

NORTH WALES WIRING ON THE WISHLIST

Political pressure is growing for electrification and other improvements to the North Wales coast main line, as Rhodri Clark reports

The North Wales coast main line, from Crewe to Holyhead, missed out when the rest of the West Coast main line (WCML) was electrified. Now politicians, local government and business leaders are hoping that their region will not miss out a second time, although the line to Holyhead has not yet been added to Network Rail's extensive list of future electrification works. Their principal concerns are that without electrification North Wales and Chester could be divorced from the UK Government's Northern Powerhouse programme and will not be 'HS2 ready' by 2027, when high speed rail services to and from Crewe are due to begin.

FOUNDATIONS

Some preparatory work has already been completed. In 2013, when the Government's enthusiasm for electrification was at its zenith, the Department for Transport established a taskforce

with Network Rail to study options for further electrification in northern England. The scope included routes from Warrington and Crewe to Chester but no further west. The DfT said that this was not a prelude to dividing North Wales services into diesel and electric elements, with passengers required to change trains at Chester.

The study, published in March 2015, emphasised the importance of through trains. It concluded: 'There is now a strong understanding of the interaction between the services east of Chester and those into Wales. From this it is clear that electrification south and east of Chester (to Crewe and Warrington) on its own would not give significant benefits and therefore these routes must be considered in the wider context of the rail network along the North Wales coast.'

'It is our view that a case for electrifying these routes will be heavily influenced by the strategic context, including the post-HS2 pattern of

services from London to North Wales and also the opportunities to link the North Wales coast with Manchester and destinations further east once routes over the Pennines are wired.'

Network Rail's draft Wales Route Study, also published in March 2015, brought North Wales coast electrification into sharper focus and warned that a 'high number of civil engineering structures along the route' would require gauge clearance for 25kV overhead electrification. The study estimated the investment cost to be £764.5 million at 2010 prices, including the routes to Chester from Crewe and Warrington.

The benefit-cost ratio was 0.33, based on committed train services, or 0.55 if electrification were to be accompanied by 'an enhanced level of uncommitted train services'. The Government classifies BCRs below 1.0 as poor value for money. Network Rail acknowledged that the study excluded 'wider economic benefits', but stated that

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their inclusion was 'unlikely to materially change the value for money categorisation.'

The assumed service pattern could be critical to the business case for electrification, particularly west of Llandudno Junction, where the timetable is currently dominated by workings from Holyhead to Birmingham and Cardiff via Shrewsbury which would remain diesel operated even if the North Wales coast line were to be electrified.

CAMPAIGN

The campaign for electrification and other improvements along the coast line is led by the North Wales Economic Ambition Board (NWEAB), representing businesses and local authorities, and by the Mersey Dee Alliance. They aim to 'inject pace and urgency to the priorities they have identified' and have established a group that will oversee and co-ordinate their joint working. The group includes representation from the Cheshire and Warrington Local Enterprise Partnership, whose members include former pop music producer Pete Waterman.

A NWEAB spokesman explains: 'We firmly believe that electrification of the line from Crewe and Warrington through to Holyhead needs to happen in the same timescale as completion of the hub station at Crewe.

Being HS2 ready in that way will bring benefits for the North Wales and Cheshire economies, and for the UK economy as a whole.'

The NWEAB held a rail summit in Llandudno in November 2015, focusing particularly on electrification. Mr Waterman suggested that dual-voltage electrification should be considered, to avoid the high costs of modifying structures at the western end of the North Wales coast line for overhead line electrification equipment.

CHALLENGES

West of Abergele & Pensarn, the railway passes through several tunnels and crosses the Menai Strait on the Britannia Bridge, rebuilt in the 1970s after a fire damaged Robert Stephenson's original tubular structure. The current single track bridge offers relatively generous clearances. However, the bridge over the Conwy estuary retains Stephenson's tubes. From the outside the tubes, 6.85 metres in height, appear to provide generous headroom. However, each tube has a row of smaller tubes running the length of the span at the base, and a second row of small tubes along the top.

The Conwy bridge is a Grade I listed structure and a scheduled ancient monument. Overhead line electrification would also affect the setting of Conwy Castle, adjacent to the railway at the bridge's

western portal. The castle and walled town, through which the railway burrows, are part of a United Nations World Heritage Site. Obtaining consents and public support for overhead electrification here could make the current work at Sydney Gardens in Bath look like a walk in the park!

