To: Billy McLarnon
PTPD

From: Michelle Thomson
Economics Branch

11th May 2010

COLERAINE TO DERRY TRACK RENEWALS ECONOMIC EA

I. You asked if Economics Branch could review the draft EA that has been carried out by KPMG, which looks at potential options for renewing the track between Coleraine and Derry. The overall project costs are estimated to be £75,019,632 (including OB of 20.2%).

II. In terms of the quality of the EA and how it concurs with DFP guidance, there are some faults that could be picked out in the report and areas for improvement or where the detail provided could be elaborated on. These are discussed below.

Strategic Context

1. Given the current interest in sustainability reference should be made as to how this project links into the theme and the current draft Translink Action Plan.

Assessment of Need

2. In terms of the need section it would be beneficial if some quantified evidence was provided in relation to the permanent way. For example:
   - Are there problems with wet beds;
   - Has the number of wet beds increased over time;
   - Have there been any failure of the rails at joint locations;
   - Has the number of failures increased over time;
   - Are there defects in the rails;
   - Have the number of defects increased over time; and
   - What was the change in journey times as a result of the reduced line speed?

3. With regards signalling the EA provides a number of reasons for the need to upgrade the current arrangement (see page 17, Section. 3.2.2 of EA). Further detail would be useful on:
   - Whether the inability to support the Automatic Warning System (AWS) or Train Protection and Warning System (TPWS), as required by legislation, has resulted in any penalties due to non compliance;
   - What the current best practice actually is and how the current arrangement does not comply;
   - How frequently spares have been sought in the past and what impact the difficulty in locating the spares has caused to the operation of the line;
   - What impact the lack of a duct route has caused to the operation of the line;
   - What impact the lack of point heating devices has caused to the operation of the line; and

- whether there would be an impact on the signalling between Coleraine – Portrush as a result of the changes planned on the Coleraine – Derry track (this is particularly important given that page 26, Section 4.3.3 includes an objective to *'complete essential signalling works along the Portrush branch line'*, though I am not convinced that this should be an objective within this EA given the discussions I have had with Peter on this subject – see point 8 for further details).

4. In terms of the Bridges (see page 17 and 18, Section. 3.2.3 of EA) further detail is required on the condition survey which has been completed. That is, information on the:
   - Numbers requiring remediation works;
   - Type of remediation works required;
   - When this remediation works would be required;
   - Whether any of the bridges fail to comply with current standards; and
   - The impact on the operation of the line if this work was not undertaken.

5. In terms of the statement quoted on page 22, Section 3.4.2 the consultants should provide further detail on average journey times within alternative modes of transport.

6. Finally, what are the implications of the occurrence of cyclical loading failure referred to on page 23, Section 3.4.4 of the EA?

Objectives and Targets

7. It may be worthwhile to also consider additional objectives such as to minimise the disruption caused by the work and to reduce travel time by x amount. Translink may also wish to indicate the relative priority of individual objectives or elements of the proposals, if applicable.

8. Furthermore, the 'further objectives' listed on page 26, Section 4.3.3 appear to be too specific as they pre-empt option selection, or are not necessarily related to what will be delivered as part of this project or are not covered within the needs section. The ones I am referring to specifically are:

   - Bullet point 2 – *'Provide a track and signalling layout at Derry to future-proof for any works undertaken at the Ebrington site in conjunction with a new station'*. The need to accommodate this has not been highlighted as a requirement within the needs section.
   - Bullet point 3 – *'Ensure signalling compatibility with future GSMR systems'*. The need to be compatible with GSMR systems is again not highlighted when discussing the signalling requirements within the needs section.
   - Bullet point 5 – **'***Carry out other major works that require a possession or blockade to ensure that no works requiring possession will be required for 5 years from the date of reopening following renewal'*. I assume this is referring to the bridge works discussed within the needs section, but I think the completion of the bridges at this time would need compared against an option of completing at a later date, particularly as the affordability of the project is already in question.

- Bullet point 6 – *'Meet the requirements of the CAA (Civil Aviation Authority) for the de-lethalisation zone of City of Derry Airport with a system that facilitates track maintenance'.* Again, it is unclear why this is required as it is not covered within the needs section.
- Bullet point 7 – '*Maintain the station at Bellarena to provide a rail link for Limavady*'. Again, it is unclear why this is required as it is not covered within the needs section.
- Bullet point 8 - '*complete essential signalling works along the Portrush branch line'.* It is my understanding that no work will happen to the signalling along the Portrush line within this project or even the Coleraine – Portrush re-rail project. If this is correct then this objective will need removed.
- Bullet point 9 – '*Facilitate the future provision of a Park and Ride facility in the vicinity of the loop(s) as highlighted in the BAH (November 2008) report'*. Again, it is unclear why this is required as it is not covered within the needs section.

