Consultation Response

Network Rail Long Term Planning Process: Long Distance Market Study

June 2013

Pedro Abrantes

pteg Support Unit
Wellington House
40-50 Wellington Street
Leeds – LS1 2DE
0113 251 7445
info@pteg.net

1. Introduction

1.1. *pteg* represents the six Passenger Transport Executives (PTEs) in England which between them serve more than eleven million people in Tyne and Wear ('Nexus'), West Yorkshire ('Metro'), South Yorkshire, Greater Manchester, Merseyside ('Merseytravel') and the West Midlands ('Centro'). The West of England Partnership, Leicester City Council, Nottingham City Council, Transport for London (TfL) and Strathclyde Partnership for Transport (SPT) are associate members of *pteg*, though this response does not represent their views. The PTEs plan, procure, provide and promote public transport in some of Britain's largest city regions, with the aim of delivering integrated public transport networks accessible to all.

1.2. The PTEs are seeking a greater devolved role in the delivery of local rail services in the West Midlands and North of England, and discussions are currently underway with the Department for Transport on this issue. *pteg* is particularly keen for strategic planning processes to acknowledge the potential greater future role of PTEs in setting investment priorities.

1.3. Although we have had sight of the three other market studies, this response deals mainly with the Long Distance document. We are also planning to submit a response to the Regional Urban market study in due course.

1.4. This response pulls together common views across the PTEs and TfGM, largely in relation to matters of principle and the overall approach taken rather than specific recommendations. However, some PTEs have also produced individual responses which should help to complement our broader points with specific examples. These responses would therefore best be read in conjunction.

1.5. We are grateful to Network Rail (NR) for taking the time to provide further clarification following the publication of the draft market study, which has helped shape our response.

2. Overview/summary

2.1. The PTEs welcome Network Rail's decision to move towards the more strategic and longer term approach to network development reflected in the Long Term Planning Process (LTPP). We agree that such an overarching framework is essential to justify and prioritise investment in rail infrastructure, given its long pay-back periods and lead-in times, multiple inter-dependencies and potential impact on long term socio-economic objectives.

2.2. Despite its promise, we feel that the draft market studies, a key component of the LTPP, have a number of weaknesses which could undermine the overall robustness and legitimacy of the process. In the rest of this response, we note our key issues, which we have structured under the following headings:

- Process
- Demand forecasting methodology
- Assessment of benefits
- Development of conditional outputs and recommendations

2.3. Even though our response takes a fairly critical view of the draft market studies, we acknowledge that this is a new framework that doesn't follow an existing template. *pteg* and the PTEs are therefore keen to continue to engage with NR and other stakeholders to ensure that the whole LTPP process is as robust and effective as possible.

3. Process and overall approach

Transparency

3.1. A key concern for *pteg* is that Network Rail's draft for consultation lacks sufficient detail to enable stakeholders to engage with the process or to endorse its outcomes. This includes the description of the way the process was conducted, the principles applied and their underlying rationale, the technical analysis undertaken and the way in which the conclusions/recommendations were arrived at.

3.2. This lack of transparency means that the analysis cannot be properly scrutinised or replicated. Individual PTE responses identify some examples of what we believe to be obvious factual errors. Without access to NR's detailed analysis other, less obvious, mistakes could slip by unchecked. We find this worrying given the role of this document as an overarching framework for future network planning. At the same time, we also believe that greater transparency could avoid potential misunderstandings and un-warranted criticism.

3.3. We appreciate that this document is aimed at a fairly wide audience and that this necessarily places constraints on its length and amount of technical detail. However, additional information could be provided in the form of appendices, which in their simplest form could be a repository of internal papers which we presume have been produced as part of this work.

Market segmentation

3.4. We accept the need to break down the analysis into manageable chunks and for presentational purposes. We therefore understand NR's decision to carry out four separate market studies. We can also see why there might be a case for applying different forecasting approaches, for example, by journey purpose.

