

Connecting Communities

Expanding Access to the Rail Network



Cover: A Transpennine Express train speeds past a new community being established near Mirfield in West Yorkshire.
Insets (clockwise): Corby, Allerford Chord (Grantham), Mitcham Eastfields.

Foreword

In 2008, rail passenger numbers reached the highest peacetime levels ever recorded. Despite the current economic climate, it is widely recognised that one of the main challenges facing the railways in Great Britain over the next five years is the need to deliver extra capacity and to plan ahead for the longer term.

Much of the current debate about improving the network is focused on major enhancements, such as main line electrification and potential high speed lines. This is a welcome vote of confidence in the railways.

This report seeks to complement recent and ongoing studies into such options for capacity enhancement by looking at other opportunities to connect communities which have grown in recent years but which do not have good access to the rail network.

In particular, this report has focused on schemes which could be delivered relatively quickly, through short links to (or new stations on) existing lines, and by making use of freight lines (current or recently closed) as well as railway land left by the line closures and capacity reductions of the 1960s and 70s.

Many past studies have looked at re-opening old railways, but this one looks first at the market, not the map. It starts with people, where they live and where they want to travel. The schemes identified in this paper as having a positive business case would provide access directly and indirectly for a million people not currently well served by rail.

Identifying these schemes is just a starting point and further work is needed to develop the ideas in this paper. We would welcome your views and details on how to respond are set out at the end of this document.

Michael Roberts
Chief Executive
ATOC

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1. Executive Summary

- Today's rail network carries 30% more passengers than it did 45 years ago on a network considerably smaller than it was then. The industry has put in place a range of measures to respond to this increased demand and is actively pursuing a range of further capacity enhancements.
- In recent years, a number of rail schemes have been implemented to serve centres of population which previously lacked access to the network. Since 1995, 27 new lines and 68 stations have been opened, many funded by devolved or local government.
- But other communities which have grown still lack adequate access to the network, either directly or indirectly at nearby stations which often suffer from constraints on road access or car parking capacity. The process for developing relevant schemes to date has also been piecemeal.
- Our analysis suggests that in England there are 14 places where there could be a positive business case for a new line to provide access to communities each with a population of 15,000 or more but which are currently not served by rail. Using the same approach, a number of new station locations were evaluated and seven had a good business case. The report does not cover Scotland or Wales where strategies for new rail links have been developed by Devolved Government (see page 5).
- In a further six cases, where the ratio of benefits to costs is one to one or less, a new line could in principle still be justified on the basis of economic regeneration or employment benefits, in line with the approach currently adopted by Devolved Government.
- Taken together, all schemes identified as having a positive business case would provide direct and indirect rail access to around a million people.
- The lead time for the new line proposals described in this study is relatively short, between two years nine months and six years, from the start of detailed scheme development to implementation.



Making it easier to catch the train

- There is a strong case for safeguarding routes that are likely to be required in the long term, and for making passive provision (when other works are being carried out on relevant existing lines) for routes likely to be required in the medium term.
- Our assessment also highlighted the potential for considering new links between some sections of the current network to provide new services, additional capacity and alternative routes to support the Seven Day Railway.
- The analysis carried out for this report needs to be followed up to confirm whether or not there is a case for taking forward the schemes identified as potentially beneficial. This work should be undertaken during 2008/9 to feed into other studies in hand on enhancement of the national rail infrastructure from 2014 onwards.

2. Objectives

The purpose of this study is to help current and potential rail passengers by identifying opportunities to:

- Provide better access to the rail network from towns that currently have no direct rail links
- Provide attractive new services and easier station access that will encourage more passengers to switch to rail from other modes, and to provide the capacity that they will require
- Adapt the present network to meet new needs arising from the changing demographic trends of the last quarter century and the population growth projected for the next 25 years.

The study does not include Scotland, which is the responsibility of Transport Scotland, nor does it include Wales, where Welsh Assembly Government has developed a strategy for transport in Wales. It focuses on major towns or settlements in England, which has no equivalent strategic national authority considering rail capacity in relation to local or regional needs.



Extending the accessible network

3. Context and rationale

In 1948, at the formation of British Railways, the rail network extended to 19,598 route miles and 6,685 stations. The Beeching Report of 1963 then ushered in a period of significant reduction in network capacity: today's network is 9,828 miles with 2,517 stations.



Communities Connected, new Mitcham Eastfields station

Passenger numbers in 2008 – buoyed by growth rates over the last eight years greater than those seen in the previous 35 years - reached the highest peacetime levels ever recorded, so that passenger numbers are 30% higher now than in 1963.

This demand has in turn been driven by factors such as economic and population growth; changes in business structures and working practices; new settlement patterns and lifestyle choices. The 2007 Rail White Paper anticipates growth of 22% by 2014, with further growth expected in the following five years as well.

The rail industry has sought to respond to this increased demand and the resulting capacity crunch. Use of busy routes has been optimised through redesigning timetables and redeploying rolling stock; and since 1995, 27 new lines (totalling 199 track miles) and 68 stations have been opened.

Ten new rail projects are under way totalling some 88 route miles, and 65 new station sites have been identified by Network Rail or Government for possible construction. The commitment to introduce 1300 additional coaches and a major programme of network enhancement by 2014, bring the promise of new capacity. The industry is actively considering options beyond 2014, including potentially major enhancements such as main line electrification and new high speed lines.

ATOC and train operators have been working with others in these initiatives, for example, through Route Utilisation Studies (RUSs) and contributing to studies on electrification and new/high speed lines. ATOC has also advanced ideas for capacity improvement through its April 2007 report *Exploring the Potential*, with proposals worth £3.25bn in total to tackle 25 pinchpoints on the network.

