The Metamorphosis of the Ellesmere Canal

BY RICHARD DEAN

Of the existing published accounts of the inception and development of the Ellesmere Canal project, those by Charles Hadfield rest on the firmest ground,[1] and several others add useful information with varying degrees of accuracy.[2] The present writer's intention is to detail the rapid and complex changes which took place mainly between 1791 and 1805, resulting in a waterway very different both from that originally conceived and from that first authorised. As an aid to understanding these changes, considerable attention has been given to the preparation of the accompanying maps.[3]

Little will be found here concerning Pontcysyllte Aqueduct as it is hoped to devote a separate article to it in the near future.

The Main Line

The earliest proposals for what later became the Ellesmere Canal have already been noticed in the *Journal*.[4] The project was revived in 1789, and it was a trio of Shropshire gentry who called the first public meeting in August 1791 'to consider of the scheme and of the line to be adopted.' John Duncombe, a local engineer from Oswestry, carried out the initial technical appraisal and made a preliminary estimate of £100,000 for a narrow canal.[5]

Whatever route the promoters had in mind (and the venues of the first meetings at Overton and Ellesmere may give some clue) it was clearly a subject of considerable discussion: a draft circular to landowners indicated that 'the course of the canal is not at present absolutely fixed'. The unanimous resolution at the August meeting stated 'that it is practicable to make such canal so as to pass near to or communicate with *branches from* several extensive coal lime and slate works in the Parishes of Chirk, Ruabon . . . . Llangollen . . . . and Oswestry . . . . and with a branch to extend to Llanymynech' with the possibility of further branches to Wem and Whitchurch. The draft presented at the meeting had not included the words in italics, and both versions are carefully recorded in the minutes. Dumcombe was directed to make an additional survey 'of a line which has been mentioned at this meeting'.[6] A route from the Mersey to Chester and east of the River Dee to Shrewsbury was set out in a preliminary newspaper notice agreed at the meeting, formally reported on by Joseph Turner in September,[7] and described by him in a pamphlet published on 11 October 1791.[8] Branches were included to Ruabon and Llangollen, to Whitchurch, to Llanymynech, and to the Grinshill quarries. It seems likely that Denbighshire coal and iron proprietors, dissatisfied at being on a branch, suggested the possibility of a main line west of the Dee which Duncombe was to examine, but that they had to accept for the time being the proposals put forward at the August meeting on which the preparatory work had already been done.

With the prospect of serious disagreement looming, the Committee resolved to ask William Jessop to survey 'the said canal and the (two) different lines which have been proposed for the same and to consider and give his opinion'. He was to be accompanied by Duncombe and William Turner, another local engineer, and the latter was to explain his ideas for a shortened eastern line using the existing Chester Canal as far as Tattenhall, and from there to Braden Heath near

Welshampton, and also a branch from Whitchurch to near Prees.[9] Jessop reported to a meeting on 9 January 1792 held in Wrexham (on the western route) when it was determined to defer any parliamentary application that session pending completion of the survey work.[10] This report was subsequently withdrawn at his request and replaced on 23 August by 'a more general and comprehensive report upon the subject containing the substance of his former report with such additions as he was enabled to make in consequence of his having taken a second survey of the line of the intended canal and the branches . . . .'[11] It is worth quoting the introduction in full:

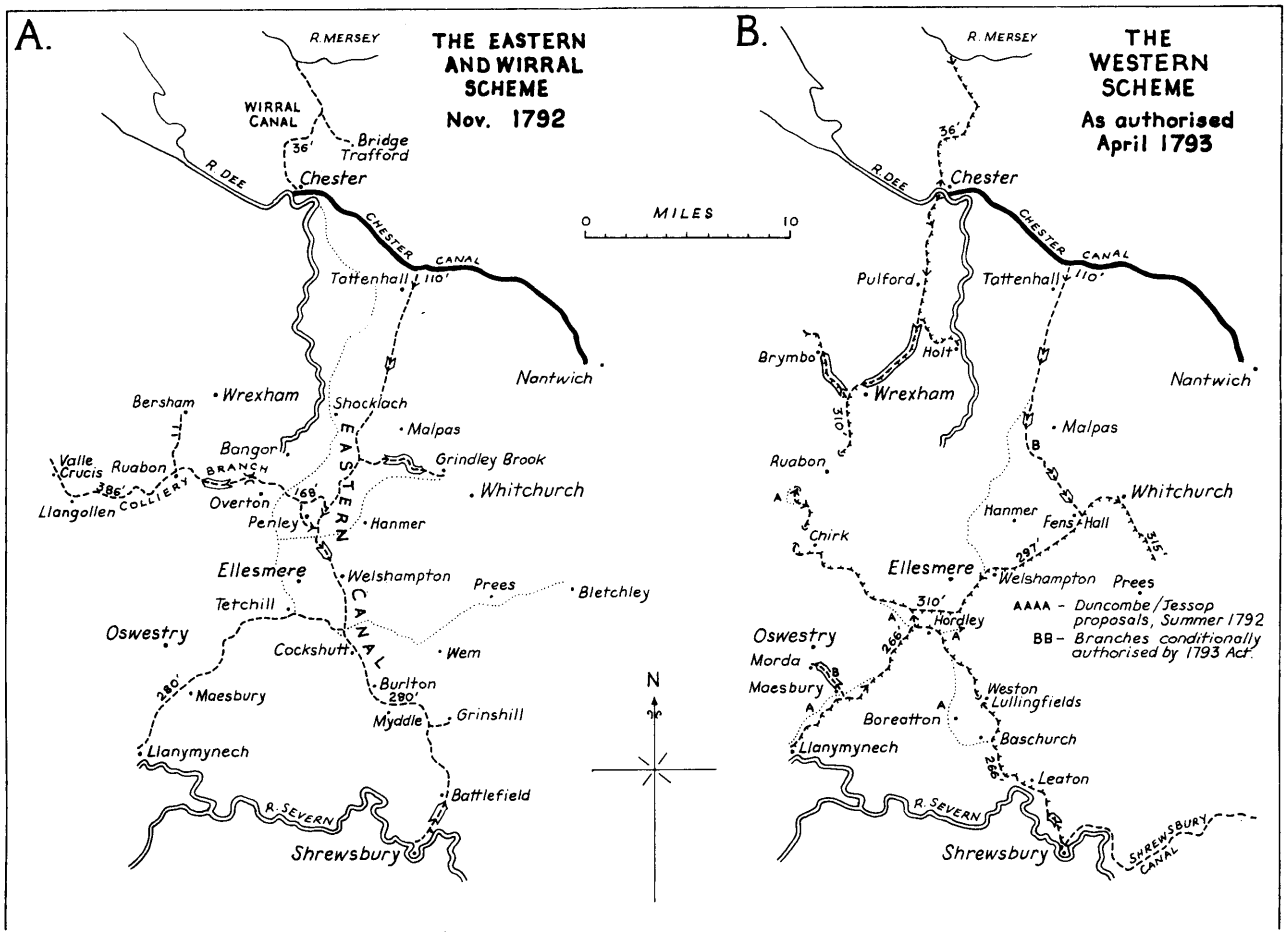
> On the cursory view of the country between the Mersey and the Severn which I took the last year when it was a question whether a line on the eastern or western side of the River Dee would be most desireable it appeared to me that the western line would be best. I could not nearly judge of the comparative expence as no particular surveys had been made, in both there were local difficulties yet I had some reason to believe that the western line would cost more than the other, but on considering that though the mercantile trade might be considerable it would bear no comparison with the carriage of coal and lime which from the information that I received was very great I recommend as the first object the survey of the western line for the following reasons The towns of Chester and Shrewsbury which consume a great quantity of coal are now supplied at a price not very moderate, it appeared to me an object material to the interest of the undertakers of the proposed canal that those towns should be supplied by it. If the eastern line had been adopted the communication with the collieries must have been so circuitous that there was hardly a probability of conveying coal to those towns at a less expence than they now received them at. If every possible line could have been actually surveyed I might more satisfactorily have formed my opinion but Mr Duncombe's time having been wholly occupied by the western line and he having produced a survey thereof I shall state to you my observations thereon.

