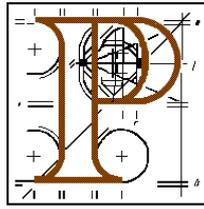


An Bord Pleanála



Inspector's Report - Addendum

DETAILS OF THE APPLICATION

Case Reference No:	29N.NA0004 (A)
Proposed Scheme:	St. Stephen's Green to Broombridge Light Railway – Line BXD
Applicant:	Railway Procurement Agency (RPA)
Planning Authority:	Dublin City Council (DCC)
Application Type:	Railway Order (RO) under Section 37, Transport (Railway Infrastructure) Act 2001 [as amended by the Planning and Development (Strategic Infrastructure) Act 2006].
Submissions/Observations:	Yes.
Site Inspections:	Various dates/times.
Inspector:	B. Wyse.

1.0 INTRODUCTION

1.1 Previous report, dated 29 September, 2011, refers.

1.2 This report is in response to the Board's Direction of 29 May 2012. It addresses the Board's further information requests and the responses and observations received in relation to that information.

2.0 FURTHER INFORMATION REQUESTS

2.1 The further information requested by the Board comprised the following.

2.1.1 From the Railway Procurement Agency (RPA) (letter dated 3 February 2012)

Item 1: Interaction with other Railway Orders

This arose following the Government's "Infrastructure and Capital Investment 2012-2016 Framework", published in November 2011, and which indicated that, in the context of reduced exchequer resources, LUAS BXD would advance to construction in advance of Metro North (MN) and Dart Underground (DU). The planning of the three projects had been originally on the basis that MN and DU would precede LUAS BXD.

Clarification was sought as to how this new sequencing would affect the interaction of the three schemes, particularly at St. Stephen's Green, Westmoreland Street and O'Connell Street.

The Board's letter dated 14 March 2012 provided some further clarification in relation to the response required in relation to this item.

Item 2: Overhead Cable System in the City Centre

This indicated, based on the available information, including that arising from the oral hearing, that the Board was not satisfied that the matter of alternative power supplies in the sensitive areas of the city centre had been adequately explored. It advised that the Board was to consider the matter further, including the commissioning of an independent report.

Item 3: Dawson Street

This requested a re-examination of the feasibility of replacing the proposed offset lateral platform arrangement on Dawson Street with a single island platform, serving northbound and southbound trams, to be located generally between Duke Street and Nassau Street at the northern end of the street.

2.1.2 From the National Transport Authority (NTA) (letter dated 6 February 2012)

This requested a submission from the NTA in relation to Item 1 above.

3.0 REPORT ON ALTERNATIVE POWER SUPPLY SYSTEMS

3.1 The Board commissioned an independent report on the issue of alternative power supply systems from SYSTRA, an international engineering consultancy specialising in urban and rail transport.

3.2 The terms of reference for the report were as follows: -

Objective

Examine the feasibility, primarily from a technical and economic perspective, of employing an alternative to the Overhead Cable System (OCS) proposed in the draft Railway Order in the visually sensitive areas of Dublin city centre.

Considerations

The sensitive area for the purpose of the study is from St. Stephen's Green to the north end of O'Connell Street, including Dawson Street, College Green, O'Connell Bridge and the GPO. The south-bound leg of the one-way system (Parnell Street to College Street) is not considered sensitive.

The author should become familiar with the existing LUAS systems as already serve Dublin Region, and how the BXD line will integrate with same, and also longer term transport plans for the region.

The study should focus only on systems that are developed and commercially available. Systems employed in cities such as Bordeaux, but also more recently in Nice, Reims, Orleans and Angers should be included for consideration (and any other relevant locations).

Up to date information on such systems should be gathered, including consultation with system providers and operators, where possible. Up to date cost estimates should be used.

The report should identify the most relevant technology/technologies applicable to the LUAS BXD requirements and consider the potential for use on LUAS BXD, including: -

- System reliability.
- Suitability for the proposed level of shared running (with cars, buses, etc.) and implications for reliability/traffic management.

- Ability to cope with adverse weather conditions, e.g. snow/ice or heavy rainfall (and possible implications for the roads authority or the environment if new response procedures are required).
- Safety implications for cyclists in a shared running environment.
- Energy considerations.
- Necessity and extent of retrofitting on existing fleets of trams.
- Likely cost differential (both capital and operational) that an alternative to OCS would mean for the overall project.

