Cynulliad Cenedlaethol Cymru	National Assembly for Wales
Y Pwyllgor Menter a Busnes	Enterprise and Business Committee
Ymchwiliad i'r Blaenoriaethau ar gyfer dyfodol Seilwaith y Rheilffyrdd yng Nghymru	Inquiry into the Priorities for the future of Welsh Rail Infrastructure
WRI 22	WRI 22
Yr Athro Stuart Cole	Prof Stuart Cole

CYNULLIAD CENEDLAETHOL CYMRU – Y PWLLGOR MENTER A BUSNES

<u>Blaenoriaethau ar gyfer y dyfodol Sellwaith Rheiffyrdd Cymru</u>

Tystiolaeth o'r Athro Stuart Cole CBE BA MSc FCILT FICE
Athro Emeritws mewn Thrafnidiaeth, Canolfan Ymchwil Trafnidiaeth Cymru, Prifysgol De Cymru

NATIONAL ASSEMBLY FOR WALES – ENTERPRISE & BUSINESS COMMITTEE

<u>Priorities for the future of Welsh Rail Infrastructure</u>

Evidence from Professor Stuart Cole CBE BA MSc FCILT FICE, Emeritus Professor of Transport, Wales Transport Research Centre, University of South Wales

SCOPE OF THE INQUIRY

- The operational effectiveness of current rail infrastructure for passengers and freight within Wales and priorities for the development of Welsh infrastructure, particularly in Control Period 6 (2019-24) and beyond;
- The relationship between the Welsh and English rail networks in terms of planning, management, maintenance/renewal and enhancement, and how these should be co-ordinated to benefit passenger and freight users on both sides of the border;
- The effectiveness of the current approach to planning rail infrastructure in Wales, as well as delivery of maintenance/renewal and enhancement, and whether the current approach achieves the best outcomes for passengers and freight users in Wales.

INFRASTRUCTURE OVERVIEW

In parallel with this National Assembly Inquiry three reports have been published / are being prepared which are directly relevant to this Inquiry and are recommended to be read in advance:

Dame Collette Bowe, non - executive director DfT is examining the past and what lessons can be learned from the periodic review process for Control Period 5 (CP 5)

Sir Peter Hendy, Chairman of Network Rail report *The replanning of Network Rail's Investment Programme* is looking at the present i.e. how to deliver as much of the current enhancement programme as possible (including the SWML electrification programme)

Ms Nicola Shaw CEO of HS1 report *The future shape and financing of Network Rail – The Scope* sets out recommendations on the longer term financing and shape of Network Rail. WG have an opportunity here of promoting a WG owned NfD infrastructure company as part of the existing Transport Company - Transport for Wales / Trafnidiaeth i Gymru (TiG). (See section 8)

There is a need to inform those reports from this inquiry and separately and more immediately from the Welsh Government (WG), which has hopefully been done.

Two major investment programmes can be used to introduce this assessment of Network rail's strategic and operational procedures and achievements – the South Wales Main Line (SWML) electrification and Valley Lines (VL) electrification. While these ar both in south Wales the lessons learned apply equally to plans for the North wales main Line Electrification

<u>Guide to Network Rail (NR) Investment Process</u>

This is a key input into Sir Peter's review. If a project has proceeded beyond GRIP Stage 5 then cancellation is not an option – high compensation costs

The investment process at Network rail has five GRIP stages up to construction completion. On the SWML this has progressed through to GRIP Stage 3 and beyond

- London to Bristol (and new Bristol Parkway depot) is at GRIP stage 6 – under construction, test and commission. The wires are up and depots have been built
- The line to Cardiff is at GRIP Stage 5 (Detailed Engineering Design giving cost, time, resource and risk estimates) and progressing to GRIP Stage 6 (Construction, Test, and Commission). This means pre-construction, planning and procurement including the Severn Tunnel (for which there are robust engineering solutions) which almost guarantees electrification to Cardiff.
- West to Swansea is at GRIP stage 3 – feasibility and engineering analysis moving to GRIP Stage 4 there are two options still open The all - electric IEP or a bi-modal IEP option, so the electrification guarantee is lower.