ENHANCEMENTS

Claire Perry, rail minister for the UK Government, was the keynote speaker at the North Wales rail summit. She made no promises on electrification in her speech. While taking questions from the floor afterwards, she said: 'We make a bit of a fetish sometimes about electrification. It's not the only way to deliver benefits. Many people, including myself, won't comprehend if we're on a diesel or electric train.' She recognised that electric trains brought operational advantages, but argued that what mattered most to passengers were getting a seat on the train, reliable journeys and whether the ticket was good value for money.

Her comments brought local Conservative MP David Jones to his feet immediately; he was Secretary of State for Wales from 2012 to 2014. He said: 'We're part of the Northern Powerhouse and we want a share of it. We don't want to miss the boat. Electrification is what we in North Wales do want. We want to make sure that we're connected to the developments at Crewe.'

There was further disappointment for him and for fellow campaigners in December when Transport Secretary Patrick McLoughlin gave a speech in Cardiff on Welsh transport infrastructure. North Wales electrification was omitted. Mr McLoughlin said HS2's opening from London to Crewe in 2027

would 'transform travel to and from North Wales, allowing passengers from North Wales to board HS2 at Crewe and travel to London in just 55 minutes, compared with today's 90 minutes.'

Commenting on the speech afterwards, Mr Jones said that changing trains at Crewe was 'something we're trying to avoid'. He said that Southeastern's services on HS1 set a precedent for classic compatible HS2 trains to continue on the existing railway into North Wales. 'The worst thing that could happen would be for electrification to stop at Chester' he added.

Albert Owen, Anglesey's Labour MP, also supports electrification. He believes that the UK

Government has overlooked the thriving ferry route between Holyhead and Dublin which makes the North Wales coast an important international transport artery, potentially enabling electrification to be supported by European Union funding. 'They [the Government] haven't understood that at all' he says. 'They haven't taken up their obligations on the European dimension of fighting for investment'.

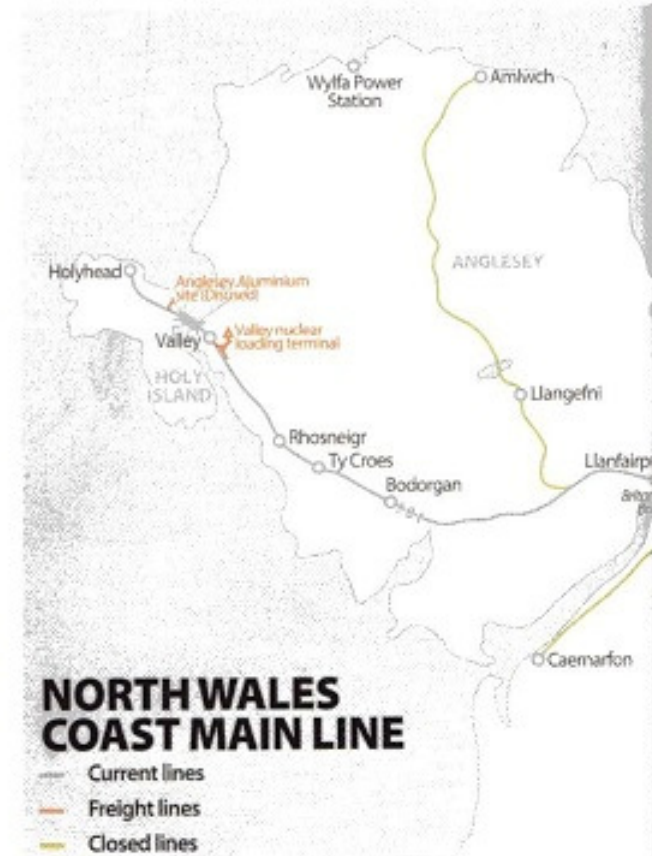
Whether through operation of HS2 trains to Holyhead depends on electrification is a moot point. SNCF has previously used diesel locomotives to haul TGVs beyond the limit of electrification. More recently, Pendolino sets were routinely hauled by Class 57 locos between Crewe and Holyhead before

sufficient Voyager units were available to cover all North Wales diagrams.