3.3 Findings/Conclusions

3.3.1 These include: -

Key Characteristics of Running Environment

- Along most of the section under consideration the tramway shares its track bed with road traffic.
- Any equipment installed in the track bed must be able to withstand heavy road traffic.
- Any OCS-free power supply solution must be able to handle a situation in which trams may be forced to stop and start multiple times between any two stations, without risk that trams may be left stranded without power in the middle of dense traffic.

Available Catenary – Free Systems

- These are classified into two categories: systems based on on-board storage; and systems based on a continuous power supply from the track bed.

Suitability/Fitness for Purpose

- Three systems based on on-board storage (super capacitors/batteries) not deemed suitable for the BXD line. Unquantifiable/high risk of trams being stranded in city centre between stations.
- Of the three systems based on a continuous power supply from the track bed, two are considered to be viable, that is Alstom's APS and Ansaldo's Tramwave.

Alstom APS

This system appears to address the constraints specified for the BXD line, by offering:

- Continuous feeding, to cope with unscheduled stops between stations.

- A design which takes into account the mechanical stress caused by road traffic.
- A high level of safety.
- The possibility of retrofitting the existing Citadis 402 fleet.

It also meets the requirement for a proven system.

Implementation is not prevented by any major technical impossibility.

The risk associated with snowfall and ice can be mitigated by proper maintenance and operation procedures but cannot be completely suppressed as recent experience in Rheims has shown – operation interrupted several times by ice/snow falls during winter of 2011/2012.

Maintenance measures introduced for Bordeaux have included:

- A railroad truck specifically designed to clean the groove of the running rail and the APS power rail is now available.
- Alstom now proposes the installation of heavy duty brushes in front of the collector shoe.

Measures introduced in Rheims include:

- Use of glycol to prevent icing of APS rail.
- Continuous operation of a tram when snow falls are foreseen to prevent snow from sticking to APS rail.
- Ban on applying salt on the streets at a distance of less than 50 centimetres from the track bed, as saltwater leads to current leaks and triggers the tripping of the circuit breaker.

The APS power rail, like any power rail, cannot operate when it is covered by water, because such a situation would lead to current leak when the rail is powered up, and thus tripping of the circuit breaker protecting the traction power circuit.

Flooding of the track bed is an exceptional situation which should be prevented by an appropriate drainage arrangement embedded in the track.

Regarding the protection of the embedded power box, the latest APS design can remain immersed in 1 metre of water for 15 days.

Ansaldo Tramware

This system appears to address some of the constraints specified for the BXD line as per the Alstom APS System.

However, it does not properly satisfy two of the identified criteria:

- There is no guarantee of its performance in circumstances of significant ice and snowfall.
- It cannot be considered as fully proven since it has not been implemented as part of a commercial in-service project.

Industrial Capacity/Commercial Considerations

- The retrofit of Citadis 402 trams appears feasible from a technical perspective.
- It is not known whether the manufacturers would be interested in carrying out such a retrofit.
- The only approach to mitigate the long-term risk of monopoly for procurement of new trams is to reach a contractual agreement to this effect with the initial manufacturer.

Extent of Retrofit

- The interconnection of the two lines has deep consequences because transitions between a section fitted with OCS and an OCS-free section is usually made at station.
- It means that the connection between the Red Line and the Green Line on O'Connell Street near the GPO would require retrofitting the Red Line up to the next station before the connection, to install OCS free power infrastructure in addition to the existing OCS.
- The existing Green Line fleet (Citadis 402) must be retrofitted to be able to run on the extension fitted with OCS-free power supply.
- The current requirement for Red Line trams (Citadis 401) to be able to run on the Green Line would necessitate the retrofit of the entire Red Line fleet, as well.
- The retrofitting of the existing Green Line fleet is a necessity and cannot be avoided. Despite its costs, the retrofit of the Citadis 402 appears feasible.
- The requirement for interoperability between the Red and the Green Line fleets has a major impact on rolling stock (retrofit of 40 Citadis 401) and installation of a few hundred metres of OCS-free power supply infrastructure on the Red Line.
- The technical feasibility of the retrofit of the Citadis 401 is not guaranteed at this stage, and would likely require deeper works than the retrofit of Citadis 402.
- The benefit of the interoperability of the Red and Green Line is not obvious. As both depots have equivalent capabilities there is reduced need to transfer trams from one line to the other on a regular basis.

