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Report to: Transport Committee
Date: 8 September 2017
Subject: Trans-Pennine Route Upgrade

Is this a key decision?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Is the decision eligible for call-in?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Does the report contain confidential or exempt information?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If relevant, state paragraph number of Schedule 12a, Local Government Act 1972, Part 1	

1 Purpose

1.1 To provide an update on the Trans-Pennine Route Upgrade.

2 Information

- 2.1 Part of the 'Great North Rail Project', Trans-Pennine Route Upgrade (TRU) is a Government project being developed by the rail industry led by Network Rail, to enhance the railway between Manchester, Huddersfield, Leeds and York/Selby.
- 2.2 TRU was borne out of the original Trans-Pennine electrification and Northern Hub schemes, which were required at the time by Government to support improved performance and integration of the north's economy. By bringing labour and employment markets, and businesses across the north closer together, this would help facilitate the creation of a functional economic entity to counter-balance that of London and the South East.
- 2.3 These schemes were proposed to enable more reliable, faster and more frequent rail travel between the north's city regions, provide more capacity for growing numbers of rail passengers and freight, and to achieve this in a way that enables lower railway operating costs as well as fewer harmful emissions. This would support improved access to jobs and enable better business to business interaction.
- 2.4 Both the Northern Hub and Transpennine Electrification schemes were committed to by the Coalition Government on various occasions, including in 2011, through the 2012 High Level Output Specification, and directly prior to the May 2015 General Election. The electrification scheme was paused for a time and then 'unpaused' by the previous Secretary of State for Transport in autumn 2015, with TRU again recently committed to in Spring 2016. The original proposed completion date for the

electrification scheme was December 2018, with a new proposed date for TRU of 2022.

- 2.5 TRU will improve rail connections between the north's major city regions and help enable the North to function as a more cohesive economic entity. A map is at **Appendix 1**. The following are the objectives from Government about two years ago:
- Upgrade of existing lines to create extra capacity for a more frequent service between Manchester and Leeds to cope with existing overcrowding on this line as well as forecast growth;
 - Electrification of the route; and,
 - Improved journey times (including Manchester to Leeds from 49 to 40 mins and Manchester to York from 74 to 62 mins).
- 2.6 Network Rail is working on the design needed to meet these objectives, to inform Government by the end of the 2017 as to the options and their associated costs, for a decision in the spring of 2018 as to what will be implemented by 2022.
- 2.7 The TRU scheme is vitally important for West Yorkshire and the wider Leeds City Region, as it will make a significant contribution to the achievement of our SEP and Transport Strategy objectives in the short-medium term. Depending on the scheme scope finally decided upon by Government, it could provide enhanced rail infrastructure that:
- Helps support improved economic cohesiveness across the north by bringing our city region closer by rail to other city region economies, through greater rail connectivity (improved journey times and train service frequency);
 - Facilitates greater rail commuting into/out of Leeds City Region by providing vitally important improved rail capacity, including on inter-regional and local rail services, so also enabling improved local rail service connectivity;
 - Improves customer satisfaction with rail quality and encourages modal shift to rail through improved rolling stock quality, particularly on local rail services;
 - Directly (i.e. through the use of electric trains) and indirectly (through modal shift from car and lorry to rail) reduces harmful greenhouse gas and other emissions which have a negative impact on the global climate and local air quality;
 - Makes the north's railway more affordable to run by reducing the long-term operating costs of the railway through increased energy and operating efficiency, and lower rolling-stock costs; and
 - Helps support local economic and transport priorities by facilitating the business case for and deliverability of WYCA promoted new stations, including at Thorpe Park, Millshaw and Elland.
- 2.8 A change to the project governance of rail programmes across the north has meant that the scope, costs and benefits of the possible TRU infrastructure intervention options are not yet fully known to WYCA. Rail North is however involved in the development of the TRU, originally as joint client alongside the Department for Transport, however latterly as a stakeholder i.e. it has been removed from the

previous joint client role. It is likely that the programme will need to include aspects which deliver and include:

- Greater route capacity to enable more frequent services to run and provide stopping patterns at stations that are led by economic and customer requirements e.g. through enhanced signalling and station platform capacity including through new and longer platforms;
- Better capability to enable an intensively used, mixed service type (local and inter-regional services) railway to operate successfully e.g. through electrification enabling greater rolling stock acceleration particularly of local stopping services, passing loops, four tracking and improved junctions, to enable fast trains to overtake slow trains.
- Faster line speeds to enable quicker journeys, facilitated by straightening out sections of route, improving junctions, separating fast and slow trains through four tracking/passing loops, and electrification;
- Improved performance and reliability through electrification, improved infrastructure resilience especially of junctions, switches and crossings, signalling, better vegetation control, and improving lineside security to deter trespass incidents; and
- A more affordable and cleaner railway through electrification.

2.9 It is likely that of the above-mentioned intervention types, no single category of enhancement will deliver all of the desired outputs. Therefore a blend of the intervention types is likely to be required. However there will inevitably be choices to be made on the blend depending on the affordability and business case of the interventions, and therefore which of the desired outputs are prioritised.