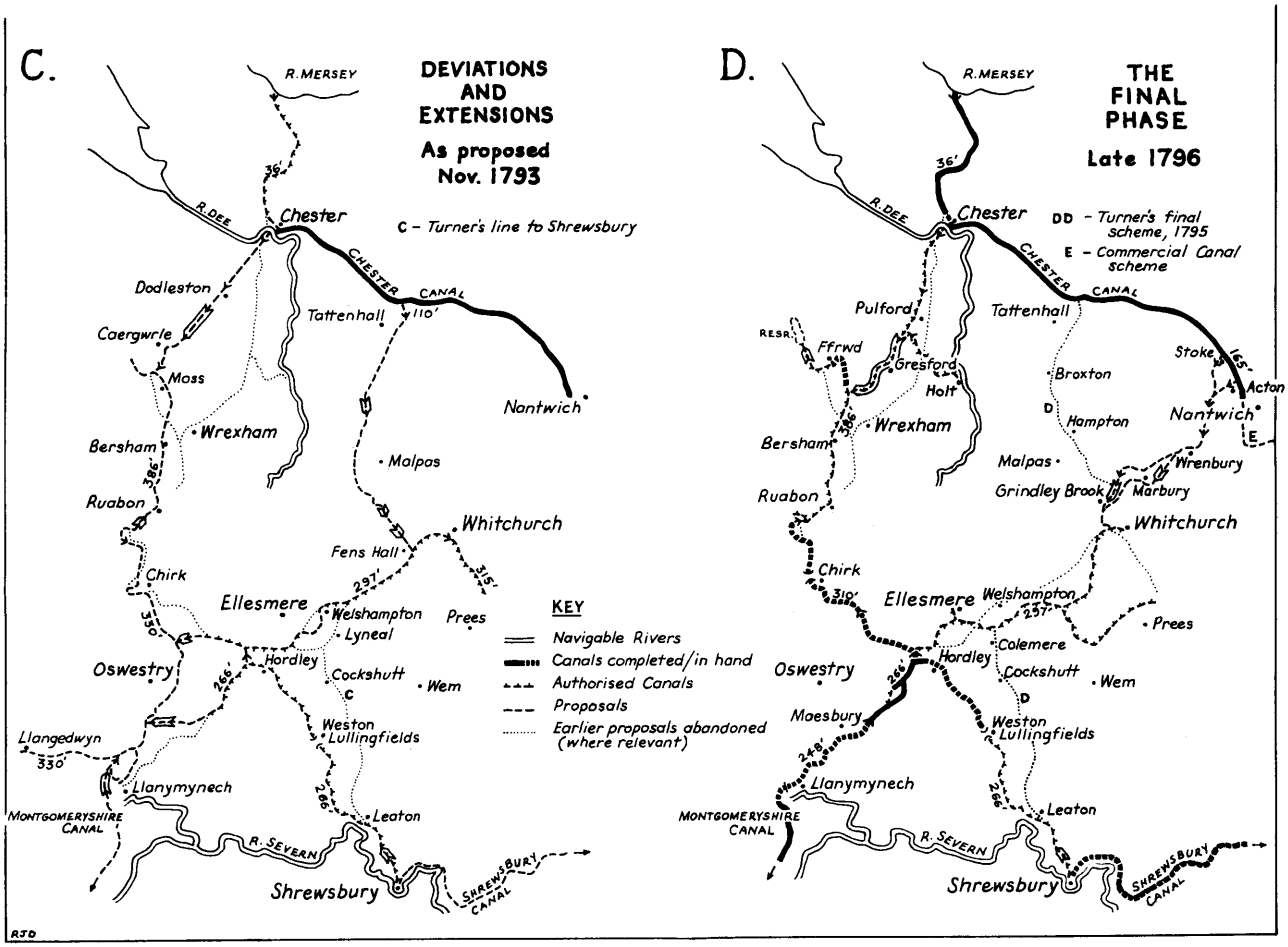
Jessop went on to recommend a canal across the Wirral, a level crossing of the Dee below Chester, and a western route via Wrexham, Ruabon, Chirk, and Baschurch to Shrewsbury, with branches to Holt and Llanymynech, at a total cost of £196,898 (Map No. 1B). He suggested exploration of a route, which must soon have been found impractical, to the west of Boreatton Park to avoid a 476-yd tunnel at Weston Lullingfields, and also the construction of a branch from Hordley to Smithy Moor that could be extended towards Whitchurch if the necessary locks near Croesmere were supplied by pumping up water from the Hordley pound. He preferred a direct low-level route to Shrewsbury rather than deviating the main line from Hindford towards Tetchill at a high level to join with and follow the southern part of the eastern route by Cockshutt and Grinshill.

The revised report was made public at a meeting in Ellesmere on 10 September 1792 which came at the height of the 'Canal Mania'. Almost £1M in subscriptions was proffered from 1500 speculators, and:

> So great is the Navigation Mania that Shrewsbury, about 16 miles from Ellesmere, was so crowded on the nights before and after the meeting that many people found very great difficulty in getting accommodated: several gentleman being obliged to take care of their own horses, cook their own vitals, and sleep two and three in a bed; and so difficult was it to procure horses and carriages from Leicester and Market Harborough (on account of the people going from those towns) that six gentlemen from the latter place actually hired and went in a mourning coach.[12]

Jessop's support for the western route had by no means extinguished the earlier proposals, and in the heady atmosphere of the time subscriptions were also


A.
THE EASTERN AND WIRRAL SCHEME
Nov. 1792
R. MERSEY
WIRRAL CANAL
Bridge Trafford
R. DEE
Chester
CHESTER CANAL
Tattenhall
Nantwich
Bersham
Wrexham
Shocklach
Malpas
Bangor
Grindley Brook
Valle Crucis
Ruabon
BRANCH
Llangollen
COLLIERY
Overton
Penley
Hanmer
Whitchurch
EASTERN CANAL
Ellesmere
Welshampton
Prees
Bletchley
Tetchill
Oswestry
Cockshutt
Wem
Burlton
Maesbury
Myddle
Grinshill
Llanymynech
Battlefield
R. SEVERN
Shrewsbury
0 MILES 10
N
B.
THE WESTERN SCHEME
As authorised April 1793
R. MERSEY
R. DEE
Chester
CHESTER CANAL
Pulford
Tattenhall
Brymbo
Holt
Wrexham
Nantwich
Malpas
Ruabon
Whitchurch
Hanmer
Fens Hall
Chirk
Ellesmere
Welshampton
Prees
Hordley
Oswestry
Morda
Maesbury
Weston Lullingfields
Boreatton
Baschurch
Llanymynech
Leaton
R. SEVERN
Shrewsbury
SHREWSBURY CANAL
AAAA - Duncombe/Jessop proposals, Summer 1792
BB - Branches conditionally authorised by 1793 Act.


C.
DEVIATIONS AND EXTENSIONS
As proposed Nov. 1793
R. MERSEY
R. DEE
Chester
C - Turner's line to Shrewsbury
CHESTER CANAL
Dodleston
Tattenhall
Caergwrle
Moss
Nantwich
Bersham
Wrexham
Malpas
Ruabon
Whitchurch
Fens Hall
Chirk
Ellesmere
Welshampton
Prees
Lyneal
Oswestry
Hordley
Cockshutt
Wem
Weston Lullingfields
Llangedwyn
Llanymynech
Leaton
MONTGOMERYSHIRE CANAL
R. SEVERN
Shrewsbury
SHREWSBURY CANAL
KEY
Navigable Rivers
Canals completed/in hand
Authorised Canals
Proposals
Earlier proposals abandoned (where relevant)
D.
THE FINAL PHASE
Late 1796
R. MERSEY
R. DEE
Chester
DD - Turner's final scheme, 1795
E - Commercial Canal scheme
CHESTER CANAL
Pulford
Tattenhall
RESR.
Ffrwd
Gresford
Broxton
Stoke
Acton
Holt
Hampton
Nantwich
Wrexham
Bersham
Malpas
Wrenbury
Grindley Brook
Marbury
Ruabon
Whitchurch
Chirk
Ellesmere
Welshampton
Prees
Colemere
Hordley
Cockshutt
Wem
Oswestry
Maesbury
Weston Lullingfields
Llanymynech
Leaton
MONTGOMERYSHIRE CANAL
R. SEVERN
Shrewsbury
SHREWSBURY CANAL
RJD

opened for a separate and rival 'Eastern Canal'. As submitted for the 1793 parliamentary session (Map No. 1A) this included a revised route north of Cockshutt to pass east of Ellesmere by Welshampton and Penley to the Chester Canal near Tattenhall, with an extended 'Colliery Branch' crossing the Dee by an aqueduct at Overton and locking up to Ruabon, where one branch ran to a terminus at Valle Crucis near to the slate quarries above Llangollen, and another on the same level to John Wilkinson's Bersham Foundry. Whitchurch was served by a branch up the Wych Valley to Grindley Brook, and the Llanmynech quarries by a level but lengthy branch from Croesmere.[13] A nominally separate 'Wirral Canal' linked the Chester Canal to the Mersey with a branch to Bridge Trafford.[14] Barge width was proposed throughout, and the proprietors of the near-derelict Chester Canal were urged to give it their support.