Swansea-based transport consultant John Davies knows the North Wales coast well, having been British Rail's Provincial Sector manager for Wales in the late 1980s and early 1990s. He doubts whether North Wales electrification is justifiable because of the traffic volume on offer and the likelihood of bi-mode trains operating in future between Holyhead and London Euston via the WCML. He also doubts that hauling an HS2 set from Crewe to Holyhead and return, even once daily, would represent good utilisation of a large and expensive train.



Airport extension planned: ATW Class 175s pass near Manchester Piccadilly on 26 July 2013. Paul Bigland



'The railway business to and from Ireland isn't time-sensitive. It can't be' he observes. A WCML service would suit the leisure travellers who cross the Irish Sea by ferry, as opposed to air, and would continue to give North Wales a through service to Milton Keynes, where interchange to East West Rail will be available. He adds that if Warrington to Chester were to be electrified, there would be no reason why bi-mode units shouldn't operate services between North Wales and Manchester.

SMALLER PROJECTS

At the rail summit, Claire Perry stressed that investments which cost significantly less than electrification could provide major benefits for passengers. As an example, she pointed to the £10 million reinstatement of the Halton Curve for regular bi-directional traffic, which would result in the first through services for decades between Liverpool and North Wales.

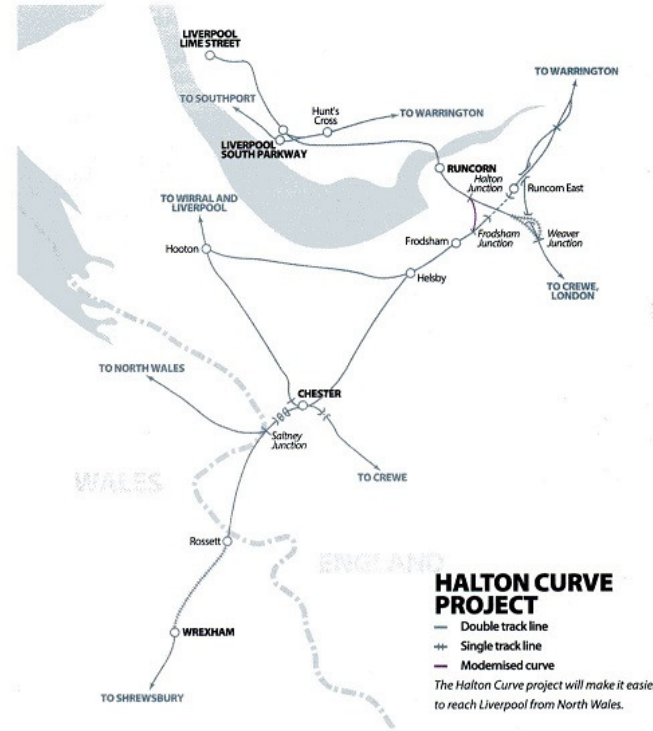
The NWEAB argues that there has been 'little or no investment in the North Wales rail system since Victorian times'. The focus since the 1970s has been firmly on investment in roads, including construction of the A55 dual carriageway from Chester to Holyhead. The A55 has transformed the relationships between communities along the coastal belt, enabling commuting over longer distances than was previously practicable.

However, the A55 is now a victim of its own success, especially when summer tourist traffic augments the year-round local, regional and international traffic. Accidents or roadworks can cause long delays on sections where diversionary routes are scarce or non-existent. Carwyn Jones, First Minister of Wales, recently said the road was built 'on the cheap'.

Enlarging the A55 would require major outlay, especially at the western end where the current road passes through three tunnels and over the Menai Strait on Britannia Bridge's upper deck. However, the Welsh Government has ordered development of a business case for a possible third road bridge over the Menai Strait.

