

May 1796 that: ‘*The Patent Machine for raising and lowering Boats without Loss of Water (instead of Locks) is erected upon the line of the Ellesmere Canal, near Ruabon, in the County of Denbigh and is in that State of Forwardness that, a trial has been made with success*’ (*Ibid.*).

The actual site of this experiment remains unidentified, although Richard Dean has suggested that a likely location for this was at Home Farm near Ruabon. In support of this he offers the following observations (*Ibid.*, 756-757:

- ◆ Here is a sharp rise in the ground where the proposed canal route in this vicinity leaves the valley, requiring some four or five locks.
- ◆ Ruabon village is less than a mile away.
- ◆ A small building at the farm depicted on the 1837 OS map is labelled ‘Machine’.
- ◆ A supply of water was available from a small stream, and an artificial pond was located just above the machine.
- ◆ Although a 19th century estate map labels the machine at Home Farm as a threshing machine, it is reasoned that if the experimental boat lift was located here, then the stone or brick building that would have been constructed would have been ideal for reuse to house a water-wheel to power a threshing machine.

An alternative location for the experimental boat lift that has been proposed by historian Ray Shill is the site of the former Engine Shed/Warehouse at Trevor Basin (Shill 2016; Shill 2018a). In support of this he argues:

- ◆ Thomas Telford would have been unlikely to choose a location for the experimental boat lift which was ‘off the route’ of the intended canal, and in 1794 when he was looking for a suitable location, a different route had already been approved by the committee.
- ◆ There may have been a water supply at Trevor Basin if Telford had utilised the mill stream to the mill at Cefn Mawr.
- ◆ Surviving photographs of the Engine Shed/Warehouse at Trevor show a building with walls of uneven thickness, and the building may have been altered at different times, with evidence for earlier elements within the building.
- ◆ The boat lift was described in contemporary literature as being ‘on the Ellesmere Canal’ which fits Trevor Basin more closely than Home Farm.
- ◆ Although not depicted on any of the early maps of the canal basin, the Engine Shed/Warehouse may have utilised surviving elements of the boat lift which did survive, unmapped.

Without the discovery of new documentary evidence, however, each of these theories regarding the location of the experimental boat lift remains unproven.

4.5 Map Regression

4.5.1 1795 - Book of 12 plans and book of reference: Ellesmere Canal (Intended canal from Pontcysyllte to Chester) (Denbighshire Record Office QSC/DC/5)

Several books of plans and reference are held at Denbighshire Record Office depicting the proposed course of the Ellesmere Canal during its inception between 1792 and 1796. Figure 5 shows an extract from a book of twelve plans dating to 1795, and depicts the proposed course of the canal to the north of the Pontcysyllte Aqueduct as it crosses the Trevor - Cefn Mawr road before swinging to the east and crossing property that the reference book identifies as belonging to William Owen [1 & 3], John Rowlands [2 & 2*] before reaching the stone quarries at Cefn Common [3*] where the proposed Acrefair Branch line extends northwards to serve the numerous collieries in that area.

4.5.2 1803 - Plan and book of reference: Ellesmere Canal (Rail road from Ruabon brook through the several collieries to the Ellesmere canal at the north end of the aqueduct of Pontcysyllte) (Denbighshire Record Office QSC/DC/7)

The original copy of this plan could not be consulted as it is currently undergoing conservation, but a copy of what is likely to be the same map is also held at the Waterways Trust Archive, Gloucester, and has been reproduced in a document available to view online (Brown n.d., 105 [Map 2]). This map depicts the Pontcysyllte Aqueduct which was still under construction, and a proposed canal continuing northwards beneath the Trevor – Cefn Mawr road to an oval basin (the prototype Trevor Basin). The proposed Ruabon Brook Tramway is depicted with a branch either side of the basin converging at its northern end and then taking much the same route as the intended canal as depicted on the 1795 map discussed above, with a hairpin bend at the southern end of the Cefn Mawr ridge where ‘The Crane’ was later to be located. This also depicts the proposed feeder canal branching off to the west immediately to the north of the aqueduct, and the course of the Plas Kynaston Canal which looks like a later addition to the original plan. Whether this addition was associated with Pickering’s proposals in 1820 or earlier similar proposals that he revived cannot be ascertained.