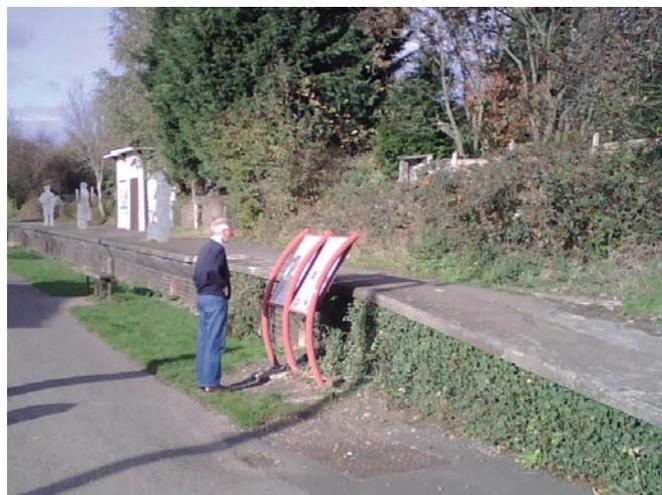
The interest in major network enhancements is a welcome vote of confidence in the railways. But one dimension which should not be overlooked is the scope for smaller scale schemes to serve significant communities which might benefit from the option to use rail, but which in practice do not have the choice as they are no longer rail connected.

Many areas no longer served by rail have grown significantly over the last 15 years. Small agglomerations exist or are being formed, in areas that were previously predominantly rural. Urbanisation has extended, and the redevelopment of city centre brownfield sites has replaced the peripheral developments of the 1970s/80s. Passengers from these communities have to travel to existing railheads on the network, and may experience problems of road congestion in reaching the station, or may be excluded because car park capacity is limited and unable to increase as fast as demand. Those stations where pressures on road access or car parking would be relieved by a new rail link are shown in the right hand column of Appendix One. Government plans for future new housing and economic regeneration are two of the issues that could be addressed by further modest expansion of the rail network over the next decade.

Where new connections have been put in place in recent years, they have been broadly successful. For all new lines built since 1995, demand has exceeded forecast, and many of these were funded by devolved government, PTEs or local authorities. But development has been piecemeal and there has been no assessment of national priorities, nor has there been a consistent approach to appraisal, or monitoring of results.

The basis for identifying demographic changes and changing demand for existing transport networks is through the development of Regional Spatial Strategies, which form the framework for local authorities' policies and implementation plans. These are linked with the rail planning process through the Route Utilisation Strategies. But the links remain loosely defined and there is no systematic way of matching strategic rail needs and priorities with the application of rail solutions to transport problems identified at regional and local level. This disparity is accentuated by the need to seek endorsement of all new rail schemes (including local ones) as projects of national significance under the 2008 Planning Act.

This study aims to provide a more systematic approach to further development in a national and regional context. We think it is needed in light of current capacity constraints and the potential for future growth in demand, notwithstanding the current economic climate. At the same time, it provides an opportunity to make use of the legacy of railway land currently unused following the line closures and capacity reductions of the 1960s and 70s. This includes room alongside some existing routes to reinstate an additional track, as well as the solum of former rail routes that can be used, at least in part, to reconnect towns that have grown significantly since the closure of their rail link, and whose development is now constrained by traffic congestion and poor rail access.



Making use of the solum of former railway lines

4. Method

The Market

The initial approach was to look at demographic data by local authority area to assess the scale of potential demand for rail travel. Nine key factors were listed to allow comparisons between parts of the country that have a relatively dense rail network, and those that are less well served. Key factors considered were:

- Population growth (ONS forecasts)
- Percentage of population living in urban areas (ONS)
- Percentage of work trips by rail
- Station usage (station entries per person)
- Car use (vehicle km per person)
- Traffic intensity (approximation for road congestion)
- Number of congested road links (DfT data)
- Population per station (thousands)
- Number of settlements (>15,000 pop) not rail connected.

This analysis helped to set the parameters for the study and gave some indication of the sort of areas that might benefit from a greater level of rail service provision. However, it became apparent at an early stage that urban population was the most useful guide to where the demand for better access might be met by new rail links.

Our analysis indicated that the most appropriate guide figure for considering a rail link was a population of around 15,000, which has been used in this study, except where there was some other factor which increased the level of rail trip generation, such as where access to the nearest railhead was known to be difficult because of traffic congestion or car parking (Cranleigh). 75 communities throughout England, with a population of 15,000 or above, which were not directly connected to the national rail network, were reviewed. The population figures used are those for 2001, so the results of the analysis may now be understated.

Forecasting demand

At this initial stage, only high-level demand estimates have been made, and we have followed standard transport planning practice and guidance from the Passenger Demand Forecasting Handbook (PDFH), using a methodology based on trip generation rates. These are based on a comparison of observed existing travel patterns which link population and employment figures to the number of trips made by train to or from comparable stations to those being examined.

Three methods were used to estimate the appropriate trip rate. By comparing the resulting rates from each method, a suitable rate could be selected. The three methods were:

1. PDFH recommended values for trip rates (based on previous observations)
2. Trip Rates from similar rail served settlements in the area (obtained from data on station entries (journeys) and population)
3. Travel to work trip rates (% trips by rail) from census data, both for location of new station and comparable settlements with existing stations.

Total trips were assessed with varying service frequencies, and a growth rate over the life of the project was included. This then formed the basis of a conventional cost benefit appraisal, using estimated capital costs, and average costs for train operations. External benefits, including journey time savings and savings in road accident costs, were included in the analysis.

Whilst these produce high level results sufficiently robust to enable some prioritisation to be undertaken, it would be necessary to undertake a more detailed demand forecasting exercise, including undertaking local surveys, when individual schemes are progressed to a further level of development. The results are sensitive to any variation of the inputs, so an accurate definition of the project and its benefits are essential before final decisions are made.

5. Results of the analysis

New lines

20 of the 75 communities reviewed could not be connected to the rail network because no practicable route existed, or the cost of reinstatement was very high. In a further 20 cases, the settlements were close enough to existing stations to be linked easily by bus, cycle or car.

The 35 remaining schemes were evaluated, showing the business case in terms of an indicative benefit to cost ratio (BCR). Evaluation included the social costs and benefits of each scheme as well as earnings from fares, comparing them with the cost of operating the service, together with the capital cost of the reinstatement.