3.5. However, it's clear that individual rail services play a number of different roles and that each individual train will have a slightly different combination of journey purposes, trip lengths and fare levels amongst its passengers. We are therefore not totally clear on what basis the boundaries between service types were established. We are also unsure why the long distance and regional urban market studies seem to apply significantly different, and potentially inconsistent, forecasting, appraisal and service quality criteria. The point about service quality also applies to flows of different lengths within the long distance rail study itself.

3.6. In addition, we are not sure what NR's proposed approach is towards international travel, flows that fall outside the specific scope of each of the individual market studies or flows that aren't currently connected by rail.

3.7. Our concerns from this are two-fold:

- The analysis could be biased by a lack of methodological consistency and what seem to be artificial distinctions between services.

- The attempt to reduce all services/flows to a small number of types will inevitably lead to gaps, overlaps and contradictions. This already seems to be the case where many regional flows outside the main urban areas may end up not being covered by any of the market studies.

3.8.   In our view, studies of this nature should aim to be comprehensive and systematic, dealing with all existing and potential flows in a consistent way. The issues highlighted above could undermine the transparency, robustness and legitimacy of the analysis. This was one of the key weaknesses of the RUS process, which we were hoping the LTPP would be able to address. However, we don't feel that these arguments have been acknowledged or addressed in the draft long distance market study. There is therefore a risk that the study will be perceived as having been skewed from the outset.

Objectives

3.9.   Although there is a statement of the strategic goals which have guided the study, few details are provided on how these were arrived at (presumably from a longer initial list) or, in most cases, how the methodological approach and study recommendations relate back to them. This makes it difficult to assess whether the goals are a fair reflection of stakeholders' views and of relevant strategies and documents, and whether the study's approach and recommendation follow on from them.

3.10.   However, our impression is that there is perhaps some confusion between short term priorities and long term strategic goals. For example, we can't see what role affordability should play in a study which is meant to be aspirational in nature and is making no attempt to estimate the costs and revenues of proposals. But if affordability is to be considered then this would need to take into account the marginal costs and marginal revenues of specific service improvements which seems to be beyond the capability of the models used.

3.11.   We are also somewhat confused by the distinction between 'improving the quality of life of individuals and communities' and 'enabling economic growth'. Some might see economic growth as an enabler for improving quality of life rather than a long term objective in itself. The specific focus on enabling economic growth is much more an explicit government priority now, when there is a significant amount of unused capacity in the economy, than it has been over the past 30 years. There have been many times, when government's key priority has been to control inflation (which may involve, e.g., putting the dampeners on growth). We would therefore argue that economic growth (as distinct from the wider well-being of the population) is a short term priority.

3.12.   Although we are not necessarily querying the objectives set out by NR, we feel that the market studies should articulate the rationale behind these much more clearly, and ideally attempt to establish clearer links with overarching policy statements from key stakeholders. This should ensure the greater longevity of the LTPP outputs.

3.13.   On a more general note, we feel that it is critical that any long term rail strategy begins by clearly articulating the central arguments for continued public funding of rail services, which seems to be entirely absent from the draft documents.

4.   Demand forecasting methodology

4.1.   We understand that NR's chosen demand forecasting approach is based on 3 key steps:
  •   Definition of exogenous scenarios on projected income growth by socio-economic group (documented in the market study report);
  •   Estimation of a relationship between household income and the total number of annual long distance trips (based on a cross-sectional analysis of 2010 National Travel Survey data, partly documented in the market study report);

- Application of an existing incremental (presumably, logit) mode choice model to determine the proportion of the overall market by OD pair carried by rail, given a certain change in Generalised Cost (the parameters reportedly come from the Planet Strategic Model but neither the parameters nor the estimation process are documented in the market study report).

4.2. Although there are practical advantages to this relatively straightforward approach, we remain unconvinced that this is the most appropriate methodology for a long term strategic study of this nature. Our key concerns are summarised below.

Incremental mode choice model

4.3. The type of mode choice model which we understand has been used (an incremental multinomial logit) is heavily influenced by current market shares. Where these are a direct function of factors which are poorly represented in the model (for example, specific timetable constraints, the need to interchange, the cost of car parking, representation of congestion bottlenecks or the distribution of trip ends relative to main rail stations), then it is likely that the model will perform poorly for forecasting purposes. The fact that the model uses only 235 zones to represent the whole of Great Britain means that such issues are unavoidable.

