employed in breaking ice on the Dock. Mr Milne was here who is very anxious to have the vessel west, and the Ice Brock up. I told him orders were given if the thaw continues for the *Breaker* to break up the sides on coming east.

### Tuesday 25th

The Wind continued strong from S West and Complete thaw. The Ice is greatly dissolved to day. The Breaker arrived at Windford at [blank] PM, returned to No 16 last night at 9 PM with 5 Horse, and started from No 16 this morning at 9 AM. Arrived here with 2 Horse at 2 PM.

#### Wednesday 26th

The wind continues strong from S West with rain. Colvin's men dressing hedges.

#### Thursday 27th

Weather continues the same. Colvin's at the necessary and breaking Ice with Lock Keepers in Timber Basin.

#### Friday 28

It is calm & foggy to day. Men employed as above at Bonded Basin.

#### Saturday 29

Colvin's men at the Bonded Basin. We have now a Complete thaw.

## Monday 31st

Colvin's men dressing Hedges west from Dalgrean Bridge.

# 1856

# **JANUARY 1856**

#### Tuesday 1st January 1856

A calm favourable day. Colvin's men at the hedges.

# Wednesday 2d & Thursday 3d

Men employed as above.

#### Friday 4<sup>th</sup> January 1856

The material arrived by the *Wester Breaker* for the new Bridge here. Son Robt here to day. Men employed in discharging the material. Put the Pilling Machine on board the *Wester Breaker* which started this afternoon with the Diving Bell to examine the pipe which conveys the Water to Camelon house considered to be Cut by the *Dredge Boat* working. The Tenants, Messrs Fularton, having complained very much to day of being deprived of the water so long. My Son, Robert, went to 16 this morning to see and got the pipe put rights.

# Saturday 5th

My Son Robert went to 16 this morning to get the Pipe examined by the Diving bell. Men employed removing the Piles & c which was taken out of the Cage. Clerk pay<sup>g</sup> men wages.

#### Monday 7

Colvin's men levelling up at Lock 1 where the Tunnel was repaired. Banksmen taken up the *Ice Breaker* with the Pilling machine and Rim of the Janker Wheel to be repaired at Old Basin omitted to be sent with *West Crane Boat* lying at No 16 endeavouring to repair the Pipe under the Canal with the Driving Bell.

## Tuesday 8th

Colvin's men at the Hedge west from Dalgreen. Carpenters removing the Piles from the Cage.

# Wednesday 9th

As the Tides are now favourable for sludging the mud from the Old Harbour I ordered Alex<sup>r</sup> Muir to go to Windford and inform the Lock Keeper there that we intend to run water tomorrow, Monday & Saturday mornings if the weather continue favourable. Colvin's men assisting at the Piles and prepair<sup>g</sup> for running the water to morrow.

# Thursday 10th

All hands employed sludging mud from the Old Harbour and got a good tides work, but as there is every appearance of frost I have ordered Alex<sup>r</sup> Muir west to inform the Windford Lock Keeper that we are not to run water tomorrow & Saturday.

#### Friday 11 January 1856

The frost was that severe this morning that we were under the necessity to start the *Breaker* with two horse. Mr Milne arrived a little after 9 o'clock, gave us orders to inform Alex Bell to put the slope of the Bank at the tail of Lock 4 in same state it was in formerly. To employ a Gas fitter to have the Large Lamp placed at the east end of the Large Lock in such a position as may be Pointed out by the Captains of the Steam vessels. *Ice Breaker* arrived.

#### Saturday 12

The frost continues most severe. *Ice Breaker* left Wford at 7 AM, arrived at Gmouth @ 3 PM with 4 Horse. Thos Cirden Broken leg.

# Monday 14th

The frost continues moderate. The Breaker started from the Dock Bridge at 7 AM with 4 horse. Colvin pruning hedges.

## Tuesday 15

The frost continues moderate. *Ice Breaker* left Windford at 7 AM, arrived here at 2 PM with 4 horse. Very like a Change.

# Wednesday 16

Fresh during the night, frost this morning. Started *Ice Breaker* at 7 AM with 4 horse. This day is quite calm and appearance of a Change.

## **Thursday 17**

This morning calm with rain and trust it will continue. The *Ice Breaker* left Windford at 7 AM and arrived here at 4 PM with only 2 Horse. It will not be necessary to start the *Breaker* to morrow if the thaw continues.

#### Friday 18

Received a letter from Mr Milne regarding the *Ice Breaker* to be sent west, but found it will do no good as the trade is proceeding west without any interruption. Heavy shower rain.

# Saturday 19

Continues to rain, wind N East. The Canal is Completely jambed up with floating timber at Dalgrean Bridge & Lock 3. Ordered the men to go west and get ropes & steeples from the Porters to get the logs tied up to the slopes.

# Monday 21 January 1856

It rained from Saturday to yesterday afternoon, to day frost, wind N East. Colvin's men dressing hedges between Lock 3 and 4.

#### Tuesday 22d

Frost very intense this morning. Wrote Mr Milne if it continues as severe till to morrow we will be under the necessity to start the *Breaker*. Met my Son Robert at Lock 13, came here and as it appears there will be change resolved not to start the *Breaker* to morrow. Colvin's men at the Hedges, one additional.

#### Wednesday 23

Wind S East snow this morning, the frost is not so severe this morning although men belonging to two lighters wish the *Breaker* to proceed west. I stated it was arranged not to start till Friday even although the frost continue, which is not likely at present.

#### **Thursday 24**

We have had a great fall rain since last night and it is very foggy this morning. Men at the Hedges.

#### Friday 25

Mr Milne was here to day, agreed to the lamps being placed in the direction proposed – namely the large lamp at the end of the building east from the large Lock, and the one at the south end of the large Lock to be removed as far east as to bring the two lamp in a line for vessels to take the turn from the River to the enterance of the Lock. To have as many of the Piles taken out of the Cage as possible so soon as the west Crane Boat is got for that purpose and to take the first opportunity of sludging out the Old Harbour. Colvin's men breaking Ice in Timber Basin.

## Saturday 26th

Colvin's men Breaking ice on the Cage. Find the sluice at Mr Adamsons 5/5 above the level of the Water at Lock 2 and 2 ½ Inch above the level of the Junction Lock.

#### Monday 28

Colvin at the Hedges.

#### **Tuesday 29**

Colvin's men as above. Hard frost to day and likely to continue. Carpenter Cutting the old Piles to taken out of the Cage to be sent to Bowling.

#### Wednesday 30 Jany 1856

Colvin's men at the Hedges. Frost continues severe.

## Thursday 31st

Colvin & Lock Keepers removing the Old Plank from the Cage to the *Breaker* to send to Bowling. Sizes 12+22 \_ 12+ 8 11+16 10+12, say 710 sup. feet.

# FEBRUARY 1856

## Friday 1t February 1856

The frost still continuing severe. The *Ice Breaker* started this morning at 7 AM with 4 horse. 1 man dressing hedges.

# Saturday 2d

Colvin's men at the hedges. The Breaker started from Windford at 7 AM and arrived here at 2 AM with two horse. Mr James Potters Scow sunk in the Dock this morning nearly loaded with Coal from another vessel. Ordered Mr Potters foreman to get 2 Scows and two small logs say 40 feet long each and take them, one on each side of the sunk Scow, and I will give orders to our men to be in readiness to assist on Monday morning.

# Monday 4th

The two Lighters with 2 logs Red Pine was placed on each side of Mr Potters Scow this day ready for the Water to run off the Dock to morrow morning.

## Tuesday 5th

We got the Chains under the Scow and by 1 o'clock floated her and the two Lighters out through the Dock and at 6 PM after getting Clear of the two Lighters brought the *Campsie* along side and commenced to discharge the Coals into the *Campsie* which was done, and both taken into the Dock again with the tide by 12 o'clock PM.

#### Wednesday 6

Mr A Cowies Tin Smith got the large Lamp put up on the South building at the enterance of the large Lock, but I am afraid the red panes will not give the light expected. This is one of the highest tides for a long time past. Colvin's men at the ground for dressing the other lamp. A complete Hurricane.

## Thursday 7th February 1856

We have one of the most awful nights and this morning we have had for many years. It commenced about 7 o'clock, wind S East and checked round to S. West. A Complete hurricane. Two vessels brock from their moorings in the Dock and two in the Junction. Fortunate the Chain was across at the large Lock and the *Campsie* got across at the Bridge or the damage might have proved fearful. The Banks have suffered and the Large open Lock 16 caused the water to flow over the north side of Lock 15, the building being 6 inch lower than the south side which have caused considerable damage to Mr Peter Simpsons Chymical works. Colvin's men pump<sup>g</sup> the *Old Cart Boat*.

#### Friday 8

Colvin's men at Hedges and discharging the coal out of the Campsie into one of Mr Robertsons Scows.

## Saturday 9th

Colvin's men dressing hedges. Messrs Readman & Milne is here to day, informed me that he had examined the Damage at Mr Simpsons Chymical work and ordered all the Banksmen to commence and git the stuff removed and Put to rights on Monday first.

#### Monday 11

Colvin's men at Peter Simpsons Works. This a foggy day, Calm.