4.5.3 1805 – Survey of Trevor Basin and Wharf

The original provenance of this document has not been identified, but a copy from the ‘Richard Dean Collection’ can be accessed online (Shill 2016, 6). This appears to be an ECC survey produced around the time the Pontcysyllte Aqueduct and Trevor Basin were completed/opened, showing the ECC land ownership in green. This shows the final ‘tuning fork’ configuration of the canal arms at the basin with wharves either side and the Ruabon Brook Railway continuing to the north. The feeder canal known as ‘The Water Line’ is also depicted although this wasn’t completed until 1808, as is Scotch Hall (NMR 27905) thought to have been built as a residence for Telford’s supervising engineer Matthew Davidson, and the adjacent Accounts House (NMR 405996) from which the labourers involved in the construction of the canal and aqueduct were paid. The cast iron Scotch Hall Bridge No. 29 (NMR 34411) over the main canal and Rhos-y-Coed Bridge No. 30-31 (NMR 403835) are also depicted for the first time.

4.5.4 1829 - Plan and book of reference: Ellesmere Canal (Denbighshire Record Office QSC/DC/7)

The original copy of this plan could not be consulted as it is currently undergoing conservation, but it has been reproduced in documents available to view online (e.g. Brown n.d., 106 [Map 3]). This map depicts Pickering's canal to his lime works as if it had been built, and depicts Ward's intended canal from the canal basin at Trevor to his Plas Kynaston Colliery, but branching off from the eastern arm at Trevor Basin some distance to the south of Pickering's canal. This map illustrates that a terrace of buildings had been constructed to the north-west of the western wharf at the basin, and the eastern canal arm had been extended to the north to provide greater wharfage at the Ruabon Brook Tramway transfer dock.

4.5.5 n.d. (1820s?) – Map of Plas Kynaston Estate and other lands in the Parish of Rhuabon (Flintshire Record Office CB/5/5/4).

This plan (Figures 6 & 7) is catalogued at the Flintshire Record Office as possibly dating to the 1850s but is likely to be roughly contemporaneous with the ECC map described above. It depicts a very similar scenario as the 1829 map but illustrates Ward's proposed canal from Trevor Basin as if it had been constructed, but only as far as its eventual final terminus to the north of Cefn Mawr. At Trevor Basin, the terrace of buildings described above to the north-west of the wharf is depicted, and two small square buildings at the edge of the wharf are also shown, with further buildings depicted to the north adjacent to the tramway. Further to the east, this map depicts the Plas Kynaston Foundry (NMR 408094) established by Hazeldine at the turn of the century, and a network of colliery pits and their interconnecting drainage levels.

4.5.6 1838 – Ordnance Survey Old Series (Sheet 74)

This map is at too small a scale to show much detail but does depict the route of the Plas Kynaston Canal as finally constructed to Cefn Mawr with a short branch line Pickering's lime works, and also illustrates that by this time there were two buildings along the western edge of Trevor Basin.

4.5.7 1838 – Trevor Issa Tithe Map (Denbighshire Record Office PCD/64/24)

The 1838 tithe map (Figures 8 & 9) and award provide a wealth of useful information regarding the land use and ownership around Trevor Basin. This shows that the ECC owned and occupied the main canal and towing path, wharfs and basins (401) as well as buildings on the wharf including 'Stable, yard and offices' (409) and 'Stable' (409a). In addition the ECC also owned the terrace of buildings to the north-eastern edge of the wharf that had been depicted on the maps from the 1820s which included 'Public house, garden etc' occupied by Henry Evans (407), 'Dwelling and garden' occupied by James Clarke (406) and 'Dwelling and court' (405) and 'Garden' (404) occupied by Samuel Roberts. To the south of Scotch Hall Bridge the ECC also owned 'Scotch Hall, Garden and Offices' (410a) occupied by William Jones and on the opposite side of the canal, 'Wharf' (537a) occupied by Edward Wright and 'Beer Shop, Smithy, Graving Docks, Wharf and Garden' (537) occupied by James Clarke.

The 'Branch Canal and towing path' (399) was occupied by Thomas Edward Ward who had constructed most of the Plas Kynaston Canal (399) and off to the north of this, 'Wharf, Lime Kilns, Part of the Canal etc' (396) and the 'Railroad' (402) were occupied by the Executors of the Late Exuperius Pickering who had died in 1835. William Edwards occupied the house (398) and garden (397) adjacent to the lime works. All of these were owned by the Co-heiresses of the Trevor Hall Estate.