With opposition threatened from this scheme the western committee negotiated for a merger whilst taking immediate steps to strengthen and consolidate their position in preparation for any parliamentary contest. The provisional capital was increased by £100,000 so that a more positive attitude could be adopted towards 'the neighbourhood of Whitchurch and Wem where the coals and lime are likely to be most in demand.[15] To secure this territory William Turner and others were given immediate instructions on 11 September 1792 to survey a branch from Maestermyn Bridge to Prees Heath via Whitchurch for inclusion in the proposed bill. The parliamentary notices published the following week duly incorporated it, Jessop was asked to view and estimate, and it was hurriedly added to the deposited plans.[16] As a further counter to the Eastern Canal, a connection was proposed from the new branch to the nearest convenient point on the Chester Canal. Turner seems to have laid out the branch so that it could if necessary make a convenient junction with the summit level of the rival scheme at Welshampton, perhaps with the aim of adopting the Welshampton to Tattenhall section of that project. The matter was complicated by the objection of Sir Thomas Hanmer to this section passing through his estate, and an alternative had to be sought.[17]

Negotiations dragged on through the winter, and by the time the final merger of the opposing groups was agreed in February 1793[18] it was too late fully to incorporate in the Western's bill all the changes that were needed to satisfy the Eastern subscribers, with the result that the Act did not represent the current intentions of the two groups of promoters, by then united in law if not in spirit.[19] The new company now needed powers to build both routes north of Ellesmere, with the junction of the broad Eastern line being moved six miles further east along the Whitchurch Branch to Fenns Hall to accommodate Sir Thomas Hanmer's wishes. A lengthy clause in the Act[20] authorised this, subject to the unlikely event of all affected land-owners voluntarily agreeing, failing which a further Act had to be sought. Not surprisingly, the project was back in Parliament the next session.

William Turner, by now on the Committee, represented a faction which still favoured a more easterly high-level route for the southern part of the Main Line, striking south from a point on the Whitchurch Branch near Cole Mere to rejoin the western route at Leaton. This would shorten the distance for through traffic on the eastern line at the expense of that on the western, which he in turn wanted to demote to the status of a northwards branch serving the Denbighshire coalfield rather after the nature of the original project. The levels would be raised both north and south of Pontcysyllte to avoid the Ruabon and Chirk tunnels and to facilitate an upper route to Llanymynech (see below). The Committee initially supported these proposals, which they further resolved would be broad canals, and authorised detailed surveys of the various parts,[21] included Fenns

Hall to Tattenhall, so that plans could be deposited in time for the 1794 session of Parliment.[22] (Map No. 1C) There were two amendments to Turner's proposals: a western line to Chester was retained, and the Colemere to Leaton deviation of the Main Line omitted. However, a short variation of the Whitchurch Branch shown between Spoonhill and Welshampton may have been in anticipation of the latter's being proceeded with at a later date.

On 3 September 1793 Thomas Telford was appointed General Agent to the concern,[23] a key post sought by Turner, who soon found himself increasingly isolated as opposition grew within the Committee to the nature and scale of the changes he was pursuing. Telford vividly summed up the atmosphere — 'besides the real labour that attends such a great public work, contentions, jealousies, and prejudices are stationed like gloomy sentinels from one extremity of the line to the other'.[24] Matters came to a head in December when the Committee recorded that their engineers were 'not yet fully prepared to point out what lines will be practicable or adviseable' and set up a sub-committee to consider all the additional cuts, variations, and branches that had been proposed.[25] On Jessop's recommendation, the Company postponed their bill for that session as 'he is of the opinion that considerable improvements may still be made in the lines and plans . . . . and that it will be adviseable to have some parts of the adjacent country resurveyed in order to determine whether in various instances expensive aqueducts deep cutting and other difficulties may not be avoided or the expense thereof reduced'.[26] This coincided with pressure to start work on the authorised lines in Shropshire to accommodate the coal and lime trade and the Montgomeryshire Canal. The Committee took the plunge and made an early start on the authorised Llanymynech Branch, the first contract being let in March 1794. Frankton Locks and the Main Line northwards to Chirk Bank followed at the beginning of 1795, being justified on job-creation grounds — 'a great number of persons are out of employ owing to Wilkinson having stopt his Bersham Works'.[27]

With the Committee resolution in January 1795 that William Turner be treated in future as a proprietor only, he ceased to hold any formal position with the Company, but 'being a proprietor and an acting engineer under the unanimous appointment of the General Assembly of the Company I think it my duty to use every means to improve this extensive undertaking'.[28] Fortified with a legal opinion the Committee had refused him access to all the Company's papers, but, undeterred, he proceeded at the end of 1795 to publish parliamentary notices and deposit plans[29] at his own expense for the 1796 session which the Company had to repudiate formally. The matter was referred to Jessop, who reported against proceeding with any of the Turner schemes and pointed out that 'as I do not think any of them are properly surveyed, I submit it to the Committee that on the future survey of them Mr Duncombe or Mr Denson should accompany Mr Turner so that there may be nothing left to dispute afterwards'.[30]

The Main Line as far south as Weston Lullingfields was completed in 1797.[31] It had been determined the previous year to extend through the tunnel to near Baschurch,[32] but in the event the line to Shrewsbury petered out in a remote field quarter of a mile south of Weston Wharf. Several attempts were made to revive it subsequently, either along the authorised route or the alternative at the Whitchurch level, but it was proved in 1803 that the Shrewsbury Canal would command the market for coal in Shrewsbury and that the construction cost would not yield a satisfactory return.[33]

North-west from Frankton, the canal must have been opened to Chirk Bank by November 1798 when a wharfinger was appointed there.[34] Water had to be drawn from the River Morlas, subject to restrictions contained in the 1793 Act, for the supply of the four locks at Frankton, and in view of the scarcity

it is surprising that two of them were constructed in a staircase pair. From Chirk Bank the easiest route called for an embankment straight across the Ceiriog Valley above Chirk Bridge, but to satisfy the landowner the authorised line lay up the steep south side of the valley to Pont Faen, followed by a 1236-yd tunnel through the high ground to the north. At Jessop's suggestion, he was prevailed upon to accept the direct route with the offer of an aqueduct in lieu of the embankment for the full width of the valley, to form an attractive landscape feature. Work started in 1796 and John Rennie's rather harsh comment on the resulting structure makes an interesting comparison with Jessop's intention:

> This aqueduct is situated in a beautiful romantic vale & might had it been planned with taste been one of the most beautiful things in this Kingdom but as it is, it is one of the most ugly things I have seen & does but little credit in that respect to the architect.[36]

Not everyone would agree with him.

Beyond the aqueduct a 459-yd cut-and-cover tunnel and a long curved cutting brought the line back to the parliamentary route, and it was opened through to the Vron Basin on the south side of Pontcysyllte about Christmas 1801,[37] and over the aqueduct there on 26 November 1805.

The Wirral Line

One of the few proposals on which the eastern and western groups were generally in agreement was that between Chester and the Mersey. As the Wirral Canal this was nominally separate from the Eastern Canal and would have locked up from the Chester Canal Basin to the Mersey at Whitby (later Ellesmore Port), with a level branch to Bridge Trafford.[38] The western scheme, as authorised by the 1793 Act, was very similar save for the absence of the branch, but connected direct into the Dee at Chester to avoid the Basin owned by the River Dee Company who were initially hostile to the western project.[39] They were placated with protective provisions in the Act giving them power to build the parts on their property, for which tolls could be charged, and preventing the Ellesmere Company carrying water across or under the Dee for the supply of the Wirral Line: Jessop had originally envisaged an iron syphon for this purpose.[40]

Construction proceeded quickly with the prospect of early traffic receipts, and a passage boat began running on 1 July 1795, presumably from a temporary terminus at Chester. It was an immediate success, and Telford could report three weeks later that:

> The business of the Passage Boat is encreasing, every person is pleased with it, and the Eastham coach is nearly deserted, the market carts are expiring, and I am taking measures that will prove a severe blow to the land carriage to and from Manchester & Chester etc.[41]

The locks to the rivers at either end were not built as part of the original contract, probably due to the uncertainty of obtaining water – Jessop had pointed out that the country could not provide a continuous natural supply and mentioned both pumping from the Stanney Mill goit and taking in the waste water of the Chester Canal. The latter scheme was soon implemented, but did not provide sufficient for the lockage-demand. This had to be accommodated by a steam engine at Ellesmere Port, completed in 1799, back-pumping the water from the lower basin there.