# Tuesday 12

Wind S. East, disagreeable day, heavy fall rain. Men employed as above.

### Wednesday 13th

Men employed as above. This day is more moderate, rain continue.

# **Thursday 14**

Wind S. East, the rain continue to fall heavy. Men employed as above. Small Boat repaired at Old Basin came down, sunk in Old Basin. Ordered it to be taken down by the Carpenters and halled up. The Causway on North side of Dock having sunk and the Surface water lying in pools, order P. Trotter to raise part of the causeway so as to get the water drained off.

# Friday 15 February 1851

This is a moderate day rain still continues occasionally. Colvin's men and Mason clearing the drains on the N. West side of the Dock which was chocked up. Causway lifted, part of the drain built of flags & Drain tiles.

### Saturday 16

Colvin's men & mason at the Drain N West side of the Dock. Peter Simpson died.

#### Monday 18

Wind N. West, very Cold. Colvin's at N East side of the Dock and south side. Mr Milne was here to day & marked off the site for Messrs D Robertsons Shed for the *Hamburgh* S Steamer which is expected here next week.

#### **Tuesday 19**

Men employed as above.

#### Wednesday 20th

Men employed as above and prepairing to sludge the Old Harbour.

#### Thursday 21

All hands employed as above. Mr Milne and another gentleman was here to day with a Plan of houses intended to be erected South from Timber Basin.

#### Saturday 23rd

Men employed as above Sludging out the Old Harbour, a good tides work.

## Monday 25

Men employed in raising and removing sunk punts in the Timber Basin.

# Tuesday 26th

Colvin's men west with the *Campsie* Bank Boat to assist the Banks men to load a Cargo Ashes at the Camelon foundry for the Bank and mason at the Lamp Stones. Son Robt here to day.

#### Wednesday 27

Men employed as above. Fine weather.

#### Thursday 28th

Men employed as above. Received a Tracing from Mr Milne of the works at Grangemouth.

## Friday 29 February 1856

Colvin's men at the canal Banks. Carpenters at Junction Lock. The weather calm & favourable.

# **MARCH 1856**

#### Saturday 1st March 1856

Colvin's men employed as above.

#### Monday 3d

The weather continues most favourable for the country. Colvin's men at the Canal banks.

### **Tuesday 4**

Received a letter from my Son Robert stating that the *Crane boat* is to be at Tophill and Lock 5 for the purpose of shipp<sup>g</sup> a gate and to have the men there to assist.

# Wednesday 5th

Colvin's men and others assisting at the Canal Locks.

#### Thursday 6th

Weather continues most favourable. Men employed as above.

#### Friday 7th

All hands employed in sludging mud from the Large Lock enterance and taken the *Campsie* from Lock 14 & *Wester Crane Boat* from Lock 8 to G Mouth. We got a very good tides work done to day.

### Saturday 8th

All hands employed as above. Very good tides work.

#### Monday 10<sup>th</sup>

All hands as above, another good tides work. Weather fine in morning, frost.

# **Tuesday 11**

Colvin's men loading *Campsie* with Stones & gravel for the Jutty and Tradesmen commenced to furnish the Bridge house. Carpenters at Bonded Basin.

#### Wednesday 12

Colvin's men discharging *Campsie* at the Jutty. Carpenters at Bonded Basin.

## Thursday 15th

Colvin's men assisting the mason conveying sand. Carpenters at the Bonded Basin & c.

#### Friday 14 March 1856

Colvin's assisting the mason and putting sand in the Causway. Mr Milne was here to day, seems anxious to have arrangements made from the Wharf wall in the Proposed new improvements for the Tunnel to the Old Harbour. Mr P Feely seem to think if the Tunnel is Placed within forty feet of the front of Mr James Robertson House that it will endanger the house. I am not of that opinion provided proper care is taken with the excavation.

#### Saturday 15th

The weather continues most desperate Cold, wind strong from S. East with rain. Colvin's men at the Causway and fence south from Large Locks.

# Tuesday 18th

Colvin's men at the Fence south from the Dock & discharging the *Campsie* at the Jutty. The wind continues in the East but not as desperately cold.

#### Wednesday 19

Colvin's men at the fence and loading the Campsie. Employed Wm Williamson in Place of Wn Taylor.

#### Thursday 20

Colvin's men taken the *Campsie* and punts round to the Old Harbour to be ready to sludge out the mud tomorrow.

#### Friday 21st

All hands sludging out Old Harbour, good tides work. Mr Milne and Grandchild was here to day surveying.

## Saturday 22d

R. Newlands at Camelon Bridge supporting it with Boat Carr---. We had another good tides work but was afraid of continuing the run owing the weather being so dry.

## Monday 24

Colvin's men employed in dressing hedges Carron River.

#### **Tuesday 25**

Men employed as above. R. Newlands at Camelon Bridge supporting it with boats.

# Wednesday 26

Wind still continues from the East, exceptionally cold. Men at the Jutty.

#### Thursday 27 March 1856

The weather still continues excessively cold in the morning, hot after breakfast. Colvin's men loading the *Campsie*.

### Friday 28

Men taken the soundings of the Dock but did not get much of it taken owing to the number of vessels in the Dock. *Campsie* discharging. Severe frost during the night, wind still continues from the East.

## Saturday 29th

Colvin's men loading the *Campsie*. This day is much more, moderate an like a Change.

## Monday 31st

Hard frost during the night, warm sunshine during the day. Colvin's men at Dressing hedges & discharging the *Campsie* at the Jutty.

#### **APRIL 1856**

#### Tuesday 1st April 1856

Colvin's men employed at the Jutty & Placing mooring Polls east from large Lock. Fine mild day.

#### Wednesday 2d

Colvin's men with a Punt taken the Rails from above Lock 3 for the fence south from the Dock & Carron River.

#### Thursday 3

Colvin's men at the Fence south side east from the necessary.

#### Friday 4th

Colvin's men removing *Campsie* & Punts to run off the mud from Large Lock enterance to morrow. Mr Milne here.

#### Saturday 5th

All hands sludging mud from L Lock enterance.

#### Monday 7

Banksmen Cutting or excavating to find the direction of the Tunnel from the timber Basin and emptying into the Cage and found the wood Tunnel 100 feet in length in a Straight line to where we found the ventilators 40 feet from the Corner of J Robertsons house.

#### Tuesday 8th

I was more than surprised when at Breakfast Geo Colvin informed me that Mr Milne was down, and was in a great rage at excavating above the Tunnel so near to where the wood and brick joins, and commenced upon me like a Tiger.

Why I did not excavate the ground where he pointed out to me on Friday. I told him the spot which he pointed out I found there was no Cross tunnel into the wood one, and all that he wanted to know was to ascertain the line of the Present Tunnel to satisfy the Partys who have feued the ground as to the safety of building so near the tunnel. That did not appear to satisfy him, although he must have been convinced he was wrong. All hands employed in sludging mud from Large Lock enterance. Went with Mr Milne to Burnhouse where he showed us the Plan of the intended Railway from Carron to meet the Railway at the turning Bridge over the tail of Lock 9 and discharge the Iron Stone Lighter in the Reach. That must prove, if carried into effect, very detrimental to the trade to have two vessels and a Railway in such a short reach, and as Mr Milne suggested it would be more consistent to have a Basin made intirely for the purpose of the trade to and from Carron.

#### Wednesday 9th April 1856

We have a considerable fall of rain since last night. Wind east and cold. Colvin's men filling up the excavation above the tunnel.

#### Thursday 10th

Colvin's men at the Jutty discharging *Campsie*.

#### Friday 11

Colvin's men fence grange burn.

#### Saturday 12

Colvin's men placing Polls Carron Banks. We had a fine shower of rain during the night with a shift of wind from the N West.

#### Monday 14

We has great hopes of the weather on Saturday that was to have westerly wind and rain with genial sun shine, instead to day wind N. East and very Cold. Colvin at G Burn.

#### **Tuesday 15**

The Wind continues N East & Cold. Colvin's men clearing the Dock Wharfs.

#### Wednesday 16

Colvin's men at the Ballast hill loading the *Campsie*. Loss of *Caste*.

#### Thursday 17

Colvin's men discharging the Campsie from clay.

#### Friday 18 April 1856

Colvin's men removing and loading *Campsie* & Punt prepairing to sludging the mud out of the large Lock to morrow.

#### Saturday 19th

All hands with the **Campsie** and two Punts in the Large Lock sludging out the mud, but the tide not having taken off so much as I expected we did not get a sufficient quantity sludged away. Upon Thursday last when the two Steamers were in the Lock to go out, the *Hamburgh* Steamer stuck in the mud and it was with great difficulty at the top of high water to get the vessel to start.

#### Monday 21st

John Henderson, Borer, from Kilsyth, with his men and Grandson Thomas, arrived this morning to ascertain the depth of the Gravel bed and its thickness. The Commence at the north end of the Carron Comp<sup>y</sup> Smith Shop. Another is to be Put down at the Gas Work, a third at the west extremity of the proposed wall, another near the end of Lord Dundas Harbour wall, and another at the side of the road in the line of the intended Tunnel. George Colvin & men assisting Thomas with the levels. **Liverpool** sailed to day.