2.10 On 20 July 2017, the Department for Transport (DfT) announced the cancellation of the electrification of rail lines in Wales (Cardiff to Swansea), the Midlands (London to Sheffield and Nottingham) and North-West (Windermere). Since then the Secretary of State for Transport has also called into question the inclusion of electrification as part of the scope of the TRU.

2.11 The various recent statements from the Secretary of State give rise to a number of concerns including:

- It appears that full electrification of the route may now be a less well favoured option, in advance of the work being completed by Network Rail;
- Full electrification generally is falling out of favour and electro-diesel trains ('bi-mode' or 'hybrid') are being suggested as an alternative;
- It is not clear how, if there is a need to do so, Government will weight or prioritise the desired outcomes and outputs for local rail services verses those of inter-urban services. If there is a drive for the fastest possible express services at the lowest possible cost, this could risk compromising local services, such as by ossifying the unsatisfactory "skip-stopping" arrangements planned for the May 2018 timetables;

- Through Transport for the North, Rail North and directly with WYCA, there needs to be a meaningful engagement on the emerging choices from Network Rail's development work on the TRU scheme. This is vitally important, as whilst each option will need to be affordable and represent value for money, they could each deliver slightly different outcomes, which northern authorities including WYCA will need to be able to have an informed view on.
- 2.12 Whilst it is important that the rail industry should innovate to provide affordable, value for money solutions to deliver the outcomes the north needs, it should be recognised that in terms of the technology, electro-diesel trains are not "innovative". Electro-diesels have existed in Britain since the 1960s but have had limited uses due to their inefficiency and poor economics. They have higher capital costs due to being more complex and a bespoke solution, and higher operating cost due to higher weight (energy, track wear, and maintenance costs), and inferior performance on diesel power. This also leads to them having worse noise and pollution impacts, and diesel trains are less reliable than electric trains. Making such an investment in electro-diesel trains would also, given that trains generally have a life of 30-35 years, risk harming the business case for subsequent full electrification.
- 2.13 In contrast, pure electric trains are cheaper to purchase, incur lower track and rolling-stock maintenance costs, are more energy-efficient and produce no air pollution at the point of use. Other European countries which still have significant non-electric mainlines (for example France, Germany, Denmark, Austria, Czech Republic) are all actively pursuing electrification programmes. Recently the Government committed the country to moving away from diesel and petrol cars; so a move to entrench a reliance on diesel powered trains for another generation would seem contrary to the direction of travel in road transport.
- 2.14 High profile electrification schemes of the existing railway such as that of the Great Western Main Line, have however proved very challenging to Government and the rail industry to deliver on time and on budget. The National Audit Office published a report in November 2016¹ estimating that the original scheme was at the time circa 18-36 months behind schedule, with an increased cost of circa £2.1bn. Inevitably this is likely to have influenced recent decisions around electrification schemes.
- 2.15 Electrification of the railway is however not an end in its own right, and needs to be considered alongside other potential interventions that together could help deliver the desired outcomes and outputs of the TRU scheme. It will be important therefore that WYCA, directly and through partners Rail North and Transport for the North, has a greater involvement than at present in understanding the choices emerging from the blends of TRU infrastructure options, alongside their costs and benefits. WYCA should also be able to offer a view on priorities for the TRU scheme to help inform the Government decision due in spring 2018.
- 2.16 It is important to emphasise that TRU is not and should not become, Northern Powerhouse Rail (NPR). TRU is required now to cope with rail passenger and freight

¹ <https://www.nao.org.uk/report/modernising-the-great-western-railway/>

demand growth and overcrowding on the north trans-Pennine route, and provide much needed and arguably overdue improved connectivity in the short-medium term in support of economic and wider ambitions for the north.

- 2.17 However the TRU scheme will not deliver the sorts of capacity, journey time and frequency improvements as envisaged through the Northern Transport Strategy for NPR. The work done to date on NPR demonstrates that if the NPR outputs are to be delivered, then on some corridors, including between Leeds and Manchester, only a new two track railway will suffice i.e. upgrades don't deliver the required outputs. It is therefore not an "either-or" situation: both TRU (short – medium term) and NPR (medium – long term) are required to help bring the north's economies together as a functional entity, along with the requisite growth in rail travel across the north that this will engender.
- 2.18 The Transport Summit for the North, held in Leeds on 23rd August, was called to debate these and other issues relating to the much needed investment in and commitment to improving the north's transport network, in support of the north's economic development.

3 Financial Implications

- 3.1 None as a result of this report.

4 Legal Implications

- 4.1 None as a result of this report.

5 Staffing Implications

- 5.1 None as a result of this report.

6 External Consultees

- 6.1 Rail North.
- 6.2 This report has been shared with Network Rail and DfT for information.

7 Recommendations

- 7.1 That the contents of the report be noted.
- 7.2 That the greater involvement of WYCA in the development of the TRU scheme, including the forthcoming choices about scope and outputs, directly and through Rail North and Transport for the North, be endorsed.
- 7.3 That a shared statement to Government be developed to articulate how important the TRU scheme is to West Yorkshire and the wider City Region.

8 Background Documents

8.1 None.