Our Case Number: ABP-314724-22

Planning Authority Reference Number:

Your Reference: OPW The General Post Office (GPO)

An Bord Pleanála

Downey Planning
29 Merrion Square
Dublin 2
D02 RW64

Date: 24 January 2023

Re: Railway (Metrolink - Estuary to Charlemont via Dublin Airport) Order [2022]
Metrolink. Estuary through Swords, Dublin Airport, Ballymun, Glasnevin and City Centre to Charlemont, Co. Dublin

Dear Sir / Madam,

An Bord Pleanála has received your recent submission and oral hearing request in relation to the above-mentioned proposed Railway Order and will take it into consideration in its determination of the matter.

The Board will revert to you in due course with regard to the matter.

The Board has absolute discretion to hold an oral hearing in respect of any application before it, in accordance with section 218 of the Planning and Development Act 2000, as amended. Accordingly, the Board will inform you on this matter in due course.

Please be advised that copies of all submissions/observations received in relation to the application will be made available for public inspection at the offices of the relevant County Council(s) and at the offices of An Bord Pleanála when they have been processed by the Board.

More detailed information in relation to strategic infrastructure development can be viewed on the Board's website: www.pleanala.ie.

If you have any queries in the meantime, please contact the undersigned. Please quote the above mentioned An Bord Pleanála reference number in any correspondence or telephone contact with the Board.

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Yours faithfully,

pp EM

Niamh Thornton
Executive Officer
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OPW Oifig na nOibreacha Poiblí Office of Public Works

16th January 2023

An Bord Pleanála
64 Marlborough Street
Dublin 1
D01 V902

Re: Railway (Metrolink–Estuary to Charlemont via Dublin Airport) Order 2022 – Submissions by the Commissioners of Public Works in Ireland

To whom it may concern,

The Commissioners of Public Works in Ireland (hereinafter, The Office of Public Works (OPW)), wish to express their overall support for the Metrolink project and welcome the economic, social and tourism benefits of this major transport infrastructure to the city of Dublin.

The OPW is presenting individual submissions for consideration by An Bord Pleanála, as part of the Railway (Metrolink–Estuary to Charlemont via Dublin Airport) Order 2022 process. This cover letter forms part of the overall submission(s) and introduces observations relating to properties owned, controlled, or for which the OPW has a responsibility, along the proposed railway route.

Any issues raised in these submissions stem from the statutory role and responsibility of the Commissioners of Public Works to ensure the protection and preservation of critical State properties, historic/national monuments and the continuity of State business throughout the project.

The OPW wishes to acknowledge the positive engagement between officials from TII and the OPW over the past number of years. However, we note that there are a number of outstanding matters relating to the construction and operation phases of Metrolink which they would wish to have addressed as part of the confirmation process. While specific issues have been identified in the submissions prepared by Downey Planning,

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who have been retained as consultants advising the OPW, this covering letter sets out some, more general comments for consideration by An Bord Pleanála.

It should be noted that the submissions now made are based on the information provided at this consultation phase. Critical aspects of this project relating to physical construction methodologies have not yet been determined and, therefore, a full analysis of any impacts on properties is not possible. In that regard, submissions are only possible and limited to the information that has been made available at this juncture.

Legal Requirements

As noted above, the OPW is supportive of the Metrolink project. However, this is subject to all statutory requirements being complied with, in light of the Commissioners' duties under the Commissioners of Public Works (Functions and Powers) Act 1996 and other Acts.

Apart from that broad statutory provision, there are two specific statutory provisions to draw to the Bord's attention.

First, s.15 of the St Stephen's Green (Dublin) Act 1877 (the "**1877 Act**") provides that the Commissioners of Public Works shall maintain St. Stephen's Green as an ornamental park or pleasure ground for the recreation or enjoyment of the public and may erect any lodges or ornamental buildings or indeed provide ornamental fountains or waterworks.

This is subject to s.116 of the Dublin Transport Act 2008 (the "**2008 Act**") which dis-applies s.15 of the 1877 Act

A. to anything done for the purposes of surveys and inspections under s.36 of the Transport (Railway Infrastructure) Act 2001 (the "**2001 Act**"),
B. to any railway works (within the meaning of s.2 of the 2001 Act) carried out on or under Saint Stephen's Green pursuant to a railway order under s.43 of the 2001 Act, or
C. to restrict the operation of a railway, light railway or metro (within the meaning of s.2 of the 2001 Act) on or under Saint Stephen's Green.

While the OPW is of the view that this section is broad enough to capture the elements of construction and operation of the Metrolink project, insofar as it potentially affects or impacts on St. Stephen's Green, it only dis-applies s.15 of the 1877 Act in those particular circumstances and does not repeal same. Therefore, the confirmation of the Railway Order should ensure that the proposed Metrolink project properly falls into one or more of the criteria in s.116 of the 2008 Act.

Secondly, the Commissioners of Public Works are of the view that the requirements in the National Monuments Act 1930, as amended, would have to be complied with, irrespective of the confirmation of the Railway Order and that a Ministerial consent or consents will have to be obtained by TII where there is potential demolition of a national monument.

There is a further consideration that s.14D of the 1930 Act was inserted by the European Union (Environmental Impact Assessment of Proposed Demolition of National Monuments) Regulations 2012 (S.I. No.249/2012) (the "**2012 Regulations**") to give effect to the Environmental Impact Assessment ("**EIA**") Directive. The 2012 Regulations require the carrying out of an EIA where a decision to grant consent under s.14(2)(a) of the 1930 Act, or to issue directions under s.14A(4)(d) of that Act, would result in the demolition of a national monument. Thus, where the Minister is considering whether or not to grant a consent or issue directions, as the case may be, and it appears to the Minister that the granting of the consent or the issuing of the directions, as the case may be, would result in the demolition of a national monument but the applicant has not submitted an environmental impact statement ("**EIS**") (now an environmental impact assessment report ("**EIAR**")) to the Minister, the Minister is obliged to call for an EIAR to be submitted.

In particular, given the scale of loss of foliage at Saint Stephen's Green Park (which is a designated national monument), the proposed project could be deemed to amount to the destruction of part of a national monument and therefore a Ministerial consent will be required under the National Monuments legislation. While this will be required in any event, it is recommended that an express condition be attached to the railway order and have proposed some suggested wording later in this submission.

Staged Assessments

In the Railway Order application, the EIAR refers to Stage 3 assessments for certain properties of historical significance, cultural or monument status or protected structures. This will be a critical factor for the OPW and a requirement for detailed consultation in relation to the design development phase of the project. It is not possible at this stage to assess or fully comprehend the extent of the impacts on sensitive and historic properties. Therefore, it is imperative that the OPW is afforded an opportunity to input into this critical stage in the process, to protect such significant structures and ensure the success of the project overall for the State. Accordingly, it is recommended that the Bord exercises its power under s.43 of the Transport (Railway Infrastructure Act 2001) and attach a condition to the confirmation of the railway order which requires TII to consult with, (and provide and agree method statements), the OPW in advance of works being carried out. The proposed wording is set out later in this submission.

The properties for which a Stage 3 assessment is critical are listed in Appendix A.

In addition, while Stages 4 and 5 are not included in the Railway Order application or EIAR, the OPW considers these stages as key to the success of the project overall. The OPW would welcome the inclusion of the Stages in the process, to facilitate a process of monitoring the necessary mitigations implemented, in advance of closing out the completion of the project. These stages are further described in Appendix D. Additionally, any issues arising in Stages 3 and beyond, that result in material changes to the scheme and/or impacts on properties not set out in this current Railway Order Application should necessitate a new, additional Railway Order application, as it is likely to be materially different to that submitted in this current application. Alternatively, the Railway Order should be amended and the OPW would draw the Bord's attention to s.146D of the Planning and Development Act 2000, as inserted by s.30 of the Planning and Development (Strategic Infrastructure) Act 2006, which allows for the amendment of railway orders.

On a related point, clarity from TII is required on apparent discrepancies between drawings submitted by TII in the Railway Order. In particular, the tunnel alignment on contour drawings appear incorrect in certain places and this is referenced in some of the individual property submissions.

Property Submissions

There are individual submissions accompanying this letter with detailed observations on each property. We respectfully request that these detailed observations are considered by An Bord Pleanála and that the OPW is afforded the opportunity to discuss those observations at an oral hearing in due course. The opportunity to present at an oral hearing would be considered an important part of the process, given the national significance of the State properties that may be impacted by the Metrolink development. These include St. Stephen's Green Park (a national monument), the Houses of the Oireachtas, Government Buildings, the Cultural Institutions such as the National Museum, the National Gallery, the National Concert Hall and the GPO, among others.

In summary, the individual submissions to An Bord Pleanála cover a number of matters relating to State properties, including:

- **Building type**: All of the historic properties in the Government business district in Dublin 2, in particular, will have varying levels of sensitivity to settlement, vibration, etc. A number of these also house equipment that is sensitive to vibration, noise, etc. and have lower ground operational areas or deep foundations. The OPW would respectfully request that an express condition be

attached to the railway order that acknowledges and mitigates any adverse impact on the subject properties.

- **Future developments**: The OPW would seek to ensure that the routing of any MetroLink tunnel would not limit the State's capacity to develop its property - vertically or horizontally - particularly around or below Leinster House, Government Buildings, the National Gallery, the National Museum, and the National Concert Hall complexes. By way of example - the future of the National Concert Hall (NCH) property includes a Master Plan, currently being developed, and envisages a new Children's Science Museum on the complex. Planning Permission is in place for some extensive developments, including lower levels of buildings that may impact the MetroLink tunnel.

  The OPW would respectfully request that an express condition be attached to the railway order that acknowledges and mitigates any restrictions on future development of the subject properties.

- **Security**: The Preferred Route runs beneath the Dáil, Seanad, and Committee Chambers, as well as Government Buildings. A thorough risk assessment from the perspectives of State security will be critical to understanding the implications during any construction and operating phases.

  The OPW would respectfully request that an express condition be attached to the railway order that acknowledges and mitigates any adverse impact on the security of the subject properties.

- **Vibration, Noise, Electromagnetic Radiation and Interference**: The Oireachtas Chambers have extremely low tolerance for any external noise, vibration, or electromagnetic interference during and post construction.

  The National Museum of Ireland holds the National Archaeological Collection on behalf of the State. The National Collection contains hundreds of thousands of objects including fragile artefacts such as prehistoric ceramic vessels, and Greek and Roman ceramic and glass vessels. The National Gallery of Ireland, in particular, has concerns about the effect of ongoing low-level vibrations on priceless paintings in the State collection.

  In terms of the National Concert Hall's activities, the impact of noise and vibration during the construction and operational phases of the MetroLink are matters that would require to be mitigated.

  The former Department of Arts, Heritage and the Gaeltacht had previously expressed to the OPW the significant concerns of the Boards of Governors of the Cultural Institutions (the National Gallery, the National Museum, the National Library and the National Concert Hall).

The OPW would respectfully request that an express condition be attached to the railway order that acknowledges and mitigates any adverse impact on the subject properties.

- **Potential impacts to National Monuments:**
    - **St. Stephen's Green Park:** The OPW acts on behalf of the relevant Minister in the operation, care and maintenance of St. Stephen's Green Park; and so shares the concerns of our colleagues in the Dept. of Housing, Local Government & Heritage that the proposed station location would have a direct, severe, negative, profound and permanent impact on the heritage value of the Green.

      As presented, the proposals would not seem sufficiently sympathetic to the history and environment of the spaces within and around the Green. The OPW would urge An Bord Pleanála, when considering any Railway Order Application, to also consider the unique, inherent importance of St Stephen's Green Park to the people of Dublin and in light of the specific legal protection which has been identified above.

    - **Moore Street/Moore Lane**: The impact on the national monument properties on Moore Street now appears to be very significant, in particular in relation to the 'cut and cover' works zone proposed for the Metrolink station box. The proposed development works are very close to the boundary of the monument and includes the public roadway, Moore Lane, behind the monument site. There are also likely to be serious and lengthy impacts and disruption to the operation of a new centre of commemoration planned for the site, with a substantial State investment due to be made over the coming years.

The OPW has discussed most of these concerns with TII as part of a consultation process between our organisations over the past number of years, but would like to ensure these points are formally included in the conditions attached to any Railway Order granted.

Legal Agreements

The Commissioners of Public Works would seek to enter into appropriate, property-specific legal agreements with TII, to ensure the protection of key State properties and of the State's activities undertaken within those and other properties. Given the importance of such properties and activities, the Commissioners of Public Works consider it appropriate that An Bord Pleanála would make the Railway Order conditional on such legal agreements being in place between TII and the OPW. Creating such legal agreements between TII and the OPW would be possible only after TII make available the more detailed design and risk-mitigation measures for the construction and operational phases of the MetroLink project, and before any development begins. Therefore, the OPW would request that this aspect be reflected in the conditions set out

by An Bord Pleanála to TII, as this would provide assurances to the Commissioners of Public Works relating to future legal agreements that protect and secure State property and activities from risks associated with the construction or operations of the MetroLink.

In that regard, the OPW would suggest wording for conditions as follows (or such equivalent wording as the Bord determines appropriate). In respect of the need to ensure compliance with the National Monuments Acts:

"Prior to commencement of development, TII must ascertain whether the proposed Metrolink project will potentially result in the total or partial destruction of any national monuments and, if so, must comply with the requirements of s.14 of the National Monuments Act 1930, as amended,"

In terms of the sensitivity of the uses within many of the properties referenced in the submissions, coupled with their historic importance, the OPW respectfully requests that An Bord Pleanála consider attaching conditions to the Railway Order that ensures continuous monitoring of those properties to prevent any negative impacts. This is referenced further in the individual submissions.

In that regard, the following wording is proposed:

"Prior to commencement of development, TII will prepare detailed method statements which shall be submitted to the relevant planning authority for agreement by the planning authority. Insofar as the proposed works affect any State properties, TII shall consult and agree with the Commissioners of Public Works, and other impacted State bodies, any method statements prior to submitting to the relevant planning authority for agreement".

The OPW would also welcome the following condition to ensure that there is appropriate monitoring of the effects of the proposed Metrolink project on State parties:

"TII will be required to monitor the physical impacts of the proposed Metrolink project and future operations, on State properties in terms of noise, vibration, business interruption, loss of ecological and amenity value and submit reports (of a nature and to a standard agreed with the Commissioners and, as necessary, their clients at intervals to be agreed), to both the OPW and the relevant planning authority".

Flood Risk Management

The OPW also wishes to highlight to the Bord the area of flood risk management. As the Bord may be aware, the Guidelines on the Planning System and Flood Risk Management (DHPLG/OPW, 2009) set out a transparent framework for the

consideration of flood risk in the planning processes, including planning applications and development management. The Guidelines stress the need for a proportionate assessment of the flood risk, taking into account the potential impacts of climate change, and the need for the management of flood risk for development in flood-prone areas.

The Climate Change Sectoral Adaptation Plan for Flood Risk Management (OPW, 2019), that was approved by Government in October 2019, further emphasises the need for the consideration of the potential impacts of climate change on flooding and flood risk in the planning and design of future assets. The Metrolink will be a highly valuable piece of critical infrastructure that may well be highly vulnerable in the event of inundation, and as such, taking account of the policies referred to above, a detailed flood risk assessment might be expected of fluvial, coastal and pluvial flood risks (in addition to sealing against groundwater), with any flood risks, such as via inflow from station entrances, ventilation systems, etc., managed to a suitably high standard of protection (e.g., the 0.1% annual exceedance flood event probability), taking account of the potential impacts of climate change.

