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Dáta|Date 27 October 2022

Ár dTag|Our Ref. TII22-119629

Do dTag|Your Ref. NA29S.314232

Re: **DART+ West Electrified Railway Order 2022**

Dear Sir/Madam,

Transport Infrastructure Ireland (TII) acknowledges receipt of referral of the DART+ West Railway Order application (Dublin City to Maynooth and M3 Parkway) by Córas Iompair Éireann.

Having regard to government policy, the proposed Railway Order development should proceed complimentary to, and integrated with the national road network and Luas.

TII's observations seek to address the safety, capacity and strategic function of the national road network and Luas in accordance with TII's statutory functions and the provisions of official policy. To that effect TII provides the following commentary for consideration. Part 1.0 relates to the national road network and part 2 to the existing light rail network, Luas. Future Luas, Metro and BRT alignments are a matter for the NTA.

Project Ireland 2040, National Development Plan (NDP), 2018 – 2027, outlines the investment priority to ensure that the existing extensive transport networks, which have been greatly enhanced over the last two decades, are maintained to a high level to ensure quality levels of service, accessibility and connectivity to transport users. Government matches the NDP *Investment Priority no. 2 National Road Network* and *no. 4 Environmentally Sustainable Public Transport*, that includes protection of significant investment made in Luas to *National Strategic Outcome no. 1. Compact Growth*, *2. Enhanced Regional accessibility*, *4. Sustainable Mobility*, *6. High-quality International connectivity*, and *8. Transition to a Low Carbon and Climate Resilient Society* of the National Planning Framework. The significant investment required for Luas to 2040 as part of asset protection is further reflected the National Investment Framework for Transport in Ireland (NIFTI).

The requirement to protect the capacity, safety and efficiency of the existing national road network is reflected in the *Eastern & Midland Regional Assembly Regional Spatial & Economic Strategy, 2019-2031*, specifically at Section 5.6 Integrated Land Use and Transportation Guiding Principle; *"The strategic transport function of national roads and associated junctions should be maintained and protected."*

Potential interaction of the proposed Railway Order works with the national road and light rail networks

The Railway Order application contains a Draft Railway Order alongside a Railway Order Book of Reference and Railway Order Drawings. The Railway Order Drawings submitted consist of 3 no. groups; *Book 1 Railway Works Plan*, *Book 2 Property Plan* and *Book 3 Structures Plans* (categorised into *General Arrangements*, *Linear Works* and *Specific Locations*). In Books 1 and 2 there are a total of 42 no. drawing sheets, numbered to match nominated areas where sheets 1 to 24 capture works proposed from Dublin City Centre (Custom House Quay) generally along the Midland Great Western Railway (MGWR) to the M3 Parkway at Junction 5 (Dunboyne) of the M3, to include a new Spencer Dock train station; and sheets 25 to 41 capture works generally along Great Southern & Western Railway (GSWR) from Clonsilla to a new depot west of Maynooth. The proposed Railway Order project is divided into 5 no. zones (Zone A to E) in the EIAR submitted with the Railway Order application.

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The proposed Railway Order works will interact with the national road network carriageways and structures and the light rail network tramways, tramstops and associated under and overground services. A summary of identified interactions is at table 1.

Table 1 Summary of interactions of proposed railway order with the national road and light rail networks

Proposed Dart + West Geographical Zones		Proposed Dart + West Area no. - General Drawings Works Plan No.	Summary National Road or Light Rail interface.
Zone A	<i>Loop Line Bridge to Phibsborough/Glasnevin (on GSWR line) and East Wall Junction (on Northern line)</i>	001 - Works Layout Plan No. WP 001	Proposed works to Loop Line Bridge (GSWR line) occurs over Luas at Beresford Place.
Zone B	<i>Spencer Dock Station to Glasnevin Junction</i>	002 - Works Layout Plan No. WP 002	Proposed Spencer Dock Train Station to north of a Spencer Dock Luas Tramstop and to include Luas tramstop and tramway lands.
Zone C	<i>Glasnevin junction/Phibsborough to Clonsilla Station/Junction</i>	006 - Works Layout Plan No. WP 006	Rail line on which works are proposed courses Royal Canal and runs adjacent to Luas Line.
		007 - Works Layout Plan No. WP 007	Proposed works to include Broombridge Train Station adjacent to Broombridge Luas terminus.
		011 - Works Layout Plan No. WP 011	Proposed works on rail line to occur under M50 Junction 6 (N/M3) and on bridge over M50 under Junction 6.
Zone D	<i>Clonsilla Station/Junction to M3 Parkway Station</i>	023 - Works Layout Plan No. WP 023	Proposed works on rail line, including M3 Parkway Train Station to occur alongside M3 Junction 5.
		024 - Works Layout Plan No. WP 024	Proposed works on rail line, including M3 Parkway Train Station continue under the R157, alongside the M3 to terminate just north of M3 Junction 5.

Table 2 is a summary of the lands identified in the Fourth Schedule *Land of which temporary possession may be acquired* of the submitted Railway Order Book of Reference that are identified as owned or occupied by TII. No lands owned or occupied by TII have been identified in the Order for permanent acquisition.

Table 2 Summary of land identified owned or occupied by TII at Fourth Schedule of Order which temporary possession may be acquired as part of the Order

Prop. Plan	Prop. No.	Location	Description	Owner or reputed Owner	Occupiers
DW.002	T.100(B)	Mayor Street Upper	Road, Luas Track	CIE	TII (Luas track)
DW.006	T.06(A)	Broombridge Luas Depot	Luas Depot	TII	-
DW.007	T.06(A)	Broombridge	Footpath, Landscape	TII	-
DW.011	T.100(B)	Castleknock	Railway Overbridge, Road	CIE	TII
DW.011	T.100(C)	Castleknock	Railway Overbridge, Road	CIE	TII
DW.011	T.100(D)	Castleknock	Railway Overbridge, Road	CIE	TII
DW.011	T.100(E)	Castleknock	Railway Underbridge, Road	CIE	TII
DW.011	T.100(F)	Castleknock	Railway Overbridge, Road	CIE	TII

The proposed works include physical works capable of impacting the national road and light rail networks directly or indirectly and the electrification of railway lines running alongside, under or over the national road and, or light rail network where electromagnetic compatibility (EMC) is required.

It is critical to the safe and efficient operation of the national road and light rail networks during and after the proposed works that any potential impacts of the proposed works and electrified railway lines are adequately mitigated as part of the Railway Order.