The normal pass mark for DfT appraisal of rail schemes is 1.5:1, but evaluation was extended to assessing schemes scoring less than 1.5, based on operating costs (opex) and revenue only, excluding the capital cost of fixed works. This mirrors the approach adopted by Welsh Assembly Government for the Ebbw Vale line, and being adopted in Scotland for the Borders Railway, where infrastructure costs are justified on the basis of economic regeneration or employment, rather than just on the transport benefits of the scheme.

The results for the 35 schemes are as follows (see also Appendix 1):

- Nine had a BCR of 1.5 or more
- Five more had a BCR in excess of 1
- Six had a BCR below 1, but 1.5 or more based on opex alone
- Eight had a BCR below 1.5 excluding capex
- Seven did not cover opex, let alone capital costs.

The schemes identified in this paper as having a positive business case, would together provide direct rail access for three quarters of a million people, and if access through additional railheads is also included, for around a million.

Of the 14 schemes with an indicative BCR of more than one (see Appendix 2 for an outline description), six are on existing freight or heritage lines, while three are on recently closed freight lines where most of the infrastructure remains in place. The other five would use part of the formation of lines closed some years ago.

Of the new line proposals with a positive BCR, three would also link two separate parts of the rail network: Leicester – Burton, Washington (Leamside Line) and Brownhills (Walsall – Lichfield line). This would mean that the new line might have other benefits for freight, or for diversion during engineering works with value for the Seven Day Railway.

Stations

The analysis also identified seven towns (of 15,000 population or more) that could be served by new park & ride stations on existing lines. The results are set out below, and reflect the capital costs of construction, staffing costs where applicable, and the revenue loss from the need for longer distance services to make additional stops. Provision of staff on two shifts was assumed where long distance trains call, but on local services, stations were assumed to be unstaffed. All have a strongly positive business case, and would justify further analysis.



New stations: opportunities for regeneration. Ilkeston

Town (pop)	Local Authority	Between	And	Capex £m	BCR	Notes
Rushden* (25,300)	Northants	Bedford	Wellingborough	6	10.2	Irthlingborough station site
Peterlee (29,900)	County Durham	Sunderland	Hartlepool	2	8.8	Easington station site
Kenilworth* (22,200)	Warwicks	Leamington Spa	Coventry	4	1.7	Assumes line doubling
Ilkeston* (32,300)	Derbys	Nottingham	Chesterfield	3	4.3	Old station site
Clay Cross/ N Wingfield (21,000)	Derbys	Nottingham	Chesterfield	3	1.9	Erewash route
Ossett (21,100)	W. Yorks	Wakefield	Huddersfield	2	9.8	Healey Mills yard
Wantage/Grove (17,900)	Oxon	Didcot	Swindon	4	3.8	Shuttle from Didcot

[Note: marginal fuel and maintenance costs of stopping trains not included]

* Station assumed to be staffed.

Map of Links and Stations with a Positive BCR



6. Other potential schemes

Link lines

In the course of the study, 16 other links connecting arms of the network were considered, shown in Appendix Three. These did not provide new rail access to towns over 15,000, so have not been evaluated as part of this study. However, it is apparent that some of them might provide new journey opportunities that are not currently possible by rail, as well as diversionary routes, bringing added resilience to the network. ATOC will be giving further consideration to how the potential benefits of links like these might be identified and evaluated.

For example, there is no east – west connection between the Birmingham – Leicester – Peterborough line in the north and the North London line in the south. This suggests potential benefits of the Oxford – Bletchley scheme, proposed by the East/West Consortium of local authorities, which could provide the basis for an interurban link from Reading and Oxford to Milton Keynes, Bedford, Corby and Peterborough (via a spur at Manton). This would provide for the substantial housing development and the two eco towns proposed in this corridor. It could also have a role for freight traffic, relieving capacity on other radial routes from London.

Eco Towns

The Government's proposed eco-towns are shown in Appendix Four, together with their proximity to the rail network. Whilst the concept has been challenged, the principle of sustainable new settlements to provide additional homes to match the growth in population and change in household size is recognised. Locating any significant new settlements in places without good links to the rail network would certainly represent a missed opportunity. Of the 15 Eco Towns currently proposed, nine sites are within five kilometres of an existing station. One of the six that is further away is Bordon, where a connecting link is proposed in this paper, and has a positive business case, while Western Otmoor would be served by the Oxford – Milton Keynes proposal described above.

Community Railways and Heritage Lines

In addition to lines identified as potential new links to the national network in this study, another workstream driven by the private sector is looking at property developments where new lines might provide the rail transport required to support them, but would also bring wider community benefits as well. Proposals by Kilbride Group have considered a number of potential new lines including an extension of the Tamar Valley Line to Tavistock, a town of 12,000 population.

This study includes use of heritage railways to link major towns such as Rawtenstall and Brixham, but does not consider the question of running public transport (rather than tourist) services on self contained heritage lines. One example is the Keighley & Worth Valley line in West Yorkshire, where the towns of Oxenhope and Haworth could be linked to Northern's successful Aire Valley service from Keighley to Leeds. In general, though, the speed and methods of operation of heritage railways do not make them suitable for operation of commuter services, and risk detracting from their primary role in terms of tourism development.

On some of the routes proposed, the principles of the Government's Community Rail Development Strategy could be used both to reduce costs of provision and to increase earnings by embedding the new line within the local community.

7. Delivery and operational issues

Practical considerations

The team that undertook this analysis has visited all of the routes described, to establish that each was capable of being engineered to meet the requirements. This does not mean that these are the only routes, or the best routes, only that they are physically possible.

The next steps would be to discuss the proposals in more detail with the organisations concerned, particularly local authorities, Network Rail, DfT and the owners of the heritage railways included. Following this, a detailed engineering survey would be required, consideration of routing and station options, and a more detailed analysis of costs and benefits, before proposals could move to public consultation. Potential sources of funding in addition to fares income, include the private sector (briefly described above), Regional Funding Allowance, PTE or local authority contribution, and Government rail funding in CP5 (2014-19) and beyond, and these could be considered further once these initial studies had been completed.