<u>Critical Issues SWML</u>

- The additional production cost compensation payment, and operational costs of the heavier bi – modal trains could exceed the savings achieved from not putting up the wires to Swansea. DfT appear to be doing both
- The Hitachi depot at Maliphant Sidings, Swansea is able to maintain both IEP types so in itself does not imply electric trains
- Notice will have to be given to the operators – primarily Arriva Trains Wales / Great Western Railway / Cross Country Trains – of closure of for example the Severn Tunnel for putting in the electrification infrastructure which will have to occur in the six weeks to mid – October to maintain the planned construction /completion dates
- Uncertainty in the infrastructure programme has several impacts. The passengers who will not want to see brand new trains standing idle awaiting the overhead wires and will wish to plan journeys well in advance. The train companies have to plan construction period timetables matching reduced train capacity.
- The logistics supply chain (getting materials, machinery and skilled staff to the sites on time) remains the biggest challenge if the railway is to be operational while electrification takes place.
- There are unforeseen obstacles such as planning consents; possible underground workings and listed Victorian over-bridges and buildings. Here local authorities, Cadw and the planning minister must be prepared to act quickly to benefit the south Wales economy.
- As with all rail infrastructure investment it is amortised over 60 years. An investment of say £550m with interest changes of 3% pa (as WG / NR backed by HMT) would cost circa £25m pa

<u>Benefit Cost Ratios (BCR's) as known</u>

London – Bristol: above 6:1. Therefore well above the HM Treasury acceptable limit of 2:1 and under construction. Costs are relatively low; few tunnels or old overbridges; runs through open land. Passengers are 100% of the flow at the Reading section and fall to about 50% of the flow at Bristol on the both routes

Bristol – Cardiff (current figure N/A to me). Previous BCR varied from 2:1 to 3:1 so acceptable to HMT. Would be in competition with other schemes but for 'the priority given to the GWML'). Passenger numbers are high with about 30% of total flows on the line

Cardiff – Swansea (current figure N/A to me) previous figures for this section as a stand – alone project was 0.9:1 so below HMT minimum. In basis terms it is 25% of the route miles but with <10% of passengers loadings. This could only ever be electrified now on a sequential basis (so now is the last chance for probably 40 years). With any new schemed 30% of the costs are set up costs. Crossrail has acquired much of these set up costs for GWML. These would only reduce the BCR for Cardiff Swansea

In the earlier studies for WG when VLE and GWMLE / SWMLE were combined they achieved a BCR of 4.6:1. This was based on the lower cost of VLE compared with now and a high passenger flow on VL.

<u>Electrification / Infrastructure enhancement</u>

The primary criteria for rail infrastructure improvements are

- Increases in train frequency
- Reduced journey times
- Infrastructure investment at stations to enhance journey experience
- Increased capacity on trains (i.e. operating longer and more efficient trains)
- More modern, comfortable trains

Defined objectives for infrastructure:

- Provide passengers with what they want
- Reduced journey time
- Better quality services
- Faster more frequent trains
- Extendibility of the network in the future
- Reduced operating costs
- Increased reliability
- Lower environmental impact
- DDA approved accessibility on trains / stations
- Regional connectivity
- International connectivity

ISSUES SET FOR DISCUSSION BY THE ENTERPRISE AND BUSINESS COMMITTEE

1
High level priorities for the development of rail infrastructure to provide the capacity and connectivity necessary to support the social and economic well - being of Wales;

South Wales

- South Wales Main Line electrification to Swansea. The electrification to Cardiff is now at GRIP Stage 6 (Construction, Test and Commission) and therefore past an expenditure point to not complete the work. The Cardiff – Swansea section is at GRIP Stage 4 of Single Option Development / GRIP Stage 5 Detailed Design. Approval in principle has been agreed and there have been ministerial announcements from Westminster Government that the programme will be completed to Swansea. The cost element in relation to demand levels continues to be a part of the analysis. But I have been told that there is no reason why electrification to Swansea should not be completed. This however would be dependent on the engineering work being done incrementally at the beginning of CP6. Any time break in delivery would increase capital costs and put the electrification to Swansea in jeopardy.
- Valley Lines (VL) electrification as part of the Metro development. The decision between heavy rail and trams / tram train has to be made. The latter will delay electrification but has to be seen in a longer term context of service quality (frequency, vehicle capacity) and lower capital investment / operating cost subsidy), Cardiff is Wales' equivalent to the Northern Powerhouse with which we have to compete. With growth rates of up to 8% in passenger numbers VL have to be seen as one integrated whole (Metro). The DfT see Valley Lines original routes, the Vale of Glamorgan and the City Line as three separate services.
- SWML increased frequency beyond Swansea to Carmarthen (regular half hourly) and Milford haven / Pembroke Dock (regular hourly) and Fishguard connecting trains at least two hourly and to meet Irish ferries. This is consequent in the recently completed Llwchwr Viaduct and track doubling from Cockett to Llanelli.
- Extensions to existing lines e.g. at Ebbw Vale (town); Maerdy in the Rhondda Fach;
- Development of the Swansea commuter network on heavy rail using existing stations. These could provide a half hourly (or more frequent dependant on demand) service.
- Integration into local bus and TrawsCymru services at Cardiff, Swansea, Carmarthen and Haverfordwest
- Cardiff Central Station faced capacity issues following the first World Cup game (see Appendix 1) less so following subsequent games. The station is designed for longer distance and commuter travel on a far smaller scale of passenger departures per hour. Consideration could be given to providing extra platforms and increased capacity for the eastern facing track exit. This however has high level capital investment implications for use on under 15 times per annum. The wider economic benefits would however also be considered for Cardiff as a major events location
- The electrification of the relief lines between Cardiff and Newport should continue to be considered