Bore No 1 at end of Smiths Shop:

Surface 4 ½	5
Surface rubbish	1.6
Mud & clay	7.9
Gravel	6
Mud	9.3
Mud & clay (a stone six hen egg brought up)	3.6
	22.11
Gravel bed mud & clay	2.6
	25.5
Tuesday 22	
Bore No 2 inside Gas work wall	
The leve pig above the Surface	3.4
Surface 6 inch mud & clay 4 feet	4.6
Black mud	10.2
Mud & clay	3.6
	21.6
	2.4
	24.0

The Horse Barers not having provided tubs to prevent the Bore filling up they cannot proceed through the Gravel Bed Until they are got, which they ought to have brought with them. All hands at sludging at Large Lock enterance & Empty<sup>g</sup> the *Campsie* Scow having sunk outside the Lock.

#### Wednesday 23 April 1856

None of the Borers made their appearance to day. Men employed in consequence of the Dock being so well cleared of vessels taking the soundings in the Docks with 20 feet 3 inches on the sill.

#### Thursday 24th

Mr Milne was here to day. Borers brought a Tub, but it brock and he left with the Buss before they got it repaired. Colvin's men at the fences Grangeburn. A Borers brought a tub but it gave way at the joints before ascertained the depth of the Gravel bed at bore No 1 & No 2 at the Gas Work. A sample of the gravel & Clay from Bore No 1, but got nothing from No 2, the Chisel having gone down between the Stones.

#### Friday 25th

Colvin's men at South Embankment. The four Borers bored down No 3 at the South end of the Railing near the Junction Canal Bridge. The Strata as follows No 3 Bore:

	Pr 19 above the Surface Gravel Mixture mud, clay & stones Black mud Gravel bed Mud & clay	1.2 1. 10.3 8. 2. 2.5 24.10
No 4 sou	th from Mr Robertson New Shed on the Dock Wharf:	
	Pig above the surface	
	Rubbish	1.4
	Mud & clay	7.
	Light mud	13.
	Gravel	1.3
	Mud & clay	1.9
		25.10
Bore No	5	
	Pig above the surface	9 inches
	Rubbish	2 –
	Mud & clay	7
	Dark mud	9
	Mud & clay	4
	Top of the Gravel bed	22.9

#### Grangemouth 26 April 1856

The Borers were here to day, put down No 5 & No 6 see No 5 other side No [blank]. Put down a bore 6 feet near Lord Dundas Old Wharf wall North west end of the Cage but could not proceed for stone & Rubbish.

#### No 6

Pig above the surface	11 inches
Rubbish	1
Mud & clay	7
Light mud	11.6
Mud clay & gravel	2.4
	22.9

Mr Milne was here to day, proved the hight of the Pigs, returned with the Buss, requested the two large Plans made by Mr Black of the Grange burn to be sent west. Colvin's men at East Banks.

#### Monday 28

Colvin's men assisting the mason at the Causway and down the East Bank. The weather continue desperate Cold, wind North.

#### **Tuesday 29**

Colvin's men employed as above. Sent the two Plans of the Old Grange burn made by Mr Black in 1838 to Mr Milne by Railway.

#### **MAY 1856**

#### Wednesday 3d

Colvin's men at the Causway & c. The weather continue most boisterous & Cold wind N East.

[End]

#### **APPENDIX**

**Ashlar** – finely dressed stone, usually rectangular, with squared edges. It can refer to an individual worked stone, or a structure built from such stones.

Auchinstarry – a basin on the south side of the Forth & Clyde Canal near Kilsyth from where whinstone was obtained.

**Ballast** – material used to provide stability to a vessel, particularly if she had no cargo. Without it the vessel would sit too high in the water increasing the possibility of capsizing. Gravel was used as a ballast material because it was heavy, did not move easily in the hold, and was relatively easy to handle. It was dug out of a hill at Rosebank near Lock 11 belonging to Mr Haggart of Bantaskine. Some vessels arrived at Grangemouth with such ballast which had to be removed before cargos such as pig iron were loaded. The material was temporarily placed on an artificial hill adjacent to the dock – the Ballast Hill – for reuse.

**Basket Point** – the pointed spur of land between the Old Harbour and the River Carron where a navigation beacon was kept from an early date.

**Beacon** – navigation beacons on the banks of the River Carron were necessary to guide vessels along the navigable channel across the mudflats of the Forth Estuary. They took the form of stone cairns mounted on top of the north embankment, encasing a vertical pole. They were numbered 1 to 6, starting in the west. The seventh beacon at the end of the embankment was known as the "Seaward Beacon." Latterly these were topped by iron baskets to contain flammable material which could be ignited for guidance at night. In this sense they were similar to the navigation light at Basket Point.

**Building** – a side wall of the canal, basin, harbour or dock.

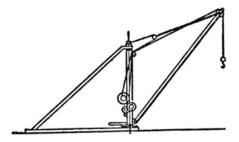
**Contractors** – normally the carpenters and masons were employed directly by the Canal Company, but the labourers undertaking the excavation and removal of vast quantities of earth were under contract. Sections or lots of the work were put out to competitive bids and usually the cheapest accepted if there was sufficient security. Pile driving and the construction of the embankments were also included in this sort of working. The names of some of the contracting firms were:

- George Colville
- Andrew Glen
- David Keir & Co
- Peter Feely & Connel

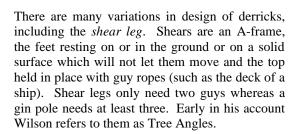
Cyclops – this iron-hulled vessel was built in 1825 at Tophill with a narrow beam for use as a fast passenger boat. She was not a success in this role and was widened and in September 1830 was fitted with a steam engine and a stern paddle wheel by John Neilson of Oakbank Foundry, Glasgow. She was then used to carry goods and passengers between Port Dundas and Alloa. In the late 1830s she was being used as a tug.

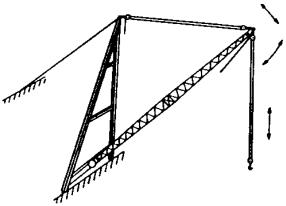
**Dalgrain** – this place name is a compound of dail for meadow and grain meaning gravel (Reid 2009, 65). The presence of gravel in the River Carron meant that this was a crossing place from an early date and in 1804 the Pay Brig was constructed. The Canal Company extracted the gravel from the river bed to use for surfacing paths, etc. Gravel from the river is first mentioned on 8 August 1838 and occurs throughout Wilson's diary.

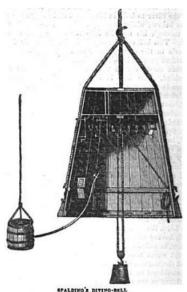
Danders - refuse, clinker, from a smith's fire - slag. It was obtained from one of the local foundries.



**Derrick** – a mechanical lifting device composed of an upright pole supported at the top by guy ropes, and a beam or boom hinged at its base to provide articulation. A load rope with pulleys runs up and over the mast to the end of the boom.







Diving Bell — a rigid chamber used to transport divers from the surface to depth and back in open water to perform underwater work. That used on the Forth and Clyde canal was for working at relatively shallow depths and was an open-bottomed wet bell. On 27 April 1852 the Canal Company had to wait until the tide was low enough to use it in the Dock entrance at Grangemouth. The principle is simple — invert a drinking glass and insert it vertically into a sink filled with water and the air is trapped inside it. In 1689 Denis Papin suggested that pressurised air could be pumped into the diving bell to maintain the air and this was adopted by John Smeaton in 1789. In 1775 Charles Spalding, an Edinburgh confectioner, added a system of balance-weights to ease the raising and lowering of the bell, along with a system of ropes for signalling the crew on the floating crane.

Illus 6: Spalding's Diving Bell, *The Saturday Magazine*, Vol. 14, 1839

By the 1840s the diving bell would have been made of heavy cast iron and by the 1860s had largely been replaced by copper-helmeted divers which were cheaper, more easily deployed, and more versatile.

**Dundas Cut** – the straightening of the River Carron at the expense of Lord Thomas Dundas in 1781 from Dalgrain (west of the Carron Wharf) to Holmerry. The new cut thus ran along the north side of the fledgling town of Grangemouth.

*Experiments at No. 16* – John McNeill, consulting engineer for the Forth and Clyde Canal, supervised a series of trials immediately to the west of Lock No. 16 to use a steam locomotive to pull canal vessels – see Locomotive power applied to canal transit.

Fast day – The Church celebrated specific days in the calendar such as Epiphany, or Revelation, when Jesus was said to have been born, traditionally celebrated on the 6 January. Most churches had fast days around Easter. The Presbyterian church in Scotland could also call for fast days to indicate support for particular causes – such as earthquake victims. On these days the participants reduced rather than abstained from their usual indulgences such as food. Work was not undertaken. Fast days could be called on the national or parish level.