Approvals process

For the reinstated routes (where the track has been removed), a Transport & Works Act Order would be required or, following implementation of the Planning Act, 2008, from April 2010 onwards, a new process leading to approval by the Secretary of State for Communities and Local Government. New railways will generally need to be designated as projects of national significance under this Act, although there is provision for Development Orders to be made for more modest schemes, within an overarching National Policy Statement by the Secretary of State covering the route or the area. Whilst the TWA process was open ended, the new Planning Act process is time limited and should speed up the consideration of new line proposals providing the case has been thoroughly researched and properly presented.

For the upgraded freight routes, a Development Order would not be required, but it is likely that planning consent would be needed for access to new stations and car parks.

Once a decision has been made to proceed with a project, depending on complexity, the planning timescale under the new process typically could be:

1. Route planning and optioneering – one to two years
2. Consultation – six to nine months
3. Determination of Development Order application – three to fifteen months
4. Mobilisation, construction, testing, commissioning – one to two years.
 - Total – 2.75 to six years.

This process is quick compared with that required for other new lines (20 years for HS1, for example) or even for major upgrading (ten years for WCML). Much of the work required would be on sites away from the existing network and therefore less disruptive in terms of line possessions required for the engineering work. As with the case of Ebbw Vale, the work could be carried out by separate contractors, to Network Rail standards, and transferred once completed.



Corby: now integrated with East Midlands Trains core service

Effect on network performance

In general, the new lines proposed will not have an adverse effect on the operational performance of the existing railway. Of the 14 schemes with a positive BCR, eight could be provided by an extension or diversion of existing services, with relatively little impact on network capacity. The other six would be new services which would take up additional capacity on the main lines to which they are connected. This would require detailed work with Network Rail to ensure that the new trains could both be accommodated and provide optimum connections with existing services.

In some cases, their introduction might need to await enhancements on the main line or at the terminating point - or, in some cases, creation of additional capacity through the construction of a new line. In other cases, the new service identified in this study might be linked to other terminating services to avoid the layover period and taking up capacity at main line stations.

Route/site safeguarding

In the course of undertaking this study, a number of corridors with promising market potential were examined, but where there was no physical possibility of restoring a rail route. In many cases, most of the route was undeveloped, but a few key points were blocked by buildings or highway structures that now make the rail corridor completely unusable.

With the benefit of hindsight, many of the decisions on future strategic infrastructure requirements have proved to be wrong. Given the demographic changes of the last 40 years and those likely over the next 40, an essential lesson to learn is how best to protect the solum of former railway lines, where they may be of future strategic significance.



Routes blocked at key points: Daventry

We believe that this should be initiated by the rail industry, using criteria to be agreed with DfT Rail and local and regional authorities, to avoid sterilising land that would never be required for railway use again. Safeguarding would then be by local authorities through the Local Development Framework, supplemented by Government guidance for schemes of wider regional or national importance.

In addition to safeguarding, passive provision for the most promising new links could sensibly be made when track and signalling alterations are carried out on existing routes which would be used by the new services. This would allow, for example, a junction to be laid in at a subsequent date without the need to resignal the whole area. The RUS process should be used to determine where passive provision should be made.

8. Recommendations

- The 20 schemes shown as having a BCR of 1.5 or better (with or without infrastructure costs) should be reviewed in the light of the consultation responses to this study, with the costs and benefits refined/updated using NATA, and in the light of increasing population and employment figures.
- This work should be undertaken before the end of the current financial year, to feed into the other studies in hand on enhancement of the national rail infrastructure.
- Early conclusions will also be helpful, given the long lead time for new rail projects and the need to link schemes with regional spatial strategies and local plans, as well as with the rail planning process.
- The schemes listed that have a positive BCR should then be taken forward as part of the Route Utilisation Strategy for the connecting or adjacent routes, including making passive provision where appropriate.
- A policy on identifying and safeguarding the most promising routes should be agreed with DfT over the next year and implemented as early as possible to prevent further loss of sites. ATOC should initiate the analysis to confirm the requirement for passenger routes, working with train operators. This work should proceed quickly because of the risk of further encroachment from development.
- The list of schemes should be reviewed from time to time in the light of changing demographic trends and the comparative costs of motoring and rail travel.
- Further analysis should be undertaken of the case for new or reinstated link lines to improve the capacity and flexibility of the network as well as to increase further the access points to it.



A step up for local communities

9. Acknowledgements

Input and advice for this study is gratefully acknowledged from train operating companies, Network Rail, the Department for Transport and a number of local authorities.



New services to meet changing demand

10. Appendices

Appendix One

Initial Outline Evaluation of Links (Ranked by BCR)