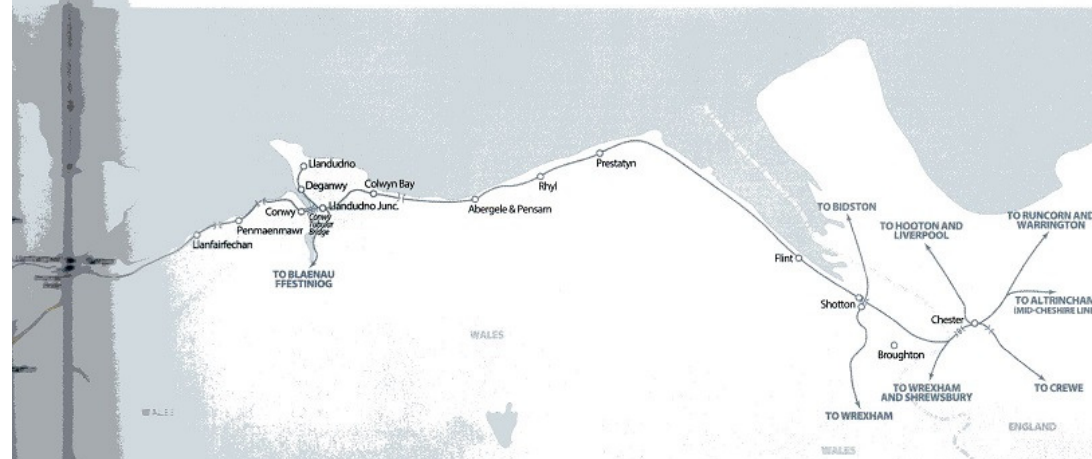
The NWEAB sees the under-utilised railway as a transport safety valve. Its wish list includes faster and more frequent services, including a mix of fast and semi-fast trains. It argues

that North Wales needs through trains to key destinations including cities, airports and ports, and emphasises the scale of commuting in both directions across the border. There are one million commuter journeys each month between North Wales and North West England, and 85% are by car. With current plans envisaging 55,000 new jobs between Holyhead and Wirral Waters, the NWEAB predicts that 'the roads will not be able to cope'.



BOUNDARIES

Irrelevant though the England-Wales border may be to commuters, it is a political and administrative reality. Its significance has grown recently with the decisions to devolve the Wales and Borders rail franchise to the Welsh Government and introduce devolution in northern England. The UK Government intends to remap the Wales and Borders franchise to ensure that services which



primarily serve English markets remain within the DfT's ambit.

Politicians in North Wales are concerned at the potential ramifications for their region. David Jones MP says: 'There's no doubt that economically speaking we're part of the North West [of England]. The last thing we want is a border – a line on the map – causing difficulty for us reaping the benefit of the Northern Powerhouse.'

Welsh rail infrastructure will not be devolved, and the Welsh Government's strategic plan for the North Wales coast line to 2020 and beyond is to 'make the case for investment by UK Government during the next Control Period' (CP6, 2019-24). However, the Welsh Government has developed its own plans for electrification, light rail and other enhancements for railways in South Wales, where it has already opened numerous new stations and reopened two railways to passengers. North Wales appears to be falling between the devolutionary stools which are driving forward rail development in South Wales and North West England.

AIRPORT SERVICES

The NWEAB highlights the importance of through trains between North Wales, where tourism is a major sector of the economy, and the nearest international airports. North Wales has no international airport of its own.

Arriva Trains Wales operates several through trains on weekdays and Saturdays between Holyhead and Birmingham International, near Birmingham Airport, but this provision may not survive the Department for Transport's franchise remapping. The DfT's consultation document on the next London Midland franchise explains: 'Some services and stations within England that currently run as part of the Wales and Borders

franchise may be moved into this and/or another franchises.'

The DfT said in early February that no cross-border services will be split, and Claire Perry gave an assurance at the rail summit in November that services from Liverpool to Chester via the Halton Curve will continue into North Wales. If the result is a regular train service from Liverpool Lime Street and Liverpool South Parkway (close to Liverpool John Lennon Airport) to the North Wales coast, it could stimulate new inbound tourism through the airport as well as helping residents and businesses in North Wales to access the airport.

ATW runs a small number of services, in early morning and late evening, to and from Manchester Airport. It had intended to operate more services to the airport from the May 2015 timetable change, as projections of its hourly Llandudno-Manchester Piccadilly workings. The current diagrams result in a long layover for trains and crew outside Piccadilly, sufficient for a return trip to the airport with a performance margin included.

Network Rail and the DfT were in broad agreement that the paths requested by ATW would be needed for a new service to the airport from the Calder Valley line when the Ordsall Chord is eventually completed. However, in October the timetabling panel of the rail industry's access disputes committee ruled that Network Rail had been wrong to deny ATW the paths.

ATW subsequently applied to the Office of Rail and Road for contractual rights to extend six additional trains to the airport on weekdays from May 2016. These would be the workings which depart from Llandudno from 07.45 to 12.53 inclusive. They would return at xx.37 from the airport, from 10.37 to 15.37.