It is noted that a proposed Construction Environmental Management Plan (CEMP) is at Appendix 5.1 of the submitted EIAR and presents the approach and application of environmental management and mitigation for the construction phase. It states that it does not describe mitigation measures relating to operation and decommissioning which are provided in the mitigation sections of the individual chapters of the EIAR and summarised at Chapter 27 of the EIAR.

1.0 NATIONAL ROAD NETWORK

One of TII's core functions is to deliver modern, efficient and safe network of national roads. This part of the TII submission is made having regard to official policy for development at or near national roads as outlined in the DoECLG *Spatial Planning and National Roads Guidelines* for Planning Authorities (2012).

TII as the national roads and light rail authority set development guidance and standards for traffic and road assessments and construction that may be necessary by reason of proposed development location, scale or typology.

Elements of the national road network are operated and managed by a combination of (Public Private Partnerships) PPP Concessions, Motorway Maintenance and Renewal Contracts (MMaRC) and local road authorities in association with TII. Any crossing of the national road network, including by under or over pass will require will require prior consultation with TII and compliance with all relevant TII standards as detailed within the TII publications website www.tiipublications.ie.

Proposed Railway Order works interactions with the national road network are summarised at Table 1 of this submission. Interactions identified are set out below.

1.1 Proposed Railway Order Area No. 11 (Zone C)

Book 1 of the Railway Order Drawings contains *Works Layout Plan No. WP011* that indicates proposed works along the railway line that crosses Junction 6 of the M50 the most heavily trafficked national primary national route. Junction 6 of the M50 is a critical interchange with another national primary route the N/M3.

The railway line has an east to west orientation running through M50 Junction 6 and interacting with 5 no. structures maintained as part of the national road network as follows (east to west):-

- The N3 utilises the bridge identified as OBG6C on Works Layout Plan No. WP011
- The N3 and M50 utilise the bridge identified as OBG6D on Works Layout Plan No. WP011
- The M50 roundabout utilises the bridge identified as OBG7A on Works Layout Plan No. WP011
- The M50 runs under the dedicated railway bridge identified as OBG7B on Works Layout Plan No. WP011
- The M50 roundabout utilises the bridge identified as OBG7C on Works Layout Plan No. WP011

Each of the above bridges are structures part of the national road network. With the exception of the dedicated railway bridge (OBG7B) that crosses over the M50 where the motorway's operations and management is by a (Public Private Partnerships) PPP Contractor, the remaining structures above are maintained as part of Motorway Maintenance and Renewal Contracts (MMaRC) Network Area A.

Book 2 Property Plans of the Railway Order Drawings holds *Property Plan No: DW.011* indicating lands that may be subject to temporary possession at Junction 6 of the M50. This drawing indicates the bridges described above as summarised at Table no. 3 below.

Table 3 Summary of land identified occupied by TII at M50 Junction 6 (N3/M50) at Fourth Schedule of Railway Order over which temporary possession may be acquired as part of the Order

Railway Order Book 1 Railway Works Plan		Railway Order Book 2 Property Plan & Fourth Schedule Land of which temporary possession may be taken					
Works Plan no.	Bridge No.	Plan no.	Prop. No.	Location	Description	Owner or reputed Owner	Occupiers
WP0011	OBG6C	DW.011	T.100(B)	Castleknock	Railway Overbridge, Road	CIE	TII
WP0011	OBG6D	DW.011	T.100(C)	Castleknock	Railway Overbridge, Road	CIE	TII
WP0011	OBG7A	DW.011	T.100(D)	Castleknock	Railway Overbridge, Road	CIE	TII
WP0011	OBG7B	DW.011	T.100(E)	Castleknock	Railway Underbridge, Road	CIE	TII
WP0011	OBG7C	DW.011	T.100(F)	Castleknock	Railway Overbridge, Road	CIE	TII

As noted above, the structures on the N3 and M50 roundabout that are part of the proposed works occur within a MMaRC maintained area (OGB6C, OGB6D, OGB7A, and OGB7C). The dedicated railway bridge OGB7B runs over the M50 which is subject to a PPP maintenance contract over the area of the national road reservation. Consultation with the Motorway Maintenance and Renewals Contract Network A and PPP Contractors is required, via Transport Infrastructure Ireland (TII), in relation to any works proposed that affect the motorway and national roads and associated junctions in terms of operational requirements such as timetabling.

The M50 and N/M3 are part of the motorway and national primary road network. Works are proposed at Junction 6 of the M50, a critical interchange of the M50 and N/M3. Therefore, potential construction and operation stage impacts on the safety, capacity and efficiency of the national road network must be carefully coordinated and managed in consultation with the Network Management section of Transport Infrastructure Ireland.

1.1.1 Proposed Railway Order works at Junction 6 of the M50

It is noted that the majority of the works to the railway line at Junction 6 of the M50 are indicated at Book 1 of the Railway Order Drawings at *Works Layout Plan No. WP011* consist of *Proposed Railway Electrification* which indicates no vertical or horizontal alignment alterations of the railway. However, there is a section of railway running from just east of OBBG6C to the eastern side of the M50 indicated to consist of *Proposed Track Alignment Modification and Electrification*.

Schedule 1 works indicated in the immediate vicinity of Junction 6 of the M50, east to west, are nos. 11.2 and 11.3 at OBG6C; and 11.4 and 11.5 at OBG7A. There are no further Schedule 1 works indicated on *Works Layout Plan No. WP011* at the M50 Junction:-

11.2 "Track lowering for 230m beneath OBG6C N3 Road Bridge to achieve required clearance for OHLE."

11.3 "Parapet heightening on OBG6C N3 Road with an installation of an angular coping stone (precast concrete)."

11.4 "Track lowering for 230m at 396mm depth beneath OBG7A M50 Roundabout/Navan Road Rail Bridge to achieve required clearance for OHLE."

11.5 "Provision of a collector drain on both sides of the track that will connect at intervals to the gravity drain on OBG7A M50 Roundabout/Navan Road Rail Bridge. The outfall proposal is an existing gravity combined network."

Book 3 *Structures Plans* of the Railway Order Drawings, includes a subset of drawings under the title *Linear Works*. Drawing no. MAY-MDC-TRK-SC05-DR-C-0002-D *Permanent Way Design - Glasnevin Junction to Clonsilla. Alignment and Profiles - OBG7A Track Lowering - Sheet 1 of 1* generally depicts the proposed works under bridges OBG6C, OGB6D, OBG7A and OBG7B in plan and section. It is noted that the sections provided do not include an indication of the position of Overhead Line Equipment/Electrification (OHLE) under structures OGB6C, OGB6D, OGB7A, and OGB7C. It does not appear that further specific drawings of the works at this location are provided either as one of the subset *Specific Locations* drawings part of Book 3, or amongst the Technical Figures of *Chapter 4 Description of the Proposed Development*, or *5 Construction Strategy* of the submitted EIAR.

