

Route Plans 2007
Route 22
North Wales and Borders



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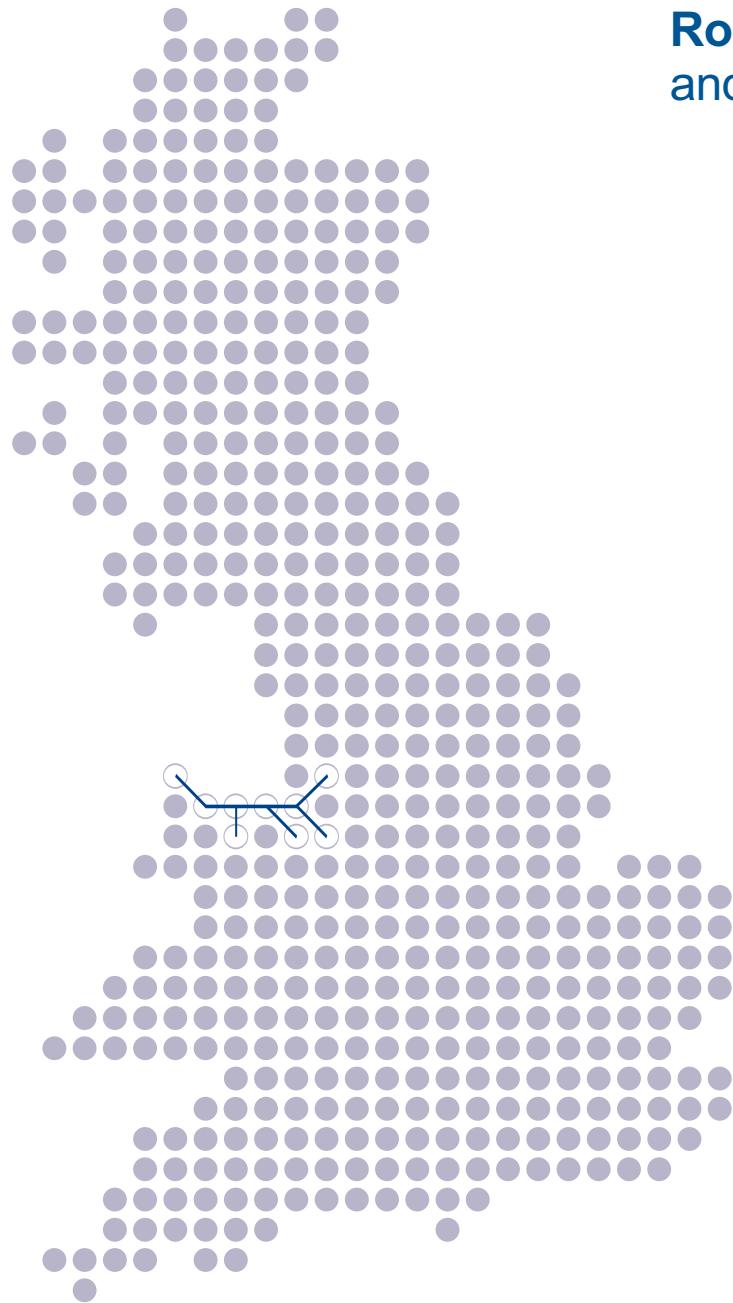




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Route 22 North Wales and Borders

Today's route

The principal elements of the North Wales and Borders route are described below. The relevant Strategic Route Section is shown in brackets:

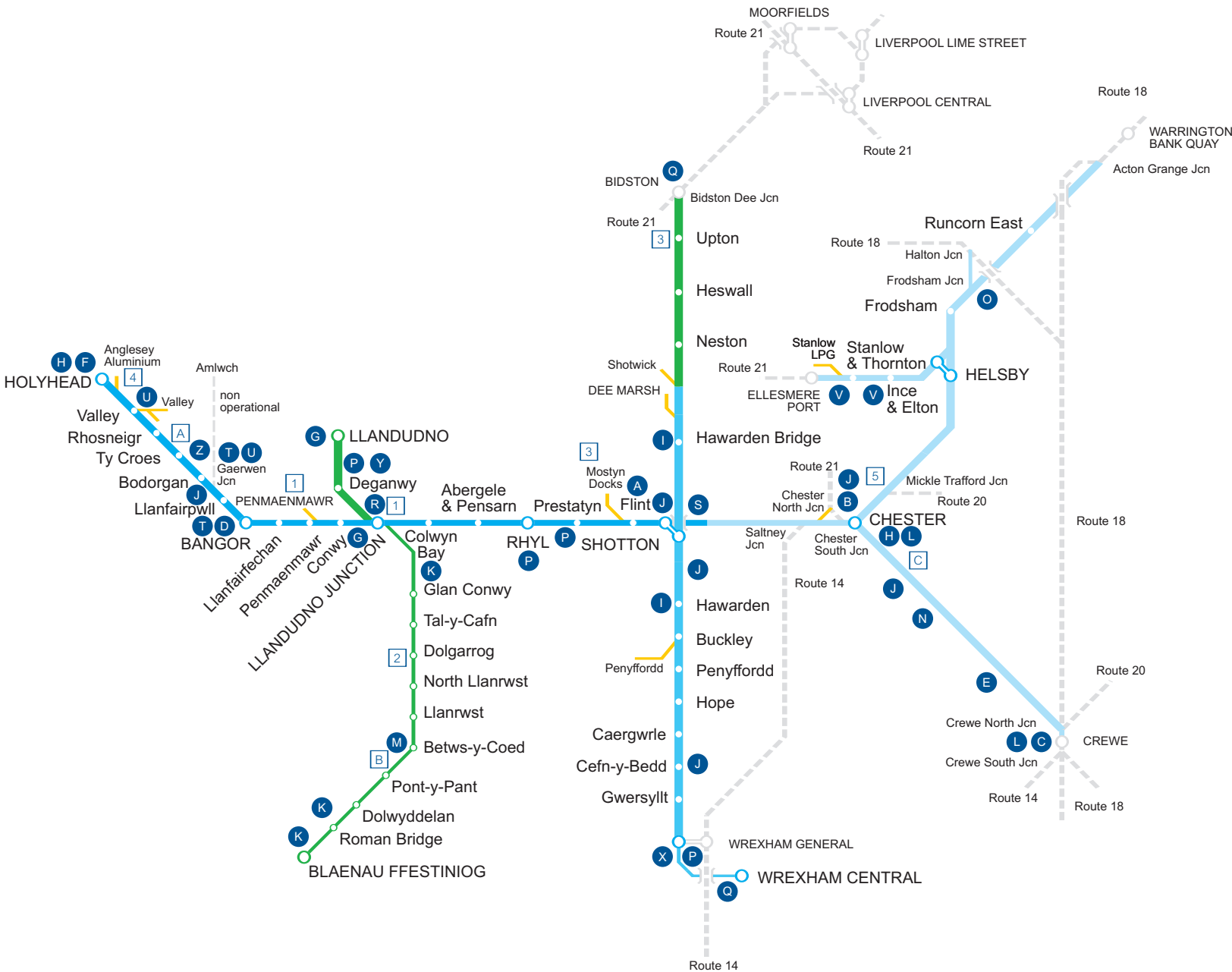
- Holyhead to Chester and onto WCML via Crewe and Warrington (22.02, 22.01);
- Bidston – Wrexham line (22.04, 22.05 & 22.06);
- Branches from Llandudno Junction to Llandudno and Blaenau Ffestiniog (22.03);
- Ellesmere Port to Helsby (22.01); and
- Halton Curve (22.01).