4.4. In addition, where rail's market share is very low, we suspect that the model won't be estimated with sufficient confidence to forecast the impact of a step change in rail accessibility. This is essentially a statistical issue whereby the confidence interval for parameter estimates is likely to be very wide where rail's market share is currently low.

4.5. It's not clear to what extent these issues have been addressed in the analysis - our view is that this could help explain some of the gaps in the output tables from the study where it is stated that no forecast could be made.

Destination choice model

4.6. Destination choice appears to be excluded from the model, which effectively means it implicitly assumes travel patterns will remain unchanged all other things being equal. In reality, as the level of rail accessibility and overall size of urban areas outside London continue to increase, there is likely to be some substitution of long distance travel to London with travel to nearer cities.

4.7. This could be further compounded by non-linearities in long distance demand. For example, there might be step changes in demand from the ability to undertake a return business trip in a single day which would have previously required an overnight stay. There are plenty of regional flows which could fit this category (e.g.: flows between cities in the South West/South Wales/South Coast/Kent/East of England and cities in the North/Scotland). There could be an additional step change when daily commuting becomes feasible, which is likely to be especially relevant for flows below the 50 mile mark. These effects could make certain destinations/flows much more popular than they are at present.

4.8. We would of course accept that increases in overall accessibility, population and income would probably lead to an absolute increase in the total number of trips to London. However, our point is that the model does not explicitly allow changes in the relative balance of different journey types.

Understanding the long term drivers of demand

4.9.   Building on the previous points, the study seems to make only a very cursory attempt at understanding the range of drivers of long distance travel demand. As far as we can see, no explicit account is taken of factors other than household income and the competitive position of rail in terms of generalised cost (even here, it's not entirely clear what assumptions have been made regarding future fare levels, fuel prices or the cost of aviation).

4.10. In reality, long distance passenger travel is likely to be determined by factors such as:

- the structure of the economy (for example, the move towards some service sectors is likely to generate an increasing amount of long distance rail trips per job because these jobs tend to locate in areas with better than average rail accessibility);

- the spatial distribution of economic activities, and in particular the degree of spatial specialisation;

- the spatial distribution of the population (which, combined with the degree of spatial specialisation in leisure activities is likely to be a key driver of leisure travel);

- the evolution in working practices (in particular, the growth in home working and the development of information and communication technologies).

4.11. Although some of these factors are touched upon in the description of long term scenarios it's not clear to what extent they have been taken into account more explicitly in forecasting travel patterns.

4.12. Another point that we also feel needs to be addressed in the final document is the fact that some of these factors are path dependent, i.e., they are affected by public policy choices made over time. Our view is that any strategic model of this sort needs to allow decision makers to be able to explore the potential implications of alternative courses of actions, not just in relation to rail investment but more generally in terms of other levers which government bodies have at their disposal.

4.13. At local government level, there is a clear trade-off, for example, between planning policies[1], availability, quality and cost of housing, ability to achieve agglomeration economies/economies of scale in production and the need for supporting transport investment. Our reading of the market study suggests, for example, that whether local authorities choose to prioritise development on green field or brown field sites is irrelevant for forecasting future rail demand, which is unlikely to be the case.

4.14. The recent 'On the Move' project[2] also shows that changes in government taxation of company cars are likely to have played a key role in promoting a shift to rail for business travel over the past decade. This further illustrates our point that decision makers need to see rail investment in a much broader policy context.

4.15. Ideally, we would like to see all these factors (public policies, economic and demographic structure) treated explicitly in the model. But, at the very least, the study should include a detailed register of assumptions which could be validated against local plans and forecasts, and sensitivity tested against different government policies.

---

[1] See, for example, DCLG (2010), Housing and planning statistics 2010, Table 11.1, which shows the proportion of new dwellings built on brownfield sites increased from around 60% to 80% between 1999 and 2009.

[2] LeVine and Jones (2012), "On the Move: Making sense of car and train travel trends in Britain". Report to the ORR, ITC, Transport Scotland and the RAC Foundation.