Having regard to the above and the submitted EIAR, the works proposed at Junction 6 of the M50 are summarised below.

1.1.1.1 Proposed Railway Electrification and railway track lowering under OBG6C, OGB6D and OBG7A (Railway Order, Schedule 1, works item nos. 11.2 and 11.3) and parapet heightening at OBG7C (Railway Order, Schedule 1, works item nos. 11.3)

Chapter 05 Construction Strategy of the submitted EIAR holds section 5.6 *Description of Construction Works in Zone C – Phibsborough/Glasnevin to Clonsilla* that includes the area of Junction 6 of the M50.

Subsection 5.6.8.1 of the EIAR records that track lowering under bridges OBG6C, OGB6D and OBG7A (indicated at Figure 5-248) is required in order to "allow for the required OHLE clearance under the OBG7A bridge." Here track

lowering under OBG7A is recorded as up to 338mm along 215 m of track to follow the methodology set out in subsection 5.3.6.1 *Changes to vertical alignment (track lowering)* where work is to lower track under 6 no. bridges, including OBG7A *"...during night-time or weekend possessions, or extended closures, and are to be executed sequentially."* In total subsection 5.3.6.1 of the EIAR states that track lowering under 6 no. bridges will *"take around 5 months to complete"*, this timescale is commuted in the case of the proposed track lowering under *"at M50 Roundabout"* to an estimated 3 weeks.

In addition to track lowering under OBG6C, works to heighten the parapet of this bridge are described in Section 5.6.9 of the EIAR, that identifies OBG6C as the *"N3 road bridge in Blanchardstown"*. This section of the EIAR directs to section 5.3.12 *Parapets* and subsection 5.3.12.1 *Parapets on bridges*. It is noted that the construction sequence for parapets on bridges at subsection 5.3.12.1 includes works to the road pavement surface. There does not appear to be recorded an intended timeframe and co-ordination with track lowering beneath OBG6C.

It is noted that the track lowering area ends on its western side immediately adjacent to the M50 motorway.

1.1.1.2 Proposed Railway Electrification Works on OBG7B and under OBG7C

The dedicated railway bridge OBG7B runs over the M50 motorway and OBG7C holds part of the M50 roundabout running over the railway. No alteration to the vertical or horizontal alignment of the railway track appears indicated on submitted material, however works as indicated at both Railway Order *Book 1, General Arrangements* (Works Layout Plan No. WP011) and *Book 3 General Arrangements* indicate works including Overhead Line Equipment/Electrification (OHLE) and fencing.

1.1.1.3 Proposed collector drain either side of railway to connect to the gravity drain on OBG7A Railway Order, Schedule 1, works item nos. 11.5)

Schedule 1 of the Railway Order records works item no. 11.5 as follows; *"Provision of a collector drain on both sides of the track that will connect at intervals to the gravity drain on OBG7A M50 Roundabout/Navan Road Rail Bridge. The outfall proposal is an existing gravity combined network."*

Chapter 05 *Construction Strategy* of the submitted EIAR holds section 5.6 *Description of Construction Works in Zone C – Phibsborough/Glasnevin to Clonsilla* that includes the area of Junction 6 of the M50.

Chapter 04 *Description of the Proposed Development* of the submitted EIAR describes the drainage works proposed at OBG7A as follows:-

"Due to the lowering of the tracks required to obtain the necessary OHLE clearance at OBG7A, a drainage system has been designed between Ch 55+900 and 55+100.

The drainage solution for this area includes a filter drain with a collector pipe in the Down track and a carrier drain, diverting the collected runoff water to culvert UBG6A.

Before the discharge to UBG6A, a hydrodynamic separator is proposed to capture pollutants such as oil and debris within the surface water runoff."

There does not appear to be recorded an explicit indicative timeframe and intended co-ordination of drain installation with track lowering at OBG7A.

The proposed drainage arrangement for OBG7A, as a national road structure is part of the national road drainage infrastructure and designed for that purpose. The drainage proposal part of the proposed works has the potential to impact on the capacity and efficiency of the drainage regime provided for the national road network. Therefore, it is in order that the drainage design and construction management and maintenance approaches that safeguard the national road drainage infrastructure is agreed with the Network Management section of TII in consultation with the MMarC contractor prior to commencement of development.

1.1.2 Potential impact of proposal at Junction 6 of the M50

The proposed railway order works, at Junction 6 of the M50 have the potential to impact the national road network, including structures (ONBG6C, OBG6D, OBG7A, OBG7B, and OBG7C) on that network and requires prior consultation with TII and compliance with standards in TII publications.

In this regard, it is noted that at 5.3 *Project Wide Construction Works and Methodologies*, subsection 5.3.1 *Surveys and licences* in *Chapter 05 Construction Strategy* of the submitted EIAR does not appear to record the requirement to comply with TII Publications standards for the national road network, including structures and services. In turn, *Chapter 05 Construction Strategy* and *Chapter 27 Mitigation and Monitoring Measures* of the submitted EIAR do not appear to identify specific methods or techniques proposed for mitigation of potential impact for works traversing or in proximity to the national road network.

To ensure the strategic functions of the M50 and N/M3, national roads, in the vicinity of the proposed works at Junction 6 of the M50 is safeguarded the following is advised:-

- Compliance with TII Publications (Standards) in accordance with relevant TII Publications (Technical) will be required for any work that may impact the national road pavement, structures and infrastructure including drainage. In particular, Design Reports will be required to be prepared and submitted as a Departure Application in accordance with TII publication GE-GEN-01005 and PE-PMG-02041 and any works to structures forming part of the national road network requires TII Technical Acceptance in accordance with TII publication DN-STR-03001.
- Access for the construction period and any subsequent monitoring and maintenance in relation to any works proposed, including temporary and permanent signage, that affect the national road and associated junctions in terms of operational requirements, timetabling, etc. will require prior consultation with the MMarC Network A and M50 PPP Contractors and fulfilment of requirements to complete their 3rd party protocols, via the relevant road authorities and TII.
- Separate structure approvals/permits and other licences may be required in connection with the proposed works, including where temporary modification to the road network may be required.