Town	Location	Capex £m	BCR	Excl Capex#	Reduces pressure at:
Hythe*	Hampshire	3	4.8	-	Southampton
Brixham+	Devon	Nil	3.0	-	Newton Abbot
Bordon	Hampshire	50	1.9	-	Farnham, Liphook
Fleetwood¶	Lancashire	14	1.8	-	Preston
Rawtenstall+	Lancashire	50	1.8	-	Manchester, Rochdale, Bury
Aldridge*	Walsall	6	1.7	-	X City North stns
Brownhills (part ¶)	Walsall	52	1.7	-	X City North stns
Cranleigh	Surrey	63	1.7	-	Guildford
Ringwood	Hampshire	70	1.5	5.9	Southampton Apt
Washington (Leamside)¶	Tyne & Wear	86	1.4	N/A	Durham, Sunderland
Leicester to Burton*	Leics/Derbys	49	1.3	2.9	Leicester, Burton
Skelmersdale	Lancashire	31	1.1	2.73	Kirkby, Wigan
Ashington and Blyth*	Northumberland	34	1.1	2.4	Newcastle
Wisbech¶	Cambridgeshire	12	1.1	1.8	Peterborough, March
Madeley*	Staffordshire	8	1.0	1.3	Stafford, Stoke
Stourport-on-Severn	Worcestershire	29	0.9	3.2	Kidderminster, Stourbridge Jnc
Ripon	N. Yorkshire	100	0.6	4.3	Thirsk, York
Norton Radstock (part*)	Bath/NE Som	62	0.6	3.0	Bath Spa
Portishead*	N. Somerset	29	©	©	Bristol Parkway
Witney	Oxfordshire	95	0.5	1.8	Oxford, Didcot Pkwy
Annfield Plain via Washington	Co Durham	209	0.4	2.2	Durham
Biddulph	Staffordshire	45	0.4	1.5	Stoke on Trent, Congleton, Crewe
Spennymoor	Co Durham	45	0.4	1.2	Darlington
Dereham+	Norfolk	30	0.4	0.7	Norwich
Thornbury (part*)	S. Glos	17	0.4	0.6	Bristol Parkway
Leek/Stoke¶	Staffordshire	48	0.3	1.3	Stoke on Trent
Haverhill	Cambridgeshire	120	0.3	1.1	Audley End
Guisborough	N. Yorkshire	30	0.3	0.8	Middlesbrough, Northallerton
Leek/Macclesfield	Staffs/ Cheshire	82	0.2	1.4	Stoke, Macclesfield
Bideford	Devon	80	0.2	1.3	Tiverton Parkway
Daventry	Northants	216	0.2	1.2	Northampton
Ripley	Derbyshire	49	0.2	0.9	Derby
Anston*	S. Yorkshire	20	0.2	0.3	Worksop, Retford
Louth	Lincolnshire	142	0.1	0.6	Newark
Annfield Plain via ECML	Tyne & Wear	123	0.1	0.5	Chester le Street, Durham

Including road user benefits

- * Link would use an existing operational freight railway
- + Link would use an existing heritage railway subject to agreement
- ¶ Link would use an existing 'mothballed' freight railway
- # Not shown where the BCR (including capex) exceeds 1.5
- © Indicative BCR requires reassessment; see note at end of Appendix 2

Appendix Two

Description of schemes with positive business case

Aldridge:

- Station: Aldridge.
- Population: 15,700.
- Location: between Sutton Coldfield and Walsall.
- Catchment area: Aldridge and surrounding commuter villages.
- Current rail access: via Cross City Line North stations such as Four Oaks (5.5 miles from Aldridge).
- Proposed link: using Sutton Park freight line, 2.75 miles from Ryecroft Junction to Aldridge.
- Formation: Existing double track freight route.
- Indicative capital cost: Walsall – Aldridge: £6m. Electrification not assumed.
- Train service: Half hourly to Aldridge, extension of New Street to Walsall service.
- Notes: This route is proposed by Centro in its strategic plan and is under consideration for inclusion in the West Midlands RUS.

Ashington and Blyth:

- Stations: Seaton Delaval, Bedlington, Newsham (for Blyth) and Ashington.
- Population: 79,000 (Ashington, Blyth and Bedlington).
- Location: North East of Newcastle.
- Catchment area: A station at Ashington would also provide a railhead for Newbiggin and Lynemouth.
- Current rail access: from Ashington via Morpeth (seven miles); from Blyth via Whitley Bay, Metro (7 miles) or Newcastle (14 miles).
- Proposed link: using current freight route and signalling. 14.5 miles from Benton Junction, of which 6.5 miles is double track. 12 level crossings involved.
- Formation: Existing freight route. Park and ride station site for Blyth proposed at Newsham. Original station site could be used at Ashington, but alternative site to the south may be required to provide car parking.
- Indicative capital cost: £34m, including stations.
- Train service: Hourly. Additional service from Newcastle or Metro Centre to Ashington.

Bordon:

- Station: Bordon.
- Population: 16,000.
- Location: 12 miles south of Aldershot.
- Catchment area: A station at Bordon would also serve the adjacent peri-urban areas of Lindford, Headley and Whitehill, as well as a wider rural catchment area to the south between the Alton and Portsmouth lines.
- Current rail access: via Liphook or Farnham stations, at both of which car parking is fully utilised.
- Proposed link: single track electrified line, using the formation of the former Bentley – Bordon branch line and part of the track of the former Longmoor Military Railway. Five miles long from Bentley. Three level crossings required.
- Formation: Largely intact. New station site proposed to east of original site, on formation of former military railway, and half a mile closer to the town centre.
- Indicative capital cost: £50m.
- Train service: Half hourly. Could alternate with Alton – Waterloo service once an hour, or form a portion (attached at Farnham) every half hour. Could operate as a shuttle to Aldershot connecting with Guildford, Ascot and Waterloo services.
- Notes: Bordon was predominantly a military town, but is about to change with 5,500 new homes already planned and it has been earmarked as a possible eco town site. Apart from London, rail access to Farnham, Aldershot and Guildford would be of value given the pressure on local roads and daily traffic congestion experienced in these towns.

Brixham:

- Stations: Goodrington Sands and Churston (for Brixham).
- Population: 17,500.
- Location: Three miles south of Paignton.
- Catchment area: Continuous housing in the railway corridor would be served by this short extension, and Churston would also serve Brixham which is two miles away with a frequent bus link.
- Current rail access: via Paignton or Newton Abbot stations.
- Proposed link: existing single track heritage line, with permission from the Paignton & Dartmouth Railway.
- Formation: Line and stations capable of taking extension of local services from Exeter and Paignton.
- Indicative capital cost: Nil. Operating costs reflected in evaluation.
- Train service: Hourly from Exmouth via Exeter.
- Notes: Service would need to flex to accommodate peak holiday steam services, but scope to provide additional track capacity for the first half mile to Goodrington if required.