Route context

The route includes the North Wales Main Line (NWML), designated as a Trans-European Network (TENS) route. It provides an important link between North Wales and Liverpool, Manchester, London, Birmingham, and South Wales. It also includes the branch lines to Wrexham, Bidston, Llandudno, Ellesmere Port and Blaenau Ffestiniog. Holyhead station acts as a railhead for the ferries to and from Ireland. The M56 is the road alternative to the Manchester to Chester rail routes, and suffers from heavy congestion during peak hours. In North Wales,

the A55 provides the direct competition. Traffic to Ireland from Liverpool and Manchester has competition from low cost airlines. For smaller communities on this route, rail provides a valuable public transport link. The NWML forms an important route for freight, as do the branches between Wrexham and Bidston, and Ellesmere Port and Warrington. This route is included within the scope of the Wales Route Utilisation Strategy (RUS). Work on this RUS started in late 2006, and is expected to be completed in May 2008.

Route 22 North Wales and Borders



Key	
—	Secondary
—	Rural
—	Freight only

Passenger and freight demand

Passenger usage on this route is mixed. There is some localised commuting and business traffic within the route, but there are also significant commuter flows to destinations off route – notably to Liverpool, Birmingham and Manchester – with South Wales and London being popular destinations for business travellers. There are flows to and from Ireland via the ferry terminal at Holyhead, as well as to and from the various resort towns along the coast, all of which vary in intensity according to season and weather.

There are several drivers of freight traffic on the route. These include: the steelworks at Dee Marsh; the ports of Mostyn and Ellesmere Port; the quarry at Penmaenmawr; and on Anglesey the power station and the aluminium smelter.

Current services

The following train companies operate services on this route: Virgin West Coast, Arriva Trains Wales, Northern Rail, Merseyrail, English, Welsh and Scottish Railway, Freightliner Heavy Haul Ltd and DRS.

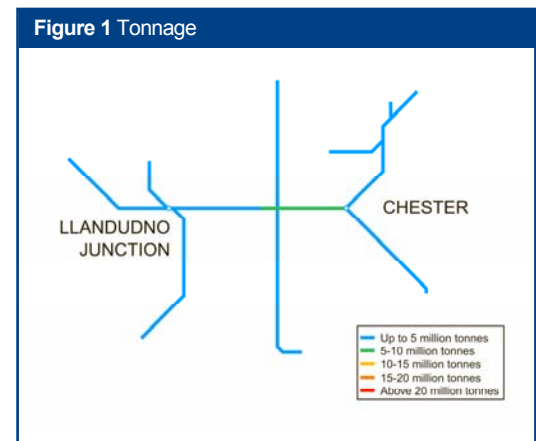
The timetable has been recently revised, giving a more standardised pattern during the off-peak. On the core route, there are two trains per hour between Crewe and Chester, hourly services from Manchester to Llandudno and from Wrexham to Bidston, and two-hourly services from both Cardiff and Crewe to Holyhead and from Birmingham to Chester. On top of this pattern there are additional services in the peak and a number of long distance trains that serve the Irish ferries. The Blaenau Branch is single track with one passing place, restricting access for services, and sees half a dozen trains each way a day. The section between

Ellesmere Port and Helsby sees only four passenger trains a day, and the Halton Curve sees no passenger traffic. At the periphery of the route, Merseyrail operates a half-hourly off-peak service into Chester, with up to four trains per hour in the peak.

The largest freight flow is steel traffic of about 3 trains a day between Wrexham and Dee Marsh. There is significant stone traffic of 2 or 3 trains a day along the NWML from the quarry at Penmaenmawr to Network Rail's local distribution centre at Crewe. There is also a steel flow of about 2 trains a day between Warrington and Mostyn Docks, and a coal flow of 2 trains a day between Ellesmere Port and Fiddlers Ferry Power Station (via Warrington Arpley). In addition there are a few trains a week between Warrington and Anglesey and between Crewe and Valley.