At Chester the Company were authorised in 1796 to revert to the original proposal to join the Chester Canal Basin,[42] and after lengthy negotiations with the River Dee Company this was accomplished by two locks. A short branch from the Wirral level was also carried directly into the Chester Canal for the benefit of

traffic between the two, involving a difficult junction part way up the Northgate staircase lock, completed in January 1797. All boats passing between the River and the Chester Canal had in future to use the Ellesmere Canal, and the tidal basin was improved in 1802 with the completion of an entrance lock making it into an enclosed wet dock.[43]

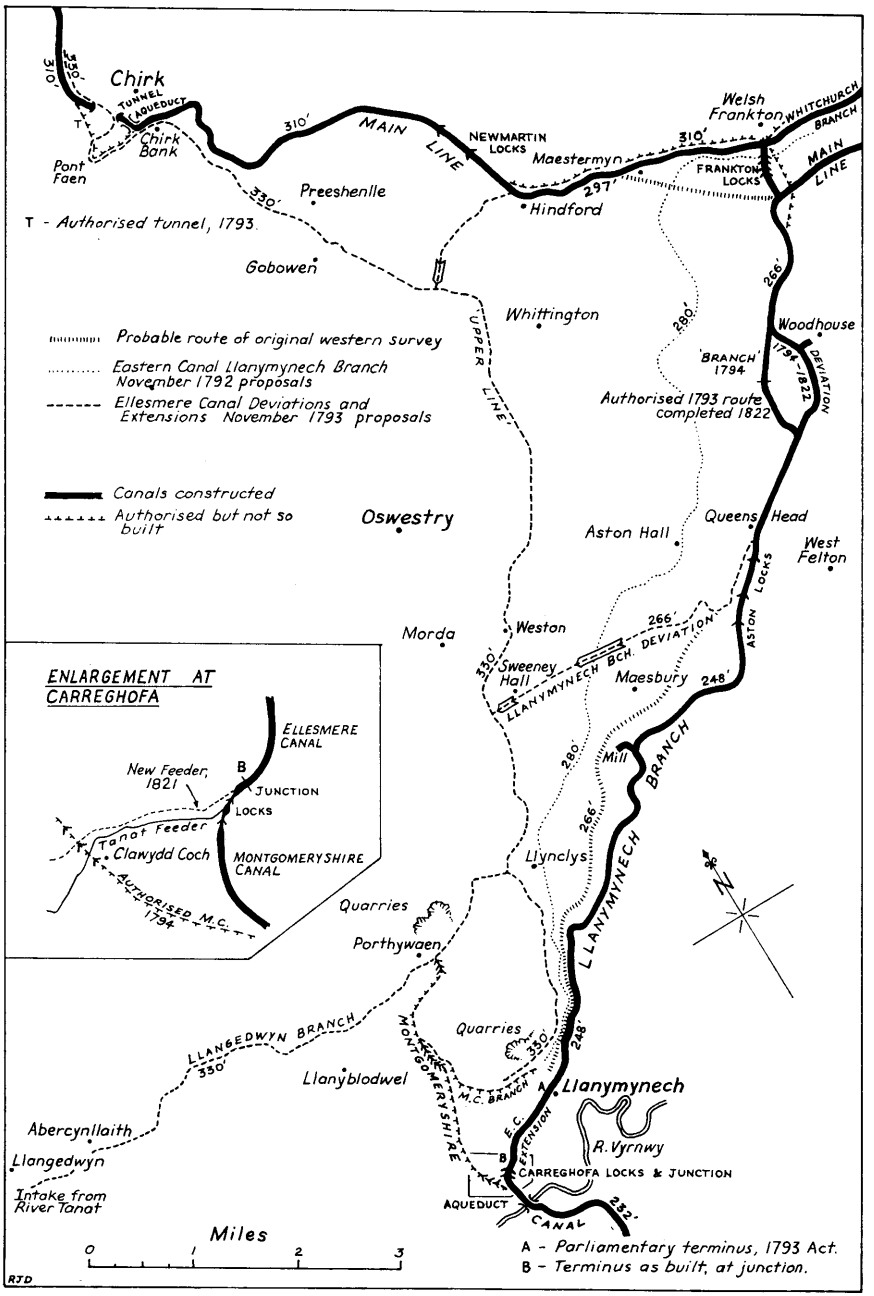
Llanymynech and the Montgomeryshire connection

A branch to Llanymynech, putting the limestone quarries there in contact with the Denbighshire coalfield, formed an integral part of all the early proposals.[44] As shown on the deposited plans for the Eastern Canal, it was laid out on the summit from Croesmere via Frankton, Berghill, Aston Park, and Llynclys - a level, if roundabout, route skirting the low-lying moors. Duncombe brought the western line down to cross these moors, and his Llanymynech branch, commencing near Hordley, took advantage of existing drainage cuts as far as Queen's Head. As referred to in Jessop's report of August 1792 this branch was to be at the Hordley level throughout, but by the time the parliamentary plans had been deposited in November the route had been altered below Queen's Head to create an even lower pound into Llanymynech. This otherwise inexplicable introduction of locks at Aston drawing valuable water from the main line probably followed the decision that had been taken in October to extend the branch into Montgomeryshire; [45] any continuation had to be at low level to cross the River Vyrnwy.

The inhabitants of Oswestry and proprietors of the collieries near there were 'much dissatisfied' at being by-passed both by the main canal and by the Llanymynech line. Under pressure from them, the Committee agreed to provide a branch towards the town,[46] an unsatisfactory scheme involving over 100ft of lockage. Richard Myddleton owned both the Chirk collieries and Llanymynech quarries, and his agent Thomas Lovett suggested a better alternative:[47] a direct canal from the main-line summit near Preeshenlle to Llanymynech, which would save five miles and all the lockage between the coalpits and limeworks, and supply fuel-starved Montgomeryshire. The line would pass much closer to Oswestry; a public meeting there provided subscriptions for a survey and the proposal was pressed upon the Ellesmere Committee.

This activity took place whilst the Ellesmere Canal bill was in Parliament, and during the gestation of the now-independent Montgomeryshire Canal which had not been sufficiently advanced to seek authority in that session. The Montgomeryshire party strongly supported the direct Oswestry route and were prepared to adopt it if the Ellesmere would not. The latter still preferred their own line, but agreed in January 1793 not to offer any opposition.[48] After further discussion two additional clauses were inserted in the Ellesmere's bill and became part of the Act.[49] The first authorised a branch of about two-and-a-half miles from the Llanymynech Branch at Maesbury Marsh to Morda Bridge for Oswestry and the collieries near there subject to the consent of intervening landowners; if not obtained, the Company had to use its best endeavours to secure an Act within two years. The second and lengthier clause suspended for two years all the powers to build the Llanymynech and Morda branches until the expediency of substituting a direct upper line had been reported on jointly by engineers acting for the Ellesmere and embryo Montgomeryshire companies, and if favourable, then provisions were made for a parliamentary application. Jessop and Thomas Dadford were respectively nominated for this duty, and although their final report was not signed until April 1794, much correspondence and discussion took place in the intervening months.[50] The scheme agreed upon seems to have been that shown on the plans deposited by the Ellesmere Company for the

MAP No. 2 Chirk to Llanymynech



1794 session, comprising an upper line from Llanymynech towards Chirk, with a long branch at that level from Llynclys past the Porthywaen Quarries and up the Tanat Valley to tap the river near Llangedwyn. At Sweeney Hall the upper line was joined by a deviation of the already-authorised Llanymynech branch rising from Queen's Head, and another link near Hindford would enable the authorised main line north of there to be abandoned. A short branch from Weston Mill would have extended into Oswestry.[51] The Montgomeryshire party sought and obtained their incorporating Act in this same session, commencing at a junction near Porthywaen with the Ellesmere's proposed Llangedwyn branch (sharing the water supply from the Tanat) then falling quickly to cross the Vyrnwy near Newbridge, with a high-level branch around the hill to serve the Llanymynech quarries.