Options

9. The options are all fairly similar in scope. I don't think to have such a close range of options is a problem per se, but what it does mean is that there are other types of options which are not examined. For instance, no consideration has been given to:

    - Maintaining current service levels so that all existing TSRs and PSRs remain in place (perhaps this is what would be completed under option 2, but it is not clear from the information contained within Section 5.1.2);
    - Different working patterns, such as continuous blockade versus late night only (again, there is some mention of this within Section 5.1.2, but analysis on the possibility and potential impact of different working patterns on the other do-something options would prove useful);
    - Re-use of existing rail (again this is discussed within Section 5.1.2, but it would be useful to determine if it is possible to consider within any of the other do-something options);
    - Use of different materials, such as steel sleepers versus concerts sleepers (this was considered within other track renewal projects so it would be interesting to determine if it is possible within this project); and
    - Different levels of scale and/or quality for the station.

10. Translink should also provide detail as to whether it is possible to include a passing loop within option 2.

11. Given the details within section 5.1.5 concerning the option around 'heavy maintenance of the existing signalling and telecoms infrastructure' could it be confirmed what the difference is between this option and the signalling works proposed under option 2. As it stands option 2 states that *'signalling improvements would also be required, including the full replacement of the current signalling equipment at Castlerock with a route relay interlocking to interface with the existing systems on the line, along with replacement of the current token block system'* so it would seem that the two options are similar.

12. I also think it would be useful to provide some background to the assumption being applied under each option in terms of the location of the passing loop and how this has been decided upon, making reference to any reports which support the passing loop at Eglinton.

13. Finally, as option 1 would involve simply maintaining health and safety only i.e. line speeds, reliability and ride quality would continue to drop until the time that the line would have to close, it may be useful to include this option within the EA.

Monetary Costs and Benefits

14. With regard to costs, the following issues need to be looked at:

- I would like to see a more detailed break down of the costs quoted, in particular that related to staff.
- Any effect to disrupting of services should be accounted for within the costs section.
- The NPC spreadsheets shows work occurring over a 4 year period, but section 7.5 shows works duration to range between 82.5 and 113 weeks.
- It is stated within the objectives that the design life of the permanent way should be a minimum of 30 years, but the NPC spreadsheets are only completed over a 25 year period. Either this will need altered or a residual value should be included. Furthermore, what will happen after this time i.e. could the track be retained further or will it require another relay?
- As option 2 involves a full relay in year 12, and assuming that the design life of the permanent way would be a minimum of 30 years, some residual value will be required at the end of the appraisal period.
- It is assumed that operational costs will remain the same for options 3 and 4, but given that option 4 will also result in 2 passing loops and a station at Bellarena, should the maintenance costs not be higher? Furthermore, as the NPC spreadsheets are costed over a 25 year period, will further works be required on the station during this time?
- Clarification is required on what the capital costs for full relay are based upon for option 2.
- Clarification is required as to why there are no costs associated with the maintenance of signalling under options 3 and 4.
- The extent of the economic dis-benefits plays an important role in the rejection of option 2 in monetary costs and benefits terms. With this in mind, it is important that the EA provides a full breakdown of the assumptions applied as I am unsure how these were calculated and whether in fact it is correct to include them within this option in the first place.
- The allocations in terms of the percentage applied to preparation and supervision need justified. That is, detail on whether it solely relates to Translink staff time, how the percentage figures were decided upon and why they differ between the base and the two do-something options.
- OB was calculated at 20.2%. However, given the differences between the options clarification is required as to whether Translink are content in assuming that the same level of risk is applied across all options.

- The explanation of the risk management and risk reductions strategies associated with the mitigation factor of 'other' still needs to be included within section 7.4.2 of the EA.

Risk and Uncertainty

15. Within an EA there needs to be a breakdown of all the risks associated with the options and the way in which this project will overcome them. Although a risk register is attached, it would be useful if the risks highlighted were accompanied by information on the likelihood of their occurrence (low/medium/high) for each option and the severity of the impact they would have on each option (low/medium/high).

16. Risk 57 talks about purchasing of land at Ballerena. Could it be confirmed whether this only applies to option 4, or if it also applies to option 3? Furthermore, based on the way the cost tables are shown under each option, it is difficult to determine if the cost of land has been included.

Non-Monetary Costs and Benefits

17. The correct approach has been used to assess the non-monetary costs and benefits. However, the benefits outlined simply restate the objectives of the proposed project. The benefits should be thought out in terms of what the actual outcomes will be of the proposed project and not how well the proposed options will achieve the objectives. For example, the following could be considered as benefits of the project - reduced journey times, increased customer satisfaction levels and so on.

Affordability and record arrangements for funding, management, benefits realisation, monitoring, and ex post evaluation

18. It is important that this section of the EA also contains details on the following:

- *Affordability:* Include budget statement, phased over time.
- *Management:* Give details of proposed timetable.
- *Benefits Realisation:* Include draft benefits realisation plan.