- New Metro stations at e.g. Magor, Maindee, St Fagan's; at Whitland with a half hourly service (see above). All new stations and many existing stations to have P&R facilities.
- Electrification and high speed trains between Newport (SWML) and Birmingham

Canolbarth (Mid – Wales)

- Ensure that passing loops and signalling on the Aberystwyth – Shrewsbury line provide sufficient capacity for an initially stopping hourly service and subsequently a half hourly 'fast' service. Similarly provision for an hourly service on the Cambrian coast line to Pwllheli
- In connection with this provision retain the Aberystwyth – Birmingham service within the Wales and Borders franchise
- Extra stations e.g. at Carno should be considered in the context of more local stops versus overall journey time. In such a context train services have to be considered alongside capital investment. A 'fast' service might avoid this

North Wales

- Electrification of the North Wales Main Line starting within CP6. This would obtain the benefits of HS2 with through trains running between north Wales and London partly on conventional track and partly on HS2. The trains would be HS2 type (similar to the French TGV which operates on both types of track e.g. between Paris and Bordeaux).
- Redoubling of the track from Chester to Wrexham to increase frequency and avoid timetable padding which extends journey times at present.
- Electrification of Chester – Wrexham – Bidston to provide a bi – directional route to / from Liverpool Merseyrail.
- Retain the through Carmarthen – Manchester service and not terminate at Shrewsbury requiring a train change. This seems possible.

2
How far Welsh Government's rail infrastructure priorities, including those in the National Transport Finance Plan, and the Ministerial Task Force on North Wales Transport report meet the needs of Wales.

The National Transport Finance Plan (NTFP) 2015 – 2020 sets out the indicative expenditure on transport for the next five years (p.11) in terms of both revenue and capital accounts. However it only confirms the financial year 2015 – 16 and makes clear that in subsequent year's expenditure 'will reflect the available resource position'.

This is the fundamental flaw in all public expenditure accounting and can have serious repercussions where third parties (whether local authorities or private bodies are concerned). They in turn cannot plan expenditure and often have insufficient time to deliver the best plans.

(Please see my Ministerial Report on Active Travel, June 2015 where the one year funding is clearly inappropriate as most, even small, schemes take up to three years to develop).

This is even more relevant in railway expenditure where capital schemes can take many years to deliver (see note below on control periods). The Wales & Borders agreement between WG and ATW shows it os possible to commit funds (£140 m subsidy) over a 15 year period.

The published NTFP has no priority setting mechanism. It is largely a list of schemes or often proposals for evaluating schemes. The schemes referred to are similar to those included in section 1 above. But the sequence of work, the priorities and timing are not clear after the current year in the sections RI 7 – RI 11 on station reconstruction or new stations; or in RI 12a – b neither on NWML electrification / increased speeds nor on the upgrade of the relief lines between Cardiff and Newport.

Therefore while the NTFP gives an overall picture on what might be expected over the next five years the detail on funding and deliver requires considerable development. It needs also to fit into the Hendy report on Network Rail delivery over the next three CP periods.

The NTFP should be seen as a dynamic document under frequent review to meet new circumstances. The proposals are all positive in terms of demand and capacity potential. But funding is an obstacle unless Block Grant income is put on a similar basis to that in Scotland.

The capital investment applies primarily to rail. The Metro sees integration with buses and the series of feasibility studies are essential. But to do this bus services (both tendered, TrawsCymru and commercial) have to be a part of an integrated network. Part of the success of TrawsCymru has been that direct integration with Bwcabus, local services and train timetables and locations. But new buses for commercial routes may not be funded under state aid rules. Companies must make that decision themselves. The TrawsCymru fleet is funded directly or through contractual payments by WG and thus serves many settlements which the railway could not.

Overall the NTFP covers in railway terms – stations, track enhancements or new lines, interchanges and access for wheelchairs, park and ride for cars and cycles and safe routes and access to stations for pedestrians / cyclists.

A useful guide to the stages of rail passenger market analysis and funding are:

Passenger Demand Forecasts leading to:

> Capacity assessment (trains / track / stations) to:
> Services and paths to:
> Rolling stock types to:
> Track / depot capacity delivery.

3
How the development and exploitation of rail infrastructure in England affects Wales, and vice versa

National

Wales has a long porous border with England and the Marcher Line is a key element in connecting up the three east west sections of our national rail network. This line is largely in England and connects via Abergavenny, Hereford, Shrewsbury and Chester. Expenditure therefore on new development (major projects or enhancement)this line may not be a priority for DfT or NR.