Table 1: Extracts from the 1838 Trevor Issa tithe award

Plot	Description	Owner	Occupier
396	Wharf, Line Kilns, Part of the Canal etc	The co-heiresses of the Trevor Hall Estate	Executors of the Late Exuperius Pickering
397	Garden	The co-heiresses of the Trevor Hall Estate	William Edwards
398	House	The co-heiresses of the Trevor Hall Estate	William Edwards
399	Branch Canal and Towing Path	The co-heiresses of the Trevor Hall Estate	Thomas Edward Ward
400	Cae Pit Mawr	The co-heiresses of the Trevor Hall Estate	Ann Thomas Widow
401	Part of Canal Towing Path, Wharfs, Basins etc	Ellesmere Canal Company	Ellesmere Canal Company
402	Railroad	The co-heiresses of the Trevor Hall Estate	Executors of the Late Exuperius Pickering
403	House and garden	The co-heiresses of the Trevor Hall Estate	Stephen Roberts
403a	Garden	The co-heiresses of the Trevor Hall Estate	Stephen Roberts
404	Garden	Ellesmere Canal Company	Samuel Roberts
405	Dwelling and court	Ellesmere Canal Company	Samuel Roberts
406	Dwelling and garden	Ellesmere Canal Company	James Clarke
407	Public house, garden etc	Ellesmere Canal Company	Henry Evans
408	Rhos Y Coed, Cae Scotch Hall	The co-heiresses of the Trevor Hall Estate	John Jones
409	Stable, yard & office	Ellesmere Canal Company	Ellesmere Canal Company
409a	Stable	Ellesmere Canal Company	Ellesmere Canal Company
410	Cottage	Turnpike Trust Ruabon & Llangollen	John Roberts
410a	Scotch Hall, Garden and Offices	Ellesmere Canal Company	William Jones
537	Beer Shop, Smithy, Graving Dock,s Wharf and Garden	Ellesmere Canal Company	James Clarke
537a	Wharf	Ellesmere Canal Company	Edward Wright

4.5.8 1863 – LNWR Plan for reconstruction of tramway to railway

The provenance of the original document has not been identified, but a copy from the 'Peter Brown Collection' can be accessed online (Shill 2016, 3). This is the earliest known plan to depict any of the details regarding the trackways that were associated with the Ruabon Brook Tramway prior to it being upgraded to the standard gauge railway of the Pontcysyllte Branch which opened in 1867, although this depicts the final configuration of the lines which might not reflect its earlier appearance. This illustrates that the engine shed and warehouse which was to house the ex-L&NWR shunting engine No. 1118 *Acton* during the early years of the Pontcysyllte Branch line was already in existence by his time. This structure may have originally been built as an 'Iron Warehouse' used to store iron products such as pig iron from the Acrefair Ironworks and cast-iron products from the Plas Kynaston Foundry (Shill 2016, 1). This plan illustrates that at this time a single tramline provided access to the warehouse from the south, continuing c.45m before terminating approximately halfway along the central pier separating the two canal arms. This fed three separate branch lines, one of which was also connected to feeder line from the western canal arm.

To the north of the warehouse, these lines converged with another line which continued southwards along the western canal wharf, beneath Scotch Hall Bridge (NMR 34411) and continuing along the wharf before crossing Rhos-y-Coed Bridge No. 2 Bridge No. 30 (NMR 406699) which took the tracks over the Llangollen feeder canal. This bridge was a flat-decked moveable bridge that took the tramway to the Trevor Forge iron works (NMR 406687) which had been established by Exuperious Pickering junior on the south bank of the feeder canal.

A second branch line skirted past the eastern side of the warehouse to continue over the bridge over the Plas Kynaston Canal via Ruabon Brook Bridge No. 29A (NMR 406531) and thence along the eastern canal wharf and underneath Scotch Hall Bridge to terminate along the wharf some 65m further on.

By 1863, the building recorded in 1838 as the ECC's 'stable, yard and offices' to the north of Scotch Hall Bridge had been enlarged slightly, and the associated stable building on the wharf was still extant. The terrace of buildings recorded as an Inn and two dwellings in 1838 was still evident (although may have seen some reconfiguration or even rebuilding), and another terrace of buildings had been constructed on the western edge of the wharf to the south of this, with a detached smaller rectangular outbuilding further to the south, but otherwise the layout of the basin appeared unchanged.

4.5.9 1865 – Map of Wynnstay, Plas Kynaston and Cefn Collieries (Flintshire Record Office CB/5/1/2).

This map of the Plas Kynaston Estate (Figures 10 & 11) depicts a similar situation within Trevor Basin as on the 1863 map discussed above, with the exception that the rectangular outbuilding to the south of the new terrace of buildings on the wharf is not depicted, the stable on the wharf had also gone, and also none of the tramways are depicted apart from a single track which skirts the western side of the warehouse over the transfer dock. Presumably the tramways were still in existence, however.