4.16. On a separate note, we feel it could also be useful to look at changes in the pattern of rail travel over the past 30-40 years to get a better feel for how rail demand has responded to observed socio-economic changes, and the extent to which those relationships are relatively stable or likely to change significantly over time. We expect this would show, for example, a high correlation between the shift from manufacturing to service employment in regional cities (with significantly higher growth rates than London during much of the past two decades) to have been a key driver of rail demand growth to/from core cities.

Relationship between household income and long distance trip frequency

4.17. We are not confident in the robustness of the estimated relationship between household income and long distance trip frequency. The data from the 2010 NTS presented in figure 6.3 does not consistently support the hypothesis of an increasing monotonous relationship between income and number of trips for all household types. It is possible that there is a threshold above which the number of annual long distance trips no longer increases due to physical, psychological or business constraints. Another hypothesis is that as income increases above a certain level, more complex substitution patterns begin to emerge, for example, where more frequent but shorter length stays are replaced with less frequent longer stays or longer journeys. This would be the case, for example, where households decide to holiday abroad. It is not clear whether/how these potential issues were addressed in the model.

4.18. Although the model postulates a relationship between income and trip frequency which is meant to be applied over time, it is estimated on cross-sectional data for a single year. This weakens the robustness of the relationship as it cannot be ruled out that it is a household's income relative to the population at large, rather than its absolute income, which determines the number of long distance trips made. We wonder whether the analysis could be strengthened by taking into account NTS data for several years.

4.19. More generally, the study fails to acknowledge significant alternative hypotheses for future changes in long distance trip frequencies. One example, the constant travel budget hypothesis, suggests that the amount of time individuals spend travelling has remained remarkably constant over time and that what has changed is the average speed of travel, enabling people to make more trips or cover longer distances in the same time. This would suggest that the number and length of long distance trips is a function of transport accessibility and could therefore be more directly influenced by rail service quality than by income levels[3]. This hypothesis could be tested, for example, by using NTS data for the past two decades.

Treatment of fares

4.20. It is not clear whether the model is sensitive to changes in fares or what assumption has been made in relation to their future levels. This applies to rail fares, fuel prices and the cost of air travel (including the assumptions regarding the level of future taxes and levies).

Access/egress legs

4.21. It is not clear how access and egress legs have been treated in the model.

---

[3] See, for example, Metz, D. (2013), "Peak Car and Beyond: The Fourth Era of Travel", Transport Reviews 33:3, pp.255-270 for an up to date discussion of the evidence.

4.22. For example, the conditional outputs suggest a future service level between Nottingham and Birmingham of 160mph, 3-4 trains per hour, presumably achieved through HS2. However, the planned HS2 station nearest to Nottingham will be located at Toton, 7miles from the centre of Nottingham. Taking into account interchange and the operating speed on the local transport network, the door-to-door operating speed between Birmingham and the centre of Nottingham is unlikely to exceed 140mph (and could be significantly less). At the moment, it's unclear whether this type of issue has been considered in the analysis and how it affects the conditional outputs and benefits estimated.

4.23. More generally, for many journeys access/egress legs can form a significant proportion of the overall generalised cost and can be an important competitive advantage of car travel. And, in some cases, investment into access/egress could be more cost-effective at improving door-to-door journey times than investment on the heavy rail network. We would therefore argue that the study should consider accessibility to the rail network as well as service levels between stations.

4.24. This adds to our earlier point that decision makers need to be able to consider rail investment in tandem with other potential policy interventions.

Competing modes

4.25. It is not entirely clear what assumptions have been made regarding the future competitive position of air travel relative to rail, and we would like to see a much more detailed explanation of this issue in the report.

Summary

4.26. Given the issues noted above, we are not confident that the forecasting model employed is fit for purpose. Essentially, we feel that it has a significant element of status quo bias which acts to direct future investment towards flows where rail already does particularly well but may not necessarily be where the benefits from future improvements would be greatest.

4.27. This could lead the LTPP to overlook some significant opportunities to grow the competitive position, and socio-economic benefits, of rail by making use of existing capacity and targeted service improvements and capital investment. Examples of this would include strengthening links between major origin-destination pairs where rail is currently not competitive due to low speeds, lack of direct services, low frequencies, low vehicle quality/crowding or poor local access.