Jessop attended a meeting of the Ellesmere Company on 17 January 1794 at which he recommended postponement of the bill that was then in Parliament as he felt that further improvements to the project could still be made: this probably did not relate to the upper line with which he had been fairly closely involved, but he did specifically suggest abandonment of the Llanymynech branch deviation as the already authorised line 'will be more for the advantage of the Company and the publick'. Between March and September contracts were let for construction of the whole of the authorised branch together with a short connecting portion of the Main Line as far as Hordley Wharf. Telford reported the branch as already cut in October 1795,[52] but the troublesome lower length over porous limestone strata does not seem to have been fit for navigation until the middle of 1797.[53]

The Montgomeryshire Canal Company had wisely deferred starting on the expensive portion of their line between the north side of the Vyrnwy Aqueduct and Porthywaen until the Ellesmere were committed to the Llangedwyn branch, but apart from opting for a feeder rather than a navigation west of the proposed junction,[54] the Ellesmere Company busied itself with construction of the lower line and made no moves towards resurrecting the upper line or applying for further powers. Noting that neither of the bills promoted in the 1796 session by the Ellesmere contained any reference to the Oswestry line, the Montgomeryshire obtained on petition a clause obliging them to seek powers within four years and to build it as per the Engineers' joint report, failing which it could be constructed by others at the Ellesmere's cost.[55] The matter again rested until the time-limit expired, when a legal opinion was sought, but with no apparent effect; there was already a well-established connection and it was understandably difficult to generate enthusiasm for an expensive parallel route, except perhaps as a reliable supplier of water, but that justification was also removed once the decision had been taken to tap the Dee.

At Llanymynech a mile-long extension of dubious legality took the Ellesmere's branch beyond their authorised terminus and over the border into Wales where it was intended to meet the Montgomeryshire's line near Clawdd-coch, and the latter company carried their waterway across the Vyrnwy meadows towards this point. Delegations from both canals met on site in January 1796, and the Montgomeryshire agreed to deviate their line 500 yards nearer to Llanymynech, notwithstanding that the ground had already been prepared towards the original junction. In consideration of the saving by shortening their extension, the Ellesmere later paid £300, part of the cost of the two locks that the Montgomeryshire built up to the new junction.[56] The Montgomeryshire Canal Act of 1821[57] finally confirmed that the *de facto* beginning of the canal 35 yards on the Llanymynech side of Carreghofa Top Lock was deemed to be the formal commencement in lieu of the obsolete one at Porthywaen, and the Ellesmere's extension to here achieved belated statutory authority in 1827.[58]

The Llanymynech branch as built followed the authorised route of 1793 fairly closely except at Frankton, and near Woodhouse, the residence of William Mostyn Owen MP, one of the original promoters with an honoured seat on the Committee. He was instrumental in deviating the canal to pass through his estate, with a short private arm virtually to his door. Half a mile of the parliamentary line had already been cut,[58] and this was later paid for by the Revd John Robert Lloyd, another of the original trio, to the intent that it would become a private appendage to his Aston Hall lands.

In 1799 the Committee resolved to repay this money so that the 'branch' could be used for public traffic, and by a further arrangement in 1822[60] the parliamentary line was completed throughout at the expense of Mr Owen and the Woodhouse deviation given up – the rude Shropshire boatmen had evidently ceased to be a fashionable parkland amenity.

Pontcysyllte to Chester

John Duncombe deserves considerable credit for the design of the western scheme through difficult country with a seventeen-mile summit-level only four locks higher than the eastern alternative, but at the cost of major engineering works between Ruabon and Chirk including a tunnel at first planned to be 4607 yards long, later shortened by 600 yards of deep cutting proposed at the north end. Although projected with the specific intention of directly serving the Denbighshire coalfield, access was denied to most of the Acrefair pits by reason of the tunnel, and the 310-ft summit contour ran well away from the workings in the valleys north-west of Wrexham. Jessop clearly recognised the latter problem in his report of August 1792 – 'perhaps a branch up the Bersham Valley towards the Brombo Collieries should also be made as it may go a considerable way on a dead level'. This was rather a curious statement given the geography of the area, and the Brymbo terminus as later settled on at Gough's House was a further 250 feet above the main-line summit in an area devoid of natural water supplies. Perhaps a tramroad was envisaged for part or all of the route, as the bill included a general power to substitute railways or roads for any portion of the canal system.

At the Committee meeting on 26 September 1792 it was resolved to ask Jessop to reconsider the route – 'It having been suggested that it may be possible to avoid the tunnell from Pont Cysyllte towards Ruabon and in such a manner as to put the coal owners as near as possible on an equal footing'. This suggestion seems to have come from William Turner.[61] Once the decision had been taken to interrupt Duncombe's summit by a low-level aqueduct at Pontcysyllte, there was no reason why the northern length should not be carried at a higher level to eliminate tunnelling and approach closer to all the collieries, introducing more lockage on the main line but reducing the rise to Brymbo. This developed into a proposal to extend the branch to the Cegidog Valley at Ffrith, where ample water was available to feed the newly-elevated route (now isolated from the River Morlas supply south of Chirk originally proposed). But to use that water the highest part of the Brymbo Valley needed tunnelling, or the branch diverting to an easier line.

Turner's principal concern was to put the collieries in contact with Shropshire; traffic to Chester could use the Eastern route once terms had been settled with the promoters of that line. The Committee, however, were not yet ready to give up the western line so recently approved by Jessop, and time was running out for fresh surveys. In the end, the plans that were deposited on 10 November showed the whole of the original western scheme including the tunnel,[62] the only concession to the new proposals being the hurriedly-added extension of the

Brymbo branch to the Cegidog and its precious water, but with no indication of the level intended. It is possible that, anticipating a settlement with the Eastern promoters, the Committee hoped to adopt parts of that project including the higher level Plas Kynaston – Ruabon – Bersham route already in the Eastern Canal bill: but they were forced by necessity to pursue their original scheme in Parliament, despite having resolved by December to apply for a deviation of the Pontcysyllte to Cegidog Valley section in the next year's session together with a more direct main line from the Brymbo area to Chester.[63]

Their incorporating Act being achieved, application was duly made for the alterations in November 1793. The revised route locked up from the aqueduct site at Pontcysyllte to a new 386-ft summit at Rhosymedre, this level being followed through Ruabon to Bersham as previously surveyed for the Eastern Canal's colliery branch, and on the Cegidog Valley where 66 feet of lockage took the line up to its terminus at Tan-yr-Owen Mill. To avoid tunnelling at Brymbo, the new route ran through the easier Moss Valley, although still needing some deep cutting. The direct line to Chester was probably little more than a sop to the westerners – after dropping down from a junction at Ffrwd to an aqueduct about 90 feet high over the Alyn below Caergwrle, it continued by seven dead-straight falling miles to the Dee.[64]