Brownhills:

- Stations: Pelsall and Brownhills.
- Population: 46,000 (including Burntwood).
- Location: between Lichfield and Walsall.
- Catchment area: a station at Brownhills would also provide a railhead for Burntwood for journeys to Walsall and Birmingham.
- Current rail access: via Cross City Line North stations such as Four Oaks (6.5 miles from Brownhills).
- Proposed link: single track line, 10 miles long from Ryecroft Junction to Lichfield City, or 4.75 miles just to Brownhills. A crossing loop at Brownhills would be required if the whole route to Lichfield was reopened.
- Formation: the section between Walsall (Ryecroft Junction) and Brownhills is the formation of a former railway, while the remainder to Lichfield would take over a disused freight route. Four level crossings required.
- Indicative capital cost: Walsall – Brownhills: £52m; Brownhills – Lichfield: £70m. Electrification not assumed.
- Train service: hourly Walsall to Brownhills or Lichfield service.
- Notes: being considered for inclusion in the West Midlands RUS. The restoration of the Walsall – Brownhills – Lichfield line for freight is proposed by Centro in its strategic plan, to release capacity on other routes serving Birmingham. Longer term, the Brownhills route could form part of an interurban service from Birmingham to Walsall, Brownhills, Lichfield, Burton and Derby.

Cranleigh:

- Stations: Cranleigh and Bramley.
- Population: 11,000 (including Bramley).
- Location: eight miles south of Guildford.
- Catchment area: a station at Cranleigh would also serve a wider rural catchment area to the south between the Portsmouth and Arun Valley lines.
- Current rail access: via Guildford or Godalming stations, at both of which car parking is extensive, but fully utilised.
- Proposed link: single track electrified line, using the formation of the former Guildford – Horsham line. 7 miles long from Peasmarsh Junction. Two level crossings required.
- Formation: mostly converted to cycleway, part of the National Cycle Network.
- Indicative capital cost: £63m.
- Train service: half hourly. Waterloo – Guildford stopping service extended. Option to change to fast service to London at Guildford.
- Notes: the National Cycle route would need to be accommodated alongside the line. Sensitive section through Bramley where the former station is landscaped and forms an attractive recreational area.

Fleetwood:

- Stations: Thornton and Fleetwood.
- Population: 58,000 (Thornton Cleveleys and Fleetwood).
- Location: Fylde coast, just north of Blackpool.
- Catchment area: major residential area and Fleetwood Port.
- Possible use by freight if reinstated.
- Current rail access: via Poulton-le-Fylde (limited parking), Blackpool North (bus or tram link) or Preston.
- Proposed link: single track line, 5.5 miles long from Poulton-le-Fylde junction.
- Formation: available throughout. Track in place as far as Burn Naze (4.5 miles). Three level crossings on this section. This would be extended a further mile north to a new station site at Fleetwood, using the formation of the former railway.
- Indicative capital cost: £14m.
- Train service: hourly Preston - Fleetwood.
- Notes: the junction at Poulton le Fylde has recently been renewed. Group already established to consider reopening, including Northern, Network Rail and local authorities.

Hythe:

- Station: Hythe.
- Population: 19,500.
- Location: South of Southampton Water, bordering the New Forest.
- Catchment area: Dibden Purlieu, Blackfield and Fawley.
- Current rail access: via ferry from Hythe to Southampton Town Quay. Via Totton station (seven miles from Hythe) or Southampton station (11 miles from Hythe by road).
- Proposed link: using existing single track freight line, non electrified. Seven miles long from Totton on main Waterloo – Weymouth line. 13 level crossings.
- Formation: in use as freight line, with crossing loop at Marchwood.
- Indicative capital cost: £3m.
- Train service: hourly. Possibly linked with Chandlers Ford service to provide direct links from Hythe to Southampton, Southampton Airport and Romsey.
- Notes: the evaluation is based on a diesel service, but electrification of the seven miles from Hythe to Totton should also be evaluated, possibly linked with other services terminating at Southampton. The need for further track and signalling enhancement would depend on the future freight requirement which would need to be protected.

Leicester – Burton:

- Stations: Kirby Muxloe, Bagworth, Coalville, Ashby-de-la-Zouch, Moira, Gresley (for Swadlincote).
- Population: 94,000 in the corridor (excluding Leicester and Burton).
- Location: links the Midland Main Line at Knighton Junction, just south of Leicester, with the Birmingham – Derby line just south of Burton on Trent.
- Catchment area: in addition to the towns served directly, larger settlements at Ibstock, Whitwick, Measham and Woodville would be served by railhead stations.
- Current rail access: Leicester (14 miles from Coalville, and Burton (six miles from Swadlincote).
- Proposed link: 29 miles from Knighton Junction, Leicester to Leicester Junction, Burton. Using existing freight line upgraded for higher speed and with additional capacity provided through additional signal sections and an additional crossing loop on the single track sections. Just over half the route is double track. Seven level crossings.
- Formation: intact throughout.
- Indicative capital cost: £49m.
- Train service: hourly. Leicester – Burton or Derby.
- Notes: Coalville – Leicester is being considered for inclusion in the East Midlands RUS. The railway runs through the National Forest, with its centre located near the proposed station at Moira.

Rawtenstall:

- Stations: Heywood, Bury (Bolton Street), Summerseat, Ramsbottom, Irwell Vale, Rawtenstall.
- Population: 95,000 in Heywood – Rawtenstall corridor, excluding Bury.
- Location: a group of larger towns north and east of Bury, along the Irwell valley.
- Catchment area: the line would also provide convenient access to Manchester from Bacup (via Rawtenstall) and Haslingden (via Ramsbottom).
- Current rail access: from Rawtenstall via Rochdale (10 miles) or from Ramsbottom via Bury and Metrolink (four miles). From Heywood to Castleton (two miles) or by bus to Manchester (eight miles).
- Proposed link: single track line, using the route to the civil engineering depot between Castleton South Junction and Heywood, and seeking permission to use the East Lancashire Railway (a heritage line) between Heywood and Rawtenstall. 14.25 miles long from Castleton South Junction. Line speed improvements above 25 mph. Five level crossings.