Figure 1 shows the tonnage levels on the route.

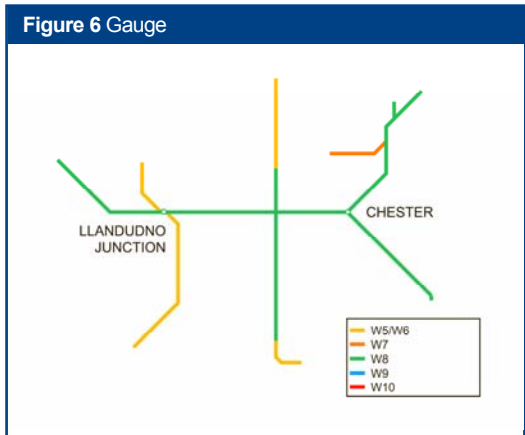
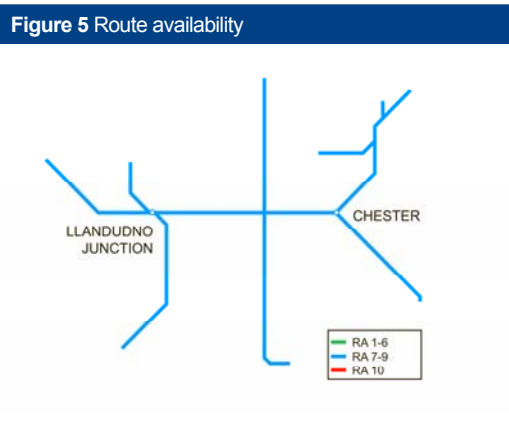
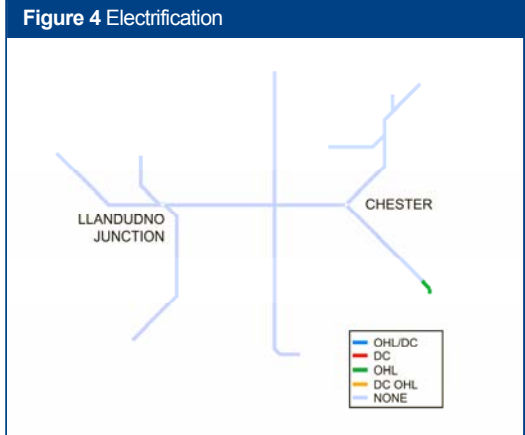
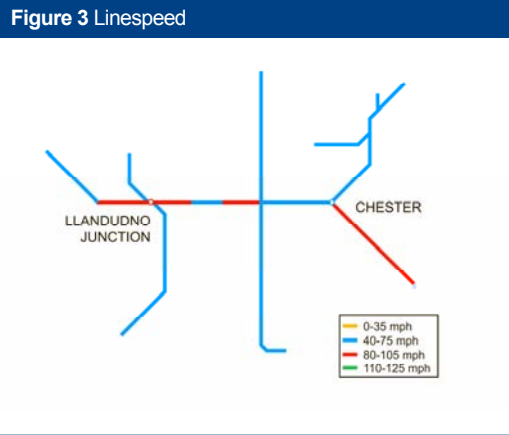
Traffic volumes are summarised in Figure 2.



	Passenger	Freight	Total
Train km per year (millions)	5	0	5
Train tonne km per year (millions)	764	178	942

Current infrastructure capability

The following maps set out the capability of the current network.



Current capacity

Broadly, the route is capable of handling the traffic expected of it, with no major issues. The most significant constraints are off route, such as the single lines between Wrexham and Saltney Junction, and between Mickle Trafford Junction and Mouldsworth. However, the move away from locomotive hauled stock and HSTs to multiple units and Voyagers has in the past led to certain services being particularly overloaded. The revised timetable is expected to smooth the overcrowding, and the main challenge will be the summer months.

Where constraints do exist, they tend to restrict flexibility when planning the overall timetable, or restrict perturbation management, rather than prevent the desired traffic. Examples of these are: the restricted layout at Chester East Junction, which creates an interaction between North Wales – Crewe traffic and Manchester – Northwich – Chester traffic; the single electrified access to Chester for Merseyrail trains; a few long absolute block sections that are adequate for the quantity of traffic, but restrict the spacing of trains more than would be desired; and the single line with one loop on the Blaenau branch.

The Halton Chord is constrained by traffic only being able to run in one direction, effectively preventing its use for passenger services.

Figure 7 represents numbers of trains in the morning peak hour.

Current performance

Figure 8 shows the current PPM for each TOC running along the route.

Some traffic on this route, notably the trains originating from London and Manchester, can import delay from other congested places or export it to them. Although there are comparatively few

trains in relation to the geographical area, the signalling sections are generally fairly long, meaning that the ability to recover from delay can be limited.

The standard pattern timetable introduced for Arriva Trains Wales has improved performance on this route largely due to the more regular spacing of trains. At the same time, the opportunity was taken to increase station dwell and turnaround times, leading to a more robust schedule. The route has also benefited from reduced reactionary delays from the rest of the Arriva Trains Wales area.

Each year, there tends to be a handful of instances of serious delay arising from the physical geography. Severe weather can result in disruption to services on the exposed coastal route, and several lower-lying sections of the route, notably between Crewe and Chester and along the Conwy Valley, are susceptible to flooding. We have developed a 10-year strategy to strengthen the coastal sea defences at various locations along the route. There remains an issue with floodwater originating from land adjoining the rail network at locations including Llanrwst, for which we are working with relevant landowners and the Environment Agency to address.