Date of Fast	Day of week	Comments
6 June 1838		
5 June 1839	Wednesday	

Date of Fast	Day of week	Comments
1 November 1843	Wednesday	
23 October 1844	Wednesday	
2 May 1845	Friday	
5 November 1845	Wednesday	
18 April 1846	Tuesday	Switched from Friday 1 May 1846
29 October 1851	Wednesday	
19 November 1852	Friday	
29 April 1853	Friday	
26 April 1854	Wednesday	
1 November 1854	Wednesday	
21 March 1855	Wednesday	
4 May 1855	Friday	
2 November 1855	Friday	

The date was occasionally changed to take into account other local events, such as in April/May 1846 when: "The fast day was intended to have taken place on Friday among the different Congregations in the Parish, but owing the Election of a Member of Parliament which is to take place Friday, the arrangement is completely deranged and one or two of the Congregations have appointed this day – such as the Established Church in Falkirk and the Free Church in Grangemouth."

Grange Burn – the Grange Burn was a large sinuous stream which issued into the River Carron at the point where the Forth and Clyde Canal was terminated. This junction was utilised as a tidal harbour – the burn helping to keep it clear of mud. The Grange Burn mouth gave the town its name. As part of the Improvements it was decided to divert the flow of the water from the Grange Burn and the Almond Pow into a straight artificial channel called the new Grangeburn cut which ran well to the east of the port. This allowed room for the extension of the docks and the town. The course of the old burn was then filled in using dredged material as well as earth dug out of the new wet dock.

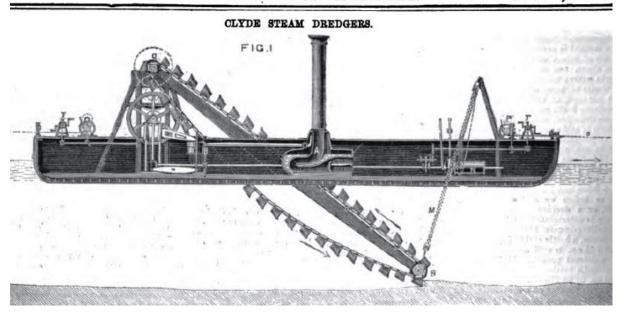
*Gravel* – initially gravel was obtained from dredging the River Carron near Dalgrain (the second element of the place name is derived from "griain" for gravel – Reid 2009, 65). It was used for making concrete for the foundations of the dock walls. As it was not sorted it contained too much sand and so had to be riddled. Gravel was also used to surface the roads. This supply was augmented from the Ballast Hill.

*Hansel Monday* – the first Monday of the New Year (though many places in Scotland refused to adjust the calendar by eleven days in the early eighteenth century) and traditionally gifts were exchanged – the forerunner of Christmas. Games and activities took place, including cock fighting, dog fighting, and badger fighting, which attracted large audiences. It fell into abeyance towards the end of the 19<sup>th</sup> century.

*Hercules* – a bucket dredger for use in the Forth and Clyde Canal and the Harbour and Dock at Grangemouth.

### THE MECHANICS' MAGAZINE.

JULY 21, 1865.



*Ice boat* – this was an old scow which was strengthened at the iron clad prow and provided with additional weight and protection at the water line. When the canal was closed to traffic due to the formation of ice this boat was pulled along it to break up the surface. The number of horses used depended upon the thickness of the ice and additional horses were hired from private firms (usually Alexander Morrison) when required. She had to be wide enough to create a path useable by other barges which often followed in her wake. The ice boat was kept at Tophill but was occasionally used for cargoes of stones and for salvage operations. A second ice boat was held at Port Downie for the western end of the canal.

Date	No. of Horses	Destination
16 January 1843	4	Lock 16
27 February 1844	4	Lock 16
9 December 1844	2	Dalderse Lock
11 December 1844	2	Timber Basin
20 December 1844	-	Bainsford
21 December 1844	3	Bainsford
31 January 1845	4	
1 February 1845	6	Wyndford
5 February 1845	2	Dock & Basin
7 February 1845	4	Wyndford
8 February 1845	2	Wyndford
10 February 1845	2	Wyndford
11 February 1845	4	Lock 16
12 February 1845	4	Lock 16
13 February 1845	=	Lock 16
17 March 1845	6	Tophill
20 February 1851	-	Lock 9
29 November 1851	=	Mungal Bog
1 December 1851	=	-
2 December 1851	=	-
3 December 1851	-	-
24 January 1853	2	Lock 16
12 February 1853	2	Lock 16
14 February 1853	4	Wyndford
15 February 1853	6	Wyndford
16 February 1853	4	Wyndford
17 February 1853	4	Wyndford

Date	No. of Horses	Destination
18 February 1853	4	Wyndford
19 February 1853	6	Wyndford
21 February 1853	6	Wyndford
22 February 1853	6	Wyndford
24 February 1853	5	Wyndford
25 February 1853	4	Mungal Bog
28 February 1853	4	Wyndford
1 March 1853	4	Wyndford
4 March 1853	-	Basin
27 December 1853	8	-
28 December 1853	8	Castlecary
29 December 1853	-	-
30 December 1853	3	Lock 16
2 January 1854	10	-
3 January 1854	5	Dock
4 January 1854	5	Lock 16
5 January 1854	5	Lock 16
6 January 1854	10	Basin
	14	Tophill
7 January 1854	14	Castlecary
9 January 1854	-	Wyndford
10 January 1854	-	Wyndford
11 January 1854	-	Lock 16
12 Janaury 1854	14	Lock 14
13 January 1854	6	Dock/Carron Wharf
14 January 1854	14	Lock 16
17 January 1854	6	Dock
18 January 1854	8	-
19 January 1854	8	Wyndford
20 January 1854	aborted	
29 January 1855	6	Wyndford
30 January 1855	-	Wyndford
31 January 1855	6	Wyndford
1 February 1855	6	Wyndford
3 February 1855	-	Wyndford
6 February 1855	2	- W
7 February 1855	4	Wyndford Wyndford
8 February 1855 9 February 1855	6	Wyndford
10 February 1855	U _	Wyndford
10 February 1855 12 February 1855	8	Wyndford
12 February 1855	8	Wyndford
14 February 1855	8	Wyndford
15 February 1855	8	Wyndford
16 February 1855	-	-
17 February 1855	4	Wyndford
19 February 1855	10	Wyndford
20 February 1855	-	Wyndford
21 February 1855	10	Wyndford
22 February 1855	-	-
23 February 1855	12	-
24 February 1855	12	Wyndford
26 February 1855	12	-
28 February 1855	12	Wyndford
1 March 1855	-	-
2 March 1855	6	Wyndford
10 December 1855	4	Kelvinhead
	<u> </u>	

Date	No. of Horses	Destination
11 December 1855	4	Kelvinhead
12 December 1855	4	Kelvinhead
13 December 1855	6	Wyndford
21 December 1855	-	Mungal Bog
22 December 1855	-	Wyndford
24 December 1855	5	-
25 December 1855	5	Wyndford
18 February 1855	4	Basin
11 January 1856	2	-
12 January 1856	4	Wyndford
14 January 1856	4	-
15 January 1856	4	Wyndford
16 Janaury 1856	4	-
17 January 1856	2	Wyndford
1 February 1856	4	Wyndford
2 February 1856	2	Wyndford

Hand held ice-breaking tools were provided for use in the dock area. These were necessary because if there were many vessels at the wharves it was not possible to use the ice-boat in close proximity.

*Lighter* – a type of flat-bottomed barge used to transfer goods and passengers to and from moored ships. Lighters were traditionally unpowered. They were operated by skilled workers called lightermen.

*Livered or levered* – to deliver something is to take it to a person or place; livering it is to place it in the hands of the delivering vehicle/person.

Lime – limestone was quarried at Charlestown in Fife where is was roasted and was then loaded into a scow at Limekilns. The scows were towed across the Forth by a steam vessel. Hydrated lime was sold in lumps or shells by the bushel measure. Due to various natural inclusions the lime supplied from Charlestown had a hydraulic quality as was pointed out in this advert from the Falkirk Herald of 8 March 1849: "Charlestown Lime – The superior qualities of this Lime are well known,—the Wet Docks at Leith, Dundee, and Grangemouth being built with it. This Lime will stand exposure either above or under water. Price 8d. per Imperial Bushel."

When mixed with water the hydrated lime produced an exothermic reaction and this often led to fires on vessels used to carry it (see Bailey 1992), as occurred with the *Manchester* on 11 November 1839.

*Lord Dundas* – Lord Thomas Dundas inherited Kerse Estate, which included Grangemouth, from his father, Lawrence Dundas, in 1781 and died in 1820. He in turn was succeeded by Lawrence Dundas, the First Earl of Zetland who died in 1839 when Thomas Dundas, the Second Earl took over.

**Lord Dundas Old Boat** – not the **Charlotte Dundas**, one of the earliest steam boats in the world. The **Lord Dundas** was built in 1831 by Fairburn and Lillie in Manchester for the Forth and Clyde Canal Company for use as a passenger boat on the canal. In 1836 she had her engine removed and she was turned into a barrack boat for canal workers.

*Manchester* – built in 1831/32 by Fairburn and Lillie of Manchester for the Forth and Clyde Canal Company with two stern paddle wheels. She ran the goods service between Port Dundas and Stirling until 1837 and was then taken to Grangemouth where she had her engine removed and served as a scow during the construction programme.

*Memel* is the German name for an area on the Baltic coast now in Lithuania, and timber from that region was known as Memel Timber.