4.28. At the same time, we feel that the proposed approach could also introduce a bias towards long distance flows relative to commuting flows into core cities, where recent growth in demand has been highest and where existing demand model have been shown to severely underestimate demand already[4].

4.29. At a more fundamental level, we would question whether a demand model which, we presume, includes no more than a simple representation of competing modes, no trip distribution component and no representation of the wider economy is appropriate for this type of analysis.

4.30. We would therefore call on Network Rail to:

---

[4] See, for example, work by Motts for the Northern RUS or the MVA Regional Growth Study for PDFC.

- Make available its analysis in full so that stakeholders can assess its robustness;
- Submit its analysis to an independent peer review process;
- Consider the need to develop the existing model further;
- Consider the merits of alternative model formulations[5].

5. Appraisal framework

5.1. In order to be able to prioritise different potential improvements, there is a need to understand the benefits that they are each likely to generate. The market study considers three types of benefits and below we set out our understanding of each of these:

- **_GDP growth from potential increase in business travel_** (referred to as economic impacts).This first requires an estimate of the change in effective density of a given area as the result of a change in rail accessibility. This is then used to estimate the impact of the change in accessibility on economic growth using a linear relationship between GDP per worker and effective (rail) density. This relationship is estimated on rail accessibility data from the Planet Strategic Model and, presumably, average wage data sourced from either the ONS or the DfT's WebTAG guidance. While there are some similarities between this approach and WebTAG's methodology for estimating Wider Economics Impacts (WI1) there are some notable differences which are explored in the next section.

- **_Generalised cost savings to new rail passengers_** ('quality of life'). This is based on the monetised value of the change in rail Generalised Cost for existing and generated passengers, following the rule of a half[6]. Different values of time are applied to business and leisure trips though it's not clear whether other journey purposes are included in the calculation. It seems that the change in the number of new rail trips is based exclusively on the change in the generalised cost of rail travel, although the report isn't entirely clear on this point.

- **_Decongestion and environmental externalities_** ('environmental impact'). This takes the reduction in car trips estimated as described in the previous point, and multiplies it by the new trip length and a uniform factor of 0.26, which is meant to reflect the higher load factors of car travel and differences in mean trip length. The reduction in total car-kms is then multiplied by marginal external costs sourced from WebTAG. It's not clear whether the marginal external costs are allowed to vary by flow to reflect different levels of road congestion.

5.2. We would like to have seen a greater level of technical detail in the market study report and trust that NR will be able to provide additional information in due course. However, from the information provided we have some concerns over the empirical evidence and rationale underlying the calculation of benefits related to economic growth, as well as some queries about the detailed methodology employed to quantify the other types of benefit. These are set out below.

---

[5] Although there are a variety of alternative approaches, a recent presentation by TRG (University of Southampton) at a PDFC meeting illustrated how a simple direct demand model could be used to identify flows where a step change in service quality could lead to a large increase in rail's mode share.

[6] The total user benefit is equal to the change in GC multiplied by the initial number of passengers plus the change in GC multiplied by half the number of generated passenger trips. The rule of a half reflects the change in Consumer Surplus assuming the demand curve can be approximated by a linear relationship.

Overall approach

5.3. We are unclear why the three types of benefit were used for separate ranking exercises rather than treated cumulatively. This has the consequence that improvements or flows which perform well on all three criteria may be ranked below another improvement which performs marginally better on a single crtierion but not well at all on the other two. This could be an important issue when comparing medium/long distance regional flows, which will serve a range of journey purposes[7], with core commuting flows (especially those in London and the SouthEast) and inter-city services to London.

Economic impact from increased effective density

5.4. While we support NR's emphasis on the potential economic impacts of improved rail accessibility we have some concerns that the methodology employed is inconsistent with the WebTAG Wider Economic Impacts guidance and underlying research[8], on which it seems to be based. We believe that these inconsistencies could be skewing the conclusions of the study to a significant extent. We set out our specific issues in the following paragraphs.