The line between Llandudno Junction and Blaenau Ffestiniog was substantially rebuilt following a washout early in 2004. Although it is still susceptible to flooding problems during extreme rainfall as happened in January 2006, it is now more resilient, with train services able to resume more quickly, albeit at reduced speeds.

The route has no diversion capability apart from Crewe – Chester traffic able to be diverted either via Middlewich or via Wrexham depending on the ultimate destination, and for Ellesmere Port to Helsby traffic to go via Hooton and Chester.

Figure 7 Current train service level (trains per peak hour)

Route Section	
Crewe – Chester	3
Chester – Mickle Trafford Junction	2
Chester – Saltney Junction	3

Figure 8 Current PPM MAA (2006/07)

TOC	MAA	As at period
Arriva Trains Wales	87.2%	11
Merseyrail	92.2%	11
Virgin West Coast	86.4%	11

The track renewals programme is targeting the remaining pieces of jointed track on the route by replacing it with CWR. Significant work was carried out on the line from Crewe to Holyhead during 2006/07, and this programme will continue into 2007/08. Elsewhere, we will carry on with the strategy to reduce rail defects before they become a significant issue. Around Bangor Bridge, we have carried out track circuit cable renewals, leading to a reduction in failures.

On some sections of the route, leaf fall is still a problem although the impact was reduced this year due to a number of infrastructure interventions: the completion of a 6m strip clear of vegetation either side of the tracks; proactive treatment of rails; and static traction gel applicators that spread adhesive gel in front of trains to improve traction. We also worked with Arriva Trains Wales (ATW) to ensure that the types of trains most prone to slippage were used in areas with the least risk. In recent years, high rail temperatures have been a particular problem north of Crewe, leading to speed restrictions to mitigate the risk and consequences of rail buckles. Our maintenance teams have undertaken a major programme of rail stressing to reduce the possibility of having to impose speed restrictions in hot weather.

Route crime remains an issue around Rhyl, and Chester, and around Prestatyn during school holidays. We are working with the British Transport Police and local authorities to address these issues.

Future requirements Strategic direction

The route is expected to experience steady growth in passenger numbers, partially stimulated by the increased frequencies and better connections provided by the new timetable. This growth will be accommodated without the need for major infrastructure changes. There are aspirations by local authorities and the Welsh Assembly Government to improve station facilities and accessibility, in order to improve the attractiveness of rail as a form of transport.

There may be significant benefits to be had from reducing the journey time for passenger traffic along the North Wales coast. We are working with industry partners and funders to assess along which sections of the NWML the linespeed could be increased, and the business case for carrying out the necessary work. In addition, there are aspirations to increase the frequencies of some services.

The existing freight traffic is expected to remain steady, perhaps with some growth on existing flows. There is a possibility of new flows that could lead to a step change in traffic in certain areas, such as slate from Blaenau Ffestiniog. The return of rail freight traffic to Ellesmere Port and (should it come about) Birkenhead Docks could generate significant new freight flows out of those locations.

The local authorities believe the Bidston – Wrexham corridor will experience significant economic growth even without electrification. The potential reopening of the Halton Curve to regular passenger traffic from Liverpool Lime Street and Liverpool South Parkway could stimulate significant passenger growth between there and Chester.

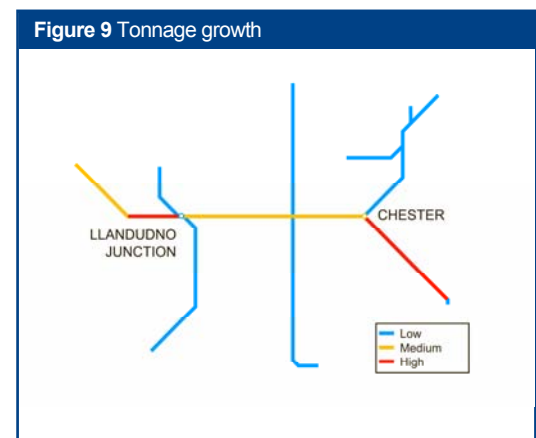
The Wales RUS that started at the end of 2006 will examine these issues in more detail.

Future demand

Figure 9 indicates the forecast percentage change in tonnage to 2016.

ATW has moved to a timetable with a more regular pattern, including a greater number of trains between Chester and Shrewsbury. It is anticipated that Virgin will at some point increase the number of trains a day along the coast from the current five. The combined effect of these changes is expected to stimulate demand between the South Wales – Shrewsbury – Chester corridor and North Wales and Liverpool, as well as between North Wales and London and Birmingham.

Crowding is likely to continue on some of the busiest trains during the summer. This is especially true of the Virgin West Coast services. We will continue to work with the train operators to facilitate train lengthening of the most crowded trains where appropriate.



Growth of commuter flows into Manchester may lead to the Chester – Manchester services becoming overcrowded. Similarly, commuting into Liverpool could lead to overcrowding on the trains from the Bidston to Wrexham Line as they approach Liverpool. This increased growth is linked to additional jobs based in Liverpool city centre (as discussed in route 21), as well as to a large housing development near Shotton. In addition, as part of this development at Shotton, there are plans to create an industrial park. This will involve the creation of around 8,000 new jobs, and generate demand towards Shotton, especially as this is an area of comparatively high employment.

The stone traffic flow from Penmaenmawr to Crewe is expected to remain steady. However, the other freight flows are likely to grow, and new flows may appear. Ellesmere Port has reopened to rail freight traffic, with the existing flow of two coal trains a day expected to grow to three, and a possibility that the reopening of the port will stimulate further traffic. On the Ellesmere Port to Helsby line, the connection to Kemira Fertilisers is expected to see a return of freight traffic in 2007, initially associated with Kemira, but with the possibility of further flows, such as glass.