At present the Network Rail Wales Route is directly linked into the WG and the Wales and Borders franchise / Arriva Trains Wales in maintenance terms and this appears to work well.

By contrast the Scottish network is more internal with two points of entry from England – the WCML and the ECML. The line across the central lowlands between Edinburgh and Glasgow connects up the internal network within Scotland. This makes for a more cohesive rail infrastructure investment programme.

South Wales

Electrification of the GWML will affect south Wales train operations / paths. All train operations on the SWML are dictated by the GWML and in particular the train paths available through Reading. InterCity express trains are at level 1 in terms of path priority and Reading Station has to accommodate trains to / from south Wales, Bristol, and the West of England as well as Cross Country long distance services. It also has to accommodate Thames Valley local services to / from Paddington. The recent enlargement to 18 platforms and the new western flyover has eased the position considerably for trains to south Wales.

The passenger travel patterns on the GWR south Wales trains are in general: westbound trains collect most passengers at Paddington and drop off en-route with limited picking up of passengers. Eastbound, loadings are low to Cardiff and passenger numbers grow from there en route to London. For Newport and Bristol Parkway the south Wales service is the only one to London. At Swindon and at Reading there are many other train options for travellers to London so pick – up is spread over more trains

North Wales

The creation of HS 2 will have benefits for north Wales only if the NWML is electrified with direct services to London, Birmingham and Manchester. (See the Shaw Report 2015 Figure 4 – The new HS2 network). This shows that the NWM is currently incompatible with HS2. Conversely lines to Stafford, Liverpool, Warrington, Preston and others on the WCML are compatible and therefore more attractive destinations from London and the English Midlands than is north Wales. There is no HS2 station at Crewe which again acts against the attractiveness of north Wales and the benefits HS2 could bring to north Wales.

Electrification of the Trans – Pennine Express could involve shortening of north Wales services to terminate at Chester and require a change of trains for travellers to / from Manchester. The north Wales – Manchester services provide the link to / from the Northern Powerhouse. It is essential that these services remain under WG control and not transferred to the adjacent English franchise for which they will not be a priority

Mention here should also be made of the travel patterns between north Wales and Chester / Liverpool; the Canolbarth and the English west Midlands and south Wales to / from Bristol. Some of these flows are significant in commuter and retails market segments. WG should be in constant discussion with DfT on these services. The issue of electrification therefore applies again in the case of the NWML.

Major track enhancement funding should be the financial responsibility of the DfT funding Network Rail (see devolution note in section 8). Electrification of or increased speeds on the NWML are a priority for WG and residents and businesses in north Wales. Electrification in north east wales and a gateway interchange station between the NWML and the Wrexham Bidston line are priorities for Wales. Neither has been put forward to date as a priority for DfT. Its priorities lie on major routes in England

Wales' effect on England

The rail network in Wales was built primarily on the periphery of a London centric network for Great Britain and Ireland. Consequently there is little effect from the Welsh network onto railways in England.

4
The impact on Wales of key planned developments in England including High Speed Rail, electrification, Northern Power House / Transport for the North, and wider devolution of responsibility for rail within England

HS2 and Northern Powerhouse links are dealt with under section 3 above.

The primary rail investment for Transport for the North is the electrification of the Trans Pennine Express and local services to the north and east of Manchester. The impact of this and its timing will depend on devolution of the Network Rail investment programme together with sufficient funding for that work.

The UK Government has been somewhat disingenuous (to both Wales and northern

England) in claiming that project as HS3. This title was given to the plan for constructing a new western line from London to south Wales proposed in 2006 and which members will no doubt recall. This was to be a full TGV / Eurostar style service. The northern 'HS3' is unlikely to have that format but would be an electrified service.

5
How Welsh Government can best engage with and influence infrastructure developments in England and the development of passenger and freight services using the network;

Mention has been made of three key reports sponsored by DfT – the Hendy, Shaw and Dowe reports. These have provided the best formats in recent times to engage with and influence infrastructure developments in England.

On the Dowe / Shaw consultations (The Shaw consultation closed on 24 December 2015) one presumes WG put in its detailed response.

The process which follows these three reports has to be a continuous and in depth dialogue between WG, Network Rail, Office of Road and Rail (ORR), Nicola Shaw and the DfT. Developments in England will be determined by the CP6 expenditure plan and the ORR restructuring. To influence these effectively WG will need to obtain staff in the next six months. The extent of the skills and staff numbers currently available within the WG Transport Company, as I previously advised following the national rail transport seminar in November 2014, are insufficient to achieve the objectives implied in the scope of this inquiry (see section 5 below).

Three areas within the WG Transport Company require populating by those with direct recent expertise in the rail industry – interface with Network Rail; procurement of rolling stock; procurement of a train operating company (TOC) to operate the service until such time as a not for dividend (NfD) direct operating company can be established under new legislation.