It is appropriate that specific mitigation and monitoring commitments for potential impact on the national road network at Junction 6 of the M50 are reflected in the submitted EIAR at *Chapter 05 Construction Strategy*, in the proposed CEMP at Appendix 5.1 and at *Chapter 27 Mitigation and Monitoring Measures*.

1.2 Proposed Railway Order Area Nos. 23 and 24 (Zone D)

Book 1 of the Railway Order Drawings contains *Works Layout Plan Nos. WP023 and WP024* that capture the M3 Parkway Train Station, park and ride and adjacent Junction 5 (Dunboyne) of the M3. At this general location, the existing railway line, part of the proposed works, runs parallel to the western side of the M3.

Junction 5 of the M3 is with the R157 and R147 in County Meath. The M3 motorway is managed by a PPP Contractor at this location.

As noted, the existing railway line runs parallel to the western side of the M3 with the M3 Parkway Train Station and park and ride accessed from the R157 and located to the south west of Junction 5 of the M3.

The proposed railway order records bridges over the rail line on the western side of Junction 5 of the M3, indicated as OBCN296A and OBCN296B, over which the R157 travels. The Tolka River is also located west of the M3 at this location. The existing railway line also crosses the River Tolka in proximity to Junction 5 at OBCN295A.

1.2.1 Proposed Railway Order works at Junction 5 of the M3

Schedule 1 works indicated in the immediate vicinity of M3 Junction 5 are, north to south, nos. 24.1 and 23.3:-

24.1 "Construction of two new sidings north of M3 Parkway Station. The current tracks that extend past the station are to be adapted for use as sidings, extending the double track and terminating it 130m before the current track end."

23.3 "Parapet heightening on OBCN295A M3 Parkway Station with an installation of a low-level solid sheet panel 1.20m high along the front of the existing parapet."

It is noted that a new M3 Parkway siding is to be installed at the end of the railway line adjacent to the M3 and a proposed crossover is to be located under OBCN295B.

Further scheduled works in the area generally relate to M3 Parkway Train Station and parking area where SET (signalling, electrical, telecommunication) technical buildings are proposed alongside a temporary construction compound.

1.2.2 Potential impact of proposal at Junction 5 of the M3

To ensure the strategic function of the M3 national road, in the vicinity of the proposed works at Junction 5 of the M3 is safeguarded the following is advised:-

- Compliance with TII Publications (Standards) in accordance with relevant TII Publications (Technical) will be required for any works that impact the national road pavement, structures and infrastructure including drainage.
- Access for the construction period and any subsequent monitoring and maintenance in relation to any works proposed, including temporary and permanent signage, that affect the national road and associated junctions in terms of operational requirements, timetabling, etc. will require prior consultation with the M3 PPP Contractor and fulfilment of requirements to complete their 3rd party protocols, via the relevant road authorities and TII.
- Separate structure approvals/permits and other licences may be required in connection with the proposed works, including where temporary modification to the road network may be required.

It is appropriate that specific mitigation and monitoring commitments for potential impact on the national road network at Junction 5 of the M3 are reflected in the submitted EIAR at *Chapter 05 Construction Strategy*, in the proposed CEMP at Appendix 5.1 and at *Chapter 27 Mitigation and Monitoring Measures*.

1.3 Railway Order construction compound and traffic routes arrangements

It is noted that construction traffic haul routes indicated in the submitted EIAR include the national road network. Construction compounds are listed at *Chapter 05 Construction Strategy*, subsection 5.3.3.2 and are indicated on *Technical Figure - Compound Location Overview* of the submitted EIAR. Haulage routes indicated that will utilise the national road network include:-

A Main Storage and Distribution Centre (MSDC) is proposed to reduce the required storage space for proposed works compounds. The MSDC site location in Fingal is indicated at figure 5-5 alongside intended haulage route that runs over local roads to Junction 2 of the M2.

The haulage route to Zone B compounds is indicated via the Port Tunnel, part of the M50, and onto Dock Road. This route is indicated at Figure 5-130 of the submitted EIAR.

The haulage route indicated for the Ashtown substation and station construction compounds is indicated at figures 5-237, 5-243 and 5-245 of the submitted EIAR and indicates the inclusion of the M50 (at Junction 6).

The haulage route indicated for the Navan Road station compound is depicted at figure 5-247 also indicated onto the R147 close to the M50 (at Junction 6).

The haulage route for works including those for OGB9 includes the N3 as indicated at figure 5-254 of the submitted EIAR.

Figure 5-263 Castleknock construction compound and haulage route, Figure 5-272 Coolmine level crossing compound and access, Figure 5-273 Porterstown level crossing compound, Figure 5-274 Clonsilla level

crossing compound haulage route and Figure 5-277 Clonsilla permanent way compound haulage route indicate the inclusion of the utilisation of Junction 2 of the N3 for haulage.

A main construction compound is proposed at M3 Parkway (referenced at as CC-PW-S8-106950-B, CC-SET-S8-106950-B, CC-SUB-S8-106950) and includes Junction 5 of the M3 in its haulage routing as indicated at *Figure 5-283 M3 Parkway SET compound and haulage route* *Figure 5-292 M3 Parkway substation compound and haulage route*, and *Figure 5-295 Parkway permanent way construction compound and haulage route*.

Figure 5-290 Dunboyne substation compound and haulage route and *Figure 5-288 Dunboyne permanent way compound and haulage route* is indicated to run to Junction 4 of the M3.

Figure 5-328 OBG18 permanent way compound haulage route is indicated to run to Junction 6 of the M4.

Figure 5-386 Depot siding construction compound and haulage route is indicated to run to Junction 8 of the M4.

Separate structure approvals/permits and other licences may be required in connection with the proposed haul routes, including where temporary modification to the road network may be required. Consultation with relevant PPP Companies and MMarC Contractors may also be required. All structures on the haul route should be checked by the prior to development to confirm their capacity to accommodate any abnormal loads that may be proposed, including abnormal weight load.

1.4 Revision of submitted EIAR and associated documentation required

Proposed works will interface with the national road network in areas managed by PPP and / or MMarC Contractors. Any works proposed potentially impacting the national road network including pavement, structures and associated services are required to demonstrate to the satisfaction of TII, compliance with TII Publications (Standards) in accordance with relevant TII Publications (Technical). In this regard, it is noted that TII Publications are not identified at 5.3 *Project Wide Construction Works and Methodologies*, subsection 5.3.1 *Surveys and licences* of Chapter 05 *Construction Strategy* of the submitted EIAR.