There is a possibility that Birkenhead Docks will reopen to rail freight traffic. Although unlikely to involve a large number of daily train paths, it would add more traffic to a busy freight line, and the ultimate destination of the traffic may add to the case for increasing capacity on the single line between Wrexham and Chester (see Route 14).

The demand remains to transport slate waste from Blaenau Ffestiniog by rail to the West Midlands and the North West. We continue to work with the WAG and McAlpine to determine the scope of work this would require and the likely funding mechanism.

Future services

There are additional passenger services to Chester from London planned on this route in 2008. There is an aspiration to increase the frequency of the services between Merseyside and Chester. In terms of freight, a new flow carrying slate waste may start from Blaenau Ffestiniog.

There are proposals from Wrexham, Shropshire and Marylebone Railway to run services from Wrexham to Marylebone. If these services go ahead, it is expected that they will stimulate additional traffic from this route into Wrexham.

Future capability

Line speeds

There are aspirations for improved journey times along the NWML. We have identified sections along which a higher linespeed would provide journey time improvements, and are now working out costs for the necessary work. Some of this work could be carried out at the same time as other planned renewals, taking advantages of synergies to provide cost savings.

Stations and depots

Halton Borough Council and Merseytravel have proposed that the Halton Curve be upgraded to allow bidirectional running. This scheme could include a new station in the Beechwood area of Halton on the curve itself. It could also include partial electrification of the line, which would allow electric services to turn back from Liverpool Lime Street.

We are working with Cheshire County Council on a scheme to redevelop Chester station to provide an improved gateway to the city. Improvements include the adoption of the station forecourt, architectural lighting of station façade and refurbishment of internal brickworks. At the same time, we are helping facilitate Arriva Trains Wales' aspirations to develop the concourse area including a new ticket barrier, booking office, retail outlets and improved car parking.

There is a scheme being developed to relocate the ATW depot at Holyhead away from the town in order to allow the A55 to be extended into Stena Port. A recent performance assessment produced a positive result, and we are now working with the Isle of Anglesey to identify the engineering issues involved. The aspirational implementation date is 2009 should the scheme go ahead.

We are working with the Welsh Assembly Government to develop a detailed plan for a train depot at Wrexham. We are also developing a scheme to improve access to the station itself.

There are aspirations to improve stations facilities on this route. These improvements broadly fall into three categories: accessibility, interchange and regeneration. We are working with local authorities and the Welsh Assembly to identify and develop potential schemes to achieve these aims, using an integrated approach to identify synergies with each of the aims and with proposed renewals. At Prestatyn, we are involved in a scheme to provide better access under the Disability Discrimination Act, and are working with the local authority to provide a 'Gateway' to the town and reduce the severance effect of the railway. Providing a better

station experience is the primary objective at Shotton, where the station is accessed directly from the main street, but we are also looking at providing better access. At Bangor, we are working with the local authority and ArrivaTrains to provide an interchange with local buses. This will then be followed by a large car park with around 150 spaces in 2007/08, providing improved access to train services. A similar scheme is also being developed at Llandudno.

Electrification

The Welsh local authorities and Merseytravel are considering the business case for a scheme to electrify some or all of the line between Bidston and Wrexham with third rail DC. There is also the intention, as part of this scheme, to build up to three new stations at Beechwood, Woodchurch and Deeside Industrial Park.

Freight

Network Rail is investigating the works involved to provide a connection to the rail network at Blaenau Ffestiniog and upgrade the Conwy Valley line. This would be to enable up to 3 trains per day of slate waste to run to the North West and Midlands for use as secondary aggregates. The aim is to develop the scheme to GRIP 3 to enable discussions with McAlpine and the Welsh Assembly Government to proceed regarding possible funding for the scheme. There is also a proposal at Blaenau to reinstate the line to Trawsfynydd. This would enable the transportation of waste from the decommissioned power station to Cumbria.

Depending on the extent to which freight growth materialises from Ellesmere Port and Ince, we will investigate the case for restoring the line between West Cheshire Junction and Mouldsworth.

Fragile routes

Network Rail engineers have identified a set of 'Fragile routes' across the country where the addition of any further loco hauled traffic would have a significant impact on the residual life of track and/or structures.

The rail freight industry has recently provided Network Rail with a set of 10-year traffic forecasts, and we are currently assessing their implications. The key section within this route that has been identified as being fragile while having clearly defined additional tonnage/train numbers projected by the industry is Wrexham – Bidston.

The Amlwch branch remains non-operational, with no prospect of any future freight traffic that might justify its restoration to use by mainline traffic. Discussions continue about using the line as a

heritage railway, and we are hopeful that the line's future will be resolved in the coming year.

Future capacity

Capacity on the route is expected to remain broadly unchanged. There are currently no plans to alter headways or capacity, although some opportunities for improvement are being investigated. There are a number of locations where the layout is inefficient in terms of capacity, and some long block sections where shorter ones would be desirable. Whilst resignalling schemes typically provide the best opportunity to improve capacity (and speed), the next major resignalling project for this route will be at Chester, and is not expected before 2017. This scheme would present the ideal opportunity to improve Chester East Junction, allow better access to the station for electric units, and address the issues surrounding the single line to Wrexham. The resignalling at Crewe, which is expected to be completed around the middle of the next decade, will most likely incorporate into one point of control the railway from Crewe to the limits of Chester's control, and provide 4 minute headways.

Future performance

We are continuing to improve our vegetation management, and have now begun to maintain a recently cleared 6m strip on either side of the railway that is free from vegetation. This is expected to contribute to better performance, especially during the autumn leaf fall season.

On the single line between Wrexham and Chester, we will be carrying out track circuit reliability work. We are currently establishing the condition of components on the line. We will then undertake replacements and upgrading as necessary in order to reduce the risk of failure.