As stated above, we would respectfully welcome the opportunity to present to An Bord Pleanála at an Oral Hearing, should the Bord deem it appropriate.

Yours sincerely,

Maurice Buckley

Chairman

Appendix A:

List of properties that require Stage 3 and further Stage assessments:

- Houses of the Oireachtas, Leinster House complex
- Government Buildings
- National Gallery
- National Museum
- National Library
- Natural History Museum
- National Concert Hall
- St. Stephen's Green Park
- 14-17 Moore Street and Moore Lane
- Garden of Remembrance
- General Post Office (GPO), O'Connell Street

Appendix B: relevant correspondence between OPW and TII

- **"Re: Metrolink - Emerging Preferred Route"** – Suzanne Angley (Metrolink Stakeholder Communications Coordinator) to Chairman's Office, 21st March 2018 (by registered post)
- **"Re: Metrolink"** - Aidan Foley (Project Director, Metrolink, Transport Infrastructure Ireland) to Caoimhe Allman (Assistant Principal Officer, Property Management – Owned Properties), 28th May 2018
- "**Re: Observations of the Commissioners of Public Works in Ireland regarding the proposed MetroLink route (Emerging Preferred Route)**" - Caoimhe Allman (Assistant Principal, Property Management, Office of Public Works) to Aidan Foley (Project Director, MetroLink, Transport Infrastructure Ireland), 9th July 2018
- **"Re: Metrolink (Emerging Preferred Route)"** - Aidan Foley (Project Director, Metrolink, Transport Infrastructure Ireland) to Caoimhe Allman (Assistant Principal Officer, Property Management – Owned Properties), 8th August 2018
- "**Re: Observations of the Commissioners of Public Works regarding the proposed MetroLink route**" – Catherine Eddery (Principal Officer, Property Management – Owned Properties) to Aidan Foley (Project Director, Metrolink, Transport Infrastructure Ireland), 20th December 2018
- **"FW: Metrolink - OPW high level obs from Paul Tighe"** – Catherine Eddery (Principal Officer, Property Management – Owned Properties) to Aidan Foley (Project Director, Metrolink, Transport Infrastructure Ireland), 17th January 2019
- "**Re: Observations of the Commissioners of Public Works regarding the proposed MetroLink station at St. Stephen's Green" -** Catherine Eddery (Principal Officer, Property Management – Owned Properties) to Aidan Foley (Project Director, Metrolink, Transport Infrastructure Ireland), 5th April 2019
- **"Re: Proposed Metrolink Station at St. Stephen's Green"** - Aidan Foley (Project Director, Metrolink, Transport Infrastructure Ireland) to Catherine Eddery (Principal Officer, Property Management – Owned Properties), 9th August 2019
- **"St. Stephen's Green"** – John McMahon (Commissioner, OPW) to Michael Nolan (CEO, Transport Infrastructure Ireland), 10th June 2020
- **"Re: Metrolink Proposals for St. Stephen's Green"** – John McMahon (Commissioner, OPW to Michael Nolan (CEO, Transport Infrastructure Ireland), 20th June 2020

Appendix C: relevant meetings between OPW and TII

- **"OPW Presentation"** – 3rd May 2018
- **"TII presentation"** – 14th December 2018 (attended by Chairman)
- **"TII presentation in response to OPW concerns"** – 18th January 2019
- **"OPW St Stephen's Green Meeting"** – 22nd May 2019
- **"St. Stephen's Green"** – 12th September 2019
- **"TII MetroLink project update to OPW"** – 5th June 2020
- **"Project Update to: Office of Public Works (OPW)"** – 31st May 2021
- **"Project Update to: Office of Public Works (OPW)"** – 15th September 2022

Appendix D – Ground Movement Assessment

The following sets out the requirements for assessing the impact of ground movement resulting from underground construction, such as tunnelling, embedded wall installation, and excavation for station boxes, together with requirements for monitoring and the close out.

The Designer shall investigate the potential for ground movement associated with the design and possible construction:

a) to assess risk of building damage by identifying those zones where the implementation of the design is likely to cause ground movements which will result in risk of Damage Category 2 'Slight' being exceeded (see Table 1) or where damage exceeds the agreed tolerable limits. To assess the risks of such degrees of damage occurring and either investigate alternative designs or advise interfacing Designers that alternatives need to be considered and modify the design as necessary. To undertake an assessment of the potential consequences where there is a significant likelihood that Risk of Damage Category 2 'Slight' will be exceeded or where damage exceeds the agreed tolerable limits and identify specifically what the risks are. Design protective measures where necessary to mitigate against the risk of damage exceeding Risk of Damage Category 2 or where damage exceeds the agreed tolerable limits;
b) to demonstrate that the environmental effects of excavation induced ground movements have been considered and taken account of in the design;
c) to assess the risk of damage to utilities and to design mitigation measures in agreement with the utility owner;
d) to assess the effects of excavation to existing above-ground and underground infrastructure and to design suitable mitigation measures;
e) to indicate where property may require demolition or structural modification;
f) to enable the preparation of contingency plans to deal with residual risks.

Stage 1 – Scoping

Schedules and plans shall be prepared to identify all assets assessed to experience ground movement exceeding 1mm using conservative parameters.

Stage 2 – Initial Assessment

The designer shall carry out initial assessment calculations using simple empirically calibrated methods and moderately conservative parameters to classify the risk of damage to assets. For masonry building structures the risk should be classified in accordance with Table 1. For non-masonry buildings and infrastructure the level of risk should be determined by ensuring that deformations do not exceed tolerable values determined in consultation with the asset owner.

A schedule and plans of predicted damage shall be prepared, along with outline trigger levels.

The assessment calculations shall be based on record drawings, where available and an inspection for assessment. Assets estimated to be a risk of damage greater than Category 2 'Slight' or where damage exceeds the agreed tolerable limits require further detailed assessment at Stage 3.

Table 1 - Building damage classification

Damage Category	Description of degree of damage+	Description of typical and likely forms of repair for typical masonry buildings	Approx. crack width* (mm)	Max. tensile strain %
0	Negligible	Hairline cracks		<0.05
1	Very slight	Fine cracks easily treated during normal redecoration. Perhaps isolated slight fracture in building. Cracks in exterior visible upon close inspection	0.1 to 1.0	0.05 to 0.075
2	Slight	Cracks easily filled. Redecoration probably required. Several slight fractures inside building. Exterior cracks visible; some repainting may be required for weather tightness. Doors and windows may stick slightly	1 to 5	0.075 to 0.15
3	Moderate	Cracks may require cutting out and patching. Recurrent cracks can be masked by suitable linings. Tuck pointing and possible replacement of a small amount of exterior brickwork may be required. Doors and windows sticking. Utility services may be interrupted. Weather tightness often impaired	5 to 15 or a number of cracks greater than 3	0.15 to 0.3
4	Severe	Extensive repair involving removal and	15 to 25 but also	> 0.3

		replacement of walls especially over door and windows required. Window and door frames distorted. Floor slopes noticeably. Walls lean or bulge noticeably. Some loss of bearing in beams. Utility services disrupted	depends on number of cracks	
5	Very severe	Major repair required involving partial or complete reconstruction. Beams lose bearing, walls lean badly and required shoring. Windows broken by distortion. Danger of instability	Usually > 25 but depends on No. of cracks	
+ In assessing the degree of damage, account must be taken of its location in the building or structure. * Crack width is only one aspect of damage and should not be used on its own as a direct measure of it. Burland, J.P. and Wroth, C.P., Settlement of Buildings and Associated Damage, Proceedings of a Conference on the Settlement of Structures, Cambridge, 1974, pp 611 – 54 and 764 – 810;				

The heritage value of a Listed or Protected Building should be considered during the initial assessment by reviewing the sensitivity of the building structure and of any particular features together with the initial assessment calculations. The heritage assessment examines the following:

a) the sensitivity of the building / structure to ground movements and its ability to tolerate movement without significant distress. The potential for interaction with adjacent buildings / structures is also considered. A score within the range of 0-2 should be allocated to the building/structure in accordance with the criteria setout in Table 2;
b) the sensitivity to movement of particular features within the building / structure and how they might respond to ground movements. A score within the range of 0-2 should be allocated to the building in accordance with the criteria set out in Table 2.

The scores for each of the two categories (a) and (b) should be combined and added to the category determined in Stage 2 to inform the decision making process. In general,

Listed Buildings which score a total of 3 or higher should be subject to further assessment as part of the Stage 3 – Detailed Assessment. Buildings that score a total of 2 or less are predicted to suffer a degree of damage which may be easily repairable using standard conservation based techniques and hence no protective measures for the building's particular features should be required. However, ultimately the professional judgement of engineering and historic building specialists should be used to determine whether additional analysis is required.

Table 2: Scoring for Sensitivity Assessment of Listed Buildings

Criteria		
Score	**a) Sensitivity of the structure to ground movements and interaction with adjacent buildings**	**b) Sensitivity to movement of particular features within the building**
0	Masonry building with lime mortar not surrounded by other buildings. Uniform facades with no particular large openings.	No particular sensitive features
1	Buildings of delicate structural form or buildings sandwiched between modern framed buildings which are much stiffer, perhaps with one or more significant openings.	Brittle finishes, e.g. tight-jointed masonry, which are susceptible to small movements and difficult to repair.
2	Buildings which, by their structural form, will tend to concentrate all their movements in one location.	Finishes which if damaged will have a significant effect on the heritage of the building, e.g. cracks through frescos.

Stage 3 - Detailed Assessment, Mitigation Design and Monitoring Plans

The Designer shall carry out detailed assessments of structures that will be affected by the works so that any monitoring works and mitigation works can be designed and implemented.

For structures at risk of exceeding Damage Risk Category 2 'Slight' or where damage exceeds the agreed tolerable limits the designer shall undertake a detailed assessment (more rigorous) to determine:

a) the influence of the structure and its foundations on the predicted ground movements (soil/structure interaction).
b) the volume loss at which the risk of damage to the structure (or any sensitive finishes/features) is 'slight' or better;
c) whether this volume loss may be achieved by the proposed excavation design/control measures;
d) any special control measures required to reduce the predicted damage to acceptable levels (i.e. Risk Category 2 'slight' damage category and below or below the agreed tolerable limits) such as significantly higher face pressures with EPBM tunnelling and the practicality of these;
e) the amount of ground movement that the structure (and or any sensitive finishes/features) can accommodate without exceeding Damage Risk Category 2 or where damage exceeds the agreed tolerable limits;
f) the level of residual risk if intrusive mitigation measures are not implemented.

The detailed assessments should include a number of iterations to determine how the risk of damage to a building may be reduced. Asset-specific empirical models shall be prepared successively using moderately conservative and best estimate parameters. If after these iterations the use of empirical methods do not reduce the risk of building damage to acceptable levels (i.e. Damage Category 2 'slight' damage category and below or below the agreed tolerable limits), the damage assessment shall be refined by increasing the sophistication of the analysis with the aim of reducing the risk of asset damage to acceptable levels and to eliminate the asset from further assessment.

If the risk of damage cannot be shown to be reduced by detailed assessment to acceptable levels, then mitigation measures shall be designed. The primary means of settlement mitigation shall be practical measures to control ground movement by good design and construction practice. This could include staged excavation sequences within sprayed concrete lining (SCL) works, ground treatment, face stabilisation, spiling / face dowels, increasing face pressure when using a tunnel boring machine (TBM), adopting stiffer walls/propping for rectangular shafts etc.

In the event that physical mitigation measures are still required (i.e. to control building damage to Damage Category 2 'slight' and below or below the agreed tolerable limits), the Designer shall seek to obtain the Asset Owners approval.

The Designer shall also undertake a comparative risk assessment to demonstrate that the risks associated with installation/implementation of any intrusive mitigation measures (such as compensation grouting) are no worse than the risks associated with the base case.

The relevant Local Authority and the OPW shall be consulted on the results of the Protected Building assessment reports and the proposals for protective measures, if any are required. The OPW shall also be consulted in relation to Listed or Protected Buildings where they would normally be notified or consulted on planning applications or listed building consent applications.

When considering the need and type of protective measures for Listed or Protected Buildings, due regard should be given to the sensitivity of the particular features of the building which are of architectural or historic interest and the sensitivity of the structure of the building to ground movement. Where the assessment highlights potential damage to the features of the building which it will be difficult or impossible to repair and/or if that damage will have a significant effect on its heritage value, the assessment may recommend appropriate measures to safeguard those features either in-situ or by temporary removal and storage off-site if those with relevant interest(s) in the building consent.

The form of monitoring of Listed Buildings should be determined based on the results of the assessment process.

Where repair works are necessary they will require the consent of those with relevant interest(s) in the building.

For railway track and track support structures the designer shall:

a) review the track surveys (including specifying additional surveys if required) and establish that ground movement can be accommodated without exceeding track standard operational tolerance in conjunction with the relevant Infrastructure Manager;
b) identify locations where fettling of the track is required pre construction and /or during construction to ensure the track geometry and clearances are acceptable.

The designer shall prepare plans and sections showing the zone of influence of the works that is defined by ground movements exceeding 1mm.

The designer shall develop an instrumentation and monitoring plan to validate that ground movements within the zone of influence are in accordance with design assumptions and that the infrastructure remains within acceptable limits. The designer shall ensure that there is a clear distinction between parameters measured to confirm the change in any parameter is in accordance with the design and parameters measured to limit damage to the assets. This plan shall identify the minimum period of time required to obtain base line data for each monitoring point.

Note: *A competent engineer responsible for the works shall consider those factors which may influence the monitoring data and shall determine an appropriate period and frequency for baseline monitoring. This decision making process will include an element*

of engineering judgement to account for the possible effects of any underlying environmental trends (seasonal, diurnal, tidal) in the assets under consideration.

Note: *The designer shall demonstrate that the monitoring system complies with the British Tunnelling Society Monitoring Underground Construction best practice guide.*

Note: A review of the monitoring system against the checklists provided in Appendix B of the BTS Monitoring Underground Construction best practice guide may be used as a tool to demonstrate compliance.

The detailed assessments shall define the control limits that need to be imposed on the TBM/SCL excavation in the zone of influence. The designer shall state these control measures on drawings and specifications.

The designer shall identify the critical parameters to be monitored and define the Asset Control Limits based on:

a) the ability of the asset or structure to withstand ground movement investigated
a) during the assessments carried out in Stage 2 and 3.
b) the risk to third party operations

The designer shall link the Asset Control Limits to actions within an Emergency Preparedness Plan.

The Instrumentation and Monitoring Plan and Emergency preparedness Plan shall be agreed with the relevant Asset Owner.

Stage 4 – Construction

Contingency plans shall be developed and agreed with the OPW to cover the risks posed to the OPW before commencement of the construction activity.

Contingency plans shall be implemented where the results of monitoring or inspection so indicate.

Ground movement and construction progress records shall be maintained and reported in regular reviews when construction processes are taking place within the zone of influence.

Predictions and assumptions made during design in respect of both ground movement and the effects which such ground movement will have on adjacent assets shall be verified by measurement during construction.

Stage 5 – Completion and Close-out

After ground movement has stopped, as confirmed by instrumentation and montoring, the designer shall prepare a "Completion Report". This shall include the following:

a) details of any modifications/mitigation measures to the existing structure;
b) graphs that show the ground movement and construction progress over time

a) with at least 3 months duration of readings which show no change;
b) a schedule showing actual movement compared to predicted movement;
c) a schedule of defects recording only the exceptions (changes) identified during the post construction defects survey;
d) details of any remedial works undertaken;
e) as-built records (including any temporary works remaining in situ on completion of the works).