In view of the requirements of the *Spatial Planning and National Roads Guidelines for Planning Authorities* (DoECLG, 2012) and the maintenance of strategic function and safety the national road network for all road users, TII requests that the matters highlighted above be reflected in revised drawings and documentation for both construction and operation phases of the proposed development. In particular, details of works at national road network structures should be provided and any proposed mitigation should be recorded at *Chapter 05 Construction Strategy, Appendix 5.1 Construction Environmental Management Plan (CEMP)* that includes a commitment to prepare a construction traffic management plan, and *Chapter 27 Mitigation and Monitoring Measures* of the EIAR.

The resolution of the foregoing matters and their reflection in revised documentation to form part of the proposed development is essential to avoid detrimental impact on the capacity, safety or efficiency of the national road network, is in the interests of sustainable development, and the promotion of an integrated approach to land use and transportation planning.

1.5 National Road network considerations

The proposed order includes works proposed to be carried out on, and in close proximity to the national road network, which includes structures and associated services such as drainage that must be subject to co-ordination with and the prior approval of TII.

Subject to the resolution of the above, TII recommends the following conditions should be considered in the event of approval of the proposal in the interests of the protection of the safety, capacity and efficiency of the national road network:

1. Development shall be undertaken in accordance with TII Publications. Prior to commencement of development, plans and details of works on, or in the vicinity of the national road network required under TII Publications shall be submitted for the written agreement of the planning authority in consultation with TII.

2. Prior to commencement of development, the Construction Environmental Management Plan (CEMP) shall be submitted for the written agreement of the planning authority subject to the written agreement of TII. The CEMP will reflect mitigation and monitoring for the national road network.
3. Prior to commencement of development, the Construction Traffic Management Plan including access to services, shall be submitted for the written agreement of the planning authority subject to the written agreement of TII. The Construction Traffic Management Plan shall:-
 - a) demonstrate consultation with the Motorway Maintenance and Renewals Contract Network A and M3 PPP Contractors, via TII and the relevant road authorities, and
 - b) include detailed information on traffic management, including signage (static and VMS) to ensure the strategic function of the national road network is protected.

Where revisions to the proposed scheme application documentation arise as a result of this submission consideration, it is understood and accepted that additional / new mitigation measures that ameliorate potential significant negative impact on the national road network may form the subject of agreements between TII, PPP or MMaRC contractor and the developer.

2.0 LIGHT RAIL NETWORK – LUAS

This part of the TII submission is concerned with ensuring the safe and efficient operation and maintenance of the Luas service. Unlike buses, trams require fixed tracks, overhead lines, fixings and associated under and over ground services infrastructure, including trackbed and surfaces, which are complex and costly to alter. In addition, changes to this infrastructure and the implementation of amended street finishes and traffic management practices can create disruption to the Luas network service which should be avoided or ameliorated. These are important considerations that have implications for the practical implementation of this proposed scheme.

This submission is made having regard to:-

- *TII's Code of engineering practice for works on, near, or adjacent the Luas light rail system*, and
- *Light Rail Environment - Technical Guidelines for Development*, TII Publication no. PE-PDV-00001.

Proposed Railway Order works potential interactions with Luas are summarised at Table 1 of this submission. Interactions identified are set out below.

2.1 Proposed Railway Order Area No. 1 (Zone A)

Book 1 of the Railway Order Drawings contains *Works Layout Plan No. WP001* that indicates the rail overbridge above the Luas track at Beresford Place within the development boundary.

Luas Overhead Conductor System (OCS) and supporting infrastructure are located under the railway bridge at Beresford Place, and include associated OCS poles on the northern footpath adjacent to the bridge and in planted area on eastern side of bridge. Protected copper plates are also installed and connected to mitigate the effects of a failure from the Luas OCS to the bridge structure.

The Works Layout Plan No. WP001 does not hold a schedule of works reference number in the vicinity of Beresford Place and it is therefore ascertained that works to the rail line above Luas will consist of works within the vertical and horizontal alignment of the bridge to facilitate electrification of the railway and power supply to support the projected capacity increases.

It is submitted that in accordance with *TII's Code of practice of engineering practice for works on, near, or adjacent the Luas light rail system*, that the proposed works, including where they will occur over Luas at Beresford Place requires commensurate specific construction methodology approach, co-ordinated with TII and the Luas Operator to ensure protection of the asset and minimal Luas service disruption.

It is not apparent in the submitted EIAR that dedicated mitigation for works over Luas tramway, OCS and associated OCS poles or potential service disruption at Beresford Place are identified or reflected either at *Chapter 5 Construction Strategy, Chapter 6 Traffic and Transportation, Chapters 16, 17, 18 and 19 Material Assets, Chapter 22 Electromagnetic Effects and Stray Current, Chapter 27 Mitigation and Monitoring Measures*, or at *Appendix 5.1 CEMP*.

2.2 Proposed Railway Order Area No. 2 (Zone B)

The Order includes for a new Spencer Dock Train Station where the trackbed will be at a lower ground floor level. The new train station is indicated to be located immediately perpendicular to existing northern Spencer Dock Luas platform, facing that platform. View 1, 2 and 3 of the Photomontages at Volume 3B of the submitted EIAR indicate the final appearance of the proposed train station to the north of Spencer Dock Luas tramstop on Mayor Street Upper.

Book 1 of the Railway Order Drawings contains *Works Layout Plan No. WP002* that indicates Spencer Dock Luas tramstop (both platforms), tramway between and lands to rear of each platform indicated within the proposed development boundary. Also within the development boundary at this location are Luas OCS infrastructure, systems cabinets and cubicles, an underground Luas substation and Luas vehicle location loops.

Schedule 1 works indicated in the immediate vicinity of Spencer Dock Luas Tramstop are nos. 2.1, 2.2 and 2.12.

2.1 "Construction of new Spencer Dock Station extending from Mayor Street Upper to Sherriff Street Upper (between Park Lane and New Wapping Street). The proposed station will have its main entrance on Mayor Street Upper interfacing with Spencer Dock Luas Station and a secondary entrance on Sheriff Street Upper for access by bus, taxi or private cars. The Station will include four new tracks and two island platforms all located below existing ground level with escalator and lift access to the upper station level.

The entrance to the station is at the existing ground level of 3.90mOD with the station platforms at -2.39mOD and the track levels at -3.30mOD. The station is designed to accommodate future site development."