As part of the strategy to reduce crime and animal trespass, improvements are being made to fencing, with a view to bringing the whole route up to the appropriate standard. Additional fencing will be provided at Beeston Castle and Llanrwst to prevent animals coming onto the track. In response to the particular issue of trespass and vandalism around Prestatyn and Rhyl, we are continuing a major local education campaign targeted at young people, and are working with the local youth and community groups that cover the most problematic areas.

Figure 10 shows the forecast reduction in Network Rail delay minutes compared with the expected outturn for 2006/07.

Figure 11 shows the forecast PPM for each TOC running along the route

Engineering access

Most renewal work is planned at weekends on this route, which can cause some disruption to services due to the lack of diversionary routes, particularly on the route to Holyhead. This means that if short notice access is required, planned work may have to be cancelled. There is a need for better mid-week access, particularly on the long sections between Chester and Holyhead.

During January to March 2007, several possessions will take place on North Wales Coast route affecting trains between Crewe and Holyhead. An all-weekend block at Wrexham affecting trains between Chester and Wrexham, and Wrexham and Bidston for civils work will take place in August, during the shutdown of Shotton Steelworks. During September and October, there will be a series of Sunday possessions at Chester.

Opportunities and challenges

Merseytravel has an aspiration to increase the service frequency to Chester to 4tph. To achieve this, work will need to be done to understand the interface with the Standard Pattern Timetable (especially regarding connections at Crewe), and the use of platform 7 at Chester.

The aspiration for shorter journey times along the North Wales Main Line, in addition to the obvious passenger journey time benefits, could provide benefits in terms of service frequency and (possibly) stock utilisation. A list of possible interventions is currently being developed, but business cases will be required before implementation. We will need to identify the options and opportunities, to ensure that there is a prioritised list that is realistic in terms of benefits, funding and deliverability.

The railway acts as important link for otherwise isolated communities. We will continue to work with local authorities and communities to provide the most appropriate service, balancing the requirements of connectivity and accessibility with available resources. Conversely, the railway can also act as a line of severance where there are not suitable means of crossing available. We will continue to address these issues with stakeholders, from schemes in urban centres such as the footbridge at Llandudno junction to level crossings in rural areas such as Denbighshire.

Figure 10 Forecast reduction in delay minutes

	2007/08	2008/09
% reduction in delay minutes	14%	17%

Figure 11 Forecast PPM MAA

TOC	2007/08	2008/09
Arriva Trains Wales	87.9%	88.5%
Merseyrail	94.1%	94.4%
Virgin West Coast	87.7%	87.6%

Delivering future requirements Expenditure

Figure 12 shows the planned level of expenditure on renewals on this route over the next three years. However, the precise timing and

scope of renewals remains subject to review to enable us to meet our overall obligations as efficiently as possible, consistent with the reasonable requirements of operators and other stakeholders.

Figure 12 Forecast expenditure		
£m (2006/07 prices)	2007/08	2008/09
Renewals		
Track		
Plain line	3	3
Switches and crossings	3	0
Track total	6	3
Civils		
Underbridges	2	1
Overbridges	0	0
Bridgeguard 3	0	–
Footbridges	0	0
Earthworks	2	2
Tunnels	1	0
Culverts	0	0
Coast and estuary defence	0	0
Retaining walls	–	0
Major structures	1	1
Civils total	7	5
Signalling		
Resignalling	–	0
Minor works/other	7	1
Over-planning	(0)	–
Signalling total	7	1
Electrification		
AC systems		
Other	0	–
DC systems		
Other	0	0
Electrification total	0	0
Telecoms		
Customer information systems (CIS)	1	–
Telecoms total	1	–

Operational property		
Stations		
Franchised	4	0
Lineside buildings	–	0
Operational property total	4	0
Plant and machinery		
Fixed plant		
Point heating	–	0
Signal supply points	0	0
Plant and machinery total	0	0
IT and other expenditure		
Other	0	0
Total	0	0
Total Renewals	26	10
Enhancements (funded by)		
Network Rail		
Planned		
West Coast North West LSE A09	1	0
Other	0	0
Total	1	0
Network Rail (RAB)		
Planned		
Blaenau-Ffestiniog	1	5
Total	1	5
Potential schemes	-	7
Total	1	12
Welsh Assembly		
Planned		
Blaenau-Ffestiniog	6	6
Total	6	6
Other third party		
Planned		
Bidston to Wrexham line enhancements (Borderlands)	0	20
Other	0	1
Total	1	20
Potential schemes	0	-
Total	1	20
Total Enhancements	8	39

Figure 13 Forecast volumes

	2007/08	2008/09
Track		
Plain line (km)		
Rail	5	4
Sleepers	5	4
Ballast	5	4
Total	16	11
Switches & crossings (no.)		
Complete renewal	9	1
S&C (equivalent units)	9	1
Civils		
Underbridges (m ²)	1,330	224
Overbridges (m ²)	63	–
Footbridges (m ² decking area)	–	50
Earthworks (m ² slope surface)	4,540	6,300
Tunnels (m ²)	356	–
Culverts (m ²)	–	21
Coast and estuary defence (lm)	200	300
Major structures (m ²)	–	150

The planned volume of renewals is detailed in Figure 13.

It should be noted that in order to manage the deliverability of our Civils, Signalling & Electrification plans we have included an element of overplanning in our work banks. As a consequence the sum of our route plans exceeds our plan for the network as a whole.

It is likely that a small proportion of the activities in these areas will slip to subsequent years

Maintenance

Figure 14 shows the planned level of expenditure on maintenance on this route over the next three years.