To achieve its requirements WG will have also have robust discussions with:

- Senior and junior officials in Whitehall
- National Infrastructure Commission (Lord Andrew Adonis)
- ORR (Chairman: Professor Stephen Glaister and for the present, CEO: Richard Price)
- HM Treasury
- Scottish Government – Transport Scotland (Bill Reeve). Useful advice will come from Scotland who have the infrastructure regime that Wales (more or less) seeks on how it works for them and how they use their expertise
- European Commission Bruxelles. What funding contributions may come? WG (with WEFO) need to reach for the EC rail agenda

6

Whether the periodic review process meets the needs of Wales and takes account of the needs of Welsh passenger and freight users, and how this should be developed

<u>The periodic review (Control Period / CP) process</u>
(Source: Office of Road and Rail)

As an example set out below are the key stages of the 2013 periodic review (PR13):

Stage one - from May 2011 until March 2012

This stage focused on consulting on a number of key issues in preparation for subsequent stages. It culminated in advice to the Secretary of State and Scottish Ministers on how they should develop their high-level output specification (HLOS) and a statement on funding available (SoFA).These set out what it was hoped the railways would achieve between 2014 and 2019 and the public financial resources that would be, or were likely to be, available for this.

Stage two - from March 2012 to October 2013

During this phase consultation took place on detailed issues relating to the regulatory framework and how access charges should be set. The Secretary of State and Scottish Ministers also issued their HLOSs and SoFAs. It ended with the publication of a final determination on 31 October 2013.

Stage three - from October 2013 to April 2014

During this stage, ORR and Network Rail, with its partners, focused on implementing the final determination. This includes the issue by ORR of the detailed changes to access agreements and Network Rail's network licence required to reflect the final determination. Network Rail and its partners also undertook detailed planning work ahead of 1 April 2014 to implement the determination.

<u>Commentary on the CP process</u>

The periodic review (CP) process will change. It needs in particular to understand the needs of Wales and WG needs again to feed constantly into the new format through the parallel DfT consultation by 11 January. For this WG must get a holding response in and then consider a further detailed response.

From a financial planning and expenditure viewpoint the CP system never was appropriate because:

- There is a five year fixed period budget

- This takes one year to begin to carry out the plan
- Most businesses have a5 – year rolling programme not a fixed term plan
- Year 2 – Year 4 is the activity period
- Year 5 – back to planning the next CP

In large business corporations a detailed plan may cover 5 – 10 years (rolling programme which responds to the market for implementation). But infrastructure in railway terms is amortised over at least 20 years – the period by the end of which major renewals will have to take place. In the public sector this can be interspersed with National Assembly and Westminster elections which can affect the plan and the spending cycle and priorities both in Wales and the UK

Investment commitments require a long term horizon. For example investments in CP6 are not subject to detailed analysis until CP5. In the Hendy report CP6 investment for the SWML has been placed correctly with continuity from CP5 (electrification of SWML Cardiff – Swansea follows on the end of CP5 to Cardiff in 2019). To do otherwise would have increased costs or result in non – construction. There is a temptation to put construction projects into the next CP (say CP6) even if it is illogical because there is insufficient funding in CP5.

EXAMPLE: On the Shrewsbury – Hereford line (the Marcher Line vital to Wales' internal rail connectivity a bridge over the River Teme was to be repaired in CP5 (year 1) when funding might be available. However its condition worsened so it was moved forward into CP4 or the line would have closed.

External factors

Network Rail have been known to put building or renewable projects into the internal cycle before e.g. obtaining local authority planning permission or having full knowledge of underground utilities; subsidence; historic coal mining; contaminated land; incorrect drawings of utility lines

In preparing costs initially there is a standard pricing 'schedule' for most familiar engineering elements. Though there is a 20% (or more) contingency in most capital projects that can be used for such costs associated with an unexpected low bridge or a coal working. But should the optimism risk factor be used to cover e.g. contractor's wages levels

The periodic review periods enables Network Rail to report to target on:

- Initial determination
- Monitor NR delivery programme to satisfy the customer (train companies / DfT)
- Financial constraints

The ORR (see ORR report) will set out what NR needs to do in terms of for example:

- Safety
- Train performance
- Ensuring the economic elements tie up with safety (e.g. signals or level crossing replacements)

It is ORR who agree funding requirements for NR

DfT then deal with the train operating companies and agree their funding. In Wales and Scotland their respective governments carry out train revenue support negotiations

How the rail industry is funded

In the costs estimates assumptions in the case of GWML costs are known at the estimating time but may rise or fall and therefore changes from the draft determination and are finalised in summer 2013 for 2014 – 15. If say oil prices fall then it is difficult to make assumptions made for a fixed 5 – year plan.

Similarly seeing NR as a private company was not realistic. Its debt and interest charges had been guaranteed by the Welsh, Scottish or English (DfT) governments. Fining NR for non – performance also made little sense. This is even more so since NR has been reclassified as a public sector body.