2.2 "New rail lines including the construction of four tracks and two island platforms at Spencer Dock Station, retaining walls, new drainage systems, electrification, and signalling. From the new Spencer Dock Station new twin tracks and electrifications over approximately 1.1km to the GSWR Line and over 0.8km to the Northern Line to the north of Connolly Station."

2.12 "Construct services and carry out utility diversions and connections."

Book 3 *Structures Plans* of the Railway Order Drawings includes sets of drawings under the title *Specific Locations*. Series no. 01 of the *Specific Locations* set of Drawings is the proposed *Spencer Dock* focused on the new train station.

Having regard to the above, *Appendix A4.2 Spencer Dock Station Design Report of Chapter 04 Description of the Proposed Development* and *Chapter 05 Construction Strategy* of the submitted EIAR, it is noted that the proposed new train station construction compound, construction traffic routes and proposed substation and signalling buildings are located north of Sherriff Street and will not directly impact Luas.

As noted above, the Luas tramway and Spencer Dock tramstop are indicated within the development boundary of the Railway Order and further, these lands are indicated for potential temporary acquisition at Schedule 4 of the Order for the construction of the new train station. The construction works arrangement for the new train station will impact Spencer Dock Luas tramstop and tramway and will impact Luas services and likely potentially put Luas Spencer Dock and The Point Square tramstops out of service. TII is unclear of the duration or level of Luas service interruption that will occur as a result of construction works having regard to the indicative construction programme at figure 5-143 *Construction programme for Spencer Dock area* of the submitted EIAR. The scheduling of any service interruptions must be carefully co-ordinated and reflected in the CEMP.

Further impacts to Luas services may arise to facilitate the concurrent operation of the proposed train station and Luas tramstop as a result of alterations to crossings and signalisation along the Luas line to accommodate passengers and other public realm and road users.

Excavation of the proposed train station site is required and is to occur immediately adjacent to the Spencer Dock Luas tramstop, tramway and underground substation and will give rise to direct potential for vibration and settlement impact on Luas. *Chapter 14 Noise and Vibration* of the submitted EIAR states "As some construction works will take place close to the Luas tracks it is appropriate to set vibration criteria during construction work at the Luas line" and includes reference to the vibration thresholds set out in TII's *Code of engineering practice for works on, near, or adjacent the Luas light rail system* at Table 14-25. No proposed vibration and settlement monitoring locations are set out in this Chapter of the EIAR and the recording of commitment to undertaking

vibration monitoring for Luas is not recorded at Chapter 27 Mitigation and Monitoring Measures of the submitted EIAR.

Luas and its associated under and overground services, including locations of existing and proposed OCS poles and fixings are not indicated on the above drawings, the underground Luas substation location is approximated on submitted drawings. Any temporary or permanent relocation or reconfiguration of Luas infrastructure will require full plans and details to be prepared, assessed and agreed with TII in accordance with TII's *Code of engineering practice for works on, near, or adjacent the Luas light rail system*.

2.3 Proposed Railway Order Area Nos. 6 and 7 (Zone C)

Book 1 of the Railway Order Drawings contains Plan Nos. WP006 and WP007 that indicate the railway line crossing to the southern side of the Royal Canal whereupon it runs parallel to the Luas Line until just short of Broom Bridge where Broombridge Luas tramstop/terminus, depot buildings and facilities are located, including pick up, drop off and parking facilities are located.

To the immediate rear (north) of the Luas Broombridge tramstop Platform is Broombridge Train Station.

Luas staff and passengers, and emergency vehicles access the Luas facilities at Broombridge from an existing access off the eastern side of Broombridge Road just south of Broom Bridge itself (OBG5). Access to Broombridge Train Station is also from this road access through the Luas pick up and drop off and parking area.

Schedule 1 works indicated in the immediate vicinity Luas on Works Layout Plan Nos. WP006 and WP007 are nos. 7.3, 7.4, 7.5 and 7.6.

7.3 "Construction of a telecommunications equipment building south of the rail line and east of the existing Broombridge Station next to the existing Broombridge tram stop."

7.4 "Parapet heightening on Broombridge station with an installation of a low-level solid sheet panel 1.20 m high along the front of the existing parapet." Note that these works are to pedestrian bridge at Broombridge Train Station (OBG4A).

7.5 "Prepare the sites and compounds initially by constructing safety fencing or hoarding as required, undertaking site clearance/demolition or diversion/protection works and excavating to formation level for all works."

7.6 "Establish construction sites and compounds at four locations – three at Broombridge and one west of Ratoath Road in Pelletstown - including temporary fencing/hoarding, site offices, welfare facilities, storage facilities, workshops, construction plant and equipment required to carry out the works."

2.3.1 Works to Electrify Line adjacent to Luas Line

The electrification of the railway line alongside the Luas light railway line does not appear to require any works to the vertical or horizontal alignment of the railway. However, other associated works such as installation of OHLE and fencing will occur adjacent to Luas as part of the proposed works and must be undertaken in accordance with TII's *Code of engineering practice for works on, near, or adjacent the Luas light rail system*. The design for the electrification of the line alongside the Luas alignment should consider all fault scenarios to ensure that the safety of people, staff, and infrastructure, on or adjacent to Luas infrastructure, have been fully considered, incorporated and mitigated against. Any temporary or permanent potential impacts to Luas infrastructure will require full plans and details to be prepared, assessed and agreed by TII in advance, in accordance with TII's *Code of engineering practice for works on, near, or adjacent the Luas light rail system*.

2.3.2 Proposed Telecommunications Equipment Room (TER)

A Telecommunications Equipment Room (TER) is noted proposed immediately adjacent to the Luas tramway, just east of Broombridge Luas Tramstop and Train Station platforms. TERs are described at *Chapter 04 Description of the Proposed Development* (subsection 4.5.15.3.2) in the submitted EIAR and that proposed for Broombridge is indicated on *SET Technical Buildings Broombridge* (Drawing no. MAY-MDC-SET-RS05-DR-Z-0003-D) in Book 3

Structures Plans of the submitted Railway Order Drawings. Having regard to that drawing, the proposed TER appears to be proposed immediately adjacent to the Luas line where associated underground overground services occur and on the boundary of indicated Córas Iompair Éireann (CIÉ) lands. It is noted that the Order currently includes TII lands for part of the TER at this location (ref. DW.006.T.06(A), see table 2 of this submission) in the schedule of lands that may be temporarily acquired. The submitted EIAR does not appear to contain any specific mitigation for the protection of Luas and its associated services during the construction and operation of this TER.