Figure 14 Forecast expenditure

£m (2006/07 prices)	2007/08	2008/09
Maintenance	16	14

Infrastructure investment

Figure 15 highlights schemes that are planned for completion in the financial year shown.

Figure 15 Planned infrastructure investment						
Project	Project description	Output change	Main asset Type(s)	Funding	GRIP stage	Completion Year
A Flint Station Scheme (22.02)	Station improvements including access works at Flint station. Flintshire Council have grant money to improve facilities at Flint station	Improved station facilities/access	Stations	Third party	–	Completed
B Buildings Renewals(22.01)	Stonework repairs at Chester station	Renewal	Stations	Network Rail	5	2007/08
C E&P Renewals (22.01)	Crewe Depot renewals (local deopt isolation switches).	Renewal	E&P	Network Rail	5	2007/08
D Bangor Station car park (22.03)	New car park and access improvements scheme	Improved access	Stations	Gwynedd CC	5	2007/08
E Civils Renewals (22.01)	Bridgeguard 3 programme – we plan to carry out strengthening works to Bolderstones and Merrils Bridges	Ensuring sufficient strength of bridge to carry appropriate load	Structures	Local Authority	4	2007
B Chester Gateway (22.01)	Redevelopment of Chester station scheme being lead by Cheshire County Council – including adoption of station forecourt, architectural lighting of station façade and refurbishment of internal brickworks. ATW also wish to develop the concourse area including a new ticket barrier, booking office, retail outlets and improved car parking.	Network Rail has committed renewals for the station roof and access ways and for some stonework repairs	Stations	Cheshire CC ATW	3	2007/08
B Telecoms Renewals (22.01)	Renewal of CIS / PA / Clocks at Chester station	Renewal	Telecoms	Network Rail	3	2007/08
F Holyhead Celtic Gateway (22.02)	Overbridge scheme, crossing depot in the vicinity of Holyhead, plus station improvement works	Improved layout at Holyhead	Depots	Isle of Anglesey Council	3-4	2009

Figure 15 Planned infrastructure investment

Project	Project description	Output change	Main asset Type(s)	Funding	GRIP stage	Completion Year
G Llandudno Transport Interchange (22.02)	Redevelopment of station site providing a new bus and rail interchange facility (revised scope)	Greater transport flexibility	Stations	Conwy CBC	3	2007/08
H Civils Renewals (22.02)	Strengthen bridge no.9 on the Chester to Holyhead section.	Increased capability of RA.	Structures	Network Rail	3	2008/09
I Civils Renewals (22.05)	Repair and refurbishment of two bridges along the route, e.g. Hawarden Swing bridge over the River Dee. Strategy being developed for possible strengthening in future years.	Renewal	Structures	Network Rail	3	2007/08
J Track Renewals (22.05)	Plain line renewals planned at: 2007/08: Chester station, Tattenhall, Britannia and Cefyn-y-Bedd 2008/09: Belmont Tunnel, Tattenhall, Rockcliffe Hall and Dee Marsh	Renewal	Track	Network Rail	3	2007-2009
B Track Renewals (22.05)	S&C renewals planned at: 2007/08: Chester station turnout 2008/09: Chester West jn	Renewal	Track	Network Rail	3	2007-2009
K Blaenau Ffestiniog slate terminal (22.03)	Proposal for track, signal and earthworks improvements on the Conwy Valley line to enable slate traffic to be hauled from Blaenau Ffestiniog	Increased capacity	Track and signalling	Welsh Assembly/ Third party	2	2008/09
L Civils Renewals (22.01)	Underbridge preventative works and waterproofing at Bridge 96 and Bridge No.9 on Crewe-Chester lines	Renewal	Structures	Network Rail	2 3	2007/08 2007/08
M Civils Renewals (22.02)	Platform repairs planned at Betws-y-coed.	Improved platforms	Stations	Network Rail	2	2008/09
N Civils Renewals	Earthworks and drainage improvement work planned at Beeston Castle	Renewal	Structures	Network Rail	3	2007-2009

Figure 15 Planned infrastructure investment

Project	Project description	Output change	Main asset Type(s)	Funding	GRIP stage	Completion Year
K Civils Renewals (22.03)	Repairs to Ffestiniog Tunnel	Renewal	Earthworks	Network Rail	2	2007/08
O Halton Curve (18.13)	Reinstate bi-directional working.	Bi-directional signalling, or restore other track. May include electrification.	Signalling	Third party	2	2008/09
P Telecoms Renewals (22.02)	Small concentrator replacements at Rhyl, Prestatyn, Croes Newydd, Deganwy and other locations across the route	Renewal	Telecoms	Network Rail	1	2008/09
Q Wrexham – Bidston Electrification (22.05)	Electrify all or part of the Wrexham – Bidston line. May involve signalling changes for improved headways and track changes to allow turnback moves.	Electrify, possibly improve headways, possibly provide turnback facilities	Electrification and plant	Welsh Assembly Government/ Third party	1	2009/10
R Civils Renewals (22.03)	Renewal of the toe support to embankment at Afon Ganol (Llandudno Jn).	Renewal	Earthworks	Network Rail	1	2008/09
S Shotton station (22.05)	Station refurbishment scheme	Improved station facilities	Stations	Local Authority	1	2008/09
P Prestatyn station (22.02)	Access for all scheme to improve access at Prestatyn station	Improved station access	Stations	DfT	1	2008/09

Figure 16 highlights other schemes under consideration.