5.5. WebTAG evidence implies that effective density declines more quickly with generalised cost than the logistic relationship implicit in figure 1 of annex 2. The effect of NR's approach is therefore to skew the analysis towards improvements that significantly reduce Generalised Cost for longer distance flows when there are, in fact, greater agglomeration benefits to be had from reducing the Generalised Cost on short to medium distance flows. This can be seen, for example, when comparing the profile of benefits of schemes such as the Northern Hub with long distance schemes such as HS2.

5.6. WebTAG also suggests that effective density should be calculated as a weighted sum of travel by all modes. As we understand it, the approach followed in the market study only takes into account rail Generalised Cost. This could lead NR's analysis to overestimate the potential impact of marginal improvements where rail isn't already competitive and underestimate improvements which take rail GC to levels close to or above those of existing modes.

5.7. WebTAG's productivity elasticities imply a decline in the marginal productivity gain from successive increases in effective density. In contrast, the model presented in figure 2 of annex 2 implies constant returns to increases in effective density. This is likely to skew the results towards larger improvements in service quality rather than towards improving all services in a more uniform way. The productivity elasticities in WebTAG also vary significantly by economic sector so we would want to understand whether this has been factored into Network Rail's analysis.

5.8. Finally, the analysis seems to overlook labour market impacts from improved rail accessibility (WI4 – more people working and move to more productive jobs) which are linked to (shorter distance) commuting trips rather than business travel.

5.9. Together, the points above suggest that the greatest marginal return in terms of productivity improvements for areas of similar size would be to bring rail accessibility above the level of competing modes across the board, where this is not already the case. This essentially

---

[7] A large proportion of the services operated by First Transpenine, London Midland and Cross-Country would fit this description.

[8] We are referring in particular to the research carried out by Dr Dan Graham of Imperial College London.

contradicts NR's assertion that the greatest benefits are likely to arise from further improving those flows where rail already does well, at least on business productivity grounds. In our view, the choice of methodology and parameters biases the results towards longer distance services and could lead to sub-optimal decisions being made.

User benefits, non-user benefits and environmental externalities ('quality of life' and 'environmental impacts')

5.10. The treatment of benefits relating to 'quality of life' and 'environmental impacts' appears to follow the conventional WebTAG methodology for quantifying user benefits, non-user benefits and environmental externalities. However, we have some queries regarding elements of the calculation which are not fully described in the market study report.

5.11. Firstly, it's not clear how exactly mode shift due to rail improvements is calculated. The report seems to suggest that this is based on an aggregate statistical relationship between rail Generalised Cost levels and rail's market share, although the report also states that '[i]t assumed the generalised cost of travel for different modes from the Planet Strategic Model'. In our view, the model used by Network Rail needs to incorporate the GC of competing modes, especially as this will most likely vary from place to place in the future.

5.12. In terms of the calculation of the value of non-user benefits and environmental externalities it's not clear whether load factors, the degree of mode shift and the unit marginal external costs are allowed to vary by flow and journey purpose. Our view is that this is essential given the wide variations in the externality benefits per car-km for travel in congested urban roads at peak times compared to uncongested inter-urban roads in the off-peak. Load factors are also likely to play a key role in differences between leisure, business travel and commuting trips.

6. Conditional outputs and recommendations

Incremental or aspirational?

6.1. In NR's own words, the LTPP is '*designed to take into account strategic change in the economy, and GB's approach to social and environmental responsibility*' and to identify '*long term strategic goals which define the successful provision of rail services* (…)'. Yet, and with the exception of flows covered by HS2, we have found the conditional outputs to be conservative and unambitious.

6.2. We have explained in the demand forecasting section of our response why we believe this is the case for flows that are currently not well served by rail. However, we also feel that for a number of successful shorter distance flows the aspirations are set at too low a level. In addition, no account seems to be taken of international flows or those which aren't currently served by rail.

6.3. We are therefore concerned that this first set of market studies could become a missed opportunity and would call on Network Rail to reflect the long term nature of the exercise in the types of outputs aspired to.

Long term service aspirations

6.4. We are not entirely clear what the source of the long term service aspirations in table 7.1 is and would be grateful for further clarification from Network Rail. From our perspective, many of the service aspirations seem arbitrary and unambitious[9].