- Formation: all currently used as a railway. Signalling alterations would be needed to use the route from Heywood to Castleton South Junction by passenger trains. Discussions would be required with the East Lancashire Railway to establish how paths for the 'commuter service' could best be provided between Heywood and Rawtenstall.
- Indicative capital cost: £50m.
- Train service: hourly. New service from Manchester Victoria to Rawtenstall via Heywood.
- Notes: Bury Interchange is already served by Manchester Metrolink. Interchange with Metrolink at Bury Knowsley Street could be considered.

Ringwood:

- Station: Ringwood.
- Population: 25,000 (Ferndown, including Ringwood).
- Location: 12 miles north east of Bournemouth.
- Catchment area: a station at Ringwood would serve the northern part of the Bournemouth/Poole conurbation spread along the A 31, including Ferndown, West Moors and Wimborne, as well as the rural area to the north, including Verwood and Fordingbridge.
- Current rail access: via Bournemouth or Christchurch, although traffic congestion is a real constraint, particularly in the peak. Alternative access to Southampton Airport Parkway via the A31/M27/M3.
- Proposed link: single track electrified line, using the formation of the former Brockenhurst – Wimborne - Poole line. 10 miles long from Lymington Junction (Brockenhurst). Four level crossings required.
- Formation: intact, but blocked at Ringwood by the A31.
- Indicative capital cost: £70m.
- Train service: hourly assumed for evaluation, provided by a diverted service from Waterloo. Alternatively the Victoria – Southampton service could be extended, with the option to change to fast Waterloo services at Southampton.
- Note: the reinstated line would run through the New Forest National Park.

Skelmersdale:

- Station: Skelmersdale (potential for additional station at Westhead, but not evaluated).
- Population: 39,000.
- Location: six miles west of Wigan.
- Catchment area: Skelmersdale new town.
- Current rail access: via Kirkby, Upholland or Wigan.
- Proposed link: single track electrified line, using the formation of the former Ormskirk – Rainford Junction line. 3 miles long from Ormskirk.
- Formation: mostly intact, but deviation to north of Westhead required.
- Indicative capital cost: £31m.
- Train service: four trains per hour, extended from Ormskirk.
- Notes: station would be on north west corner of town near the Skelmersdale Ring Road.

Washington (Leamside Line):

- Station: Washington.
- Population: 53,400.
- Location: eight miles south of Newcastle.
- Catchment area: large urban area between the East Coast Main Line and Durham Coast line. Washington would also serve South Hylton and the west of Sunderland.
- Current rail access: via Pelaw (4 miles) or Newcastle (8 miles) stations to the north, and via Chester-le-Street (4 miles) or Durham (11 miles) for journeys to the South.
- Proposed link: single track line, with dynamic loop, using the abandoned route of the Leamside line. 20.75 miles long from Pelaw to Ferryhill. Five level crossings.
- Formation: intact throughout, with much of the track in place, but would require renewal and signalling.
- Indicative capital cost: £86m.
- Train service: hourly. Various options for local and regional services exist, but for the purpose of evaluation, it was assumed that the Newcastle – Manchester Airport Transpennine service was diverted to serve Washington with the provision of a car park and bus links as a base for long distance journeys as well as local trips to Newcastle. Good interchange at York for the West Midlands and London.
- Notes: if a local service were also provided, other stations at major settlements such as Usworth, Fencehouses and Leamside should also be evaluated.

Wisbech:

- Stations: Wisbech Town; possible additional park and ride station adjacent to A47.
- Population: 26,500 (50,000 in wider station catchment area).
- Location: between Peterborough and Kings Lynn, ten miles north of March.
- Catchment area: a station at Wisbech would also serve a wider catchment area of villages and towns such as Long Sutton, to the north between the Peterborough – Spalding and the Kings Lynn lines.
- Current rail access: via March, ten miles, Downham Market, 12 miles, or Peterborough, 20 miles.
- Proposed link: single track line, using the former freight line which remains in situ. 7 miles long from March Whitemoor Junction. Eight level crossings required.
- Formation: intact to freight terminal, about 600m from Wisbech town centre. New station site required on formation of line.
- Indicative capital cost: £12m.
- Train service: hourly Wisbech – March – Peterborough, new service proposed. Could be linked with Cross Country's proposed extension of Birmingham – Leicester service to Peterborough.
- Notes: signalling alterations required at March to avoid conflict with Network Rail's Whitemoor depot.

Portishead – Supplementary note

Whilst the BCR calculated on the figures available was only 0.6 (1.3 excluding capex) a number of factors mean that this scheme requires further analysis with more recent data. In particular, the population has risen from 17,000 at the 2001 census to 21,000 today, with a further 2,000 planned before 2014. Traffic congestion at Junction 19 of the M5 (the sole route between Portishead and Bristol) has become chronic. These factors are likely to push to BCR over 1.0, which would justify further evaluation.