- Given the huge expected costs and reduced benefits it is not considered that it is worth implementing the full interoperability of the two lines.
- A cheaper alternative is to maintain the interconnection of the tracks without implementing the continuity of the power supply. In the event of the operator wishing to transfer a Red Line tram to the Green Line Depot this tram could be towed when running over the OCS free section.

Costs

- Additional investment costs estimated at approximately €19 million (caution advised). Figure does not include for retrofit of Red Line fleet.
- Additional yearly operational costs estimated at approximately €150,000.

4.0 RESPONSE SUBMISSIONS/OBSERVATIONS

4.1 RPA (Two Submissions)

4.1.1 Response to Further Information Request

Includes:

Item 1: Interaction with other Railway Orders

- The preferred and most sustainable strategy is to proceed immediately with the construction of an unaltered LUAS BXD.
- This does not preclude the future construction of either Metro North (MN) or Dart Underground (DU).
- There are a number of feasible options/scenarios that would enable the construction of MN and/or DU with LUAS BXD operational. These include: the provision of temporary support systems for the relevant segments of the built LUAS BXD; the provision of temporary tram stops; the implementation of temporary two-way running on single track lengths. Details of the first option, including the necessary temporary supports at St. Stephen's Green, Westmoreland Street and O'Connell Street, are included for illustrative purposes (Drg. No. B BXD 000 ST S011 BOI in Appendix A).
- The requirement to undertake assessment and obtain statutory approvals for the necessary works would be exercised at the appropriate time in the future.
- The assessment of cumulative impacts resulting from the construction of MN and DU following the construction of LUAS BXD, including any works required to maintain LUAS BXD in operation, can only be undertaken as part of any amendment or modification to the respective railway orders.

- The worst case scenario for cumulative impacts would be the construction of MN commencing directly after LUAS BXD works are completed. As referred to previously the impacts would be related to an extension of the overall duration of works in the city centre, thereby resulting in socio-economic impacts.
- NTA funding to RPA for LUAS BXD is on a multi-annual basis and facilitates commencement of enabling works in 2012.
- The timing of the implementation of MN and DU remains uncertain. In the context of possible considerable delay it may be considered imprudent to commit further significant and scarce financial resources to make provision for specific MN or DU designs which carry a high risk of being changed.
- The potential for conflict with DU is not significant. It relates to the LUAS BXD siding at St. Stephen's Green and arrangements can be put in place.
- Due to funding constraints there is the distinct possibility that MN and DU will not be completed within the lifetime of the respective railway orders thereby necessitating a re-application to the Board for new/extended powers.

Item 3: Dawson Street

- The island platform option is illustrated on Drg. No. B BXD 0000 to 0001 BOI in Appendix B.
- This layout would require shared running with other road vehicles through the stop area in a northbound direction. There is no other location on the LUAS system where shared running through an island stop is presented. Such arrangements are avoided as they present negative impacts on tram operations.
- Queuing of road vehicles, including buses, from the signalised junction at Dawson Street/Nassau Street is likely to impede the tram entering the stop, thereby resulting in delays. This is confirmed in an a.m. peak hour model run. Modifying the traffic signal stages at the junction to address this would result in significantly increased delays for all road users.
- The island platform option requires the removal of all loading bay facilities north of Duke Street, proposed to compensate for the loss of facilities between South Anne Street and Duke Street. This is considered to be of moderate negative significance.
- As a result of Dublin Bus's Network Direct a total of 30 bus routes now use existing stops NG and NH, located between Duke Street and the Nassau Street Junction. The frequency of these routes has increased and a number of them are now cross-city services.

- The island platform requires the removal of these bus stops and there is insufficient space elsewhere along Dawson Street to provide alternative facilities. Given the narrow footpath widths at the location of stop SL, south of Anne Street, it is unlikely that a significant increase in the number of routes could be accommodated there.
- As a consequence of the removal of stops NG and NH the distance between stops on 10 routes increases to in excess of 1 kilometre, a significant negative impact for the bus network.
- By its nature an island platform requires all passengers accessing or leaving the stop to cross the tramway (possibly shared with other road vehicles) to adjacent footpaths. In Dawson Street the proposal would include a shared running environment northbound introducing additional conflicts for pedestrians waiting to cross from the central platform to the western footpath. Potential conflict, for both pedestrians and cyclists, would be compounded by the high volumes of bus traffic.
- Given the anticipated high volumes of passengers using the stop there is limited space to cater for them on the platform while they are waiting to cross. There is also potential for unregulated movement from the north end of the platform towards Nassau Street and the entrance to TCD.
- Accessibility to Category 1 and Category 2 retail streets, as identified in the DCDP 2011-2017, reduces.
- The above impacts for pedestrians are considered to be of moderate negative significance.
- Other than the issue referred to above the island platform arrangement offers slight improvements for cyclists as it precludes any necessity to traverse the grooved rail to pass the stop.
- The necessity for low radius curves over a short longitudinal length at the exit from the platform to realign the tramway before entering the minimum 25 metres radius curve required at the Dawson Street/Nassau Street junction results in slower speeds, additional rail and tram wheel wear and reduced comfort and in general are not desirable.
- Submission includes correspondence from Dublin City Council (Appendix G) – note concerns re pedestrian safety and bus operations.
- Submission includes correspondence from Dublin Bus (Appendix G) – note strong opposition.