The proposed Saturday service would involve approximately hourly services departing from Llandudno at 06.34 to 15.44 inclusive, returning hourly from 09.37 to 18.37.

Greengauge 21 told a recent Welsh Assembly committee hearing that growth in use of rail services from both airports to North Wales would strengthen the case for electrification. There are more than 120,000 annual business trips between Wales and Manchester Airport, it observed. It also said linespeed improvements along the coast are long overdue, require minimal government funding and could reduce journey times by seven minutes.

Brian Clarke, of Cheshire West and Chester Council, told the committee that capacity constraints in Manchester could result in ATW's planned services to Manchester Airport being curtailed in favour of services from elsewhere. He said the constraints would be avoided should the 3.5-mile western airport rail link be constructed from the mid-Cheshire line at Mobberley. The council is objecting to a proposed withdrawal of safeguarding for land along the route.

RESIGNALLING

Electrification was not the only technological upgrade which omitted the North Wales coast line in the British Rail era. The Ffestiniog Railway heritage line has newer signalling than the main line, parts of which are still controlled by mechanical signal boxes and semaphore signals. This is significant for Llandudno in particular, because the three-mile Llandudno branch is covered by signal boxes at Llandudno Junction, Deganwy and Llandudno. The staffing costs are such that Llandudno has no trains on Sundays outside the main tourism season, despite the

town's regional importance for shopping, entertainment, conferences and employment. As Wales' biggest coastal resort, it has a year-round tourism trade.

Network Rail's summary route plan for Wales during the preparations for Control Period 5 included 'Chester to Llandudno signalling renewal by 2015'. Claire Perry told the North Wales rail summit that the work will be completed by 2019.

The summary route plan listed resignalling from Llandudno Junction to Holyhead for commissioning in 2020, but Network Rail is unwilling to say whether that timescale is still achievable. A spokeswoman comments: 'We are currently developing a project to renew the signalling on the North Wales main line. We're phasing the work across two distinct sections at present. The first phase will see the line resignalled from Flint to Llandudno Junction. This scheme will be delivered in CP5 with the current proposals showing the remainder of the line to Holyhead being resignalled in CP6'. Her reference to Llandudno Junction indicates that the Llandudno branch is deferred to CP6.

The second phase offers an opportunity to reopen the derelict Anglesey Central Railway from the main line at Gaerwen to Llangefni, Anglesey's county town, without the high costs of modifying existing signalling. In 2010 Network Rail presented the Welsh Government with a report on reopening to Llangefni. The Welsh Government's transport finance plan for 2015 to 2020 and beyond includes Llangefni in a list of new stations for which the government will develop assessment criteria to prioritise stations 'for further consideration in relation to securing funding from the rail industry'.

Reopening the branch to Caernarfon, a major tourism destination and the county town of Gwynedd, featured in the last regional transport plan for North Wales but would have entailed rebuilding the former railway from the main line west of Bangor. The Welsh Government has not placed Caernarfon on its unprioritised list of possible stations but has committed to building a six-mile outer bypass road for Caernarfon.

Also absent from the unprioritised list are any additional stations along the main line east of Chester. Population growth in the area has contributed to acute road congestion between and during the commuting peaks. However, the list does include Broughton, home of the large Airbus wing factory. Broughton is equidistant from the main line and the Wrexham to Bidston line.

Network Rail has suggested that a new interchange station could be developed during CP6 at Shotton, where the Bidston line crosses over the main line. The current platforms, on both lines, provide spartan facilities, no step-free access to the Chester-bound platform and a circuitous walking route for some interchanging passengers.

FREIGHT

Wylfa nuclear power station, on Anglesey's north coast, ceased electricity generation in December. It has been the only source of regular revenue-earning freight on the North Wales coast line for several years, with nuclear flasks conveyed by lorries between Wylfa and a loading terminal at Valley.

A new nuclear power station at Wylfa is proposed. Much of the construction material would arrive by sea. Reopening the entire Anglesey Central Railway has been considered for the project but found to be 'very costly', as well as involving transshipment to lorries for



Coastal resort: Class 175 at Llandudno, 14 May 2013, Paul Bigland



Decline: revenue-earning freight was already a scarcity on the main line when this nuclear flask, bound for Valley, passed Llandudno Junction on 27 October 2015. Since then the nuclear power station at Wylfa has ceased electricity generation. Rhodri Clark

the last few miles to Wylfa from a railhead in the Amlwch area. However, the line's proposed reopening as far as Llangefni for passenger services would take care of the significant costs of reinstating the junction at Gaerwen.