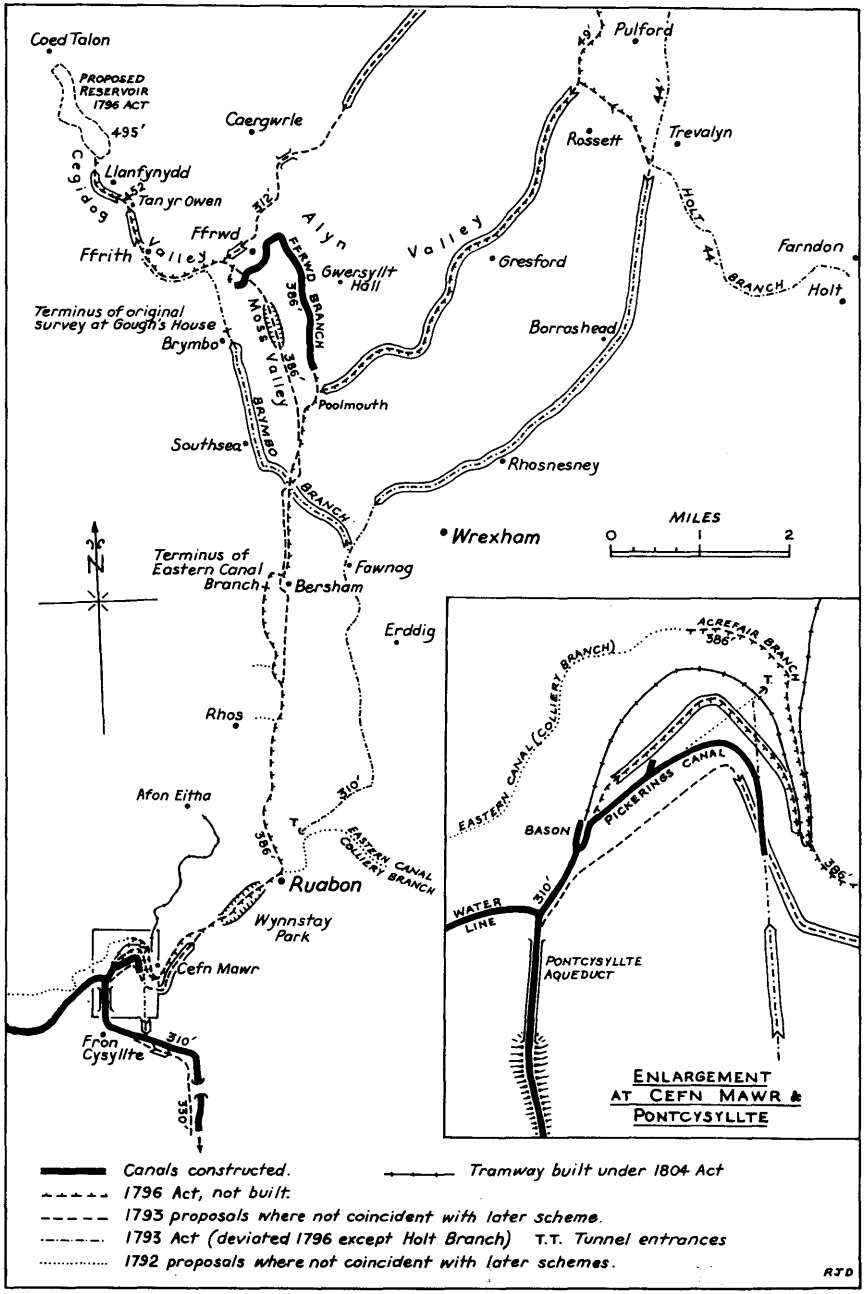
As discussed earlier there seems to have been a reaction at the end of 1793 against Turner's re-introduction of the eastern proposals, and the bill for the deviations was not proceded with. The Company had, however, to accept that his basic proposals north of Pontcysyllte were sound, provided that they were linked by a more realistic route to Chester. Duncombe prepared fresh surveys, and after various attempts to find a way through or around Wynstay Park finally settled on a line much the same as Turner's, but using the Alyn Valley between Poolmouth and Ffrwd to miss the deep cutting at Moss at the cost of extra mileage. To reach Chester, he followed the Alyn down through Gresford and Rossett to rejoin his earlier authorised line at Saltney Side, two miles from the Dee, and the original Holt branch was retained and extended to link with the new route.[65] As before, water was to come from the Cegidog, with the line extended up the valley to Llanfynydd where a dam along Offa's Dyke would create a 200-acre reservoir. This extension, if built as a navigation, would also have served the Coed Talon collieries, and could if necessary have been extended further to Mold and beyond at the same level. Jessop approved the revised proposals on 14 July 1795 with minor adjustment at the south end including a short branch on the summit round to the Acrefair collieries, and preparations were made to apply for a deviation Act.

Turner, undefeated, had revised his own scheme by raising it 10 feet in height to reduce the cuttings at Ruabon and at the Moss valley, and from there he pointed out that a half-mile tunnel could be driven to the Southsea collieries in the Brymbo valley if required. Jessop, called in to arbitrate, preferred Duncombe's route by reason of its better connection to Chester and dismissed Turner's ideas for a return to an eastern line only:

> I consider this extension [to Chester] so essential to the accommodation of the trade (particularly from the Montgomeryshire Canal to Chester and Liverpool, as boats will always on returning take back with them coal or lime) that I am not a little surprised that such an idea as Mr Turner suggests could for a moment be entertained by him.[67]

The revised scheme received authority in 1796 after some delicate negotiations with John Humberstone Cawley of Gwersyllt Hall who objected to the Ffrwd branch passing through his park.[68] Early steps were taken to build this part of

MAP No. 3 Denbighshire proposals



the branch as far as Richard Kirke's Ffrwd colliery,[69] and he agreed to supply water to the canal by pumping there.[70] Kirke had clearly influenced the Committee of which he was a member, but after spending £9,000 on the works a halt was called in 1798 with only two and one third miles cut.[71] It is doubtful if this length, which included bridges and an aqueduct, was ever used.[72] The Company then considered an inclined plane as a substitute for the heaviest lockage in the Alyn valley, followed by schemes for a railway on the branch or elsewhere along the main line. The proprietors finally settled for a railway from Pontcysyllte to Holt,[73] presumably along the canal line, but the works in Shropshire and Cheshire claimed their attention and no action resulted.

William Jessop made an inspection of the whole canal at the beginning of 1800:

> On our way to Pont Cysyllte, I saw the cut made on the branch to Brumbo; it is doubtful whether it can be made useful, until an extension may be made to Holt; and that is a subject which, I comprehend, does not immediately demand consideration. When the works more immediately necessary are executed, they will tend very much to narrow the field of speculation, and bring the objects, which it may have in view, more distinctly under the eye.
>
> As the many obstacles thrown in the way of the original intention, and the change in circumstances which have taken place since the obtaining of the Act, have shown it to be wholly unadviseable to execute a canal between Pont Cysyllte and Chester, and especially since the extensive opening of the collieries between Hawarden and Flint, which will communicate by means of railways with the Dee, so as to deliver coal at a much less price at Chester than formerly – the great object for immediate consideration is, how to deliver coal at least expence, from the Ruabon Collieries, into the bason on the south side of the Dee at Pont Cysyllte.[74]

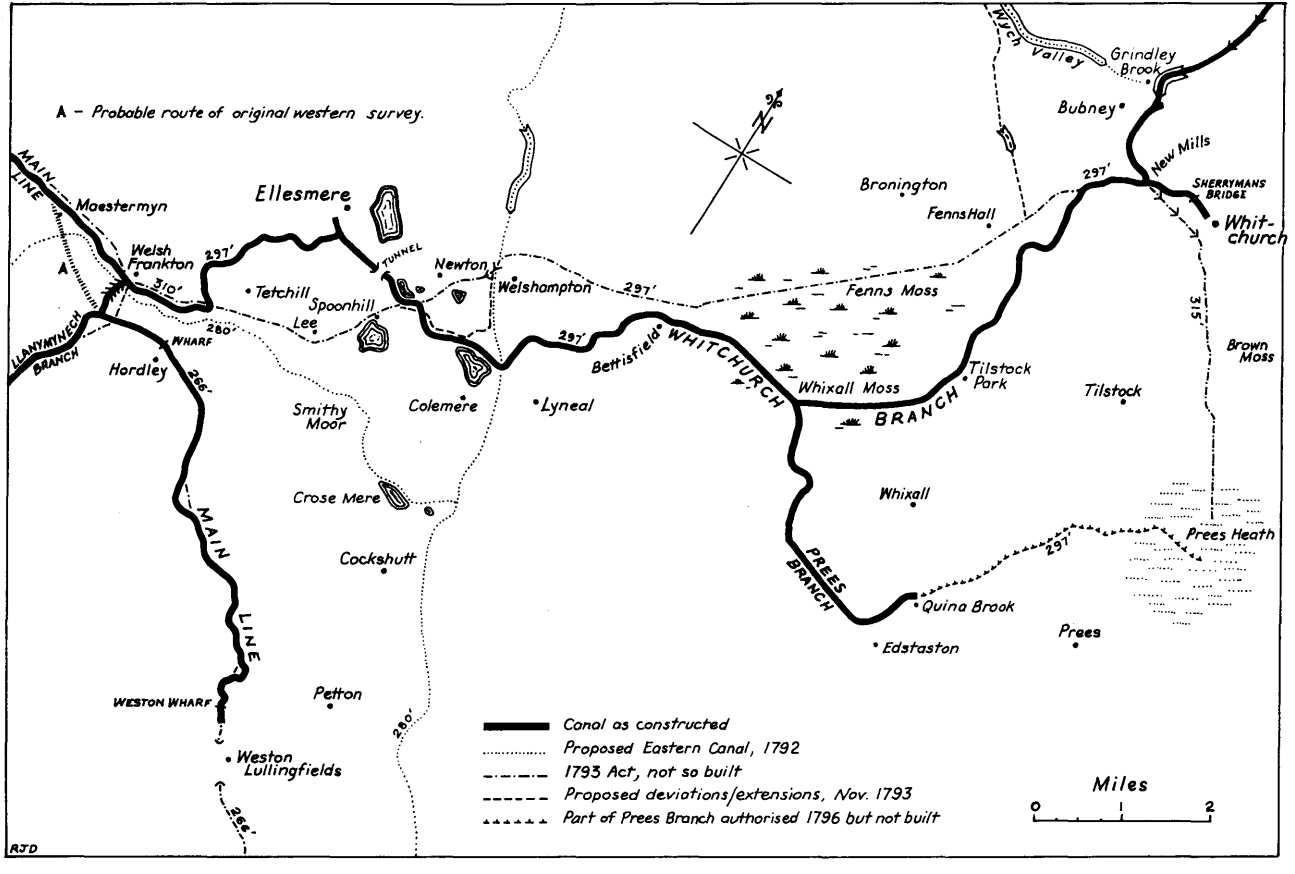
He recommended a railway for this purpose which was built under powers obtained in 1804 from Ruabon Brook to a bason on the north side of the aqueduct.[75] Although railways were to be considered again later, the western line of canal to Chester had effectively died in 1798. In the words of the Company's 1805 report:

> . . . . the great quantity of lockage, which would have been required upon this part, and the difficulty and expense to have been incurred in procurring a sufficient supply of water upon that high and short summit, made it evident that a canal navigation through that district would be perfectly unadviseable.