There are oddities in the track charging regime where TOC's pay NR for use of the track. For example if a TOC put on extra carriages to relieve overcrowding then from a track charge viewpoint it is financially worse off with more but less crowded carriages.

In some cases a TOC mainly associated with a particular NR Route where for example charges for using lines in Wales may be paid to for example the Western Route because the majority of that TOC's services are on the adjacent Route's lines. Therefore for future funding ORR should ensure all relevant track charges are allocated to the Wales Route (porous border – see section 3)

Forecasting demand for train and track capacity

The outcome since 2003 has been one of growth:

- rates of between 8% and 13% per annum on different parts of the Wales and Borders franchise
- 60% passenger growth over the first 10 years of the franchise
- 1200 (25%) more trains per week 2003 – 2013

Research has shown this growth to be a result of cross price elasticity with car costs; road congestion; preference for what is seen as a more comfortable journey and environmental concerns.

The current franchise trains have load factors on most trains such that all passengers have seats and some load factors are down to 15% in the morning peak in Cardiff but on outbound trains.

The problem of high load factors (up to 130%) arises on certain journeys. Examples are:

    - Morning inbound and evening outbound on Valley Lines

- North Wales main line services where only two car sets are in use (particularly at holiday periods, Sunday afternoons and where a delay in the Irish ferry arrival into Holyhead after the departure of the Virgin Trains ‘boat’ train.

- Cardiff / Bristol commuter services although this has been alleviated with the use of 3 – car sets. The Cardiff – Bristol service is currently operated by Great Western although on electrification it could logically be operated by GWR or the Wales and Borders franchise as part of a Swansea – Cardiff – Bristol – Bath service)

- Certain school time journeys

- Summer services to west Wales

If demand continues to grow at 8% per annum there is little point in assuming 2.5%. This is effectively what the DfT are doing. The use of more realistic demand figures can increase costs of future provision so that increased investment would not take place as it might not achieve the required benefit cost ratio

The passenger growth is a positive move but it was not forecast and has been an expensive issue for the Welsh Government in providing additional capacity through the contractor Arriva Trains Wales. In some cases e.g. Ebbw Vale Line, the subsequent need for additional infrastructure exposed the low demand forecast.

Lessons to be learned

A primary lesson is to effectively forecast demand and take into account any potential shifts in demand and demand patterns. The demand and train supply options should be set out as measures to meet changes in demand. This flexibility will protect the Government and the contractor against risks of lower or higher demand affecting increased capacity provision or revenue shortfalls.

In between lays the track capacity. The forecast passenger (and freight) demand for train numbers and track capacity have to be prepared together

To clearly define the franchise specification in terms of demand and rolling stock both diesel and electric, the working relationship between the train operating contractor and Network Rail who operate the infrastructure has to be linked. This becomes easier as the Network Rail Wales Route with its own management builds up and (for SWML) the presence of both sets of staff at the new control room at Canton.

This arrangement enables the Welsh Government to considered the best option for:

- North south services and their increase to hourly frequency

- Additional capacity on Valley Lines

- The impact of reopening the Glyn Ebbw and the Vale of Glamorgan lines

- Procuring additional rolling stock

The current penalty system relies too heavily on timekeeping alone. The new franchise should consider factors such as passenger growth, journey experience, train cleanliness and passengers personal security perception.

7
The effectiveness of the Network Rail Wales Route and whether the approach to delivery of network management, maintenance, renewal and enhancement functions are effective in delivering value for money, capacity, frequency, speed, reliability and handling disruption for passengers and freight users in Wales

The customer

Network Rail's customers are primarily the train operating companies (TOC), freight operating companies (FOC) and the DfT / Transport Scotland. There is no statutory or contractual relationship between the WG and NR. In terms of all the criteria set out in the Committee's question there is no responsibility directly to the traveller or freight customer. There are other customers who for example rent premises from NR but these are outside this inquiry.

NR does interact with a range of local regional and national bodies that represent local populations and straddles all NR functions including strategic planning. The Welsh Government and local authorities are included in this group. This however is a weakness in the structure although the pressure from the passenger / freight user as the ultimate customer should be passed through to NR's decision making. An example is avoiding the closure or restrictions on the railway at weekends when major events take place in Cardiff.

The TOC's and FOC's expect efficient and timely operations which also demonstrate taxpayer value for money. The TOC's and FOC's expect a railway which enables them to be provided with rail infrastructure of an agreed quality to run their services. The traveller / freight customer however has no concern for the providers identity nor should they. And passengers should expect trains to run on time.

The DfT (on behalf of WG) and Transport Scotland specify the HLOS outputs and the terms of TOC franchise agreements. NR should have that same relationship to deliver customer expectations on a day to day basis.