Schedule of Defects

A schedule of defects shall be recorded prior to the start of construction for all buildings, structures, utilities and facilities and Outside Party assets predicted to experience ground movement exceeding 1mm.

OPW
Oifig na nOibreacha Poiblí
Office of Public Works

Property: The General Post Office (GPO)

Location: O'Connell Street Lower, Dublin 1

Submission to the Draft Railway Order 2022 (MetroLink - Estuary to Charlemont via Dublin Airport)

January 2023

GZ Gall Zeidler Consultants

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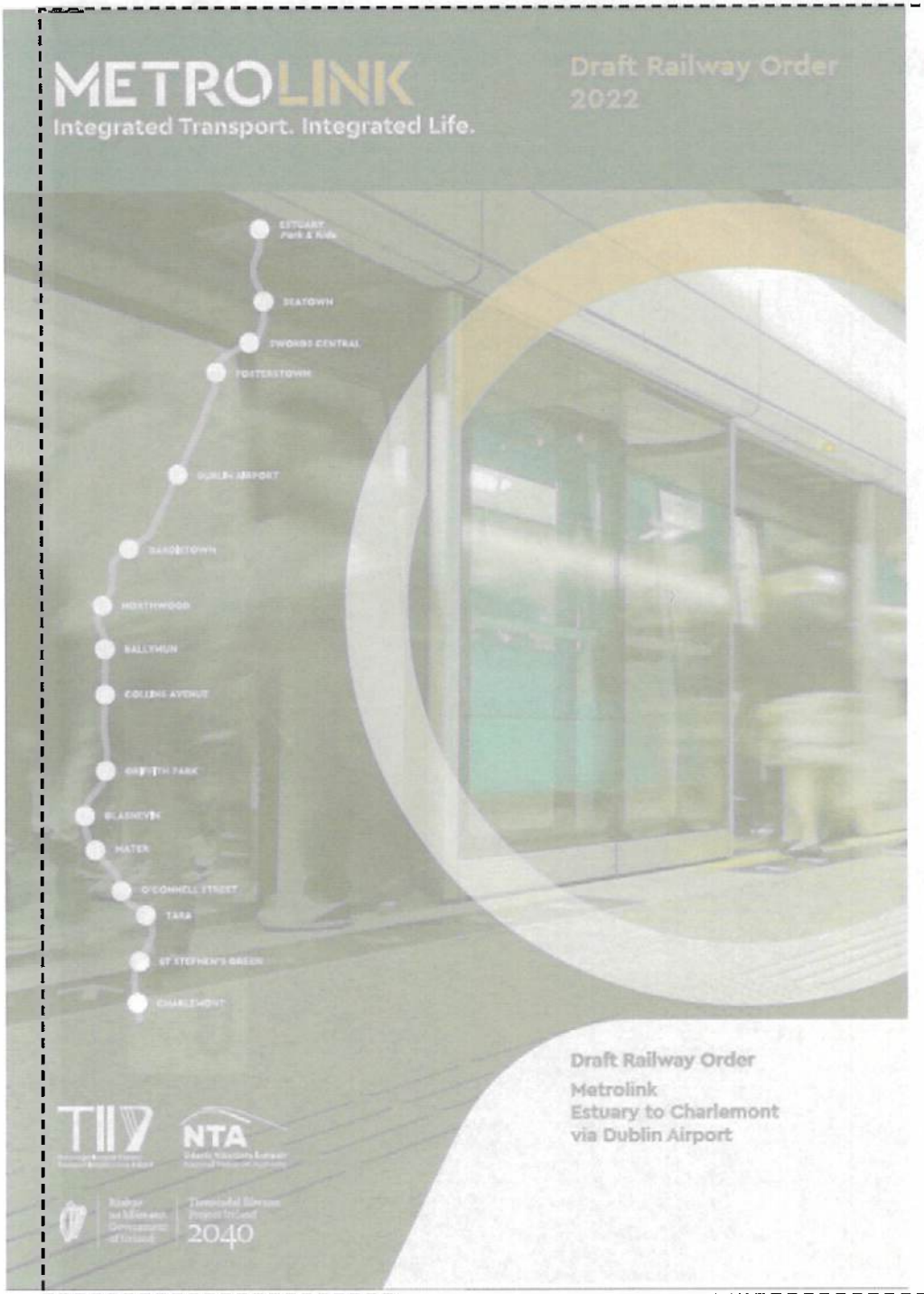


EXECUTIVE SUMMARY

With reference to the Draft Railway Order 2022 (MetroLink - Estuary to Charlemont via Dublin Airport), the Office of Public Works (OPW), OPW Headquarters, Jonathan Swift Street, Trim, Co. Meath, welcomes this strategic project and recognises the significance of its delivery to provide for a sustainable, safe, efficient, integrated and accessible public transport service between Swords, Dublin Airport and Dublin City Centre.

With respect to the proportion of the State's property portfolio managed by the OPW, we will endeavour to share knowledge and information with Transport Infrastructure Ireland (TII) to facilitate the successful delivery of the project through a collaborative approach.

This submission has been prepared by DOWNEY in conjunction with Gall Seidler Consultants, on behalf of The Commissioners of Public Works in Ireland (hereinafter the Office of Public Works (OPW)) and on foot of extensive consultation(s) with the OPW and its clients, which relates to the MetroLink route and its relationship with the General Post Office (GPO).

With respect to this property, the OPW requests that An Bord Pleanála notes the sensitivity of the historic buildings and national collections located within. The OPW also seeks:

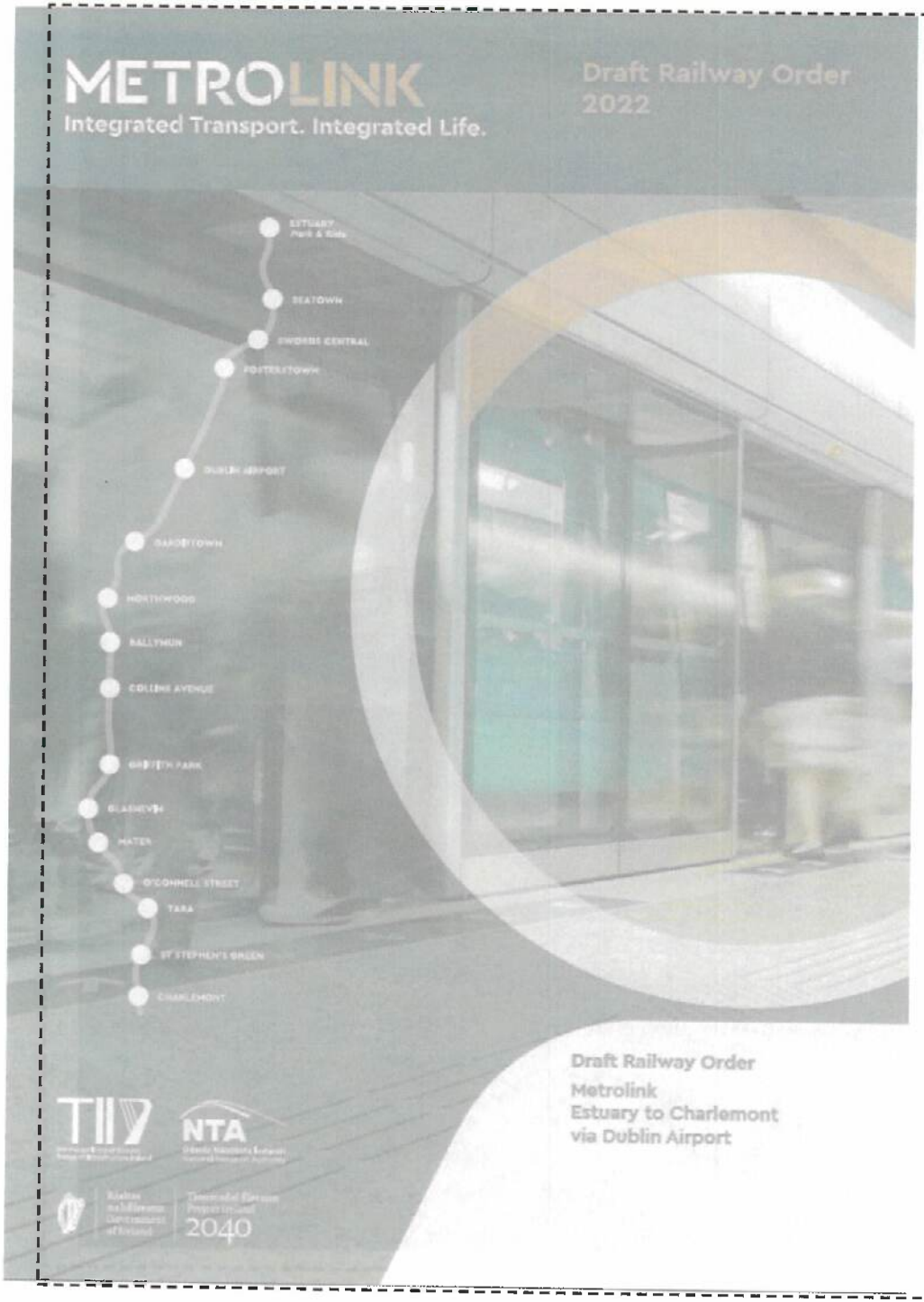
That ABP note the historic importance of this iconic building and ensure that all necessary conditions are attached to any Railway Order to ensure its full protection and use prior to, during and post the MetroLink development and operation.

1) To ensure there is minimum disruption to public access of the GPO and its day-to-day uses and functions.

2) To ensure no damage to the building and its architectural detailing, pre-construction and post-construction surveys, trials and monitoring are required as there is potential for major noise and vibration impact (at both stages). These factors can damage the building, which is of historical significance, as well as affect the operations of the building which is Dublin's primary post office.

3) Disruptions to traffic may happen during construction phases, wayleaves for the GPO and staff, as well as unrestricted access for postal vans & lorries will be required.

4) Precedents to be applied to the risk assessments to ensure the contractors are utilising best industry practice within the implementation of the Project.



5) To ensure impact on future development of GPO is minimised, particularly in relation to emergency works which may need to be carried out on the building, including repairs and refurbishment.

6) To mitigate noise and vibration to acceptable levels for this cultural and historical block, the installation of a floating track slab at this portion of the alignment would be the preferred option.

TABLE OF CONTENTS

This submission is made in response to the statutory review of the Draft Railway Order. Accordingly, this submission has been prepared in the context of "Draft Railway Order 2022; MetroLink - Estuary to Charlemont via Dublin Airport" which seeks to deliver the construction of a fully segregated and automated railway and metro mostly underground c. 18.8km in length with 16 stations running from north of Swords at Estuary through Swords, Dublin Airport, Ballymun, Glasnevin, and the City Centre to Charlemont. The Draft Order is currently on public display. We would respectfully request that An Bord Pleanála consider the content within this submission. DOWNEY would like to thank the Board for the opportunity to make this submission, on behalf of the Commissioners of Public Works in Ireland (hereinafter the Office of Public Works (OPW), a prescribed body for the project as advised by An Bord Pleanála.

Downey Planning Document Control			
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Approved by	E.B. MIPI	13/01/2023	V_03_ FINAL
	D.R. MIPI	15/01/2023	V_03_FINAL

1.0 INTRODUCTION

This submission has been prepared by DOWNEY, Chartered Town Planners, 29 Merrion Square, D02 RW64, in conjunction with Gall Zeidler, International Consulting Engineers specialising in tunnel and underground schemes, on behalf of the Commissioners of Public Works in Ireland (hereinafter the Office of Public Works (OPW)), OPW Headquarters, Jonathan Swift St, Trim, Co Meath and on foot of extensive consultation(s) with the OPW's clients, which relates to the MetroLink route and its relationship with the General Post Office (GPO), O'Connell Street Lower, Dublin 1.

With reference to the Draft Railway Order 2022 (MetroLink - Estuary to Charlemont via Dublin Airport), the OPW welcomes this strategic project and recognises the significance of its delivery to provide for a sustainable, safe, efficient, integrated, and accessible public transport service between Swords, Dublin Airport and Dublin City Centre.

2.0 THE OFFICE OF PUBLIC WORKS MANDATE

The OPW was established in 1831, by an Act of Parliament: An Act for the Extension and Promotion of Public Works in Ireland. Since then, generations have enjoyed and benefited from the OPW's specialist work on state buildings, heritage sites, national parks, and flood relief measures. The primary function of the OPW continues as a key player in the implementation of Government policy and advisory to the Minister of State in the disciplines of property (including heritage properties) and flood risk management.[1] The OPW has a strong reputation for expert knowledge and is an important resource for Government and State Agencies on specialist and professional advice on architectural projects, estate management, historic properties, engineering services, and flood risk management. This expert knowledge is crucial in supporting decisions across Government and is vital within the MetroLink's plan making process. The OPW will endeavour to share its knowledge and provide advice to Transport Infrastructure Ireland (TII hereinafter) as part of this submission to An Bord Pleanála on the Draft Railway Order application.

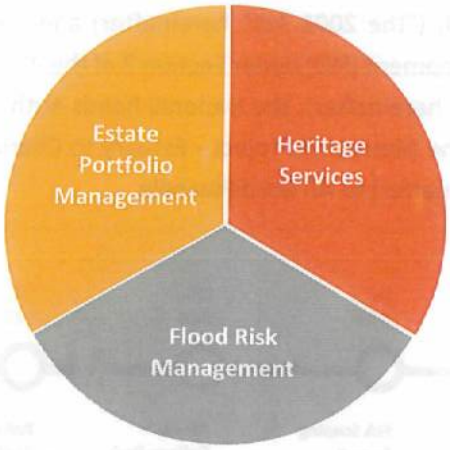

Figure 1. The OPW's Main Areas of Work

[1] *For more information, you can read the "Office of Public Works; Statement of Strategy 2021-2024" retrievable here: https://assets.gov.ie/134839/b52e1b97-bfe4-4948-9434-de0118f111bd.pdf*

The OPW provides a shared service in the area of property management and property maintenance incorporating architectural, engineering, valuation, quantity surveying, project management, art and facilities management and the conservation, preservation and presentation of heritage and cultural properties. The OPW is the lead agency for flood risk management in Ireland. This expertise will be maintained within the OPW's submission to support and engage with TII and the Draft Railway Order application.

The OPW manages a significant proportion of the State's property portfolio which stands at c. 2,500 properties and which accommodate Government Departments and includes c. 700 Garda properties. A key function of the OPW is the maintenance and operation of Ireland's most iconic heritage properties, including the State's two World Heritage Sites, c. 800 National Monuments and over 2,000 hectares of gardens and parklands.

Additionally, the OPW is a key player in infrastructure delivery for the State. In relation to flood risk management, the OPW has delivered some 150 flood relief schemes under the National Development Plan 2018-2027 as part of Project Ireland 2040 and maintains some 12,000km of river channels and 800km of embankments.

The OPW considers good governance to be central to the effectiveness of its operations, and recognises its importance in discharging its statutory, administrative and policy obligations.

It is the OPW's priority to maximise the efficient use and value of the State property portfolio, minimise the extent and impact of flooding, protect and promote our national built heritage, and excel in organisational performance and service. The OPW manages a significant number of properties along the route, including a number of historical and nationally important properties.