The proposed Telecommunications Equipment Room (TER) and proposed associated electrification of the railway line immediately adjacent to the Luas line has the potential to impact the power and systems of both networks at this location. In particular, the location of existing Luas underground and overground equipment require adequate clearances from an Electromagnetic Interference (EMI), accessibility and fault scenario perspective. The proximity of any proposed under and overground electrification apparatus and services may give rise to potential impacts that may negatively impact Luas services. In view of the proposed close proximity of both electrified sections (Rail & Luas) and the proposed TER and fencing, careful consideration needs to be given to potential failure scenarios of the Rail OHLE and/or Luas OCS at this location and any associated impacts to the safety of people, staff, and infrastructure including the proposed TER and any adjacent equipment (Luas or Rail). Any temporary or permanent potential impacts to Luas infrastructure will require full plans and details to be prepared, assessed and agreed by TII in advance, in accordance with TII's *Code of engineering practice for works on, near, or adjacent the Luas light rail system*.

2.3.3 Electromagnetic Effects and Stray Current

Chapter 22 *Electromagnetic Effects and Stray Current* of the submitted EIAR records the presence of Luas as part of the receiving environment (section 22.4) and Luas as a land use (tables 22-7, 22-8 and 22-9) with Baseline Rating for Luas with respect to Electromagnetic (EM) Fields as 'Very High' and with respect to Stray Current as 'Medium'.

At EIAR Section 22.5 *Description of potential impacts* "No likely significant effects have been identified for the construction phase of the proposed project." EIAR Table 22-13 records the *Significance of effects for electromagnetic emissions during the construction phase* on Luas lines as 'slight' in significance and as 'neutral' in quality of effects. At EIAR Table 22-14 the *Significance of effects for stray currents during the construction phase* on Luas lines is recorded as 'imperceptible' in significance and 'neutral' in quality of effects.

Potential operational impacts are set out at Section 22.5.2 of the EIAR where potential impacts are identified to "...include electromagnetic interference from the DC magnetic fields, AC fields and radiofrequency electric fields. Conducted interference may be caused by stray currents from the traction system." Elements of the proposed works capable of potentially acting as "...sources and propagators of EMI" from the project are then identified and include; power supply utility and distribution system, traction supply system, and signalling and communication systems. Luas, being an electrified light railway system complete with OCS, underground or overground substations, onboard and lineside systems, including signalling and communications systems, is particularly sensitive to EMI.

Significance of effects for DC and Near DC Magnetic Fields during the operational phase on Luas lines are recorded in the submitted EIAR as 'imperceptible' in significance and 'neutral' in quality of effects (Table 22-15 at section 22.5.2.1).

Significance of effects for AC Fields during the operational phase on Luas lines are recorded in the submitted EIAR as 'imperceptible' in significance and 'neutral' in quality of effects (Table 22-16 at section 22.5.2.2).

Significance of effects for RF and microwave fields during the operational phase on Luas lines are recorded in the submitted EIAR as 'slight' in significance and 'neutral' in quality of effects (Table 22-17 at section 22.5.2.3).

Significance of effects for stray currents fields during the operational phase on Luas lines are recorded in the submitted EIAR as 'slight' in significance and 'neutral' in quality of effects (Table 22-18 at section 22.5.2.4).

With the exception of *Embedded mitigation specific to Intel* (section 22.6.1), there are no specific mitigation measures set out in Section 22.6 *Mitigation Measures* of the submitted EIAR with suggested mitigation measures listed "should any impacts manifest themselves during operation." At Section 22.7 *Monitoring* of the submitted EIAR, no monitoring is proposed.

In this regard, it is noted that section 22.9 *Cumulative Effects* of the submitted EIAR considers both *Cumulative Electromagnetic Fields* (section 22.9.1) and *Cumulative Stray Current* (section 22.9.2). The potential for an Electromagnetic Fields “small cumulative effect” is identified at Broombridge where the railway line runs alongside Luas. With regard to *Cumulative Stray Current* the potential for subterranean impacts in the form of accelerated corrosion of services from stray current is identified in the context of the proposal potentially adding to existing stray currents. Luas, especially where the proposed electrification section runs parallel to it at Broombridge, holds a significant level of underground electric services and infrastructure which may be impacted by unknown direct or stray currents arising from the proposal.

Having regard of the electrified nature of Luas and the proposed works and their potential to interact with one another, monitoring to ensure no significant negative impact on Luas power and systems is appropriate. The design for the electrification of the railway line alongside the Luas alignment shall ensure that all EMI aspects have been fully considered, incorporated, and mitigated against by way of detailed EMI compatibility studies that considers both operational systems and sensitive equipment. Any temporary or permanent potential impacts to Luas infrastructure will require full plans and details to be prepared, assessed and agreed by TII in advance.

Luas as an existing element of the environment is particularly sensitive to electromagnetic interference and direct or stray current. It is appropriate for the protection of Luas and its services that monitoring and appropriate mitigation of potential operational impact be identified and recorded as part of the EIAR and Order.

2.3.4 Works to Broom Bridge (OBG5) and associated pedestrian diversion and northern temporary construction compound (ref. CC-STR-S5-51480-B)

Broom Bridge identified as OBG5 is proposed for modification by arch deck reconstruction and parapet heightening. Estimated duration of these works is 40 weeks at *Chapter 05 Construction Strategy* of the submitted EIAR (section 5.6.2). Traffic diversions for the period that Broom Bridge works are proposed are depicted in submitted EIAR at figure 5-232. In addition, a temporary pedestrian route from the northern side of Broombridge Road at the current bridge is proposed. That pedestrian route is to include a temporary pedestrian bridge over the Royal Canal to access Broombridge Train Station and Luas Tramstop. Figure 5-233 in the submitted EIAR indicates the pedestrian route proposed.

It is submitted that Works Layout Plan No. WP007 indicates a construction compound to the immediate north of the entrance to the Luas drop off and pick up area off Broombridge Road. This compound is identified as the *OBG5 Compound (CC-STR-S5-51480-B)* at Chapter 5 of the submitted EIAR. Submitted as a *Technical Figure* (EIAR Volume 3A) to Chapter 5 of the EIAR is *Compound Location Overview* consisting of a *Drawing Buildability Design Compound Location Overview* Dwg. No. MAY MDC RGN OTHE DR Z 0001 D. This drawing and figure 5-235 of the EIAR indicates that it is intended that the temporary construction compound proposed at Broombridge Luas pick up and drop off (ref. CC-STR-S5-51480-B) is half of a temporary construction compound indicated just south and on the opposite (western) side of Broombridge Road.