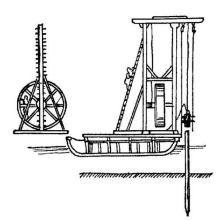
*Netherwood* – an estate near Castlecary owned by the Canal Company.

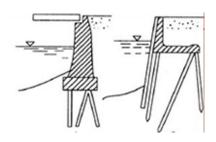
**New Town** – since 1768 the old town of Grangemouth had been developed as a planned settlement between the River Carron and the Forth and Clyde Canal. By 1840 that area was almost fully occupied and so it was intended to place a New Town to the east, separated from the old by the timber basins.

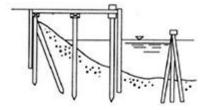
**North Embankment** – the long mound of stone clad earth demarking the north side of the new channel of the River Carron from opposite the Old Harbour to the Outer Beacon.

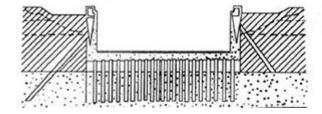
*Pile Engine or Piling Machine* – device use for driving piles into the soft ground. These used a heavy weight situated between vertical guides placed above a pile. The weight was raised by some motive power and was released at its apex, impacting the head of the pile and driving the bottom of the pile into the ground. In May 1838 this was described as "experimental." Given the locations in which it was used, and the ease with which it was transported, this device must have been mountable onto the platform of a vessel.

*Pile foundation* – a kind of deep foundation which uses a slender column of solid material to support the structure and transfer the load to a desired depth either by end bearing or skin friction. In the case of Grangemouth Docks these were wooden logs driven into the soft deposits. They underpinned the "buildings" of the dock walls as well as the embankments along the river and sealing off the old course of the Grange Burn. They were also used to support the earth slopes of the canal banks and wharfs











Pilot's House – Some distance along the south bank of the River Carron, to the east of Grangemouth, was the building where the men who piloted the larger foreign ships up the tortuous course into the harbour and dock complex waited. The pilots had small boats, often just rowing boats, which were used to rendezvous with the larger vessels near the mouth of the river.

Illus 7: The Pilot's House with telescope and waiting transport.

*Pollock's Wharf* – Pollock's Wharf on the New Cut of the River Carron was at the north end of North Charlotte Street and Carron Street. It was only built in 1820 and at first was simply called the New Wharf.

**Port Dundas** – In the late 1780s a branch of the Forth and Clyde Canal reached into the city of Glasgow and the terminal basin was named Port Dundas after Sir Lawrence Dundas of Kerse House,

Grangemouth. Here the head office of the Canal Company was constructed. The name Port Dundas was subsequently applied to a larger area which became an industrial centre in the 19<sup>th</sup> century,

Punt – a long, narrow flat-bottomed boat, square at both ends and propelled with a long pole, used on inland waters.

*Quarries* – a number of stone quarries were used over the years:

- Bantaskine Quarry the traditional quarry for Falkirk now on the estate of South Bantaskine, R.Martin & Co Bantaskine. CANAL.
- Black Craig, Plean, Torwood, Peter Shaw.
- Blair Quarry, nr Culross, Fife. James Lawrie.
- Brightons Quarry, Polmont. Lawrie. CANAL
- Dulach Quarry, Inverkeithing, Fife.
- Dalachy Quarry, west of Burntisland, Fife. Archibald & W Logan.
- Kenmuir Quarry, Bishopbriggs. CANAL.
- Kilsyth James Lawrie. CANAL.
- Kinneil Quarry, Bo'ness Duke of Hamilton
- Longannet Quarry, Fife
- Netherwood Quarry, Castlecary, Dumbartonshire. CANAL.
- Sands Quarry
- Sterley Burn
- William Dobbie

Saw pit - a pit over which timber is positioned to be vertically sawed with a long two-handled saw by two people, one standing above the timber and the other below. It was used for producing sawn planks from tree trunks. A nice example of a stone-lined sawpit was found at Tophill (Mitchell & Ronald 2007).

*Sawyers* – these men cut the logs into planks for use in cladding (cleading) structures such as the smithy and the piers. They operated in pairs at a sawpit with one man in the pit (the under-dog) pulling the cross-cut saw down and the one on top (top-dog) pulling it up. They were a distinct group from the carpenters or joiners..

Scow – a large unpowered flat-bottomed barge with broad square ends used chiefly for transporting bulk material (such as ore, sand, or refuse).

*Sheer Pole* or sheer legs – see derrick.

*Slamannan railroad* – the Slamannan Railway from Airdrie to Muiravonside opened in 1840, almost two years before the Edinburgh-Glasgow Railway, and for this period provided the best means of rapid transport to Glasgow – successfully competing with the Forth and Clyde Canal for this service.

**Sleech** – the broad intertidal mudflats. Areas of these were reclaimed from the Forth using a process called warping and by dumping the material dredged from the Docks onto them. South of the River Carron was Lord Dundas' Sleech, and on the other side was the North Sleech.

**South Embankment** – the long mound of stone clad earth along the south side of the new channel of the River Carron from the Entrance Lock to the new Lighthouse.

Stark's Rope Work – Henry Stark started a rope work in the 1830s known as the Cut Rope Works because it was adjacent to the new cut for the Grange Burn. It moved to Dalgrain in 1855 when the Junction Canal was extended.

*Stirling Canal* –in 1835 the route of a proposed canal from Underwood on the Forth and Clyde Canal to Stirling was mapped and a prospectus was produced. There were few potential subscribers and with the advent of the railways in the following decade the scheme was dropped.

Stuff - loose earth.

Tree angles - see derrick.

*Treenail* – a wooden peg or dowel used to fasten pieces of wood together in timber frames. It is driven into a hole bored through the two pieces of wood.

**Tunnel** – this term is used for culverts used to carry off surface water from land adjoining the canal and docks into those water courses. Some of these tunnels were temporary, required during the construction process. Permanent tunnels were a mixture of brick and wood construction.

*Vesta* – in 1836 John Neilson of Hamiltonhill, Glasgow, built the **Vesta**, a paddle tug, for the Canal Company for use at Grangemouth where she ran successfully and profitably.

**Vulcan** – the first iron vessel to be built in Britain was constructed by Thomas Wilson at Faskine near Airdrie in 1818/19. She was strong and served as a horse-drawn passage boat before going on to carry goods and minerals until sent for scrap in 1873.

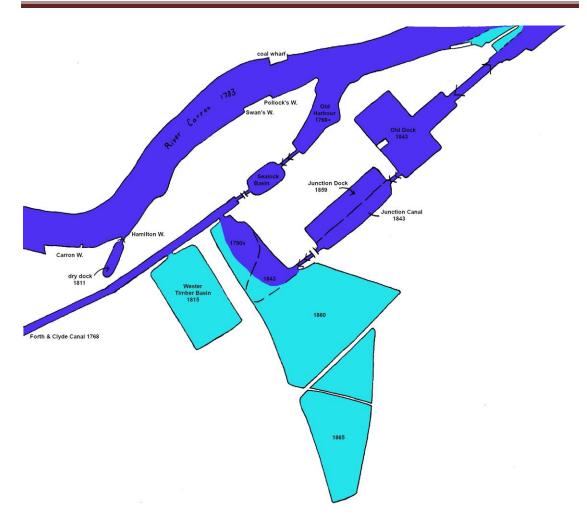
Wet or Tidal Harbour – the original 1770s entry to the Forth and Clyde Canal from the River Carron was via a tidal harbour. Ships tied up at the wharves there rested on the basal mud at low tides. Between the first and second locks of the canal was a small basin, known as Sealock Basin, which was a wet dock. Here the water was retained at low tide by the sea lock and the ships remained afloat. What is curious is that much work was executed in 1838 before a decision was finally made that the large new water basin should take the form of a wet dock for which a large lock chamber was required.

As new larger wet docks were added to the east in 1882 and 1906 the original one became known as the "Old Dock." The key dates for the growth of the artificial water system at Grangemouth are:

- 1768 canal started
- 1790 canal completed
- 1810 Customs House
- 1843 Old dock (4.5 acres)
- 1859 Junction Dock (2 acres)
- 1867 Caledonian Railway Co buy docks
- 1882 Carron Dock (17 acres)
- 1906 Grange Dock (30 acres + 10 canting basin + 23 timber basin)
- 1963 Canal closed
- 1966 first container port in Britain
- 1974 new entrance lock



Illus 8: The gigantic scale and nature of the work in 1858 on old Dock Grangemouth, most of which was done by hand. can he compared to that at the Albert Dock in Hull in 1867 for which a photographic image survives.



Illus 9: Plan showing the areas of water in Grangemouth up to 1882 with the dates of construction. The pale blue shows shallow water.

#### **PEOPLE**

**James Adamson** (-1860), ship builder, lived at Middle Street and in 1851 employed 38 men at the yard on the River Carron which included the 1811 wet dock (Ronald 2019).

**Robert Bauchop**, surveyor, acted as the factor for Kinneil Estate in Bo'ness for the Duke of Hamilton. He lived at the Dean and took a lead role in the civic affairs of the town. In 1834 he was elected as one of the trustees of the Harbour and Town of Bo'ness.