4.1.2 Response to SYSTRA Report on Alternative Power Supply Systems

Includes:

General

- By reference to the evidence of Mr. Carbone presented at the oral hearing the RPA remains of the view that the APS system would not achieve the levels of everyday reliability required to match the present day performance of the LUAS system.
- The Ansaldo Tramware alternative is not a viable option as its reliability in commercial service remains unproven.

Shared Running

- The report does not consider the effects on the APS infrastructure of shared running longitudinally along the track.
- In the case of LUAS BXD there will be very significant day-long volumes of traffic in a shared running environment along key arteries such as Dawson Street, Nassau Street, College Green and O'Connell Street. It is at such locations that the reliability of the extensive array of switchgear contained in 'underground power boxes' associated with the APS power supply to the trams will be tested. In addition to the structural integrity of the 'power boxes' themselves, there is also the concern that the required level of maintenance access to these boxes would have a significant detrimental impact on other road traffic movements in the Dublin context, which entails a high level of shared running. The absence of a relevant international comparator to confirm the robustness of this design is of major concern to RPA.

Weather Conditions

- The unique ability of LUAS to operate during severe weather conditions needs to be fully acknowledged.
- The practicality of the ban on salt for de-icing must be considered extremely doubtful particularly in areas of shared running.
- The use of glycol could be significant in close proximity to the River Liffey salmonid waters.
- In Dublin flooding or ponding such as would lead to accumulation of water on top of the rail is not uncommon. The report confirms that trams powered by APS cannot operate in such conditions.

Retrofitting

- No such retrofit on any Citadis 402 fleet has been undertaken anywhere. It would be much more expensive than providing APS at the outset; require scarce operating depot space; and reduce fleet availability for passenger service. It would demand that RPA deal exclusively with a single supplier thus negating any real potential for value for money in commercial transactions.
- Doubt as to the technical feasibility of retrofitting the Citadis 401 would be a major impediment. The development of LUAS has as a core objective the flexibility to deploy trams across the network as situations demand and in the context of the evolving LUAS network as a whole.

Safety

- The relatively wide and flat-surfaced APS power rail presents a hazard to cyclists and motor – cyclists due to its very low inherent skid resistance. This would be compounded by additional lubrication arising from carbon deposits generated through contact with the current collector shoe on the tram.
- The absence of any reference to cyclist safety in the annual safety reports on the Bordeaux system is not unexpected given its largely segregated nature. The Dublin environment will result in cyclists travelling in shared running mode in the same direction along the track rather than purely transversely.

Energy Efficiency

- The estimated additional costs, due to the absence of regenerative braking with APS, are substantially under-estimated. Additional unaccounted operating costs derive from the increased weight associated with the APS related equipment.

Procurement

- In the most likely context of a sole provider for retrofitting value for money is not attainable. Also costs quoted appear to be understated and they do not include for retrofitting the Red Line fleet. They also do not appear to include for retrofitting APS technology to specific elements of existing infrastructure on the Red Line east of the Jervis Stop.

4.2 NTA (Two Submissions)

4.2.1 Response to Further Information Request

Includes:

Item 1: Interaction with other Railway Orders

- There are considerable number of options available that enable the prior delivery of LUAS BXD without prejudicing the future construction of MN and DU.

- Some of these options may require amendments to already obtained approvals or separate new approvals.
- Given the timing/funding uncertainties in relation to MN and DU it would not be prudent to construct significant elements of these projects as part of the LUAS BXD scheme.
- Such arrangements for the interfaces with MN and DU as are decided upon can be accommodated at the construction phase of these projects, subject to the necessary modifications and approvals at that time.