Appendix Three

Other Potential Link Lines

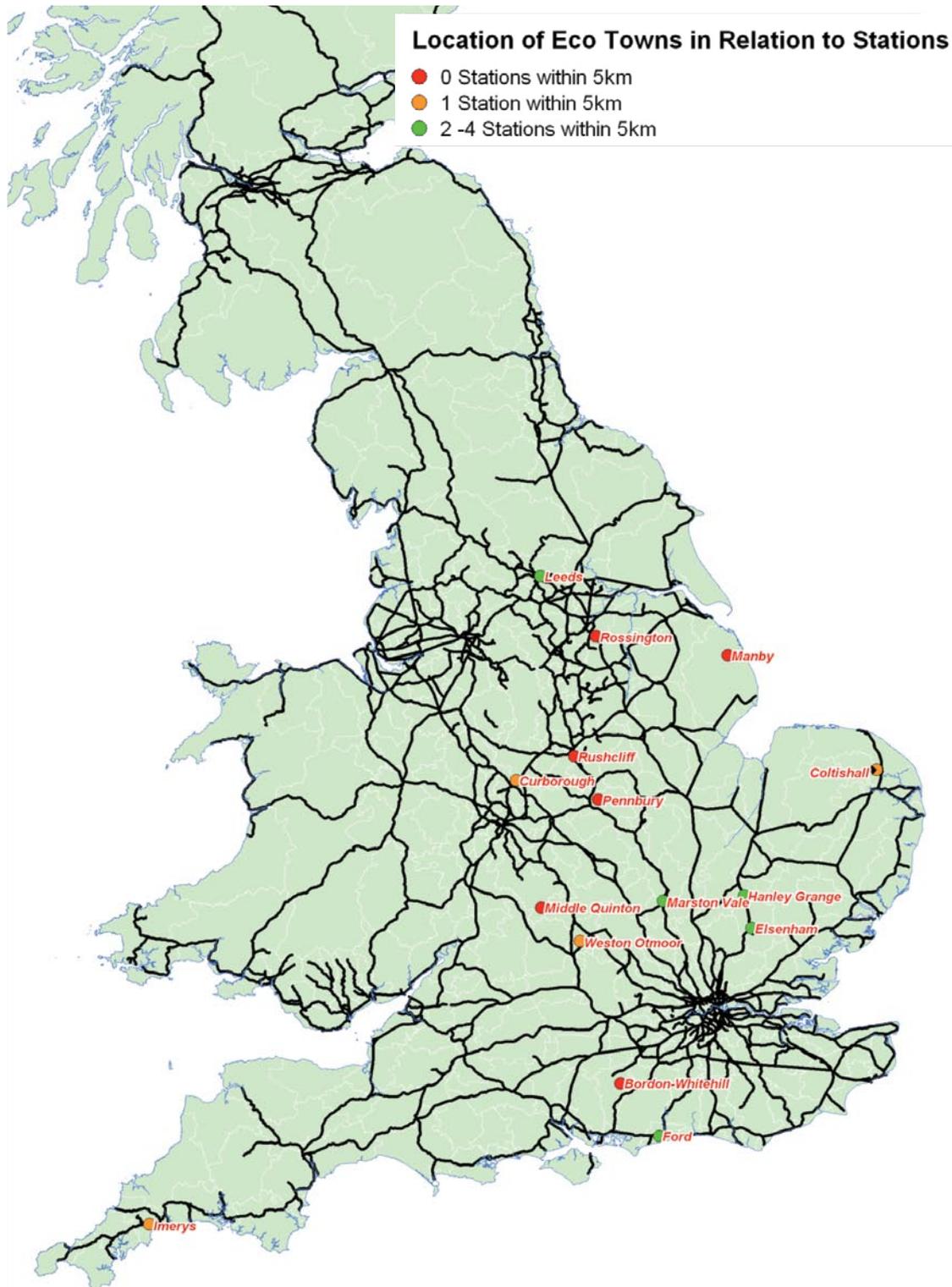
List of link lines considered during the preparation of this report (see paragraph six.) These were scoped to establish physical feasibility, but not evaluated. Other link lines may be worth evaluation and the list is not exhaustive.

Line	Connecting	To	Notes
Bishop Stortford – Braintree – Colchester	Liv St – Cambridge	Liv St – Norwich	Also links with Witham – Braintree branch
Burscough Curves	Ormskirk – Preston	Wigan – Southport	
Chessington S – Leatherhead	Waterloo – Chessington S	Waterloo – Leatherhead - Horsham	
Glazebrook – Partington	Liverpool – Manchester (Chat Moss route)	Liverpool – Manchester via Warrington	Freight route avoiding Manchester Piccadilly
Lewes – Uckfield	London – Uckfield	Brighton – Eastbourne	
Matlock – Buxton	Derby – Matlock	Buxton – Manchester	
March – Spalding	Ely – Peterborough	Peterborough – Spalding	Felixstowe – NE/NW freight route avoiding ECML
Oxford – Bletchley with Manton curve	Reading – Birmingham Chiltern Line	West Coast Main Line, Midland Main Line and East Coast Main Line	East/West route; Reading to Peterborough
Northampton – Bedford	West Coast Main Line	Midland Main Line	
Rugby - Peterborough	West Coast Main Line	East Coast Main Line	Could connect with Midland Main Line at Market Harborough
Skipton – Colne	Leeds – Carlisle	Colne – Burnley	Also links Aire Valley and Manchester
Stafford – Wellington	West Coast Main Line	Wolverhampton – Shrewsbury	
Stourbridge – Walsall	Worcester – Birmingham SH	Stechford – Bescot – Wolverhampton	Freight route
Whelley Lines	West Coast Main Line		Additional capacity through Wigan
Willingdon Chord	London – Eastbourne	Eastbourne – Hastings – Ashford International	
Woodhead Route	Manchester – Hadfield	Sheffield – Retford	

Appendix Four

Eco Towns and Rail Links

A list of the Government's proposed sites for Eco towns and their proximity to the railway.



Appendix Five

How to Respond

We would welcome comments and suggestions on this booklet. Constructive comments will help us refine our thinking, be of value to train operators in improving access to their train services, and inform our input to Route Utilisation Studies.

We would like to know in particular, whether you agree that the components of the business case described here are the right ones, or whether additional criteria should apply. Remember that it will be important to be able to quantify any other criteria in economic terms, so that financial comparisons can be made to establish priorities for investment.

We would also welcome responses on the schemes that we have suggested are worth further study. We have tried to identify those which appear to be the most worthwhile with the best business case, and to list those that just fall short of the rate of return required. However, we would accept that the results are sensitive to quite small variations in costs or benefits and we would want to know if we have missed any opportunities. Please bear in mind that the criterion for inclusion is that of linking communities not currently served by rail where this would provide value for money. This study does not look at other network links where no major new communities are served, although this could form the basis of a future study.

This is not a formal consultation, but it would be helpful to know your views and we are happy to answer questions raised in the report. Please send us your thoughts by 31st July to:

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