**Alexander Black**, land surveyor, engineer and architect, Falkirk, (1803 - 7 September 1876). Set up as an engineer and land surveyor c1836. He laid off many of the principal railways in Scotland and Ireland. He acted as consulting engineer for the water supply, street construction and maintenance in the burgh of Falkirk. As an architect he designed and superintended the erection of churches, public works, villas in Falkirk and neighbourhood. Residence in Booth Place. His son, William, married a daughter of Thomas Wilson.

John Borthwick – factor for the Kerse Estate of Lord Dundas from 1808 to 1846.

**William Crichton** was the Superintendant for the Forth and Clyde Canal, based in Glasgow, from July 1843. He had been the Glasgow agent for the vessels of the Edinburgh, Glasgow, and Leith Shipping Company in the 1820s.

**Sir William Cubitt** (1785 – 13 October 1861) was an eminent English civil engineer and millwright. Born in Norfolk, he was employed in many of the great engineering undertakings of his time. He invented a type of windmill sail and the prison tread-wheel. He worked on canals, docks, and railways, and was the chief engineer of the Crystal Palace erected at Hyde Park in 1851.

**Graham Hardie** was the manager of Falkirk Iron Works. As a businessman he expanded into other branches, including managing the Falkirk New Gas Works. He was a director of the Stirlingshire Midland Junction Railway and the Alloa Bridge.

**Mr Johnston** was the Superintendant for the Forth and Clyde Canal, based in Glasgow, until the opening of the Grangemouth Wet Dock in July 1843. He was replaced by William Crichton.

**Sir James Loch** (7 May 1780 – 28 June 1855) was a Scottish advocate, barrister, estate commissioner and later a member of parliament. Whilst managing the estates of the Duke of Sutherland he was responsible for agricultural improvements which included the "clearances."

**Sir John Benjamin Macneill** (1793 – 2 March 1880) was an eminent Irish civil engineer closely associated with Thomas Telford. After Telford's death in 1834 Macneill established his own consultancy, based in London and Glasgow, and turned his attention towards railways—his first projects were freight schemes in the Scottish coal and iron fields near Wishaw and Motherwell. He worked on the Slamannan Railway. He was also consulting engineer at Grangemouth Docks and for various Scottish canal projects. His most notable projects were railway schemes in Ireland.

**Walter McTarget & Co** – the first rope walk in Grangemouth was situated on the north side of the canal towpath and was tenanted by Walter McTarget, timber merchant, from at least 1805. Around 1839 the construction of Dalgrain Road meant that he had to move slightly to the north. In anticipation he built a large tenement in Middle Street and then used the ground and first floors as a rope work for smaller lengths. When he died, in 1842, the business was continued by his son, Henry McTarget.

**Sir John Robison**, KH, FRSE, FRSSA (11 June 1778 – 7 March 1843) was a Scottish inventor and writer on scientific subjects.

James Wallace – proprietor of the Zetland Arms on North Basin Street in the 1840s and 1860s.

**Robert Wilson** (1808 – 4 July 1867) was the son of Thomas Wilson. From an early age he followed his father as Overseer to the Forth & Clyde Canal and remained in that post for 30 years. In 1836 he took a tack of a boatyard at Port Downie which continued until 1864. He died at Tophill on 4 July 1867.

**Thomas Wilson** (1781- 8 November 1873) Thomas Wilson was an experienced boat-builder based at Faskine on the Monkland Canal. In 1816 the Forth and Clyde Canal Company authorised the development of the world's first all-iron ship and Thomas Wilson was hired as the shipwright. The design called for iron sectionals to be riveted together with covering plates. The *Vulcan* was launched in May 1819 and was an outstanding success, first as a horse-drawn passenger barge between Edinburgh and Glasgow, and later as a cargo carrier. In 1822Thomas Wilson was appointed as resident engineer at Tophill where he supervised the maintenance of the Canal and took charge of the Canal Company's shipyard. More vessels of innovative designs were constructed there. In March 1838 he was moved to Grangemouth to supervise the Improvement Scheme there which included the construction of a large wet dock. He died at his new home in Zetland Place, Grangemouth.

#### **NOTES**

1. In 1830 an Act of Parliament had given powers to construct a road from Grangemouth to the mouth of the River Avon, vastly improving passage to Bo'ness. This required the construction of bridges over the Grange Burn and the River Avon. Work began in 1834 and the three mile stretch from the River Avon to Dalgrain Bridge cost £7,012. Diverting the Grange Burn for the dock improvements meant that a new bridge was required to take it under this turnpike road and traffic had temporarily to use the old road authorised in 1794, known as Kerse Road, via the Jinkabout ford.

- 2. The old Ballast Boat was in fact the steam-boat of 1801 built by Alexander Hart of Grangemouth for William Symington's experiments with steam power sometimes referred to as Charlotte Dundas I. In 1802 a new hull was built for Charlotte Dundas II by John Allan, also of Grangemouth, and in August 1802 the Forth and Clyde canal Committee ordered the old vessel to be converted into a ballast boat. The engine was removed and she was used for a number of years before being abandoned at Tophill where she lay submerged for a number of years. She was then used to reinforce the embankment across the old Grange Burn. A contemporary account confused her with the earlier **Experiment** by Patrick Miller of Dalswinton and William Symington: "where the bed of a stream had to be filled up, the wreck and remains of Mr Miller of Dalswinton's steam-boat have been imbedded among the rubbish thrown in for this purpose. As this vessel was undoubtedly the first which was made for practical purposes, and was that which the American Fulton saw tried, its place of internment is not without interest. We hear it is proposed to insert a stone in some part of the works, with an inscription commemorative of Miller and Symington's experiments." (Scotsman 16 October 1838, 2). See also Bowman 1981, 33-34.
- 3. The Scotsman of 16 October 1838 reported that: "The Forth and Clyde Canal Company are carrying on extensive improvements in Grangemouth Harbour, at the eastern termination of their navigation. In one place, where a considerable excavation has been made for the foundation of a retaining wall, some curious articles have been disinterred." These were presumably the skeletons of marine creatures.
- 4. "Grangemouth Wet Dock.—On Wednesday morning, the 26<sup>th</sup> ult. The workmen observed the south bank giving way, and about ten o'clock a.m a line, extending to 250 feet in length, broke off with a fearful crash. The bank was about 28 feet deep, and about 50 from the face, which was a slope. Although the workmen had a warning, yet many had hair-breadth escapes. Nearly 20 feet of masonwork for the quay was put up, but the weight of the earth forced the foundation up, and also the building. The beams of the foundation were raised at the end about 12 feet. A barrel, which was placed three feet below the foundation, for a pump, was forced suddenly up into the air. It is supposed about 13,000 tons of bank have been broken off, which will considerably retard the progress of the work, and will require nearly £500 to repair the damage. It was fortunate no person was hurt." (Ayr Advertiser 4 July 1839, 3).
- 5. To allow vessels with masts to use the Forth and Clyde Canal all of the overbridges had to open. Originally wooden two-leaf drawbridges had been used, raised by chains and timber framings. As these wore out in the late 1830s and 1840s, cast-iron bridges with wooden decks were substituted, raised by a wheel and pinion. These were known as bascule (see-saw) bridges and had counterweights to make them easier to operate. These weights slotted into enlarged cisterns in the stone abutments.
- 6. "The workmen at **Grangemouth** Docks lately found a Highland or basket-headed sword in the Dock, about twenty feet beneath the surface, in fine preservation. It is likely to have either been hid or lost during the rebellion." (John O'Groat Journal 13 March 1840, 4).
- 7. "The workmen at **Grangemouth** Dock have lately turned up several remains of animals, about twenty feet below the surface, among which are the skull of a young deer; also a number of bones, one very fine fossil haunch bone, and others.. From their appearance they must have been a very long time entombed. The section of a recent deposit of shells is also to be seen, chiefly of the bivalve kind; they are about twelve feet below the surface." (Caledonian Mercury 12 December 1840, 4).
- 8. "A boy employed at the new dock of **Grangemouth** while sitting on the front of one of the agons which he had in charge, accidentally fell off, and the wheels passed over his breast inflicting such serious injuries as to cause his death the 29<sup>th</sup> ult., the day after the accident occurred." (Northern Star & Leeds General Advertiser 9 April 1842, 3).
- 9. "GRANGEMOUTH HARBOUR WORKS. To Contractors for Dredging. THE FORTH AND CLYDE CANAL COMPANY are ready to receive TENDERS for carrying on by Contract the Dredging Operations at GRANGEMOUTH; the Contractor to be supplied with the use of the Company's Dredging Machine, Punts, and Steam Tug.

The specifications and form of tender &c, may be seen at Mr MacNeill and Mr Thomson's Chambers, British Linen Bank buildings, Ingram Street, Glasgow, and at 9 Whitehall place, London, or in the hands of Mr Wilson, Grangemouth Harbour Works..." (Herapath's Railway Journal 11 June 1842, 11).