6.5. In particular, we find it unacceptable that the default conditional output seems to be to maintain existing service levels in situations where it is likely that the forecasting methodology has failed to produce convincing results (we highlight elsewhere in our response why the approach adopted may well underestimate the impact of future improvements where the competitive position of rail is fairly weak at present).

6.6. On a matter of detail, we don't understand why NR has decided to adopt a rigid relationship between speed and frequency when it would seem more appropriate to tailor each to the characteristics of each individual flow. Given that a certain operating speed and capacity could often be achieved more easily and effectively running fewer but longer trains, shouldn't the market studies leave this type of option available to be explored at a later date? We are also concerned that table 7.1 seems to consider connecting and direct services to make an equal contribution to effective frequency, which seems to disregard the fact that passengers place a high penalty on interchange.

6.7. In general, we don't actually see the need for fixing such precise service aspirations at this point in time. However, if this is the way NR opts to proceed then we believe much greater discussion needs to take place around the appropriate ambition for future service levels.

Prioritisation process

6.8. We understand that the selection of conditional outputs started with a systematic ranking of potential improvement levels according to each of the benefits criteria set out earlier (economic growth, quality of life, environmental impact). For each ranked list, Network Rail then set cut-off points at which the aspiration level changes between given service criteria (speed and frequency) determined elsewhere. Each flow was then set the highest service level achieved in any of the three ranking exercises.

6.9. We also understand from NR that this exercise started by looking at the flows between the largest urban centres and then progressed towards smaller urban areas.

6.10. We have argued earlier that a single ranking exercise using the sum of the three types of benefit considered would likely lead to more robust results.

6.11. In addition, we are not clear how the precise cut-off points between service levels were determined given that this exercise isn't constrained by a fixed budget. In our view, it would seem more appropriate at this stage to focus on determining the benefits of different improvement levels which could subsequently be taken as alternative options as part of an outline business case where costs, revenues and full socio-economic benefits be taken into account.

6.12. It also seems likely that the benefits/costs of improvements to different flows along the same corridor could be added together and would change the business case for a specific

---

[9] Why, for example, would a 51 mile long connection have as its best aspiration a speed of 160 miles/hour and a 49 mile long connection have an equivalent best aspiration of only 60 miles/hour? There are also numerous examples of internal inconsistencies which are highlighted in individual PTE responses.

conditional output. Constraining conditional outputs at such an early stage seems counterproductive from this perspective. We would perhaps have found it more instructive to see the full ranked list of improvements with a quantification of benefits.

Scope/coverage

6.13. Earlier in our response, we have queried the segmentation of passenger market studies and pointed out that this could lead to gaps, overlaps and contradictions. In the case of the long distance study, we are also somewhat surprised that NR has decided to structure the outputs of the study in a fairly hierarchical way, distinguishing between flows between the largest cities and only then including smaller centres. Where key centres are already well served by rail, it is possible that the highest returns could be obtained from connecting smaller centres to the network at relatively marginal cost.

6.14. The risk from the current approach is that important centres or services are missed out altogether, leaving gaps in the analysis. Our members have identified a number of these in their individual responses, which illustrate this point well.

6.15. Our members have also pointed out that many flows longer than 50miles, or commuting flows outside the main centres could be excluded from the LTPP process altogether, regardless of their absolute value. We would be interested to know whether this will be the case and, if so, how NR plans to deal with such services in the context of the strategic network planning process.

6.16. In terms of overlaps and contradictions, it needs to be recognised that rail services play multiple different roles and that their journey mix may well change considerably over time as the result of service improvements or socio-economic changes. For example, many regional long distance routes serve large commuting flows between intermediate stops and lightly used rural routes can be upgraded to become major intercity or commuting corridors.

6.17. We have previously raised the issue that access/egress modes appear to be overlooked in the analysis. We believe that NR should be looking across modes, considering the overall market for travel while trying to identify the most effective ways in which rail can meet future demands. Although the market studies go a significant way towards achieving this objective we feel that they could be improved by taking a broader view of rail travel.