Figure 16 Infrastructure investment under consideration						
Project	Project description	Output change	Main asset Type(s)	Funding	GRIP stage	
F	Signalling Renewals (22.02)	Holyhead rewiring works and renewals of lineside equipment to Valley	Renewal	Signalling	Network Rail	0
T	Signalling Renewals (22.02)	Renewal of lineside equipment over the Britannia Bridge (Bangor – Garwen Jn)	Renewal	Signalling	Network Rail	0
U	North Wales Linespeeds - Anglesey Linespeed (22.02)	Increase linespeed between Gaerwen and Valley	Raise maximum speed to 90 mph	Signalling	Network Rail	0
L	Headways Crewe – Chester (22.01)	Abolish Beeston Castle & Tarporley Signal Box, TCB Crewe - Chester	Significantly shortened headways: 8minutes fast, 9½ minutes slow becomes about 4 minutes	Signalling	Network Rail	0 (aspiration that would be realised with Crewe resignalling)
V	Signalling Renewals (22.01)	Signalling renewals work at Ellesmere Port. This is in conjunction with planned work at Stanlow and Thornton	Renewals and removal of redundant assets	Signalling	Network Rail	0
F	Holyhead speeds (22.02)	Increase linespeed on approach to Holyhead	Raise from 15mph to 25 mph for at least a part of the approach to the station	Track	Network Rail	0
X	Signalling Renewals (22.05)	Renewals to level crossing - Croes Newydd North Fork MCB and SB	Renewal	Signalling	Network Rail	0
Y	Signalling Renewals (22.03)	Signalling renewals to Deganwy level crossing and signal box	Planned renewals	Signalling	Network Rail	0
Z	Headway across Anglesey (22.02)	Convert Ty Croes from gate box to block post	Significantly shortened headways: 14 minutes fast, 22 minutes slow, becomes 9 fast, 12 slow	Signalling	Network Rail	0

Figure 16 Infrastructure investment under consideration

Project	Project description	Output change	Main asset Type(s)	Funding	GRIP stage
C E&P Renewals (22.01)	Points heating renewals and Crewe Depot renewals (local deopt isolation switches).	Renewal	E&P	Network Rail	0
G Signalling Renewals (22.03)	Signalling renewals to Interlocking at Llandudno Junction	Renewal	Signalling	Network Rail	0
G Buildings Renewals (22.03)	Reconstruction of platform 1 at Llandudno station	Renewal	Stations	Network Rail	0

Non infrastructure developments

The following significant timetable scheme for the route is under development.

Figure 17 Timetable development

Description	Key issues	Actions or options being developed	Benefits	Target timetable implementation
Merseyrail TT – 4 trains per hour to Chester (22.01)	Effectiveness of increased service with regards connections at Chester	Being developed by Merseytravel	Improved service between Wirral and Chester, and connections onwards	Not yet identified

Appendix

Figure 18 Strategic route sections

Predominant aspect recorded (secondary aspects recorded in brackets) ELR is Engineers Line Reference and RA is Route Availability

SRS	SRS Name	ELR	Classification	Funding	Community Rail	Freight Gauge	RA	Speed	Electrification	Signalling Type	Signalling Headway	No of Tracks	SRS
22.01	Crewe/Chester Lines	CHW1, CNH1, CNH2, HHJ	Secondary	DfT	Yes	W8	8	90 (75)	none (25kv, 750dc)	TCB AB	3 to 9	2	22.01
22.02	Border (nr Chester) – Holyhead	CNH3	Secondary	DfT	No	W8	8	90 (75)	none	TCB AB	4 to 22	2	22.02
22.03	Llandudno – Blaenau Ffestiniog	LTJ1, LLJ	Rural	DfT	Yes	W6	7	45 (50)	none	TCB , ETB NSKT	4 to 74	1 (2)	22.03
22.04	Bidston Dee Jn – Dee Marsh	WDB3	Rural	DfT	No	W5	7	50	none	TCB	10	2	22.04
22.05	Wrexham Central – Dee Marsh	WDBD1 WBD2	Secondary	DfT	Yes	W8	8	40	none	AB	4 to 14	2	22.05

Capacity and operational constraints

- A Holyhead – Llanfairpwll: long signalling block section
- B Conwy Valley: single line
- C Chester East Junction, and Platform 7 Access: capacity constraints

Other issues on the route

- 1 Sea defence issues: various sites
- 2 River Conwy flooding issues
- 3 Route crime hotspot
- 4 Holyhead A55 road scheme
- 5 Chester Gateway initiative

Note

This Route Plan forms part of the business plan suite of documents which is produced annually and in accordance with our network licence condition 7. Our plans and the way in which we intend to achieve those plans are summarised in the Business Plan itself. This document provides further detail on the specific plans for this Strategic Route including the expenditure over the next two years to the end of Control Period 3.

This year our business plan focuses on the remainder of Control Period 3 (to March 2009). We shall provide a submission to the Office of Rail Regulation in October 2007, which will set out our view of the expenditure and activities that will be required in Control Period 4 (2009/10 to 2013/14).

The Route Plan shows in more detail how the strategies set out in the Business Plan will be delivered at a route level across the network, and how we are working with our customers and other stakeholders to improve the

performance and utilisation of the network. It presents a portfolio of activities to develop the network.

The expenditure section contains tables showing the planned level of expenditure and volumes on renewals on the route over the next two years, split by asset category. Expenditure figures are shown in 2006/07 prices, and are rounded to the nearest £1 million. An entry of £0 indicates spend of less than £0.5 million. It should be noted that in order to manage the deliverability of our Civils, Signalling & Electrification plans we have included an element of overplanning in our work banks. As a consequence the sum of our route plans exceeds our plan for the network as a whole. It is likely that a small proportion of the activities in these areas will slip to subsequent years.

Please note that figures in tables may not sum to the totals shown, because of rounding.

The other documents in the business plan suite can be found on the Network Rail website www.networkrail.co.uk



This Route Plan is part of a set.
To view or download the others
visit www.networkrail.co.uk