- 10. "When the workmen were engaged in opening the Carron for the docks at Grangemouth, they found a human skull, apparently that of a woman, twenty-three feet below the surface. It must have been entombed there for thousands of years." (Witness, Edinburgh, 26 July 1843, 3).
- 11. "OPENING OF GRANGEMOUTH DOCKS. Wednesday last week, having been fixed for opening the wet docks of Grangemouth, it was arranged that the barque **Hampton** of Grangemouth, Captain Graham, should the first vessel to enter the docks. The **Hampton** is a first-class trader, 700 tons burthen, and the first ship from Quebec to Grangemouth this season. At 2 o'clock the anchor was weighed, and the ship taken in tow by the steamer **Harmony**, the Laurieston instrumental band being placed on the poop, struck up "Hearts of Oak is our Ships." An immense multitude assembled to witness the imposing scene. Never since Grangemouth was a port, was there such a scene witnessed here. At 3 o'clock, the **Hampton** was safely moored at the breastwork of the docks, amid loud cheering, at this time the water stood 21 feet. In the evening, a select party dined in the Zetland Arms Inn, Mr Wilson in the chair. Mr Thomson croupier. After the cloth was removed... When the workmen were engaged in opening the Carron for the docks, they found a human skull, apparently that of a woman, twenty-three feet below the surface. It must have been entombed for thousands of years. Stirling Observer." (Perthshire Advertiser 27 July 1843, 2).
- 12. "Since the opening of the docks the trade is fast increasing at this stirring port. There are sixty square-rigged vessels in the new dock, and several others in the harbour, chiefly foreigners, loading pig iron, which is the principal article exported. A large Prussian barque is ready for sailing with 400 tons of that metal; and another will take 500 tons. Most of these fine vessels came here in ballast." (Wolverhampton Chronicle 22 November 1843, 3).
- 13. "Guano The fine brig, Brooke, **Grangemouth**, is the first vessel which arrived at that port with this far-famed manure. On Tuesday the cargo was exposed to sale in lots of five tons. Several lots were sold from £5 15s to £5 19s per ton; about one half was sold privately at £5 16s; so that the whole, amounting to 400 tons, fetched fully... The quality was excellent. The cargo belonged to Mr Brooke, Grangemouth." (SO 23 January 1845, 4).
- 14. "On the morning of Monday the 22d inst., while William Sym, manager of the Grangemouth Gas Work, was in the act of examining the purifier, an explosion of gas took place, raising the cover, which, coming down on his head, inflicted such wounds as, after lingering in much agony till Tuesday morning, caused his death. Mr Sym has left a wife and family to mourn the melancholy occurrence which has robbed them of an affectionate husband and father. He was much respected by a large circle of friends and acquaintances, from among whom he has thus suddenly been cut off." (Stirling Observer 25 December 1845, 1).
- 15. The Edinburgh and Glasgow Railway was opened on 21 February 1842 and was a rival to the Forth and Clyde Canal. The cartloads of grain would have gone to stations at Falkirk or Polmont by road to be taken on to Glasgow.
- 16. The wet conditions of these years were ideal for the establishment and spread of potato blight. It manifested itself in Ireland in 1845 resulting in the Great Famine. In Scotland the harvest of 1846 was devastated and tubers rotted in the ground. Although generally seen as a Highland phenomenon it also hit this part of Scotland.
- 17. The Ballast Hill was part of the lands of Bantaskine. The hill had been the point at which the Hanoverian army had drawn up in battle formation facing the valley to the west on the morning of 17 January 1746 in readiness for the approach of the Jacobite army from. As the Jacobites veered to the south the Hanoverians had to climb the hill in that direction to meet them and the Battle of Falkirk ensued. The hill was taken away to use the gravel for ships' ballast at Grangemouth and for surfacing roads. A canal basin was formed to facilitate loading and this evidently belonged to the Canal Company.



The first edition Ordnance Survey map shows the basin but by that time the area had been planted with trees. Hachuring to the east represent the edge of the old quarry and show the hug extent of the extraction.

Illus 10: 1860/62 Ordnance Survey Map (National Library of Scotland).



18. Carron Canal
Basin lay at
Bainsford bridge
and was
connected to the
Carrion ironworks
by a waggonway.
It was also known
as Burnbank
Basin.

Illus 11: 1859
Ordnance Survey
Map (National
Library of
Scotland).

The New Gas works lay on the south side of the Forth and Clyde Canal opposite to the Carron Basin. These works were erected in 1845/46 and so the Gas Company took the opportunity of laying a pipe across the canal so as to be in a position to supply the inhabitants of Bainsford with gas. However, owing to the hurried manner in which the operation was necessarily performed mud and water choked the pipe and it was unusable. This was a great disappointment to the Bainsford people, many of whom had got their premises fitted up with pipes in anticipation of obtaining a supply of gas. An attempt was made to rectify the fault through the aid of a diving bell, but it proved unsuccessful, the quantity of mud and earth above the pipe being such as to prevent access being got to it. William Christie, one of the directors of the New Gas Company, used a large pair of blacksmith's double-action bellows to force air through the pipe, which successfully dislodged the sludge.

19. In 1810 "some gentlemen of the area" formed a joint stock Company called the Falkirk Foundry Co, employing many men from the Carron Iron Works. The leading proprietor was John Hardie. A wharf and basin were constructed on the Forth and Clyde Canal. By the 1840s Grahame Hardie was the manager of the Falkirk Iron Company.

20. Mylne's Granary lay at the end of John Street to the south-west of the gas works near Bainsford Bridge. It occupied the east side of a small basin (where there was a wharf) with Melville's sawmill and timber yard on the other side. In 1850 it was sold to Ogilvie and took his name. It had a storage capacity of 4,000 quarters of grain and had a malting attached. At that time it was occupied by G G Mackay of Grangemouth.

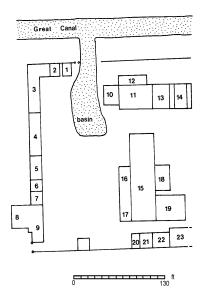


Illus 12: 1859 Ordnance Survey Map (National Library of Scotland).

- 21. The Bo'ness Iron Works had been begun by Steele, Miller & Co around 1836 and so was still becoming established in 1845. It is odd that the cylinders were not taken to Bo'ness by water.
- 22. The Pow or cut referred to was presumably the canal basin that ran into the courtyard of the foundry. It was filled in due to lack of space as the ironworks expanded.

# Illus 13: Plan of Falkirk Iron Works in 1824. For the key to the numbers of the individual buildings see A brief history of iron foundries.

23. The new foundry must have been Castlelaurie Foundry, making this the earliest reference to it. It was established by Grahame Hardie as an annexe of the Falkirk Iron Works and in 1854 made munitions for the Government during the Crimean War. It was set up at a time when there was a huge demand for railway chairs and may have been intended as temporary. Falkirk Iron Works was managed according to the contract of co-partnery by a body of directors with Hardie as the manager until 1848 when one of the partners, RW Kennard purchased the works. Castlelaurie remained with Hardie.



- 24. Camelon Iron Works was founded by RW Crosthwaite, John Miller and John Smith at Lock 16 in 1845. Crosthwaite was in charge of outdoor work and sales, Miller of bookkeeping and correspondence. The partnership dissolved in 1854 and the works were purchased by John Smith, writer, Camelon House, with Mr Fullerton (an Edinburgh publisher) as a partner; now called Smith, Fullerton and Co.
- 25. The water was required to support the walls of the new dock. At an enquiry in 1865 Thomas Duncan CE stated that the walls of the docks at Grangemouth were built upon alluvial deposit. The foundations were laid upon timber grillework filled in with broken stone. He did not know that when the Grangemouth dock was opened the walls were falling down, and it was necessary to let the water in on order to support them, though this might have been the case (Falkirk Herald 16 May 1865, 3).

- 26. An amusing incident occurred in 1819. A van carrying an elephant and a rhinoceros from a wild beast show was travelling from Stirling to Falkirk that November. The direct route was through Larbert and Camelon, but the pend under the canal at Camelon was too small and so it had to cross the canal at Bainsford. A representative from the show notified the bridge keeper in advance and a few hours before the vehicle was due to cross he checked on the arrangements. Nothing had been done, but as one of the Canal Company's carpenters was at the bridge he was asked if it would take the weight. He was confident that it would. The van duly arrived and got part way across before the bridge collapsed. Fortunately the van was longer that the bridge and came to rest on the stone abutments. The elephant and rhinoceros were led to safety, but the canal and road were closed for some time. The Canal Company subsequently docked the carpenter's wages (Glasgow Courier 11 November 1819).
- 27. The railway between Castlecary and Larbert passes under the Forth and Clyde Canal immediately to the north-west of the Falkirk Wheel. The old aqueduct was replaced in 2018 when the line was electrified.
- 28. The Aqueduct referred to on 7 October 1852 near Lock 15 was not that which carried the Forth & Clyde canal over the Camelon-Falkirk road (See "Camelon and the Forth & Clyde Canal"), but that which conveyed the Tamfourhill Burn under the Canal.
- 29. See Monday 10<sup>th</sup> March 1845 when a Petition from the Pilots requested that the Canal Company should regulate their Pilotage and prevent Pilots belonging to other ports from entering the Port of Grangemouth. The Canal Company chose not to interfere.