3.0 OVERVIEW OF THE DRAFT RAILWAY ORDER

On 30th September 2022, governed by Section 37 of the Transport (Railway Infrastructure) Act 2001 (as amended and substituted) ("the 2001 Act" hereinafter) and proposed within the definition of Strategic Infrastructure Development (SID) under Section 2 of the Planning and Development Act 2000 (as amended) ("the 2000 Act" hereinafter), the National Roads Authority (operating as TII) submitted the Draft Railway Order for the MetroLink Project - Estuary to Charlemont via Dublin Airport [2022] ("the proposed Project" hereinafter) to An Bord Pleanála.

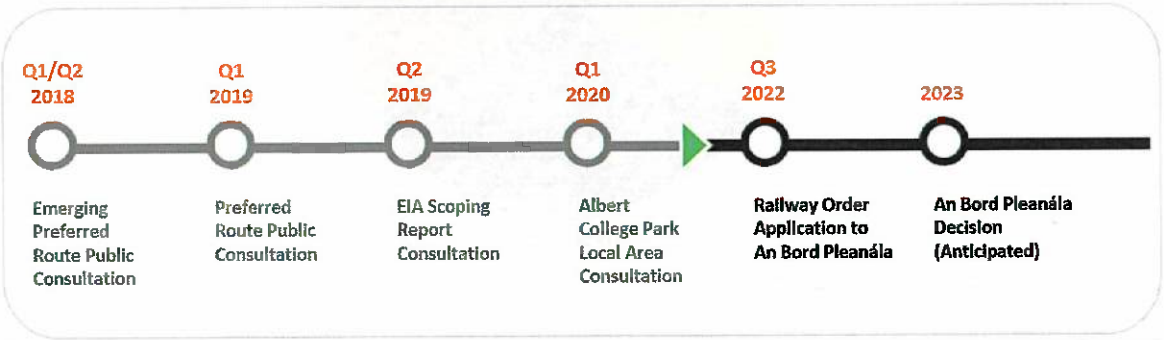

Figure 2. The Proposed Project Roadmap (extracted from Chapter 8 of EIAR enclosed with the proposed Project application)

With an objective to "*provide a sustainable, safe, efficient, integrated and accessible public transport service between Swords, Dublin Airport and Dublin City Centre*", the proposed Project seeks to deliver the construction of a fully segregated, high-capacity, and high-frequency automated railway and metro between Estuary Station and the Park and Ride facility, north of Swords via Dublin Airport to Charlemont Station, with approximately 18.8km length, which is mostly underground. The proposed Project comprises 16 new stations along the alignment, comprising of Estuary Station at surface level, four stations at Seatown, Swords Central, Fosterstown and Dardistown in retained cut, and Dublin Airport Station along with the remaining ten stations which will be underground.

Other principal project elements include a multi-storey 3,000-space Park & Ride facility at Estuary, two viaducts, one over the Broadmeadow and Ward Rivers, and one over the M50 Motorway, an Operational Control Centre, and Maintenance Depot at Dardistown, and intervention tunnels and shafts associated with Dublin Airport South Portal (DASP), located on the City Tunnel at Albert College Park, and south of Charlemont station.

The proposed Project has been designed to interchange with existing and future elements of the transport network. The key interchanges are as follows:

- Dublin Airport.
- The Western Commuter Line also known as the Maynooth Line (formerly the Midland Great Western Railway) and the South-Western Commuter Line also known as the Kildare Line (formerly Great Southern and Western Railway) at Glasnevin Station.
- The DART at Tara Station.
- Luas Lines (at O'Connell Street, St Stephen's Green and Charlemont Stations).
- The Dublin Bus network and the future BusConnects network.

Temporary elements to the proposed Project will comprise Construction Compounds, Logistics Sites, and Tunnel Boring Machine Launch Sites, which are essentially to facilitate the construction phase of the development. This encompasses 34 construction compounds, including 20 main Construction Compounds at each of the proposed station locations, the portal locations, and the Dardistown Depot location, as well as 14 Satellite Construction Compounds located at other locations along the alignment. Main logistics sites will be located at Estuary, near Pinnock Hill east of the R132 Swords Bypass and north of Saint Margaret's Road at the Northwood Compound. There will be two main Tunnel Boring Machine (TBM) launch sites, with one located at DASP, which will serve the TBM boring the Airport Tunnel and the second located at the Northwood Construction Compound, which will serve the TBM boring the City Tunnel.

TII carried out numerous public consultations on the Preferred Route over an eight-week period from the 26th of March 2019 to the 21st of May 2019. Over 1,000 people attended the five public events, which were held at key locations along the route. While extensive pre-planning consultations also took place between TII and the OPW, a detailed assessment of the individual properties affected has not yet taken place. The draft Railway Order application 2022 is a Draft Order, and should the route be approved by An Bord Pleanála, further detailed design will be submitted which will require further consideration and approval. Factors such as the internal uses of the properties, their construction methods, age and historical importance and the effect of construction on these sensitivities has not

been assessed as part of the Project thus far. Additional consideration needs to be given to the potential effects on the built environment before a route and construction method can be confirmed. The OPW reserves the right to make further commentary, pending more detailed design proposals.

The statutory consultation period commenced on the 7th of October 2022, with an initial 6-week timeframe for submissions, i.e., the closing date for submissions was the 25th of November 2022 at 5.30pm. Pursuant to Section 40(1)(b) of the Act and as stated in the public notice published on the 25th of November 2022, this consultation period was further extended to the 16th of January 2023.

4.0 THE GENERAL POST OFFICE

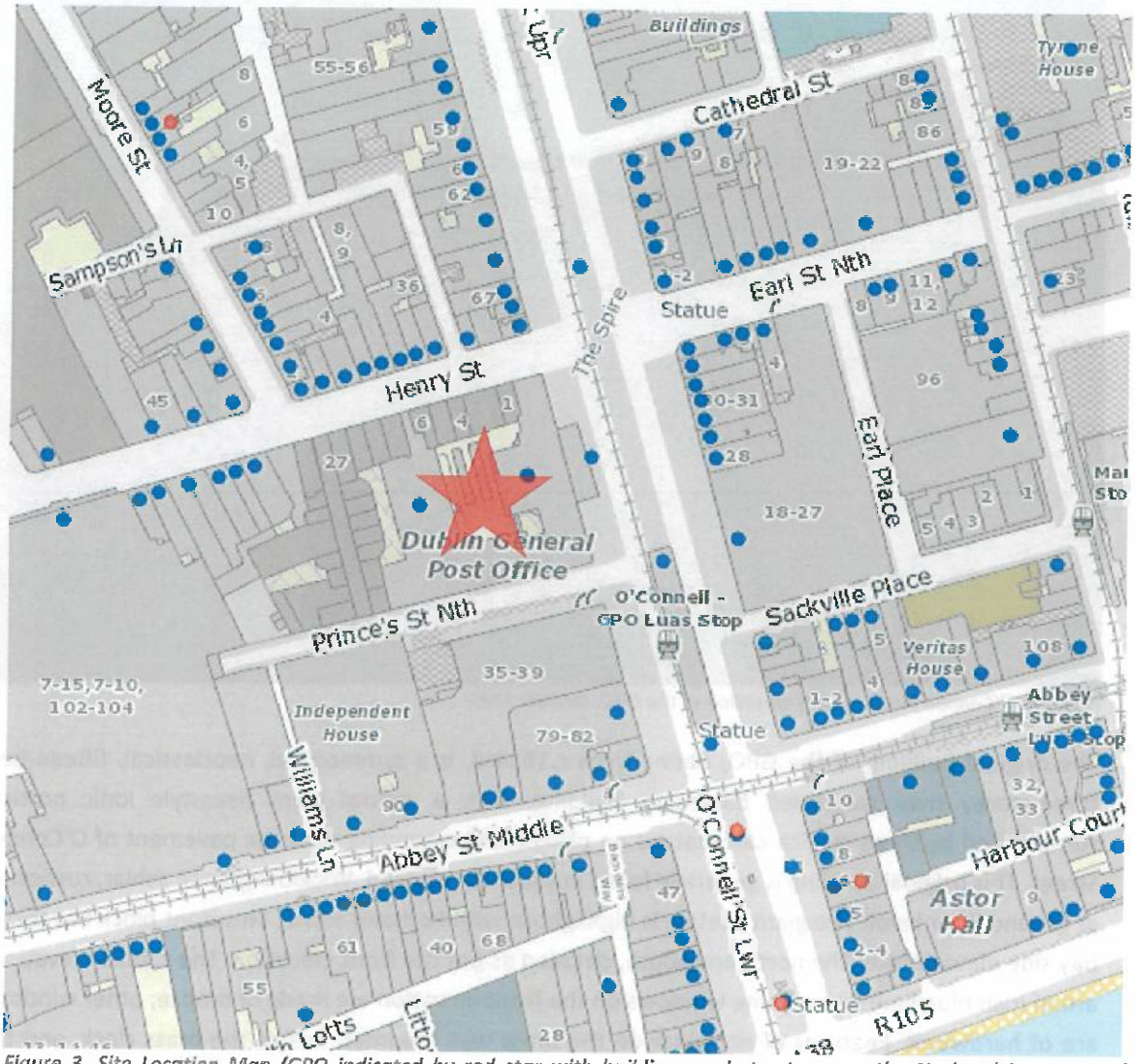

Figure 3. Site Location Map (GPO indicated by red star with buildings and structures on the National Inventory of Architectural Heritage (NIAH) marked in blue (Map extract from archaeology.ie with Ordnance Survey Base-map)

4.1 Property Location & Description

The **General Post Office (GPO)** is the headquarters of An Post and the principal post office of Dublin. It falls under the aegis of the Minister for Communications (now the Minister for the Environment, Climate Action, and Communications) and is situated on O'Connell Street in the centre of Dublin. This building is one of the State's most famous buildings as it served as the headquarters of the leaders of the 1916 Easter Rising against British rule in Ireland. The property also includes an arcade of shops to the rear.

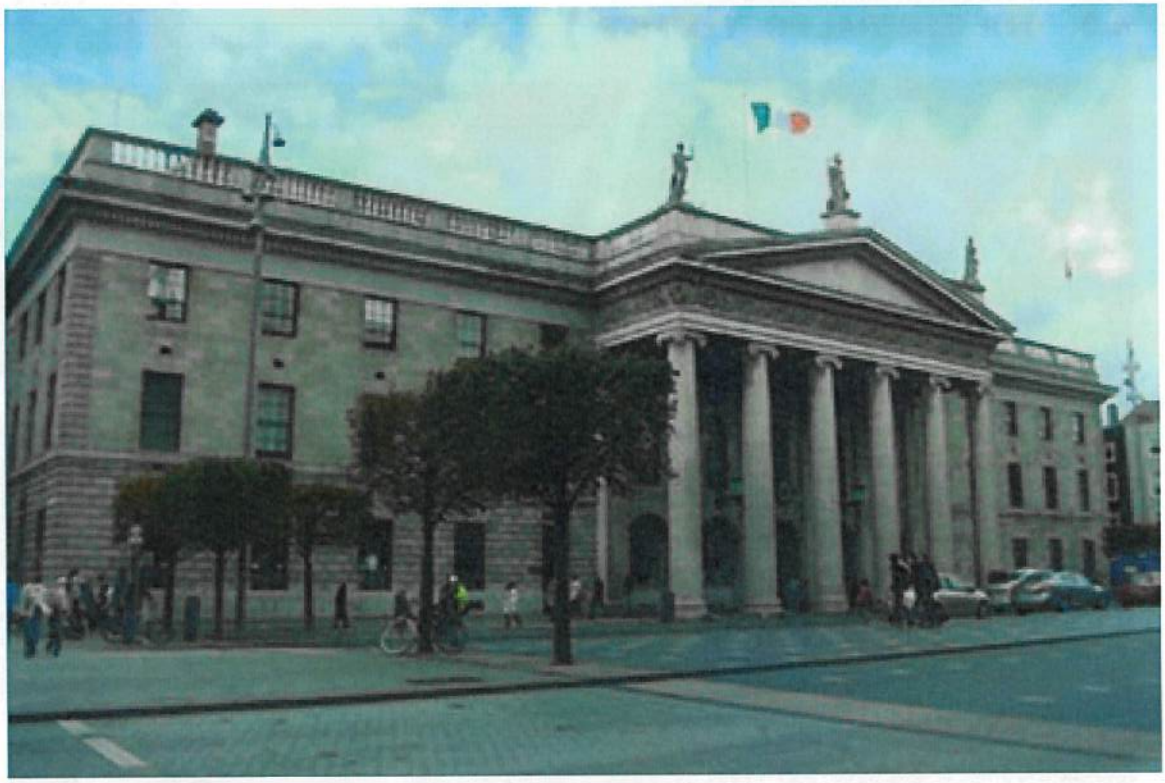

Figure 4. O'Connell Street (front) elevation of the GPO. IMAGE: NIAH

The original building of the GPO, dating from c.1814-8, is a symmetrical, neoclassical, fifteen-bay, three-storey over concealed basement building, with a central giant hexastyle Ionic portico, surmounted by three replica cast statues on plinths and extending onto the pavement of O'Connell Street. This original building is generally faced in squared, coursed, Wicklow granite ashlar, rusticated at ground floor level. The giant portico is highlighted with Portland stone. This front block has three-bay side elevations to the north and south, detailed as per the front elevation. The c.1925 elevations are of Irish blue limestone. Some windows on the front elevation are made of bronze; other windows are of hardwood. Features of note include the brass wall mounted lamps, the brass clock, and the bollards.

The late 1920s interior to the main hall features terrazzo floors, decorative Kilkenny limestone, pink marble, and Connemara marble piers with plaster egg-and-dart cornice below coffered ceiling with panelled beams and polished timber glazed entrance screens.

To the rear of the hall is a mezzanine level with iron balustrade, with the ground floor level extending into the rear courtyard and Connemara pilasters. There are elaborate polished timber counters with brass grilles to the rear with matching public writing desks and post boxes with brass embellishments in Empire style throughout the hall. The central window to the portico has a bronze sculpture of legendary hero Cúchulainn on a Connemara marble plinth by Oliver Sheppard.

Description based on NIAH Records.

The retained classical elevation and the limestone side elevations belie a modern structure. Any assessment of the building will need to be based on a full understanding of the construction and materials of the building, the effects of different period of building. Iron cramps secure stone to the

elevations. Bronze windows will be very inflexible. Historic glass is thinner and more fragile than modern glass. A complex roof relies on metal for waterproofing and will be vulnerable to movement. Extensive decorative plasterwork will be vulnerable to movement.

Figure 5. Portico surmounted by statues on O'Connell Street. IMAGE: NIAH

Figure 6. People walking on the pavement under the portico, with c.1929 bronze wall-mounted lamps; c.1929 bronze sash window; c.1929 interior.

The reconstructed public office, officially opened by President Cosgrave in 1929, is an Art Deco-flavoured neo-Classical interior that is of architectural significance in its own right and elevates the rebuilt GPO to more than a mere example of façade retention. A double-height room that encourages visual engagement and the sparse geometry of the pillared mezzanine screen echoes the pattern of the compartmentalised ceiling, whose Greek Key fret motif in turn alludes to the underside of the

portico. A more subtle recurring motif, the Irish Harp, forms the centrepiece of the mezzanine railing and is placed in line with the harp over the GPO clock.