NR is a monopoly supplier so TOC's cannot go elsewhere for their track nor can they withhold payment. The ORR is the body to monitor the customer relationships of NR and by default may have become the user representative through its powers. Through its powers ORR may impose financial penalties on NR; however the change in classification of NR into a sponsored DfT operation may make this more difficult and effectively is charging the taxpayer. This does seem to put us where the British Railways Board was before 1993.

These penalties include:

- Compensating financially TOC's for operational performance below expectations
- Fines issue by ORR to meet obligations (but see taxpayer issue above)
- Penalty for overspending – but the Final Determination only provides for efficient delivery. Any inefficiency has to be covered by the taxpayer or as suggested in the Hendy report through sale of non – core assets.

The WG has become a customer by default. In the original franchise it was not specifically a named player. However as it now funds the revenue support (subsidy) payments to Arriva Trains Wales (ATW). WG has a direct interest in day to day real time delivery. The relationship between WG and NR has much improved since the creation of the Wales Route e.g. on maintenance and renewals issues such as timing of infrastructure work

On major projects managed by Wales and West Division the management is not devolved and there is a view that Western Route area is given more focus and priority than the Wales Route. The head of the CAS-R (Cardiff area resignalling) project does not report to the Wales Route but to NR Head Office. This also applies to NAS-R (Newport area) and the Port Talbot station rebuilding. It is therefore harder for the WG to control renewals and enhancements and harder for the major projects team to understand options, trade-off and priorities between e.g. stations, set of points or a bridge. It would be preferable for the major projects team for Wales to be based in Cardiff with the Wales Route. They would draw on expertise for civil engineering (stations and bridges) or signalling from a central core or contractual suppliers.

8

The fact that funding for Welsh rail infrastructure is not devolved – what are the advantages, disadvantages, opportunities and risks potentially associated with devolution?

Present Structure

NR has begun the process of devolving responsibility for the railway. The Wales Route is responsible for day to day maintenance and smaller renewals but only in a shared accountability with the centre. Major projects and long term planning remain a head office responsibility through the Investment Projects Directorate (IPD). Planning has moved towards a devolved status with the publication of the *Wales Route Study Long Term Planning Process.*

There appears to be a devolution policy but this has to move forward quickly if Wales is to benefit. The new Route services Directorate will provide central services required and Routes will have more input into the IPD. (See Shaw report Section 3 Fig 7)

Current Financing NR

NR main sources of income are illustrated with the 2011 – 12 figures:

Total income in 2011-12: £12.5bn (all figures in 2011-12 prices).

This figure is made up of:

- £7.2bn from passengers
- £1.3bn from commercial operations such as station shops and car parks
- £4.0bn in subsidy from the taxpayer

Of this £4.0bn taxpayer subsidy:

- £0.1bn went to train operating companies
- £3.9bn went to Network Rail.

Network Rail receives 63% of its income in the form of a grant from government and:

- £1.7bn from charging franchised train operating companies to use the track
- £0.6bn in other commercial income

(Source: Office of Road and Rail)

Up to its reclassification NR borrowed on the market but with investors having a government guarantee. The government now lends directly to NR (under a £30 bn current agreement). This means the risk associated with NR expenditure has increased and lies entirely with the government. The government was always closely involved with NR funding. The new position means the whole of the company's finances have a direct effect on the government's fiscal objectives. The borrowing is no longer 'off balance sheet'.

Devolution of NR functions

This is a complex issue with key issues:

- Ownership of the infrastructure for enhancement. Is it all owned by NR
- Legal rights and can track access charges be made e.g. if WG took over the track and trains how would they charge their own TOC and other franchisees using their track
- Is the owner in the public sector or the private sector?
- Will there be any common ownership between TOC's, NR, Metro, and private interests?

The land ownership issues would arise if WG wished to convert the VL network to trams and take over NR track. (See note below)

Advantages

More control of track and trains if they were to be integrated into a single business such as the WG NfD company suggested by the Minister for Transport. There is a separate note by Professor Stuart Cole available on alternative funding option structures

Disadvantages

The financial risk outlined below

The legal structure and the people team to operate this business will require to be employed without further delay if even 2020 is to be a target date for electrification of VL

Opportunities

Network rail is in a deep alliance in Scotland with Abellio ScotRail and Transport Scotland. This is based on NR experience in Wessex, England with South West Trains. The latter had a single leadership team to align organisation structures for operating trains and managing engineering work, improve the financial position and provide improved services. It ended earlier than scheduled because of different incentives and financial risk outweighing opportunities. The financial risk is a key factor in any WG decision to move in that direction but NR appears to be seeking such alliances elsewhere – Wales might be an appropriate location.

Using the borrowing facilities suggested below the WG could take over the infrastructure but only by ensuring that the Block Grant provides for that funding.