Item 3: Dawson Street

- The lateral stop arrangement as included in the RO application represents a better, safer and effective solution than that which would be provided by an island platform.

4.2.2 Response to SYSTRA Report on Alternative Power Supply Systems

Includes:

System Reliability

- Resolution of the operational reliability issue during adverse weather has not been achieved.
- Given the shared running environment the implications of operational disruptions are likely to be much more significant in Dublin.

Salting Operations

- A ban on salting in a shared running environment would create significant challenges for the local authority and the tram operator.

Procurement

- As only one potentially suitable system is identified as operating commercially elsewhere, the Alstom APS, considerable issues and challenges from a procurement and value for money perspective are raised.

Retrofitting

- Flexibility has been an inherent component of the LUAS network from the outset.
- Cost estimates, therefore, would need to be increased to allow for at least some of the Red Line trams to be retrofitted.
- The BXD project would be the first experiment anywhere in such retrofitting.

- The technical feasibility of retrofitting the Red Line trams (Citadis 401) is not guaranteed.
- There is no indication that the proprietary manufacturer (Alstom) would be interested in carrying out a retrofit.

4.3 Dublin City Council

Includes:

General

- It is noted that the SYSTRA Report concludes that an alternative power system (APS) is technically feasible.
- The City Council supports this alternative but needs to highlight concerns in relation to winter maintenance and road traffic management.

Winter Maintenance

- The proposed ban on salt would be difficult to implement without extending the area around the track alignment, including the road surface areas crossing the track, such as along the north and south quays. The ban would have to be sufficiently extensive to prevent salt or salt water being carried distances along vehicular wheel tracks.
- Given the additional costs involved in the use of an alternative de-icing agent the RPA should be conditioned to make annual provision for the de-icing of a zone around the tram's track alignment with a suitable non-polluting de-icing agent to meet the requirements of the Roads and Traffic Department of Dublin City Council.

Drainage

- The sewers, into which runoff from the road and track drainage discharge, have not been designed to cater for the pluvial rainfall we have encountered over the past decade. They do not have the capacity to deal with the absolute requirement.
- Several roads within the Dublin City Council administrative area were closed due to flooding caused by severe weather events in recent years. These severe weather events appear to be getting more frequent and are not confined to the winter months. The existing road drainage infrastructure is not designed to cater for these severe weather events and so flooding is inevitable depending on the duration and the intensity of the storm. Consideration needs to be given to the impact of flooding on the proposed APS system and its knock-on effects, if any, for LUAS BXD and Dublin City Council.

- The City Council would request that a flood risk assessment be carried out along the route where the alternative power supply is being considered.
- These issues will affect both the reliability of the proposed light railway system and the city traffic management and it is recommended that the Board requests further information or includes suitable conditions that address the Council's concerns.

4.4 Irish Georgian Society

Includes:

OCS-Free Infrastructure

- The sensitivity of the historic environment, potential returns in World Heritage Site status and the interests of sustainable development absolutely necessitate the implementation of an OCS-free system through the city.

Accommodation of existing Railway Orders

- The society wishes to highlight the potential impact of temporary support systems on historic street surfaces and adjacent historic buildings.

Dawson Street

- Having regard to the RPA submission neither the island stop nor the offset lateral platform arrangement is suitable for Dawson Street which forms one of the city's most illustrious and quintessential streetscapes.
- Barring a design solution which mitigates the effects on Dawson Street, the stop should be omitted altogether.

4.5 Dr. Warren Whitney

Includes:

Relationship to MN and DU

- The solution should not rely excessively on the assumption that every aspect of these projects, and in particular the features interacting with the BXD line, will automatically be redesigned.
- Regardless of technical feasibility any solution must not endanger the political viability of MN/DU.

Dawson Street

- Support for the lateral platform arrangement.

Power Supply

- The risk of premature obsolescence still exists particularly as APS remains very limited outside France.
- The capital and operating costs, though relatively small in the context of a major rail project, are still considerable, particularly as they provide no quantifiable socio-economic benefits.
- The adoption of the approach recommended by SYSTRA (in relation to interoperability) could potentially endanger the credibility of the project.