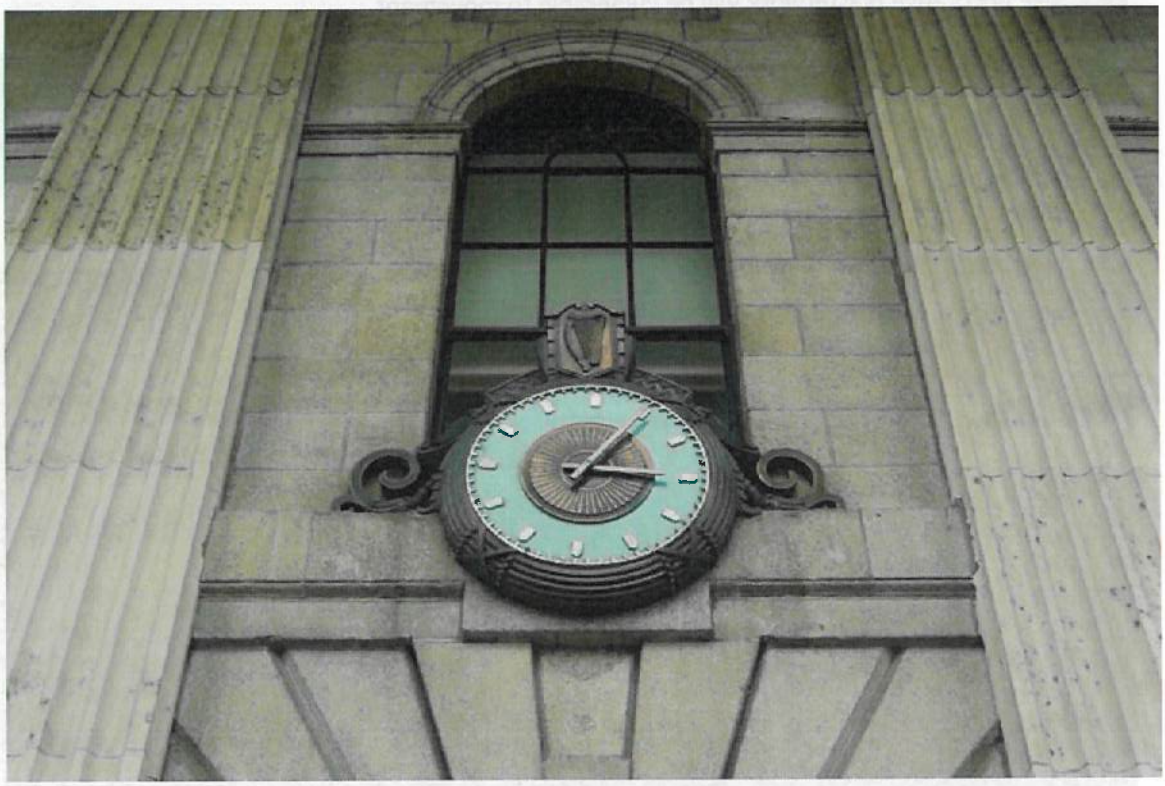

Figure 7. The GPO Clock

The following is a non-exhaustive list of building sensitivities to take into account in the Stage 3 and further assessments (construction and operation stage). We would recommend close liaison with GPO, Department and the OPW personnel at all stages of the project:

Building Sensitives

- Building structure and heterogeneity
  - The response of a building that combines early nineteenth century, early twentieth century. and likely late 20th century repairs and interventions may be difficult to predict.
  - The giant order portico surmounted by replica statues.
  - There may be differences in the stiffness of structures, iron and steel that will be present.
  - The presence of iron cramps/dowels fixing stone.
- Windows, rooflights
  - There are innumerable rooflights in the building complex which will be sensitive to movement – very fragile.
  - The arcades have fully glazed roof.
  - c. 1925 bronze windows with some original glass; bronze is very stiff.
  - c. 1925 hardwood windows, other early windows with early glass.

- Special finishes and features
  - Bronze wall mounted lights.
  - Bronze clock.
  - The statues surmounting the portico.
  - The bronze Cúchulainn sculpture.
  - Terrazzo floors.
  - Historic joinery, counters etc.
- Other aspects of note
  - Disturbance of ground water levels resulting from the excavation of the station; potential for impact on foundations, for dampness.
  - Monitoring of basements required.
  - Monitoring of roofs and flashing and rainwater goods to ensure they do not admit water to the building.
  - potential impact on sensor activated or sampling building systems.
  - Concern during construction stage of disturbance of rodents during the works to the nearby MetroLink Station box.

4.2 Historical Context/Conservation Status

The GPO is a three-phase building built c.1814-18, remodelled c.1905-15 and rebuilt c. 1925-26 by the OPW. In 1814, Francis Johnston designed the GPO in the Greek Revival Style, opening in 1818. Johnston's original design comprised a "U"-shaped building wrapping around a coach yard accessible via carriageways, opening off Henry Street to the north and Prince's Street to the south.

The front onto Sackville Street (now O'Connell Street) measured 223 feet long; the secondary fronts measured 150 feet. Standing three storeys tall and constructed of glimmering Golden Hill granite, boldly rusticated at street level, the centrepiece comprised a projecting Portland stone portico of six stop-fluted Ionic columns supporting an entablature, anthemion-detailed frieze, and pediment. The GPO first opened for business in January 1818 on what was then called Sackville Street (now O'Connell Street).

There are documented alterations to the exterior and interior of the GPO over the course of the nineteenth century. An extract from the Ordnance Survey published in 1847 shows a remodelled "T"-shaped entrance hall, the northern flank of which breaks into the octagon originally occupied by the Inland Sorting Office.[2]

In 1905-15, the building was remodelled to the designs of J. Howard Pentland.

[2] For further information please see *"The General Post Office, O'Connell Street, Dublin 1"* available at: https://www.buildingsofireland.ie/building-of-the-month/the-general-post-office-oconnell-street-dublin-1/

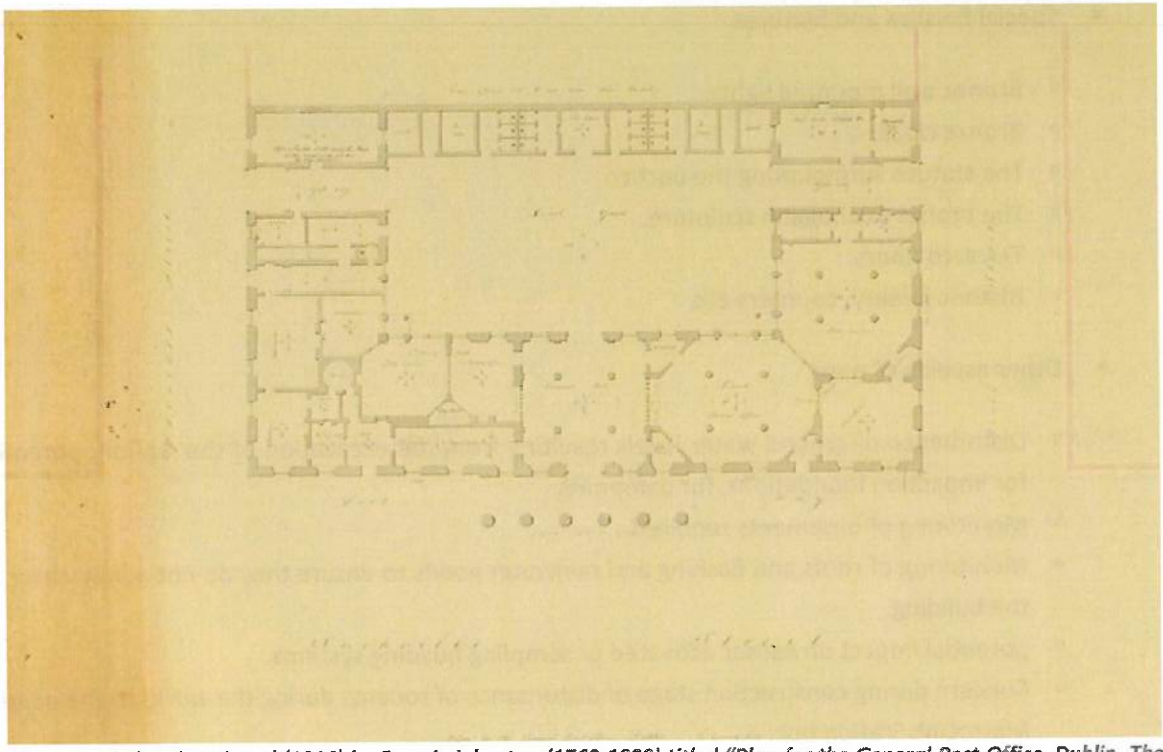

Figure 8. A drawing signed (1814) by Francis Johnston (1760-1829) titled "Plan for the General Post Office, Dublin. The Ground Floor" (Source: National Inventory of Architectural Heritage)

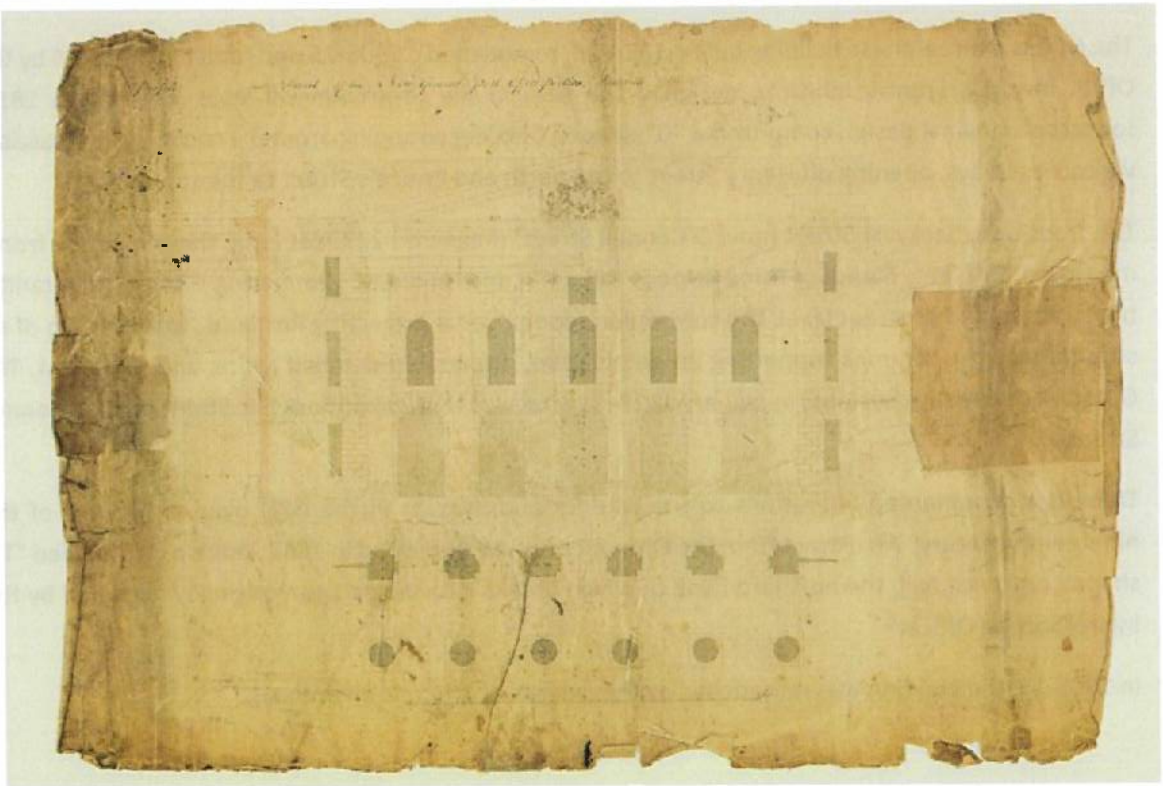

Figure 9. A drawing signed (1814) by Johnston titled "Profile and Front of the New General Post Office Portico Sackville Street" (Source: National Inventory of Architectural Heritage)

The Easter Rising

The building was most famously the stronghold of Patrick Pearse and his rebels in the 1916 Easter Rising and, along with much of O'Connell Street Lower, was reduced to a burnt-out shell. The building was only cleared of debris in 1924 when the Free State Government approved reconstruction plans, carried out principally by T.J. Byrne and J. Fairweather and reopened in 1929.

The sumptuous neoclassical interior is of major architectural importance in its own right and elevates the historic building to more than a mere example of façade retention. As the site of the Proclamation of the Irish Republic by Patrick Pearse and as a monument to the struggle for Irish independence, the building is a reminder of the seminal conflict that changed the course of Ireland's history.

Relics of particular conservation importance are the small scars and bullet holes in the main façade, columns and portico sustained during the Rising. Although the building was extensively restored and altered, Johnston's principal elevation was retained and the Giant Ionic portico remains the focal point of Dublin's principal thoroughfare, recently enhanced by the formation of a plaza to the front. The site and the building represent both the colonial and republican aspects of Ireland's history while continuing to serve its civic function as originally intended.

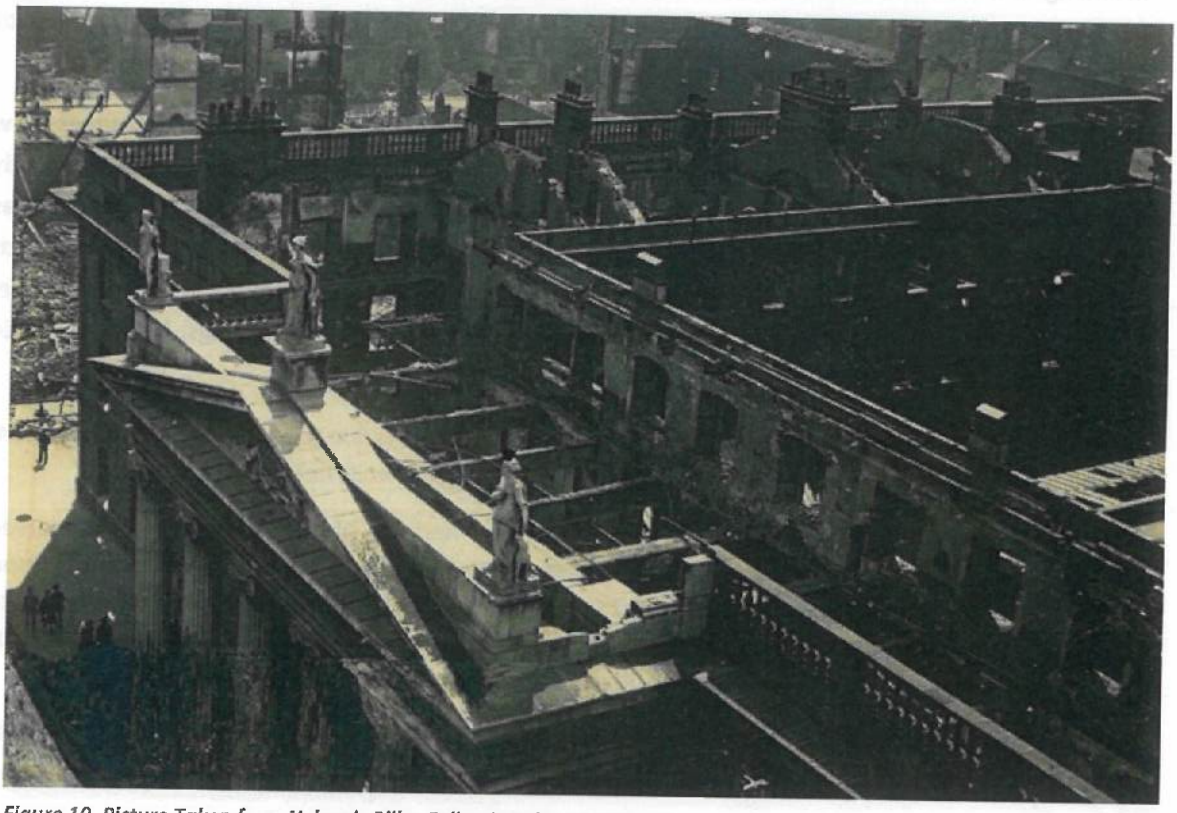

Figure 10. Picture Taken from Nelson's Pillar Following the 1919 Rising

Table 1. GPO RPS Nos. (Dublin City Development Plan 2022-2028 Record of Protected Structures) and NIAH References

Structure	RPS No.	NIAH Ref	Rating	NIAH Categories
The General Post Office (incl. GPO Buildings, Nos. 1-6 on Henry Street)	6010	50010528	National	Architectural, Artistic, Cultural, Historical, Social
GPO Buildings/GPO Arcade (26-30 Henry Street)	8746 8747 8748 8749 8750	50010500	Regional	Architectural, Artistic, Historical, Social
Two upright bollards and six dome-head bollards at GPO kerb line	6011	50010527	Regional	Artistic, Technical

4.3 Current Use/Uses

Today, the building functions as the principal post office of Dublin and there is also a Visitors' Centre to commemorate the 1916 Rising called 'GPO Witness History'. The attraction has won awards including the Michelet Award at the European Museum Academy Awards (2017) and Best Cultural Experience at the Irish Tourism Industry Awards - over 100,000 people (2017). The GPO is a symbol of freedom for the Irish Republic and a place for commemoration of the major events in Irish history.