Whitchurch and the Chester Canal

William Turner's Whitchurch branch as authorised by the 1793 Act was to run from the junction at Frankton by a substantial embankment at Tetchill and deep cuttings at Lee and Newton to Welshampton, then across Fenns Moss and the Red Brook valley to reach Whitchurch. Beyond there locks took it up to a summit extending to Prees Heath with a feeder from Brown Moss. It may be surmised that the heavy earthworks at the western end and the distance from the town of Ellesmere were the penalties for the reasonably direct course that would be necessary for this portion subsequently to become part of an eastern main line. Following the revival of the western line, the Committee took a fresh look early in 1795 at the problem of reaching Whitchurch and their statutory obligation to seek a connection to the Chester Canal.

John Duncombe was directed to resurvey the country from Frankton to Prees Heath, and produced a completely level route on the south side of Fenns Moss which could be connected by a short arm with Ellesmere and passed within two miles of Wem, but Whitchurch anger was aroused: 'by the new survey it will appear



MAP No. 4 Ellesmere and Whitchurch

that the branch will not come nearer to Whitchurch than *Prees* as the level will end there. *Must be opposed.*"[76] A lockless branch from Whixall Moss to Sherryman's Bridge, outside the town, was duly included, and the amended scheme received Jessop's blessing in July: 'Considering the general irregularity of the country the ground chosen is uncommonly favourable. When power is obtained it will be very adviseable to execute this part of the line immediately, as it will certainly be very productive.'[77] The deviation Act passed in 1796,[78] but construction did not proceed with any great vigour. The contract for the first section to Ellesmere was let in February 1797, but the contractors were discharged twelve months later in favour of direct labour.[79] The tunnel and cutting beyond the town were started in November 1798, with the canal towards Hampton Bank soon after. This was completed about the middle of 1800, and a further extension to Tilstock Park involving the difficult crossing of the Moss was taken in hand late in 1801 and completed by 1805. The first portion of the Prees line was built at this time and extended in 1803-4, but the last three miles beyond the main Wem road at Quina Brook never materialised.

Negotiations took place in April 1795 for the purchase of the controlling interest in the Chester Canal, with the purpose, one suspects, of lessening the objection to any subsequent repeal or postponement of the expensive obligation to pursue a junction line contained in the 1793 Act. However, 'Mr Egerton did not then conceive himself fully at liberty to treat',[80] and the obligation remained. Jessop, committed to the western line, was lukewarm:

> Respecting the line for connecting the Whitchurch branch with the Chester Canal, as it could be of no possible use until water could be brought to it by the execution of the main line and the Whitchurch branch, I think it would be very premature to take any steps towards this object at present, and more especially as I have reason to believe that from the line as now proposed a much more eligigible connection might be made than any hitherto surveyed: but time and change of circumstances will probably throw lights upon this subject that cannot be well forseen, and such as it would be idle to predict.[81]

Turner's scheme for this link was rejected. In its final form he had proposed an extension of the Whitchurch level via Grindley Brook, Hampton Heath, Duckington, and Broxton, then falling to join the earlier line to the Chester Canal near Tattenhall.[82]

The Company's Whitchurch deviation Act of 1796 repealed the obligations in respect of the Fenns Hall to Tattenhall line, and gave further room for manoeuvre by providing that engineers appointed by both Companies should agree on the best route for which the Ellesmere must then seek powers within three years. Duncombe for the Ellesmere and John Fletcher for the Chester quickly settled on and prepared plans for the route that was later built through Wrenbury to the summit level of the Chester Canal, save that the junction was to be at Stoke about half a mile north of that finally adopted at Hurleston.[83] Although parliamentary notices were published in August 1797, the project was pigeon-holed whilst the other works on the canal were in hand, despite periodic pressure from the Chester Canal. Not until after the decision early in 1800 finally to abandon the western line to Chester was the question revived, as without it the greater part of the system, and the Montgomeryshire Canal, were totally isolated from the Wirral line and its outlet to Liverpool.

Several variations to the route had been considered, including a more southerly line extending the Whitchurch level to Marbury,[84] and the 1797 notices had envisaged a junction with the Chester Canal at Acton, not far short of the Nantwich terminus, perhaps influenced by the Commercial Canal project of

1795-7. In the end, the original joint plan of 1796 was dusted down and deposited for the 1801 session, this route being duly authorised in the Act.[85] A proposal later that year to start construction between Church Bridge, Norbury, and the north end of Wrenbury Common, was soon detected as a ruse to divert water from the Cholmondeley and Steer Brooks for the supply of the luckless Chester Canal, and the contract for this first section was not let until the spring of 1803 after the Chester company had agreed to pay interest on the expenditure and indemnified the Ellesmere against claims from millowners. All the remaining parts of the line from Tilstock Park to Hurleston were contracted for later that year, once the water problem had been finally solved with the decision in June to bring supplies from the Dee at Llantisilio by a feeder to Pontcysyllte. The through route opened in 1805.

The Committee had decided in June 1800 to save money by not building the last mile of the Whitchurch branch between the proposed junction at New Mills with the Chester Canal link and Sherryman's Bridge. An application in 1805 to construct this length privately was refused,[87] but the Company finally agreed at the end of 1806 to undertake it themselves and to extend further to a more convenient terminus at Castle Well subject to the Whitchurch inhabitants providing a loan of £2,000.[88] Powers for the extension were granted at the second attempt by an Act of 1810,[89] and the canal opened to Castle Well basin in 1811.

Conclusion

The original promoters saw their scheme as both a trunk route of through communication between the navigations of the Severn, Dee, and Mersey, and as a carrier of local traffic: but eastern and western proposals differed sharply in the relative importance attached to each function, leading to different criteria for route selection. The eastern party, after toying initially with a narrow canal, looked primarily to the easiest north-south line big enough for the barges that used the connecting waterways, with local traffics dealt with as necessary by means of branches. The western group, restricted by their engineering works to a narrow-boat canal, wanted direct accommodation for the principal coal and lime traffics with the through connection as an incidental benefit.

Jessop's previous experience had mainly been with broad waterways, and he may have had difficulty coming to terms with the requirements of the Ellesmere scheme. He was never enthusiastic about the eastern line once the Denbighshire industrialists had sold him their expensive western project, and he does not seem to have been further involved once the tide had finally turned away from the canal he had recommended.

William Turner seems only to have had local experience and support as an engineer, and it is not surprising that his persistent but conservative voice was frequently unheeded in the highly-charged atmosphere of the time. Much of what he said was sound in principle, and the Ellesmere Canal Company might have achieved far more than it did if the proposals he supported had been allowed to develop. No doubt he derived some hollow satisfaction at the turn of events after 1798, but the very costly dice already cast largely negated any benefit to the proprietors from the return to more sensible objectives. Like so many promising launches of the period the Ellesmere Canal was swept up on the crest of a speculative wave and carried away with unrealistic ambitions, only to be beached on rising prices when the mania receded. It was to the Company's credit that so much was salvaged to become the irreplaceable asset that we enjoy today.

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2 S. Smiles, *Lives of the Engineers,* Vol. II, John Murray, London, 1862 Ed. John Rickman, *Life of Thomas Telford, Civil Engineer, written by himself,* 1838. Joseph Priestley, *Historical account of the Navigable Rivers, Canals, and Railways . . . .*, Longman, London, 1831. Sir Alexander Gibb, *The Story of Telford,* Alexander Maclehose, London, 1935. L.T.C. Rolt, *Thomas Telford,* Longmans, 1958. Edward Wilson, *The Ellesmere and Langollen Canal,* Phillimore, London & Chichester, 1975.