4.6 Dublin Civic Trust

Includes:

Alternative Power Supply System

- The outcome of the SYSTRA Report is quite clear – the so-called ‘third rail system’, either the Alstom APS or the Ansaldo Tramware, are suitable for use on the BXD line.
- The decision is much broader than just the LUAS BXD – it must be viewed in the context of setting an appropriate trend for all future LUAS developments in sensitive areas of the city core.
- The costs involved in adopting the system are quite small relative to the overall project cost of an estimated €300 million.

4.7 James Adam and Sons Limited

Includes:

- The validity of the Environmental Impact Statement and in particular the socio economic impact of the project and the construction and noise impacts are dependent on the LUAS BXD project proceeding as part of an integrated construction programme for the Metro North and Dart Underground projects. Any change to that sequencing or construction programme to run the LUAS BXD project as a separate and independent project would amount to a material alteration of the project.
- This arises specifically because of the material change in the cumulative impact of the construction programme on urban blight and the increased duration of such cumulative impacts on the City Centre and the St. Stephen's Green Area in particular.

- The Board is referred to the legal principle established in section 169(7)(aa) of the Planning and Development Act 2000 as amended 2010 which although referring to appeals of Planning Schemes in a Strategic Development Zone is relevant because of the strategic nature of the subject Rail Order and the more precautionary approach adopted following the changes to the legislation in 2010.
- Reference also to sections 146, A, B and C of the Planning and Development (Strategic Infrastructure) Act 2006 which applies to Railway Orders as provided for in section 146D.
- The RPA has proposed Option A as if this fallaciously did not involve a material change to the nature of the development project and thus failed to properly assess the environmental impacts of Option A.
- It is noted that the RPA at the Oral Hearing relied heavily on the integrated nature of the construction programme with MN and DU for mitigation of environmental impacts which arose specifically from LUAS BXD.
- It is noted also that the RPA do not propose that the LUAS BXD scheme as proposed supersedes the extant permissions for MN and DU where such conflicts arise. Instead it proposes possible future modifications to the MN and DU projects. However the Board does not have any power to impose such conditions, which effectively modify an extant permission granted to a separate applicant. It poses a legal minefield.
- Option A is proposed without any cognisance of:
 - The lifetime costs of the project.
 - The cost implications for the MN or DU projects.
 - The socio economic impact of urban blight on the city centre and St. Stephen's Green in particular arising from the significant disruption to operation of businesses in St. Stephen's Green arising from the extended duration of the construction programme as three separate independent projects and
 - The uncertainty as to when the programme would commence or finish.
 - Temporary diversion of a section of the LUAS Line for the St. Stephen's Green LUAS Box.
 - Temporary severing of the line at St. Stephen's Green.
 - Two-way running between College Green and Lower Abbey Street.
 - Option for bidirectional running on Westmoreland Street, College Green.
- The length of the temporary duration of the changes is not outlined. It is not clear if the changes will be required for the duration of the MN project 6 years and separately for the duration of the DU project another 6 years.

- The Construction Traffic Management Scheme as highlighted by the various transport agencies could be in place for 4 to 16 years depending on the phasing of infrastructure projects in train.
- In the face of the uncertainty alluded to the RPA has effectively made the case that the LUAS BXD project is premature.
- The proposed material alteration of the project would have a profound and adverse impact on the viability of our client's business as outlined in detail at the Oral Hearing. Furthermore it would contribute to significant urban blight in the wider St. Stephen's Green area.

4.8 Fitzers/Marco Pierre White Restaurant

Includes:

- The island platform design for Dawson Street should be adopted.
- The responses of the RPA, CIE, Dublin City Council and the NTA collectively failed to consider the opportunity provided for the city and for the changing role of Dawson Street by the relocation to an island stop.
- Options for the sequential phasing of LUAS BXD in advance of MN and DU include a temporary stop on the LUAS BXD line at the south end of Dawson Street.
- The island stop is demonstrated as a technically feasible solution. It warrants traffic management adjustments, including to the bus network.
- It is remarkable to consider that Dublin Bus has increased the network of buses and cross-city routes through Dawson Street, notwithstanding the routing of the LUAS BXD through Dawson Street. It would appear that there is little concern for the proper and wider distribution of public transport services in the city.
- It is remarkable that two semi-state companies, the RPA and Dublin Bus vie with one another for the limited route space through Dawson Street ultimately to the detriment of the overall network penetration for the public using these services and of the business and street life on Dawson Street.
- The RPA response is all about movement and shows little understanding of place. Ultimately the success of the LUAS BXD Project will lie in sustaining the heart of the city as a vibrant lively attractive city where public transport supports city character and street life and a sense of place.