The GPO complex is vested in the Minister for Communications, Energy and Natural Resources (now the Minister for the Environment, Climate and Communications). Certain land and property formerly owned by the postal service when it was part of the Department of Posts and Telegraphs was transferred to Arcade Properties Ltd, a subsidiary of An Post, under Section 40 of the P&T Services Act, 1983. This includes a number of retail premises let on long leases on Henry Street and the GPO Arcade. The An Post property holdings includes: the GPO Building, No's 1- 6 GPO Buildings, No's 1- 8, 10-14 and No. 16 GPO Arcade and No's 24, 25, 27, 28, 29 and 30 Henry Street.

An Post occupies the GPO Building under a 50-year licence, which is due to expire on 1st January 2034. Ahead of this, the company is seeking to move to a new purpose-built headquarters.

The GPO will remain in State ownership. The rich cultural heritage of the building will be preserved through continued operation of the historic post office and the museum on the ground floor. Sympathetic to development elsewhere on O'Connell Street, the upper floors will be refurbished to provide office accommodation for civil servants. The renovations will serve as an exemplar for improved energy efficiency in heritage-sensitive public sector buildings.

Uninterrupted access to the building is necessary at all times for the conduct of business and for access by emergency services (e.g., fire services and ambulance).

The OPW and/the State, and their authorised agents, require access to the building at all times for the purpose of facilities management, maintenance, repairs and any major conservation, repair or development programs planned, or as may arise during the construction period of MetroLink.

4.4 Planning Context

In terms of the planning history pertaining to the subject property and the surrounding area, in particular recent and live application(s) with an expected notable impact, and as outlined in the

Planner's Report of the Draft Railway Order 2022, *"No planning applications are affected by the tunnel alignment between St. Stephen's Green Station and Charlemont."*

It must be noted that there are currently no live planning applications pertaining to the GPO. However, there are live applications near the site on O'Connell Street which are relevant. Most notably relating to Clery's Quarter and Dublin Central – which if approved will facilitate the O'Connell Street MetroLink Station. The applications associated with Clery's Quarter are as follows:

- **Reg. Ref 3442/16:** By Order dated 8th December 2016 Dublin City Council approved a mixed-use scheme for the refurbishment, extension, and partial change of use of the Clery's Building at 18-27 O'Connell Street Lower. Mix uses approved on site include retail, restaurant, café, hotel, and offices.

Works have commenced on site and several compliances have been submitted by the developer and approved by Dublin City Council. Design amendments have also been approved on site under Reg. Ref 3933/19 and Reg. Ref 3576/21. Moreover, the Clery's Quarter (Reg. Ref 3442/16) was granted an extension of duration of planning permission until 28th July 2025. Furthermore, there are now 2 no. live planning applications on the Clery's site as follows:

- **Reg. Ref 4995/22:** By Order dated 29th November 2022, Dublin City Council approved planning permission for "Flannels" signage comprising 3 distinct types as indicated on drawings; (ii) proposed window bed display areas and internally mounted feature stainless steel chamfered window surrounds; (iii) proposed security shutters to open window bed areas as indicated on drawings (design pursuant to Condition 12 of application reference 3442/16 (as extended under 3442/16/x1). All works to facilitate the proposed development.
- **Reg. Ref 5171/22:** By Order dated 13th December 2022, Dublin City Council granted planning permission for amendments to the permitted development Reg. Ref. 3442/16 as extended. Permission for a restaurant use in a unit of 65 sq.m facing Earl Street North. Construction is now nearing completion and permission is sought that this unit be used for restaurant use as originally applied for. It will now be used as a restaurant in association with the adjoining corner unit facing Earl Stret North and Earl Place (111sq.m ground floor with supporting basement area of 80 sq.m.) already approved as a cafe/restaurant, so as to form a single licensed restaurant with a floor area of 256 sq.m.

Dublin Central is a regeneration project relating to lands encompassing a new quarter on O'Connell Street, Moore Street and Henry Street.[3] The live applications relating to Dublin Central are as follows:

- **Reg. Ref. 2863/21 (ABP-313947-22):** By Order dated 23rd June 2022, Dublin City Council granted permission to Dublin Central GP Ltd. for "for a period of 15 years at a site. The proposed development comprises: - A mixed-use scheme in a single building ranging in height from 2 - 6 storeys (top floor set back) over single storey localised basement. Provision of part of a new public plaza and associated temporary works pending completion of the combined plaza with

[3] For further information on Dublin Central please visit: https://dublincentral.com/

the concurrent planning application for the adjoining Site 4 immediately to the south. An Environmental Impact Assessment Report (EIAR) accompanies this application" on lands at 22-25 Moore Street, 13 Moore Lane, 14-15 Moore Lane, Dublin 1. Subsequently, a third-party appeal was lodged on 30th of June 2022, and the case is currently under review by the Board.

- **Reg. Ref. 2862/21 (ABP-312642-22):** By Order dated 12th January 2022, Dublin City Council granted permission to Dublin Central GP Ltd. for "7 years to include: 15 apartments, cafe/restaurant with takeaway facility, cultural use and office use, conservation/preservation works. An Environmental Impact Assessment Report (EIAR) accompanies this planning application" on lands at 10-13 & 18-21 Moore Street, 5A Moore Lane & 6-7 & 10-12 Moore Lane & 17-18 Henry Place, Dublin 1. Subsequently, a third-party appeal was lodged on 14th February 2022, and the case is currently under review by the Board.

- **Reg. Ref. 2861/21 (ABP-312603-22):** By Order dated 12th January 2022, Dublin City Council granted permission to Dublin Central GP Ltd. for "Hotel, 1 restaurant/café with takeaway facility, retail units: shop/café with takeaway, retail units/shops. 79 Build to Rent Apartments, 1 two-storey building for cultural / gallery use with restaurant / cafe. All associated and ancillary site works including repairs, refurbishment & conservation works. An Environmental Impact Assessment Report (EIAR) accompanies this application" on lands at 36-41 Henry Street, 1-9 Moore Street, 3-13 Henry Place, Charles Court & Mulligan Lane, Dublin 1. Subsequently, a third-party appeal was lodged on 31st January 2022, and the case is currently under review by the Board.

The most recent application lodged to Dublin City Council in relation to the regeneration of O'Connell Street, was submitted on the 26th of October 2022 under Reg. Ref. 5126/22 and by order dated 13th December 2022, Dublin City Council requested Additional Information. This is a mixed-use scheme which has provision for a hotel, licensed restaurants, cafés, and retail, as well as the conservation, repair, refurbishment, and adaptive reuse of part of the existing building fabric. As par statutory notice the conservation and repair works include:

> *"Retention of part of the rear of No. 59 O'Connell Street Upper (known as the 'Reading Room') internal and external modifications and new shopfronts; Retention of the facades of Nos. 57 – 58 O'Connell Street Upper (Protected Structures); Retention of the facades of Nos. 52 – 54 O'Connell Street Upper (Carlton Cinema – Protected Structures) including the reinstatement of the canopies; Retention of the facades of Nos. 43 – 44 O'Connell Street Upper (Protected Structures); Retention of the facade of No. 45 O'Connell Street Upper; Works to include repair and upgrade works (where required) of retained masonry, external and internal joinery, plasterwork and features of significance; Conservation and repair of existing lightwells on O'Connell Street Upper; Demolition of all other existing buildings and structures on site (c. 22,521 sq. m) including No. 13 Moore Lane and No. 14 Moore Lane (otherwise known as Nos. 1 – 3 O'Rahilly Parade and Nos. 14 – 15 Moore Lane or Nos. 1 – 8 O'Rahilly Parade and Nos. 14 – 15 Moore Lane) to facilitate a temporary construction compound; Laying of services in Parnell Street westwards from Moore Lane for approximately 49 metres".*

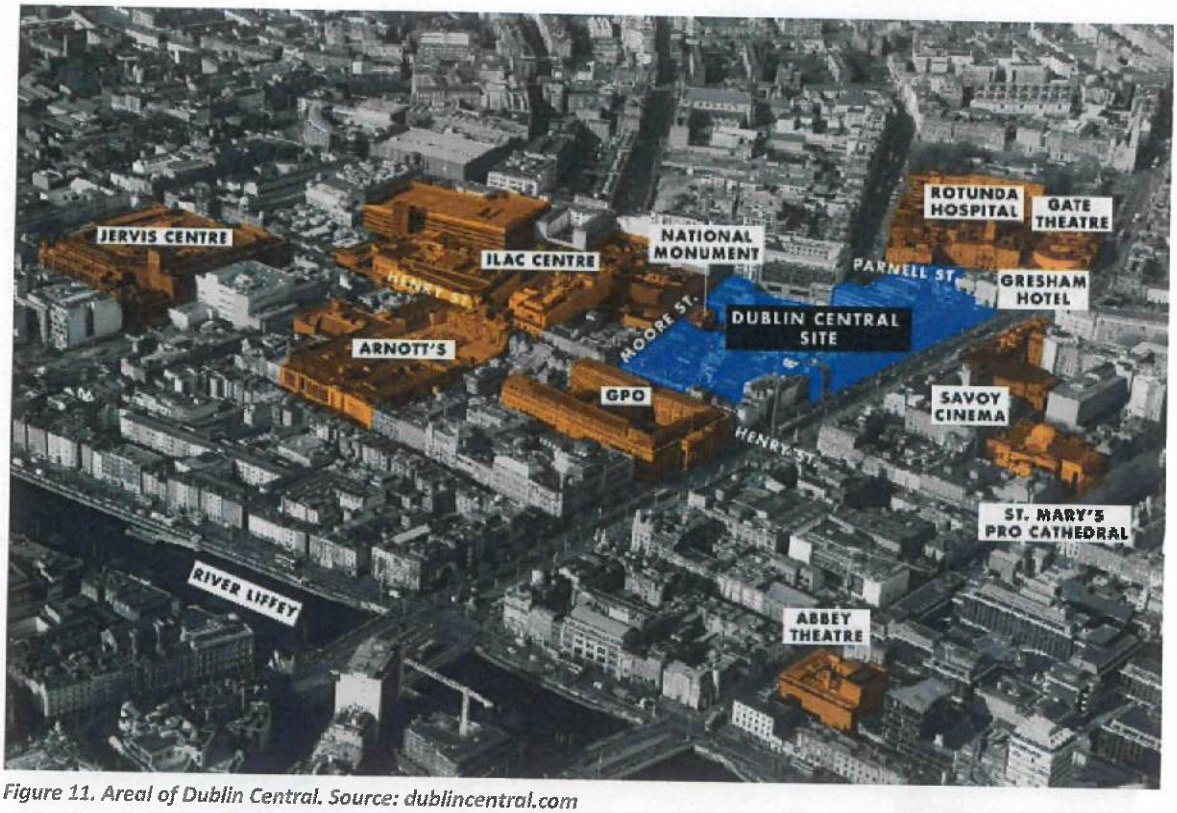

Figure 11. Areal of Dublin Central. Source: dublincentral.com

It must be noted that Upper O'Connell is the proposed location for the O'Connell Street MetroLink Station and is within the proposed development boundary of Dublin Central regeneration project. While the Transport Infrastructure Ireland station will be subject to a separate application, provision has been made for the future location of the station under Reg. Ref. 5126/22, as stated within the statutory notice:

> *"A structural box (120m length, 26m width, 34.5m depth) beneath the ground floor level that has been designed to accommodate the independent construction and operation of the planned O'Connell Street MetroLink Station by Transport Infrastructure Ireland, including provision of the structural envelope and co-ordinated voids to accommodate station entrances, ventilation, and fire escape shafts through this part of the Dublin Central proposed development. These ensure that the Dublin Central proposed development is structurally independent of, and not prejudicial to, the MetroLink project. The MetroLink project will be the subject of a separate application for approval to be made by Transport Infrastructure Ireland. This part of the Dublin Central proposed development is referred to as the MetroLink Enabling Works".*

The proposed development under Reg. Ref. 5126/22 provides for the construction of a "bare" station box for the O'Connell Station, known as the MetroLink Enabling Works (MEW). There are items within Dublin City Council's Additional Information request relating to the enabling works timeline and the proposed demolition & excavation methodology. The applicant will have a 6-month statutory timeframe to respond, unless extended.