3 Where possible the maps have been based on the best available original plans rectified to incorporate present day topographic knowledge. Whilst they are considered to be more correct than any offered previously, the depiction of proposals nearly two centuries old can often only be a personal interpretation. Locks are generalised, and the figures beside the pounds represent the height in feet above present Ordnance Datum.

4 E. A. Shearing, 'Chester Canal Projects', *Journal* Vol. XXVIII Nos 3 & 4, 1984. R. J. Dean, 'Sir Richard Whitworth and Inland Navigation', *Journal* Vol. XXVII No. 4, 1982. Whitworth was on the Committee of the Eastern Canal.

5 Ellesmere Canal Proprietors minute books, Public Record Office, Kew, RAIL 827/4, 28 June 1791

6 Ibid. 31 August 1791

7 Ibid. 15 September 1791

8 Joseph Turner, *A description of the intended canal from Shrewsbury to Chester and Liverpool . . . .* Edmund Monk, Chester, 1791. The exact publication date was advertised in the *Chester Courant.*

9 PRO RAIL 827/4, 7 November 1791

10 Ibid. 9 January 1792

11 Ibid. 21 August 1792, with a full transcription of the report and estimate

12 *Chester Courant,* 18 September 1792

13 Deposited plans, 11 November 1792, Cheshire Record Office QDP 2 (Shropshire, Flints., and Denbighs. copies also survive)

14 Ibid. QDP 3

15 PRO RAIL 827/4, 9 January 1792

16 The only survivors of the original large-scale deposited plans of 10 November 1792 are Cheshire RO QDP 1, and Shropshire RO parcel 287. Both have Turner's hurried survey of the branch pasted on as an annex, with the main line now deviated to a higher level between Maestermyn and the intended junction at Frankton to accommodate it.

17 PRO RAIL 827/4, 28 December 1792

18 Ibid. 14 February 1793

19 No record is available of the terms, except that the Eastern promoters were to receive £1,000 towards their surveying expenses. The extent of the combined project at or soon after this time is probably represented by an undated MS map (with later additions) in the Shropshire Libraries Local Studies Dept. Knight Collection

20 33 Geo. III c.91, 30 April 1793, clause 96. Standing Orders of the House of Commons had prevented the new route's being authorised under cover of the Eastern's existing plans and parliamentary notices.

21 Ellesmere Canal General Committee minute books, PRO RAIL 827/1–3, 17 July 1793

22 Deposited plans 11 November 1793, Cheshire RO QDP 5 (Shropshire, Flints., and Denbighs. copies also exist)

23 PRO RAIL 827/1, 23 September 1793
24 Letter to Andrew Little, 29 September 1793, quoted by Sir A. Gibb
25 PRO RAIL 827/1, 18 December 1793
26 Ibid. 17 January 1794
27 J. Knight's rough notes of proceedings at Committee meeting 4 December 1794. Shropshire Libraries, Knight Colln 15022
28 Ibid. 5 January 1795, quoting extracts of letter 3 January 1795 from Turner
29 Curiously, the only plan to have survived is for a Whitchurch to Tattenhall canal (see Map No. 1D) Cheshire RO QDP 10, but from the parliamentary notice it seems that he was applying also for Pontcysyllte to the Cegidog valley, and from Spoonhill to Leaton Heath.
30 Copy of Jessop's report 8 December 1795, Knight Colln 15031
31 PRO RAIL 827/2, 12 April 1797, concerning arrangements with mill owners along the River Perry for filling the canal to Weston
32 PRO RAIL 827/1, 27 June 1796, and 827/2, 29 July 1796
33 PRO RAIL 827/2, 9 February 1803, 26 September 1803, 27 June 1804. See also printed report to the Proprietors 27 November 1805.
34 The locks at Frankton were built some yards west of the parlimentary route, the latter suggesting an even steeper rise
35 Copy of Jessop's report 14 July 1795, Knight Colln
36 Rennie's notebooks, 15 November 1801. National Library of Scotland, MS. 19874
37 Telford's printed report to the Proprietors, 25 November 1801. Knight Colln
38 Deposited plan QDP 3, Cheshire RO
39 Ibid. QDP 1
40 PRO RAIL 827/4, Copy report 23 August 1792
41 Letter from Telford to Rowland Hunt, 17 July 1795, NLS MS. 19772
42 36 Geo. III c.96, 14 May 1796. Clause 11
43 Telford's printed report to the proprietors, 30 June 1802, mentions that the lock was then finished
44 e.g. resolution of meeting 31 August 1791, PRO RAIL 827/4
45 PRO RAIL 827/4, 25 October 1792. As a result of a meeting at Welshpool two days earlier the Committee recommended an extension there either by consolidated stock or by an independent company.
46 PRO RAIL 827/4, 28 December 1792 and 11 January 1793
47 Thomas Lovett to Richard Myddleton, 14 January 1793. Chirk Castle MSS. E234, National Library of Wales. The first survey was taken by 'Mr Wareing, a person concerned in the Leominster Canal'.
48 NLW Chirk Castle MSS. E255 and E550
49 33 Geo. III c.91, 30 April 1793, clauses 98 and 99
50 No copies of this report seem to have survived
51 No plan can be found of this branch, but a separate parliamentary notice was issued for it, referring to a terminus in the Reverend Mr Steel's land within the Liberties of the Town of Oswestry. It would have been less than a mile long with three or four locks.
52 Printed report to the Proprietors, 21 October 1795. Knight Colln
53 Montgomeryshire Canal minute book, PRO RAIL 852/11, 27 February 1797 and 3 July 1797
54 Ibid. 7 August 1794
55 36 Geo. III c.96, 14 May 1796, clause 19
56 PRO RAIL 852/11, 15 January and 23 February 1796
57 1&2 Geo. IV c.119, 23 June 1821
58 7&8 Geo. IV c.102, 21 June 1827

59 PRO RAIL 827/2, 27 November 1799
60 PRO Ellesmere & Chester Canal minutes, 28 February 1822
61 Turner's printed notice 6 October 1795, Knight Colln
62 Cheshire Record Office QDP 1. Shropshire RO Parcel 287
63 PRO RAIL 827/4, 28 December 1792
64 Deposited plans 11 November 1793, Cheshire RO QDP 5. Shropshire, Flints., and Denbighs. copies also survive. Kept with the Cheshire copy is an interesting official survey c.1800 of the completed canal from Chirk Bank to Llanymynech, purpose unknown.
65 Deposited plans 25 September 1795, Cheshire RO QDP 10, also Flints. and Denbighs. copies
66 Jessop's report 14 July 1795, copy in Knight Colln
67 Ibid. 8 December 1795
68 36 Geo. III c.96, 14 May 1796
69 PRO RAIL 827/1, 27 June 1796, and 827/2, 29 July and 24 August 1796
70 PRO RAIL 827/2, 30 November 1796
71 Ibid. 13 June 1798
72 R. J. Dean, 'The Ffrwd Branch of the Ellesmere Canal' *Journal* Vol. IX p.109
73 PRO RAIL 827/4, 28 November 1798
74 Jessop's report 24 January 1800. Knight Colln, 15037. Against the first part of the second quoted paragraph an unknown hand has endorsed 'This might have been seen before had ye survey of ye line been made by persons of ability'
75 44 Geo. III c.54, 29 June 1804. The canal was extended privately about half a mile c.1820 by Pickering's arm. The Ellesmere & Chester Company sought powers in 1830 to build on the level to Plas Kynaston, but withdrew this provision from their bill, and it was carried out privately soon after by an extension of the arm and a short tramway.
76 Undated MS notes, Knight Colln 15019
77 Jessop's report 14 July 1795. Copy in Knight Colln
78 36 Geo. III c.71, 26 April 1796
79 PRO RAIL 827/2, 10 February 1797 and 7 February 1798
80 Potts & Leeke account books 26 April 1793. Cheshire Record Office DPB/-
81 Copy report 14 July 1795, Knight Colln
82 Deposited plan 28 September 1795. Cheshire RO QDP 10 RO QDP 25
83 Ibid. dated 30 December 1796, deposited 29 September 1800. Cheshire
84 Undated MS plan in Knight Colln, and PRO RAIL 827/2, 5 June 1800
85 41 Geo. III c.70, 20 June 1801
86 Copy report by John Hill, John Knight, and Geo. Corser, Knight Colln 15066
87 PRO RAIL 827/3, 31 July 1805
88 Ibid. 26 November 1806
89 40 Geo. III c.24, 6 April 1810

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