- The relocation of the LUAS stop would most likely necessitate the relocation of the bus route through Kildare Street. This scenario is already proposed as part of the Construction Traffic Management Scheme and as highlighted by the various transport agencies this scheme could be in place for 4 to 16 years depending on the phasing of infrastructure projects in train.

4.9 John Morton Limited

This reiterates concerns previously raised in relation to the LUAS BXD project.

5.0 ASSESSMENT

5.1 The issues arising are addressed under each of the following headings in turn. A note on Appropriate Assessment is also included. The headings are:-

- Interaction with other Railway Orders.
- Overhead Cable System (OCS) in the City Centre.
- Dawson Street.
- Appropriate Assessment

5.2 Interaction with other Railway Orders

5.2.1 I am satisfied that this issue has now been adequately addressed.

5.2.2 It is clarified that the construction of LUAS BXD can proceed and that there are a number of feasible options/scenarios to enable the subsequent construction of MN and/or DU while maintaining LUAS BXD in operation.

5.2.3 The applicants have included details of one option, that includes the provision of temporary supports for the LUAS BXD line at the critical locations of St. Stephen's Green, Westmoreland Street and O'Connell Street. It is indicated that given the uncertainty in relation to the implementation of MN and DU that it would not be prudent at this time to commit significant and scarce financial resources to further detailing of other design options and I consider that this is reasonable in the circumstances.

5.2.4 It is also now clarified that whatever additional works or modifications are required to enable the construction of MN and/or DU, while maintaining LUAS BXD in operation, will be carried out as part of these projects and will be subject to further relevant assessments and approvals at the appropriate time in the future. This could include modifications to the existing MN and DU Railway Orders or separate new

approvals. It is also indicated that there is a distinct possibility, given funding constraints, that neither MN nor DU will be completed within the lifetime of their respective railway orders and that re-application to the Board will be necessary for new or extended powers.

5.2.5 In relation to the issue of construction phase environmental impacts arising from the LUAS BXD project itself this was addressed in detail in the EIS and other supporting application documentation, including the relevant written and oral hearing submissions – see main Inspector’s report parags. 6.4.2.4 and 6.4.2.5. Notwithstanding the changed sequencing of projects now proposed, and that LUAS BXD will now proceed as a discreet project, I consider that the conclusions previously reached are still valid – see parags. 6.4.2.6 and 6.4.2.7 of the main report.

5.2.6 In relation to cumulative construction phase impacts I consider that this matter has now been addressed in the context of the LUAS BXD application to the extent that is feasible at this time, given the uncertainty over the implementation of the other projects. Essentially, given the sequencing of the projects as now envisaged and this uncertainty, the issue becomes one to be addressed in the context of further proposed amendments/modifications or re-applications that are going to be necessary to facilitate the development of MN and/or DU. Any such assessments, and which will include, in particular, cumulative socio-economic impacts and the key issue of disruption to business in the city centre, will be significant in determining whether or not these projects can proceed at that time.

5.2.7 In relation to the issues raised on behalf of James Adam and Sons Limited, I would comment as follows:

- I do not accept that the changed sequencing of the three projects amounts to a material alteration to the LUAS BXD project.
- Option A as referred to, is to be facilitated through appropriate amendments/modifications to MN and/or DU and which will be subject to necessary assessments and approvals in due course.
- There is no question of attaching conditions to the LUAS BXD Railway Order requiring modifications to either the MN or DU Railway Orders as such would clearly be illegal.
- There is no basis for considering the LUAS BXD project to be premature.

5.3 Overhead Cable System (OCS) in the City Centre

5.3.1 I concur with the applicants that there is not a convincing case on technical grounds for departing from an OCS system in the city centre. The main reasons are as summarised at Section 4.1.2 above

- 5.3.2** I note the submission of the NTA and which supports the position of the RPA.
- 5.3.3** I note the submission of Dublin City Council which, from a technical perspective, raises potentially significant difficulties in relation to winter maintenance and drainage.
- 5.3.4** I note also the submissions by/on behalf of the Irish Georgian Society, Dr. Warren Whitney and The Dublin Civic Trust.
- 5.3.5** I reiterate my conclusions as previously drawn in relation to this matter – see parags. 6.4.4.6 and 6.4.4.8 of the main report.