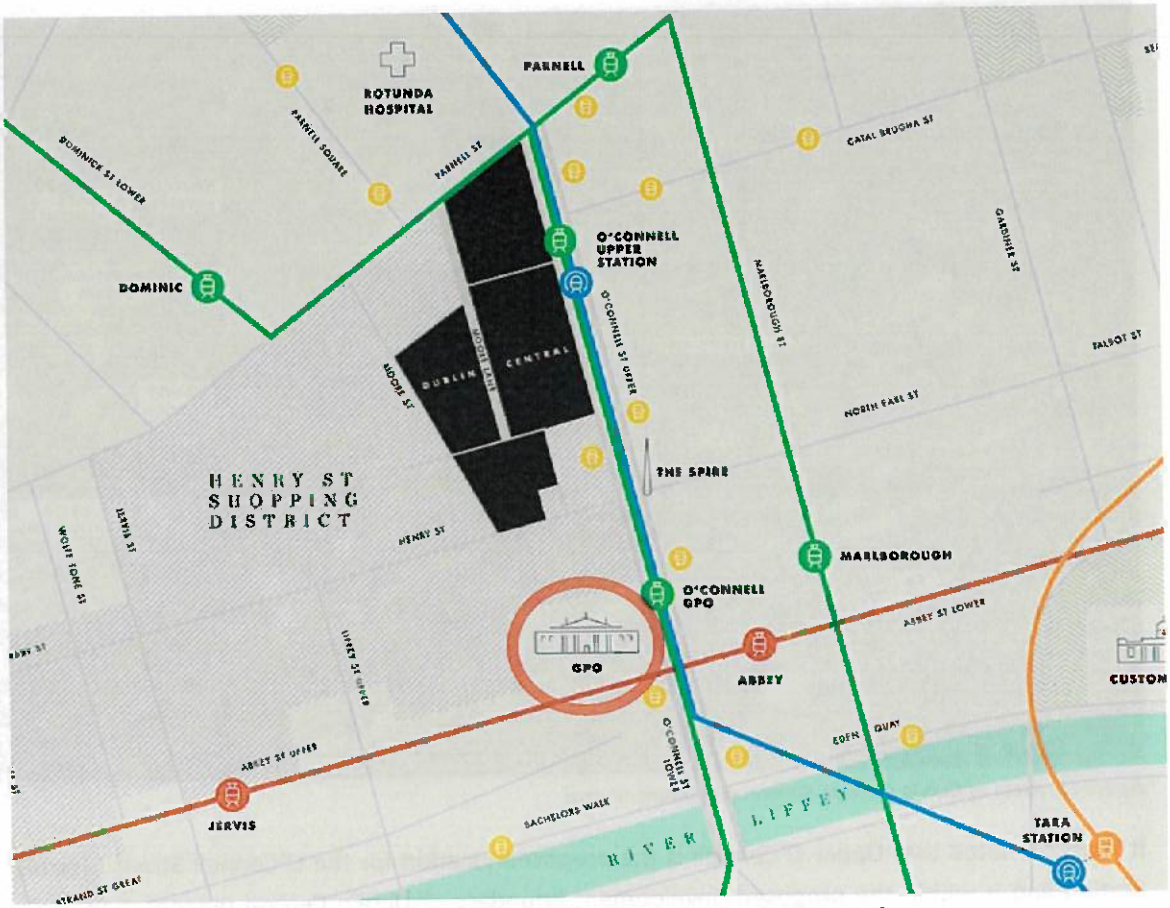

Figure 12. Location of Dublin Central. GPO identified within red circle. Source: dublincentral.com

The Clery's Development and the proposed Dublin Central regeneration are large-scale schemes that would transform O'Connell Street. Moreover, the permissions sought under the Dublin Central proposal seek planning permission for periods of 7 and 11 years. Furthermore, the latest planning proposal includes infrastructure provisions to accommodate the independent construction and operation of the planned O'Connell Street MetroLink Station by Transport Infrastructure Ireland.

In relation to the Draft Railway Order's consistency with planning policy and planning guidelines, a non-exhaustive list of planning policy, legislation, and guidelines, is included in Appendix 1 of this submission, to which the Board are invited to refer for further details. We would respectfully request that An Bord Pleanála ensure that TII have fully assessed the Project with regard to existing planning policy, as well as adherence to the relevant local policies and guidelines pertaining to each individual property.

DOWNEY note that this proposed Draft Railway Order is a strategic long-term development and An Bord Pleanála may consider Draft Development Plans in assessing the Project. It is also crucial to note that on foot of a granted Order and during the detailed design stage, a revision to planning policy is expected, whereby adopted plans and legislation may have to be adhered to within this stage. This may require an amendment to the Railway Order and further assessment, including public consultation.

4.5 Potential Development of the Property

This building itself is a protected structure under the Dublin City Council Development Plan 2022 to 2028 and a property of national importance in a sensitive location. The OPW reserves the right to develop the subject property in the future, including property above and below ground, subject to normal planning criteria. It is important that the development of the MetroLink does not interfere with extant planning permissions pertaining to the subject property and the right of the applicant to develop the property, in advance, in tandem or post operation of the MetroLink Project.

5.0 MATERIAL CONSIDERATIONS

The alignment drawing ML1-JAI-EIA-ROUT_XX-DR-Y-04024 and the Contour drawing ML1-JAI-EIA-ROUT_XX-DR-Y-21146 show different alignments. This error has resulted in deficient information within the SID application submitted under Section 2 of the Planning and Development Act 2000 (as amended), to assess the vulnerability of damage due to vibration cause by both tunnelling and operation of underground train on this section of the alignment. This affects several buildings under the management of the OPW particularly with Kildare Street, Merrion Square and St. Stephen's Green areas.

6.0 LEGAL CONSIDERATIONS

The Commissioners of Public Works would seek to enter into appropriate, property-specific legal agreements with TII, to ensure the protection of key State property and of the State's activities undertaken within those and other properties. Given the importance of such properties and activities, the Commissioners of Public Works consider it appropriate that An Bord Pleanála would make the Railway Order conditional on such legal agreements being in place between TII and the OPW. Creating such legal agreements between TII and the OPW would be possible only after TII make available the more detailed design and risk-mitigation measures for the construction and operational phases of the MetroLink project, and before any development begins. Therefore, the Commissioners of Public Works would request that this aspect be reflected in the conditions set out by An Bord Pleanála to TII, as this would provide assurances to the Commissioners of Public Works relating to future legal agreements that protect and secure State property and activities from risks associated with the construction or operations of the MetroLink.

7.0 ENGINEERING CONSIDERATIONS

This Section will cover the technical information from the engineers as it relates to the property.

7.1 General Considerations

7.1.1 Route Alignment

The MetroLink 8.5m ID running tunnel passes approximately under the GPO and this building is situated approximate 120m from O'Connell Street station Box. The alignment drawing ML1-JAI-EIA-ROUT_XX-DR-Y-04024 and the Contour drawing ML1-JAI-EIA-ROUT_XX-DR-Y-21146 show the alignment and the predicted ground movement.

Many of the reports refer to chainages along the alignment. However, there are no plans that indicate these chainages, and this makes reviewing the Railway Order and EIAR difficult.

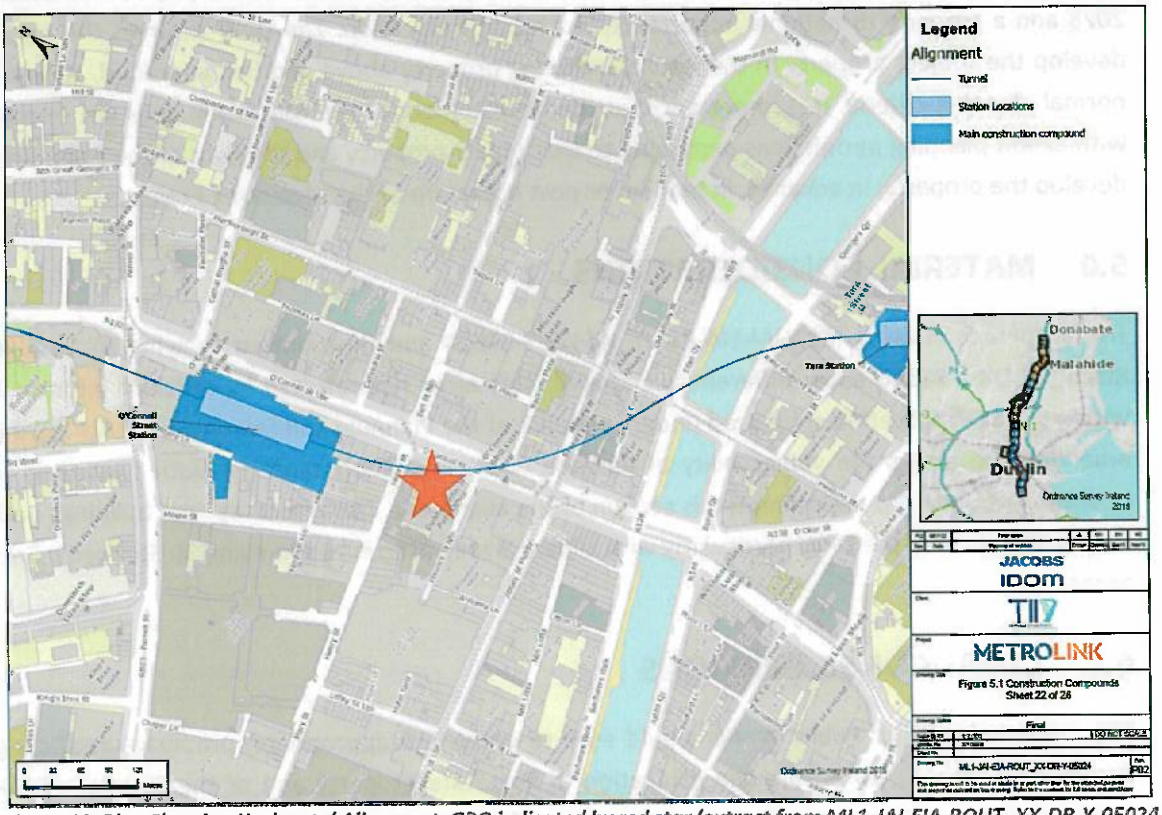

Figure 13. Plan Showing Horizontal Alignment, GPO indicated by red star (extract from ML1-JAI-EIA-ROUT_XX-DR-Y-05024

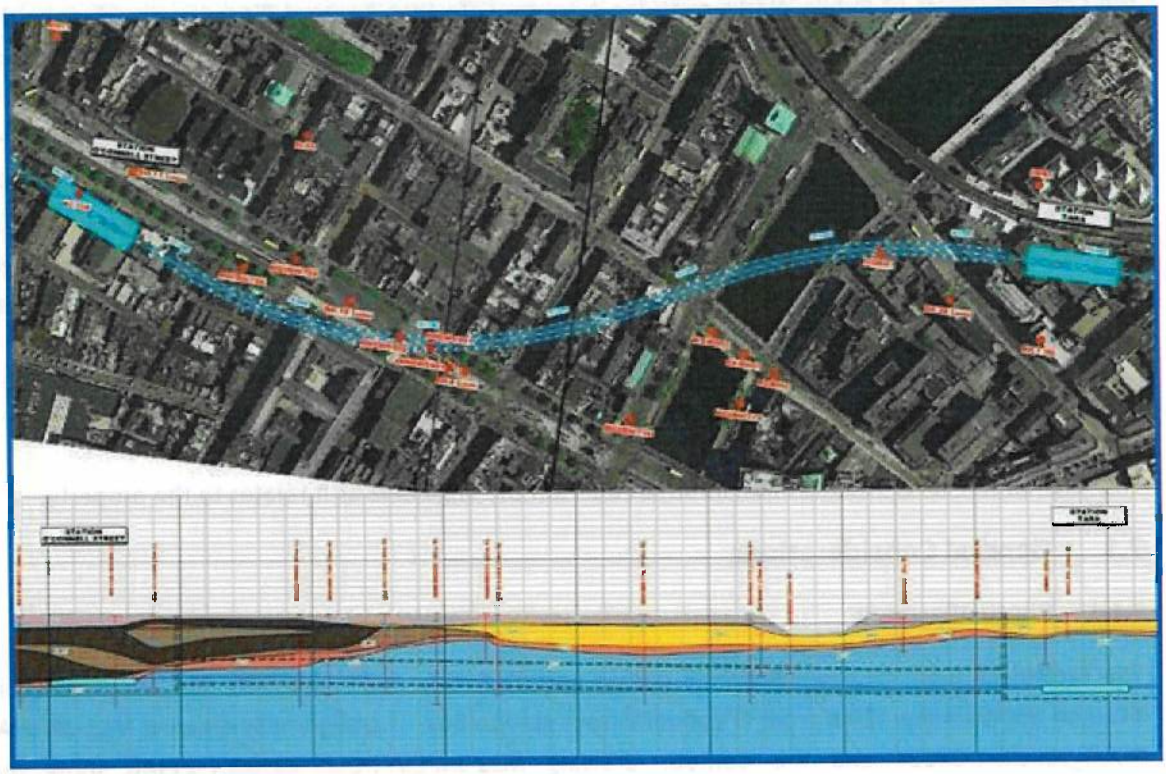

Figure 14. Geological Section

Beneath the GPO O'Connell Street, the proposed MetroLink will be excavated through Argillacous Limestone rock (CLU) underlying Weathered Rock (QTR) underlying Brown Boulder Clay (QBR) containing extensive fluvio-glacial sands and gravels. Cover to the tunnel crown is approx. 23m comprising Brown Boulder Clay. The invert will be excavated through both weathered and unweathered limestone. This will present a significant challenge to ground movement mitigation using tunnel management.

7.1.2 Tunnelling

The MetroLink 8.5m ID tunnel will be excavated by Tunnel Boring Machine (TBM). The ground conditions along the route are variable and therefore the machine could be either Earth Pressure Balance (EPB) or Slurry (STB). A modern Variable Density TBM would also be suitable and is currently being used in the UK for similar ground conditions. All these machines are able to control the ground movement with appropriate tunnel management. The C7 drive between O'Connell Street and Tara Station will start with a mixed face of rock and soil.

7.1.3 Station Excavation

The GPO O'Connell Street is situated approximately 120m from O'Connell Street Station Box. The excavation of the Station will be through Brown Boulder Clay, Weathered Rock, and Argillaceous Limestone. The excavation through the limestone will most likely include blasting, which is unlikely to affect the GPO O'Connell Street.

7.2 Programme Overview

Overall Project duration 9 years

Station construction 3 to 6 years

Tunnelling – Airport Tunnel 30 months, City Tunnel 45 months.

7.3 Contractual Arrangement

TII intend to procure the detailed design and construction of the proposed Project using Design and Build contracts that will be divided up by geographical section and by type of works. Under this form of contract, the contractor(s) will ultimately be responsible for the final detailed design of the proposed Project and for preparing a more detailed Construction Environmental Management Plan (CEMP) for each specific package of works, as outlined in Section 1.3.

The contractor(s) appointed will be responsible for the organisation, direction, and execution of environmental related activities during the detailed design and construction of the proposed Project. The contractor(s) is required to undertake all activities in accordance with the relevant environmental requirements including the consent documentation and other regulatory and contractual requirements.

8.0 POTENTIAL IMPACTS ON THE PROPERTY

DOWNEY and Gall Zeidler have carried out an examination of the property subject to this submission. Having regard to the status and current use of the property and identified constraints, the following

raises concerns regarding potential impacts of the MetroLink on the property. This has been elaborated to include potential impacts during the construction and operation phases of developing MetroLink, as well as any impediments and/or implications for future development of the property.

8.1 Monitoring

Given the sensitivity of the uses within this property, coupled with its historic importance, we request that An Bord Pleanála attach a condition to the Railway Order that ensures continuous monitoring of the property to prevent any negative impacts. Access to all properties must be agreed in advance with the owner, occupier and the OPW. It is recommended that this monitoring takes place at least 3 months in advance of the construction of the Project and throughout the operational stage of the MetroLink.

8.2 Security Issues

Given the nature of the State properties affected by the Project, we would respectfully refer An Bord Pleanála to Part XI of the Planning & Development Act 2000 (as amended), which states that:

> *"Development by State authorities. 181.—(1) (a) The Minister may, by regulations, provide that, except for this section F902[and sections 181A to 181C], the provisions of this Act shall not apply to any specified class or classes of development by or on behalf of a State authority where the development is, in the opinion of the Minister, in connection with or for the purposes of public safety or order, the administration of justice or national security or defence and, for so long as the regulations are in force, the provisions of this Act shall not apply to the specified class or classes of development.*
>
> *b(iii) the making available for inspection by members of the public of any specified documents, particulars, plans or other information with respect to the proposed development;"*

It is essential that security issues do not arise in the event of sensitive information being shared on the structure and operation of these properties. However, the OPW understands the importance of the detailed design stage of the Project and the wish to ensure that the detailed assessment of these properties takes place in the early stages of the design process, in conjunction with the OPW, to ensure that these sensitive State buildings are not negatively impacted upon by the proposed Project. The OPW will liaise with TII and An Bord Pleanála on this matter.