However WG will need to a part of the current ORR consultation and constantly interact with the Shaw Report outputs.

It has been suggested that the Shaw report may recommend transferring parts of the network to private companies or to others. There are concerns arising from the withdrawal of Metrolink Sub Surface Railways (on London Underground) and Railtrack plc which suggest there are financial and operational control risks in such a move. A WG owned public sector company might reduce such risks.

This may be the opportunity for WG to suggest it becomes one of those parts – network recipients but in the public sector. Scotland has a different model in the Transport Scotland – Abellio ScotRail alliance. Wales could then be used a live test bed using a separate infrastructure organisation but which could also be recovered with little contractual and financial downside.

It would be relatively risk free, would have access to low interest funding as a blue chip borrower (guaranteed by HM Treasury) and city investors advise me they would be keen to invest.

The final Shaw report will be produced ahead of the budget in March 2016. If based on regional structures there is an opportunity for Wales based on the Wales Route and a perfect pilot for different ownership structure aligned with train operations. It would also provide for a mix of private and public funding (see infrastructure operator section next).

The WG Transport Company would be an informed buyer (unlike Railtrack which was not and outsourced all its maintenance). HS1 is an independent infrastructure operator with Eurostar and others as the train operating concessionaires. London Underground (TfL) is an infrastructure operator but has a different model.

<u>Conclusion on WG as an infrastructure operator</u>

WG has several options all operating through the Transport Company (or TiG).

Big question 1 – how is this funded?

- NR and repayment by WG over 60 years
- Private company who 'own' (or lease) the infrastructure and rolling stock – so far all privatisations have come to grief – Railtrack (into Railway Administration); NR (for EC state aid rules); Metrolink (unacceptable profit level)
- Borrowing directly from the markets to fund infrastructure owned by NR (but subject to HM Treasury approval) using new borrowing powers. This could be in the form of unsupported debt (as Dwr Cymru) or guaranteed by WG (as was NR in the past; OBB in Austria)
- Using the Transport Company / TiG on a NfD basis to fund operate and own the infrastructure jointly with NR if required or if practical (public sector BOOT – Build, Own Operate Transfer *to the public sector at the end of the concession* – the principle of the Severn River Crossings)
- Make the Transport Company / TiG responsible for both train operation and infrastructure with allowances for other non TiG contracted train operators to use the track and pay access charges to TiG.
- Set up a joint company with a private sector company / consortium (part privatisation as with the Royal Mail). It would finance the project and charge TiG over a period of years for train and infrastructure provision (private sector BOOT).
- Cash sales of non – core assets as BRB and NR have done in the past. Selling air rights above primary stations e.g. Cardiff, Newport.
- Concession for train operation over a set time period as with Eurostar on HS1

- Part funding bt WG Transport Company (TiG) with other local or UK government partners. This would apply to specific projects such as through the stations improvement programme

Big question 2 – will NR agree?

- NR is considering handing over part of its network? The negotiations could go on for many years. DfT / NR will not hand over without due diligence and not before 2018 – DfT does not want to see another Railtrack or for the state aid rules issue to return
- Do WG want to hand over Wales' railway including £3 bn investments in new infrastructure (e.g. Metro) to a private sector company without due diligence or indeed at all. And how will Metro's very large scale investment fit into such a funding exercise.
- Expensive skills are required to give WG Transport Company (TiG) adequate management controls over the agreement so that improved passenger experiences and WG policy objectives are achieved during the 10 year £3.5 bn franchise.
- Can this be achieved by 2016 to prepare an issue of new franchise by 2017 to begin in 2018 – very unlikely as the required Transport Company full team is a long way from being in place

A first step is to establish a statutory interface with Network Rail (not included in the Railways Act 2005). Rail infrastructure investment is currently funded through Network Rail borrowing the capital expenditure. The payment of interest and repayment of the loan over 35 / 60 years will become responsibility of the Welsh Government and our Minister of Finance must be sure that the repayments are affordable.

Conclusion: rail infrastructure can be independently operated but a co-ordinating body has to be present to provide network benefits. But this is the position in Western Europe where international trains operate successfully between countries some almost as small as Wales in population terms.

<u>Risk</u>

If the WG proceeded alone with its investment in Metro then it would have a major rail investment programme. It would also have to integrate its operations with those of the main line operators (GWML - SWML, WCML – NWML, Cambrian Line and other services). This would similarly apply if WG became the infrastructure owner / operator.

The planned Metro investement has a small proportion coming from HM Treasury (£125 m) but the major part will be from other sources. The experience on the

GWML shows how costs can escalate and the published figures so far for VLE have increased from £350 m to £550 m capital cost. These large amounts of capital will have to be refunded (capital and interest) and repaid over a period of 30 – 50 years. The funding arrangements have to be carefully negotiated. A briefing for the Committee might be taken from city experts in the field.

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