5.4 Dawson Street

5.4.1 In response to the RPA's submission (see Section 4.1.1, Item 3 above) I would comment as follows:

- The island platform arrangement is clearly feasible from a technical perspective.
- While there may not be any other locations on the LUAS system where shared running through an island stop is permitted shared running through other types of stops does occur. In particular, shared running is provided for at the proposed northbound stop on Dawson Street. It is also important to note that the shared running at the island stop would be confined to northbound only, southbound being segregated.
- The queuing of road vehicles, as referred to, assumes the continued heavy use of Dawson Street for buses. As indicated at parags. 6.9.13 and 6.9.14 of the main Inspector's report a significant volume of this bus traffic could be diverted to Kildare Street with considerable planning benefits.
- It is likely that a still significant element of bus use on Dawson Street could be accommodated at the stop location south of Anne Street (see Alignment Plan No. BXD-RO-29 O-A).
- It is noted that the loss of loading bay facilities as a result of the island platform is rated as being of moderate negative significance only. It is likely that alternative facilities could be provided in the area.
- In relation to the issues raised in relation to pedestrian movements and safety at the island stop I note that the impacts are again considered to be of moderate negative significance only. It should also be noted that the concerns raised, including those of Dublin City Council, presume the continued use of Dawson Street for significant bus traffic. With the diversion of bus traffic via Kildare Street, as suggested, it should be possible, in my view, to design and implement a

comprehensive traffic calmed environment for the north end of Dawson Street, including the island stop location and the Dawson Street/Nassau Street junction, and taking account of the entrance to TCD, to the benefit of all users in the area, including pedestrians. In this regard my previous reference to a key design parameter for stop design as identified in the EIS, being a preference to have stops on street sections as close as possible to traffic junctions to integrate with pedestrian facilities and reduce service delay, appears to be particularly relevant (see parag. 6.9.16 of the main report).

- As before I do not accept that accessibility to prime retail streets would be reduced. In this regard the evidence of Mr. Clear, for the RPA, at the oral hearing that the core retail street (Grafton Street in this case) will in the future expand into the areas directly affected by the scheme construction (Dawson Street in this case) is relevant – see section 5.3.8 of the main report.

5.4.2 I therefore, reiterate my conclusions as previously drawn in relation to this matter – see parag. 6.9.17 of the main report.

5.4.3 In the light of the submissions received I would recommend that Condition No. 1 in the Fourteenth Schedule to the Railway Order be amended to read as follows:

1. The Dawson Stop shall not be constructed as proposed. The proposed offset lateral platform arrangement shall be replaced by a single island platform located at the northern end of the street, between Duke Street and Nassau Street, and generally in accordance with the plan and section details indicated on Drg. No. 0001 Rev. B01 submitted to An Bord Pleanála on 29th March, 2012. Details of the design of the revised stop and the adjacent areas up to and including the Dawson Street/Nassau Street junction, and which shall include appropriate traffic calming measures, pedestrian facilities and traffic signal adjustments, shall be agreed in writing with the Planning Authority prior to commencement of the Dawson Street element of the Railway Order. In default of agreement, the matter shall be referred to An Bord Pleanála for determination.

Reason: It is considered that the proposed northbound platform would have an adverse impact on adjacent sensitive landuses and that there is a viable alternative location for the stop at the northern end of the street.

5.5 Appropriate Assessment

5.5.1 It should be noted that this matter is referred to in the Flora and Fauna section of the EIS (see Section 2.2.9 of the main report).

5.5.2 The nearest Natura 2000 sites are correctly identified as those associated with Dublin Bay – South Dublin Bay and Tolka River Estuary SAC/SPA (Site Codes 00210 and

04024) and North Dublin Bay/North Bull Island SAC/SPA (Site Codes 00206 and 04006).

5.5.3 It is noted that none of the submissions received, including those from Dublin City Council and the National Parks and Wildlife Service raise any concerns in relation to appropriate assessment.

5.5.4 Having regard to the nature of the proposed scheme, being an infrastructural project within the established urban area, and the absence of any Natura 2000 sites adjacent to or in the vicinity of the development site, I am satisfied that no appropriate assessment issues arise. It is not considered that the proposed development would be likely to have a significant effect, either individually or in combination with other plans or projects, on a European site.

6.0 RECOMMENDATION

I recommend that the Board should proceed to grant the LUAS BXD Railway Order as per the recommendation in the main report subject to the modification of Condition 1 to the Fourteenth Schedule as set out at parag. 5.4.3 above.

Brendan Wyse
Senior Planning Inspector.

29th June, 2012.