The 1845 Statistical Account states that "Vessels entering the canal were formerly conducted up the Carron by pilots. About fifteen persons generally held license of pilotage from the Trinity House of Leith. The occupation of this class is now, however, superseded by the employment of small steamboats, which tow the vessels from the water mouth, thus rendering them less dependent upon tide and wind. Two steamboats are used for this purpose."

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10 May 1839	William Philip,	Willm. Philip, Keeper of Lock No. 18, having got his leg
To May 1833	Lock Keeper No 18	severely hurt from the Stern part of one of the Pilotage Boats having got a turn round it in bringing the boat up in the Lock, Satur. Last, and having received a letter from My Son that he considered him in a very dangerous state, I went up last Night with Dr. Hamilton, and after examination The Dr. gave his opinion that the only chance for the Man's life is to have the leg taken off immediately, to which he appeared perfectly resigned. The Dr. Wrote the three Doctors to meet him today, which they did and after a little consultation they appeared unanimous that the leg should be taken off, which was accordingly done by Dr. Hamilton. It was wonderful to see how the poor fellow stood the operation, he never so much as uttered a complaint
7 Sept 1839		Two men drowned out of a small Boat in coming ashore from the <i>Hampton</i> which sailed from here this day.
28 Nov 1839		Watson drowned last night.
4 Jan 1843		One of Peter Feelys men met with a dangerous injury from a Waggon passing over his body. In the evening the Doctor has some hope for his recovery.
3 Jan 1843		About eight o'clock this evening the Captain of a Lime Kilns Sloop and two men came into Andr Glen to sittle their wages and had one Gill Whisky and Bottle Ginger Beer but the master did not taste the spirits. The night being exceedingly dark and the men being strangers Andr. Glens daughter and Servant woman went out with them to see them safe on board their vessel which is lying on the North West side of the Basin, where the Pig Iron is piled up close to the front of the Quay. The master mistaking the water for part of the Quay and in the act of taken leave of Andrews daughter tumbled into the Basin and she along with him. A servant girl of the Post Master hearing the plunge ran forward and she tumbled over the Pig Iron into the basin also. One of the men got hold of her and she was got out, but the master and the poor Girl could not be got out, for a considerable time not having Boathooks immediately at hand so that life was entirely extinct although every means was used to restore animation. About 10 o'clock the Mate and another resolved to proceed to Limekilns to communicate the mournful account of the Masters death and in attempting to go on board for refreshment and a change of clothes they both fell into the basin also, the vessel appearing to be nearer the quay than it actually was. By the time that the alarm was made it was a few minutes before the small boat was got to the spot one of the men was got out a few minutes before the other and it was with great difficulty that he was restored to life, the other poor man was entirely gone. I may mention it was not the Mate of the Lime Kilns sloop but two men belonging to the Inverkeithing schooner being acquented with the master that intended going to Limekilns both sober men and the poor man that is drowned assisted to carry the corpse of the master into the inn.
24 Jan 1843	Alexander Hendrie	Alex <sup>r</sup> Hendrie being drowned last night between 8 and 9 o'clock. He had been at a funeral and on returning had gone into his Brothers house in Camelon and on returning home he had taken the North side of the Canal with the intention of crossing the Lock to his house, and it is thought the night being extremely dark he had taken the Canal for the Road. Three boys were standing on Canal bridge observed him trip and heard the Plunge, they made the alarm but before assistance could be got it was half an hour before his body was got out.

24 Jan 1843	Robert Jones	Robert Jones, one of our Labourers, has got himself severely
2104111013	1tobert bones	hurt in blasting the stones in the bottom of the Dock. One of his
		fingers was blown off and his head severely injured.
15 Feb 1843		William Ross was drowned out of the Scow "Richard" in going
		to the improvements with a Cargo stone.
21 Jan 1844		Andrew Waddell, Master of the Hercules Dredge, was found
		drowned along side of the Dredge. It appears that he had gone
		home on Thursday after the tides work, that he left his house
		after tea about 6 o'clock on return, that he called at the different
		houses, and lastly on board the Schooner Meteor where he
		remained a short time. The watchman spoke to him on coming
		ashore and advised him to take round the South side of the Dock
		as the gates were open. It therefore evident that in putting his
		foot into the pram which very crank he had either upset it or had
		fallen into the water and on laying hold of the pram had capsized
		it over him. The night being exceedingly stormy and the two
		men on board being fast asleep, the poor perished without any
		present to rescue or render assistance. It was astonishing that the
		men on board never thought of enquiring about him till Saturday
		afternoon, thinking that in consequence of him going home on
		Thursday that he had either himself or one of his family had
		become unwell, until they found on inquiry that he had not been
11 1 11 10 11	D	at home since Thursday night.
11 April 1844	Peter Smith,	Understand that a man intended to sail with the <i>Hurricane</i> this
	Sailor	morning was drowned in attempting to go on board last night,
		there was the name of Gibson, along with him, but I suppose both were so much the worse of drink that the man drowned
		could do nothing to save himself and Gibson was unfit to render
		him any assistance. Man's name is Peter Smith, belonged to
		Kirkwall.
		In consequence of the <i>Hurricane</i> having sailed yesterday
		morning and the Captain acting is so an unfeeling manner as to
		leave no instruction regarding the poor fellow Smith's Corpse,
		and no person looking after the body, to have it intered. I
		ordered a Plain Coffin to be made and a Grave dug in Falkirk
		Church Yard to have him buried tomorrow provided none of the
		friends make their appearance the poor man Smith's Brother,
		his wife's Brother, his wive's Uncle, and that, made their
		appearance and had the Corps removed to Falkirk Church Yard
		for interment. They appear to have resolved to have the Captain
		and Crew examined on the vessel's arrival at Glasgow and make
CT 1011		the Owner's pay, and pay the expense of the funeral.
6 June 1844		Alex <sup>r</sup> Marshall, Banksman, was drowned in the Canal opposite
		Mr Ballock's Lime kilns east from No. 3 Lock when in the Act
		of removing from a Punt discharging stuff taken from the
		<b>Dredge boat</b> at present employed there. He had got under the punt, as he never made appearance and was not found until about
		half an hour after, when life was quite extinct. Not having any
		friends that I am aware of in this quarter, except his poor Widow
		Mother in Stirling, I have ordered a Coffin for him, and wrote to
		a Mr Crystle in Stirling to commence the mournful account to
		his Mother.
Jan 1846		About 7 o'clock p.m. a Sailor belonging to when crossing
		lock No. 1 upper Gates fell into the Lock was drowned.
27 April 1846		one of the men belonging to a Danish vessel was drowned in the
		Lock between Saturday & Sabbath morning. Made a search for
		him this Afternoon and found the Body. He appeared to be
		really young stout man about 20 years of age.

29 March 1851 10 June 1851	Mrs Mann	Will <sup>m</sup> Manns wifes corpse was taken out of the Canal near the west end of Lock No 2. I am mis-unformed Will <sup>m</sup> Manns wife went out of their house last night about 8 o'clock and has not been heard of since and although search have been made with a number of men & Creepies, they have not found the Corpse.  We made search for the Corpse of Will <sup>m</sup> Mans wife and she was found in the South east Corner of the Bonded Basin.  The Capt <sup>n</sup> of a Sloop belong to Montrose fell over the north
		Quay Old Harbour opposite David Sinclairs and was choked with the mud this morning.
30 June 1851		The Corpes of a man was found in the Canal Basin this morning. I took his watch to Falkirk to ascertain if the watchmaker could identify who the man is. I found however that the boy in the shop was rather at a loss and it turned out to be a Ploughman with Alex Simpson, Town Croft.
4 October 1851		about 2 o'clock, one of Messrs Robt Melvill & Co men fell off a raft in the timber Basin and was drowned.
10 July 1852	Burns	The Corpse of young man was taken out the Junction Cut this morning, his name was Burns.
13 March 1852		A man was dragged out of the Canal this morning between Camelon Bridge & Lock No 12. He had fallen into the water between Tuesday night & early on Wednesday morning as a violin & a parcel and a cape was found floating in the water that morning. I have not heard if the body has been Claimed.
25 Sept 1852	James Spense, Diver	James Spence being drowned at Castlecary last night about 7 o'clock. After being here with the Diving Helmet on Thursday he proceeded west with theCrane Boat where they were employed in repairs of Lock 19 and it appears in taking the Crane Boat out of the Stern foremost the Tiller struck James and he fell overboard and as the rest of the men was about the Lock they did not observe the spot where he dropt overboard and although the young lad Crawford dived several times the body was not found until 20 minutes had expired when life was extinct. It is believed that James could not swim, which is to be lamented for there is nothing to prevent a person saving themselves when the fall into the Canal if they have learnt to swim except they are severely hurt or rendered useless from intoxication which I am certain it could not be from the latter.
27 March 1855		Boatman drowned at Lock 14.
11 April 1855	Singing Jamie	The Corpse of a Poor sill man, Singing Jamie, was found in No. 16 Lock this morning between the gates & splae piece sill, considerably lacerate either from a Vessel of from the gates jamming the body. The Lock Keeper gave information to the Poor Inspector and a Coffin was sent and the body taken to Falkirk for burial.
20 July 1855		James McGill grandchild drowned @ 7 PM.