It is noted that the proposed temporary *OBG5 Compound* at Luas pick up and drop off is indicated to hold ‘a new access point’ on its southern corner on submitted drawing *Works Layout Plan No. WP007*. The proposed construction compound access point appears to be at the entrance to the Luas pick up and drop off area that further appears to remain in operation during the construction phase of the proposed works. It is noted that there is only one dedicated footpath into the Luas pick up and drop off area, that also provides access to Broombridge Train Station, which is on the northern side of the entrance and indicated within the development boundary of the proposed Railway Order and part of a slightly larger potential temporary land take area (ref. DW.007.T.06(A), see table 2 of this submission) in that location. It is submitted that the maintenance of the dedicated footpath into and out of the Luas pick up and drop off area for the duration of the proposed construction is essential to maintain access to Luas Broombridge for staff and passengers, for passengers of Broombridge Train Station and for all other pedestrian users of Broombridge Road for that period. In this regard and in the interests of continuity of Luas operations, the existing footpath from Broombridge Road to the Luas pick up and drop off area is recommended maintained outside of the proposed construction compound and further, the position of the proposed compound entrance is required to be situated and scheduled to cause least traffic conflict.

2.4 Revision of submitted EIAR and associated documentation required

Any works adjacent to, or interfacing with Luas infrastructure shall be carried out in accordance with TII's *Code of engineering practice for works on, near, or adjacent the Luas light rail system*. There is a requirement to obtain a permit from the Luas operator in accordance with the Light Railway (Regulation of Works) Bye-laws 2004 (S.I. number 101 of 2004) for works, including temporary works such as hoarding, at Luas infrastructure interface. For the avoidance of doubt; Luas infrastructure includes both the fixed line and the Overhead Conductor System (OCS). In this regard, it is noted that this license requirement is not identified at 5.3 *Project Wide Construction Works and Methodologies*, subsection 5.3.1 *Surveys and licences* of Chapter 05 *Construction Strategy* of the submitted EIAR.

In view of the existence of the Luas asset, its associated over and underground services and tramstops occurring alongside or adjacent to the proposed railway electrification works at Beresford Place and Broombridge and forming part of the proposed development boundary to facilitate the proposed Spencer Dock Train Station, TII requests that the matters highlighted above be reflected in revised drawings and documentation for both construction and operation phases of the proposed development. In particular, any proposed mitigation should be recorded at *Chapter 05 Construction Strategy, Appendix 5.1 Construction Environmental Management Plan (CEMP)* that includes a commitment to prepare a construction traffic management plan, *Chapter 22 Electromagnetic Effects and Stray Current* and *Chapter 27 Mitigation and Monitoring Measures* of the EIAR.

The resolution of the foregoing matters and their reflection in revised documentation to form part of the proposed development is essential to avoid detrimental impact on the capacity, safety or operational efficiency of the light rail network, is in the interests of sustainable development, and the promotion of an integrated approach to land use and transportation planning.

2.5 Luas technical considerations

The proposed order includes works proposed to be carried out on, and in close proximity to Luas infrastructure that may necessitate alteration and relocation of Luas infrastructure, which includes underground services that must be subject to the prior approval of TII.

Subject to the resolution of the above matters and having regard to the presence of Luas within the proposed order development boundary and the requirement to integrate the safe and efficient operation of a proposed development with light rail, TII recommends the following conditions should be considered in the event of approval of the proposal:

1. Overhead Conductor System (OCS) poles are located on / or adjacent to the proposed scheme. Prior to commencement of development, the following plans and details shall be submitted for the written agreement of the planning authority subject to the written agreement of TII:
 - (i) OCS pole protection and safety distances, and / or
 - (ii) Existing, temporary and subsequent permanent fixings.The developer shall be liable for all costs associated with the removal and reinstatement of the Luas related infrastructure.
2. Prior to commencement of development, the Construction Environmental Management Plan (CEMP) shall be submitted for the written agreement of the planning authority subject to the written agreement of TII. The CEMP will contain a method statement to resolve all Luas interface issues that shall:-
 - (i) identify all Luas alignment interfaces,
 - (ii) contain a risk assessment for works associated with the interfaces, including all electrification fault scenarios and
 - (iii) contain mitigation measures for unacceptably high risks, including electromagnetic interference (EMI) and vibration and settlement monitoring regime if necessary.The method statement shall be in accordance with TII's *"Code of engineering practice for works on, near, or adjacent the Luas light rail system."*

3. All works associated with removal, temporary and final installation of Luas infrastructure are to be undertaken outside of Luas operational hours, under system shutdown and Overhead Conductor System isolation with prior agreement with TII and the Luas Operator as required.
4. Prior to commencement of development, the Construction Traffic Management Plan including access to services, shall be submitted for the written agreement of the planning authority subject to the written agreement of TII. The Construction Traffic Management Plan shall include identification of mitigation measures to protect operational Luas infrastructure.
5. The Luas operator/TII will require 24hr access to Luas infrastructure. Prior to the commencement of development, the developer shall enter into an access and maintenance agreement with TII.
6. The developer or contractor will be required to apply for a works permit from the Luas Operator by virtue of the Light Railway (Regulation of Works) Bye-laws 2004 (S.I. number 101 of 2004) which regulates works occurring close to the Luas infrastructure in accordance with TII's *"Code of engineering practice for works on, near, or adjacent the Luas light rail system"*. The developer shall be liable for all of TII's costs associated with the removal and reinstatement of Luas related building fixings and infrastructure. The permit application will require prior consultation, facilitated by the Luas operator, Transdev.

Where revisions to the proposed scheme application documentation arise as a result of this submission consideration, it is understood and accepted that additional / new mitigation measures that ameliorate potential significant negative impact on Luas may form the subject of agreements between TII, Luas Operator and the developer.

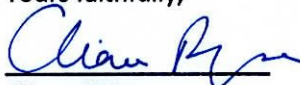
Conclusion

The content of this submission and revisions requested by TII are submitted to be in the interests of the capacity, safety and efficiency of national roads and Luas and therefore the protection of the strategic capacity of the national road and light rail transport networks.

TII trusts that the foregoing comments will be of assistance to the Board in considering the Railway Order.

Please acknowledge receipt of this submission.

Yours faithfully,



Cliona Ryan
Land Use Planner