Local MP Albert Owen argues that electrification would improve the business case for Irish Sea freight to be conveyed by train across North Wales. The Rail Freight Group says that electrification could be the spur to reintroduction of an intermodal freight link to Ireland, and enhancement to W10 gauge would unlock the line's freight potential.

The RFG also believes that HS2's opening to Crewe could release WCML capacity for freight from North Wales: 'Whether the main line to Holyhead is electrified or not, this might include capacity for through freight trains to the main container ports – Felixstowe, London Gateway, Southampton – thus providing a "land-bridge" for deep sea traffic to and from Ireland as an alternative to short sea feeder movements'.

Currently some 350,000 freight units pass through the ferry port at Holyhead each year, placing a significant burden on the A55 in terms of congestion, maintenance, pollution and accident

risk. The number of units is growing as Ireland continues to recover from the recession.

Rail freight alternatives have been studied. A key obstacle is a shortage of land at Holyhead port, where the Freightliner terminal closed in 1991 and was replaced by queueing facilities for road vehicles. Another difficulty is the disparate nature of the freight traffic, without a single large flow which would provide the nucleus for regular freight trains.

Rail sidings still exist at the former Anglesey Aluminium site near Holyhead, which previously dispatched aluminium to Austria by train. Plans have been unveiled for a biomass power station at the site. Heat and carbon dioxide from the plant would feed a large hydroponic and aquaculture centre on the same site to produce large quantities of vegetables, fruit and seafood (p17, last month).

The project's promoter claims that the centre would be the world's largest land-based producer of fish and prawns. It chose Anglesey for several reasons, one of which was the site's main line rail links. A spokeswoman says: 'We will be importing an element of the biomass through the railway links and exporting fresh products via the railway links in the future.'



Set for revival: Northern Rail's No 150148 runs along the Halton Curve on a special working on 26 June 2010. The train has just crossed over the M56 (behind the camera) and is heading towards Runcom, Tony Miles

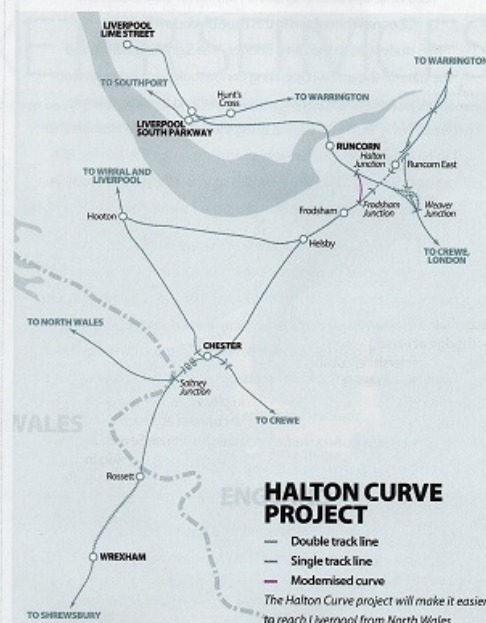
DECEMBER 2018 FOR HALTON CURVE SERVICE

RAIL MINISTER Paul Maynard has said that passenger services between Liverpool and Chester via the upgraded Halton Curve are expected to begin in December 2018.

The curve, which links Runcom and Frodsham, can only be used in one direction at present, and is served by a weekly passenger train during summer months only. Upgrades to the track and signalling across the length of the curve, along with new infrastructure at either end, will allow an hourly service to operate in each direction between Liverpool and Chester. Work is due to start on site in June 2017

and be completed by spring 2018, Mr Maynard confirmed in a written answer to a Parliamentary question.

Funding for the work has been approved as part of the Liverpool City Region Growth Deal, with Merseytravel managing the development and delivery of the scheme via Network Rail. Mr Maynard said Merseytravel anticipates that services will begin in December 2018, following the finalisation of agreements with operators and staff training. It is expected that services will be incorporated into the Wales and Borders Franchise.



The Editor of Modern Railways has kindly consented to the inclusion of an article from the March 2016 edition of Modern Railways and we are indebted to him for allowing this.

The article sums up the current situation on our route admirably and while not necessarily the view of NCRUG it is relevant.