All employees contracted to work on behalf of the TII on this Project, and any associated works, must adhere to the properties protocol around access, security, and safety. This applies to all persons entering or working in proximity of the property.

The day-to-day operations of the property cannot be interrupted by disruptions to any utilities.

The design and operation of the MetroLink should be in line with best international practice, in relation to anti-terrorism and security measures.

8.3 During Construction of the MetroLink

This building is Dublin city's primary postal office and is a cultural hub & museum. Furthermore, it is a protected structure and of nationally significant heritage/historical value. It provides functional spaces, kiosks & offices. As such, the impact of any proposed works in terms of noise and vibration need to be carefully considered. The area surrounding the property is also used for State commemorations and must continue to be available for same.

8.3.1 Ground Movement

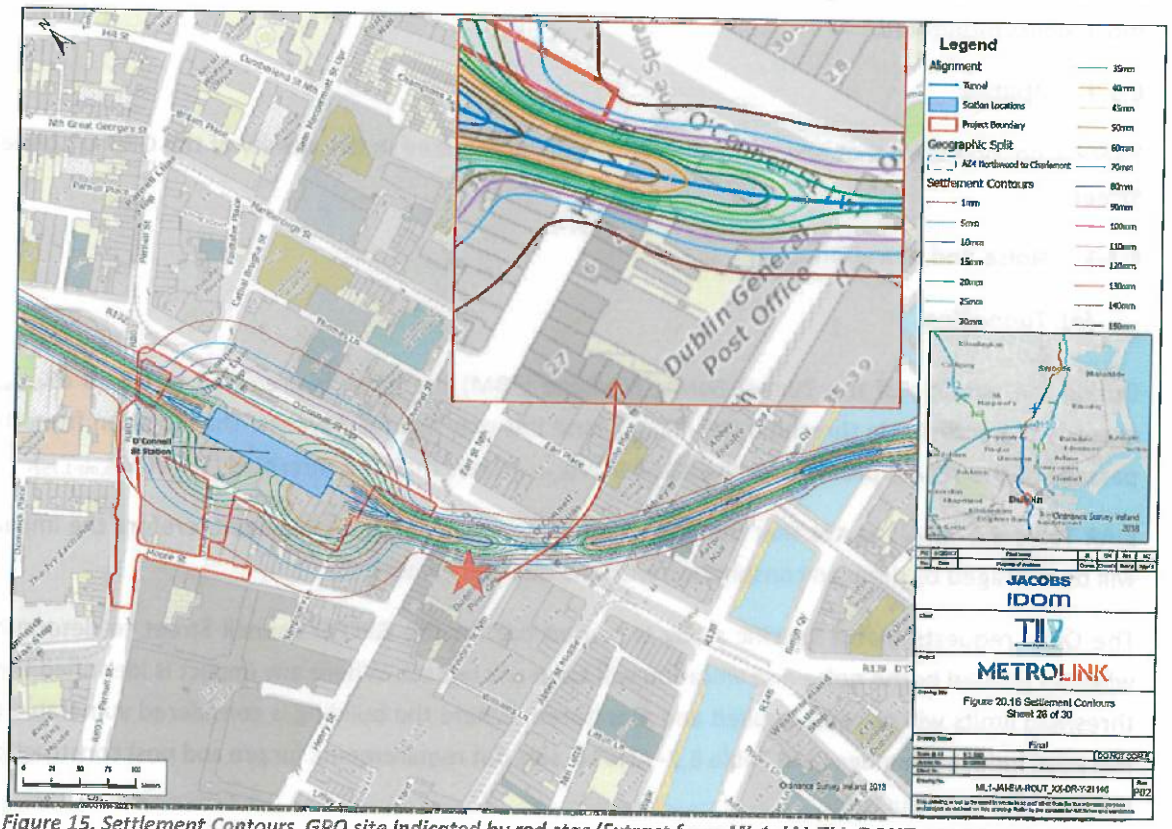

Figure 15. Settlement Contours, GPO site indicated by red star (Extract from ML1-JAI-EIA-ROUT_XX-DR-Y-21146)

Stage 1: Defines extent of ground movement using Moderately Conservative parameters. The parameters considered by MetroLink are:

- Volume Loss, $V_s = 1.5$
- Trough Width parameter, $k = 0.3$

The Volume Loss is considered moderately conservative. However, the trough parameter is very narrow and 0.4 could be considered more conservative.

The extent of the zone of influence is defined by the 1mm contour line (Dark Red) and the GPO O'Connell Street lies within the zone of influence and will be subject to up to 50mm settlement.

Stage 2: The ground movement impact on the GPO O'Connell Street (B-67) is identified in EIAR A5.17. This states that risk of damage is 1, Very Slight

Stage 3: Detailed Assessment; a Stage 3 assessment is required for this building.

Stage 4 (Construction Stage): Mitigation may be required for this building and therefore the OPW expects to be consulted. The OPW expects that pre-construction defect surveys and monitoring are carried out for this building. The OPW requests that only Engineers or Surveyors with proven competence in regard to (historic) buildings of this fabric type, period and nature are selected.

Stage 5 (Close Out): Once the excavation (tunnelling and station excavation) has been completed then the Contractor will want to decommission his monitoring. The OPW will expect to be provided with close out reports for the monitoring of their property. As a minimum, the close out report should include details of any mitigation carried out, a list of any repairs, time history graphs showing the movements monitored.

8.3.2 Utilities

There is no indication that any utility diversions will be required in the vicinity of the GPO O'Connell Street.

8.3.3 Noise and Vibration

(a) Tunnelling

During the passage of the Tunnel Boring Machine (TBM) the noise is predicted to be 50 $dB_{LAmax,s}$ exceeds the acceptable threshold (45 $dB_{LAmax,s}$)and this may last for 2 weeks. The vibration from the passage of the TBM is predicted to be 0.154 $VDV_{db,ms-1.75}$ less than the threshold (1.6 $VDV_{db,ms-1.75}$).

EIAR Table 6.2- GNV1 states that there is no effective mitigation available and therefore the impact will be managed by detailed consultation with the building owners.

The OPW requests that a specific study is carried out for the GPO O'Connell Street to determine whether ground borne noise and vibration will have any impact. Where any impact is identified then threshold limits will need be applied and monitored. Where the building is considered vulnerable to vibration induced damage EIAR Table 6.2- ANV16. sets out requirements for pre and post construction surveys of these structures.

(b) Station Excavation

GNV2 states that monitoring of blasting and re-optimising the blast design (minimising the explosive charge considering the results) will be carried out as standard. A5.20 Blasting Strategy provides information on the classification of buildings and potential damage due to blasting for the station excavations. There are also calculations for estimated magnitude of the peak particle velocity (ppv) for various explosive charges. The assumption is that the lowest charge would be implemented to avoid damage.

The GPO O'Connell Street is located approximately 100m from O'Connell Street Station excavation and the peak particle velocity is predicted to be less than 1mm/s. The OPW requests a specific assessment of the impact of blasting on GPO O'Connell Street.

8.3.4 Work Sites

(a) Dust

Appendix A16.4 EIAR requires that a Dust Management Plan must be produced and implemented. The tunnelling will not generate dust in the vicinity of the GPO O'Connell Street. The station construction site is 100m from the GPO O'Connell Street and therefore dust from these constructions sites is likely to affect this building.

(b) Ground Water Control

There is the potential for ground water lowering for the construction of O'Connell Street station to impact GPO O'Connell Street. The OPW requests that TII provides an assessment and limits that will be applied to dewatering for the Construction of O'Connell Street Station.

(c) Working Hours

Tunnelling: Working Hours will be 24 hours a day, 7 days a week for the tunnelling works using a 3x8hr shift pattern, with a total of 4 crews.

Station Excavation: Working Hours will be:

Working Hours will be:

- Monday to Friday: 07:00 to 19:00
- Saturday: 07:00 to 13:00

Deliveries: It is assumed that HGV vehicle delivery times to the tunnelling sites will generally be restricted to:

- Monday to Friday: 07:00 to 19:00
- Saturday: 07:00 to 13:00

(f) Intervention Strategy

There will be interventions that are planned to avoid sensitive receptors. Approval process will be implemented. Unplanned interventions will be unavoidable.

(g)Traffic

There will be significant traffic diversions required to construct O'Connell Street station site that will impact personnel and clients attending the GPO O'Connell Street.

(h)Lorry Movements

Tunnelling advance rate 80-120m/week.

8.4 During Operation of the MetroLink

8.4.1 Noise and Vibration

TII proposes to mitigate the noise and vibration resulting from the railway operations by installing a resilient track slab to meet threshold of 35 $dB_{Lamax,\ s}$ and VDV = 0.0.009 $m/s^{1.75}$respectively. The vibration during railway operations will not impact the building fabric or structure.

8.5 Future Development

The OPW reserves the right to develop the subject property in the future, including property above and below ground, subject to normal planning criteria.

It is important that the development of the MetroLink does not interfere with extant planning permissions pertaining to the subject property and the right of the applicant to develop this property, in advance, in tandem or post operation of the MetroLink Project.

9.0 CONCLUSION

This submission has been prepared by DOWNEY, Chartered Town Planners, 29 Merrion Square, D02 RW64, in conjunction with Gall Zeidler, International Consulting Engineers specialising in tunnel and underground schemes, on behalf of the Commissioners of Public Works in Ireland, OPW Headquarters, Jonathan Swift St, Trim, Co Meath and on foot of extensive consultation(s) with the OPW's clients, which relates to the MetroLink route and its relationship with the General Post Office (GPO), O'Connell Street Lower, Dublin 1.

With reference to the Draft Railway Order 2022 (MetroLink - Estuary to Charlemont via Dublin Airport), the OPW welcomes this strategic project and recognises the significance of its delivery to provide for a sustainable, safe, efficient, integrated, and accessible public transport service between Swords, Dublin Airport and Dublin City Centre.

The most significant impact of the MetroLink project on the GPO will be from the construction of the running tunnel between O'Connell Street and Tara Stations generating ground movement, noise, and vibration. The OPW seeks assurances from TII that Stage 2 and 3 ground movement assessments will be carried specifically for this building. These ground movement assessments should carefully consider the parameters that are used.

Once the railway is in operation it is possible that there will be major noise and vibration impact and the OPW seeks assurance that a detailed evaluation will be performed.

Reading this within the context of the building and its requirements, the main concerns for the GPO are as follow:

1) That ABP note the historic importance of this iconic building and ensure that all necessary conditions are attached to any Railway Order to ensure its full protection and use prior to, during and post the MetroLink development and operation.

2) To ensure there is minimum disruption to public access of the GPO and its day-to-day uses and functions.

3) To ensure no damage to the building and its architectural detailing, pre-construction and post-construction surveys, trials and monitoring are required as there is potential for major noise and vibration impact (at both stages). These factors can damage the building, which is of historical significance, as well as affect the operations of the building which is Dublin's primary post office.

4) Disruptions to traffic may happen during construction phases, wayleaves for the GPO & staff, as well as unrestricted access for postal vans & lorries will be required.

5) Precedents to be applied to the risk assessments to ensure the contractors are utilising best industry practice within the implementation of the Project.

6) To ensure impact on future development of GPO is minimised, particularly in relation to emergency works which may need to be carried out on the building, including repairs and refurbishment.

7) To mitigate noise and vibration to acceptable levels for this cultural and historical block, the installation of a floating track slab at this portion of the alignment would be the preferred option.

In light of the above, DOWNEY respectfully request that An Bord Pleanála take into consideration the issues raised by the OPW when assessing the Draft Railway Order 2022 (MetroLink - Estuary to Charlemont via Dublin Airport).

APPENDIX 1: LIST OF PLANNING LEGISLATION & POLICY

This appendix provides a non-exhaustive list of planning policy, legislation, and guidelines. We would respectfully request that An Bord Pleanála ensure that TII have fully assessed the Project with regard to existing planning policy, as well as adherence to the relevant local policies and guidelines pertaining to each individual property.

DOWNEY note that this proposed Draft Railway Order is a strategic long-term development and An Bord Pleanála may consider Development Plans in assessing the Project. It is also crucial to note that on foot of a granted Order and during the detailed design stage, a revision to planning policy is expected, whereby adopted plans and legislation may have to be adhered within this stage. This may require an amendment to the Railway Order and further assessment, including public consultation.

Legislative Context

- **Planning and Development Act 2000 (as amended)**

The proposed Project comes within the definition of Strategic Infrastructure Development (SID) under Section 2 of the Planning and Development Act 2000 (as amended). 'Strategic Infrastructure Development' means *"any proposed railway works referred to in section 37(3) of the Transport (Railway Infrastructure) Act 2001 (as amended by the Planning and Development (Strategic Infrastructure) Act 2006."*

- **Planning and Development Regulations 2001 (S.I. No. 600 of 2001)**

The principal regulations underpinning the Planning and Development Acts are the Planning and Development Regulations 2001 (S.I. No. 600 of 2001). A number of Regulations amending the 2001 Regulations have been made, which, taken together, are collectively cited as the Planning and Development Regulations 2001 to 2022.

An unofficial consolidation of the Planning and Development Regulations 2001-2022 has been prepared for ease of reference by users and has no legal status. This can be accessed here: Planning and Development Regulations 2001-2022.

- **Directive 2014/52/EU3**

Directive 2011/92/EU, passed on 13th December 2011, pertains to the assessment of the effects of certain public and private projects on the environment as amended by Directive 2014/52/EU (hereafter referred to as the 'EIA Directive'), passed on 16th April 2014, which sets the requirements for EIA in European law. It requires EIA to be carried out for certain public and private projects listed in Annexes I and II of the EIA Directive.

The requirements of Directive 2014/52/EU were transposed into Irish law with the adoption of the S.I. No. 743/2021 - European Union (Railway Orders) (Environmental Impact Assessment) (Amendment) Regulations 2021 (hereafter referred to as the EIA Regulations), which amend the Transport (Railway Infrastructure) Act 2001 to bring it in line with Directive 2014/52/EU.

- **Transport (Railway Infrastructure) Act 2001 (as amended)**

The 2001 Act provides for a Railway Order application to be made by the Applicant to An Bord Pleanála.

> *"37(1) An application may be made to An Bord Pleanála ('the Board') for a railway order by the Dublin Transport Authority ('DTA'), the Agency, CIÉ or another person. Where any part of the proposed railway works in the application is within the functional area of the DTA the applicant (not being the DTA) must have obtained the prior written consent of the DTA for the application*
>
> *(2) An application under subsection (1) shall specify whether the application is in respect of a light railway, metro or otherwise.*
>
> *(3) An application under subsection (1) shall be made in writing in such form as the Minister may specify and shall be accompanied by—*
>
> *(a) a draft of the proposed order,*
>
> *(b) a plan of the proposed railway works, MetroLink Planning Report*
>
> *(c) in the case of an application by the Agency or a person with the consent of the Agency, a plan of any proposed commercial development of land adjacent to the proposed railway works,*
>
> *(d) a book of reference to a plan required under this subsection (indicating the identity of the owners and of the occupiers of the lands described in the plan), and*
>
> *(e) a statement of the likely effects on the environment (referred to subsequently in this Part as an 'environmental impact assessment report') of the proposed railway works, and a draft plan and book of reference shall be in such form as the Minister may specify or in a form to the like effect."*

Section 37 (4) of the 2001 Act sets out that "The construction of railway works, the subject of an application for a railway order under this Part, shall not be undertaken unless the Board has granted an order under Section 43".

A number of other relevant documents have also been prepared as part of the Railway Order application, including the following, provided as stand-alone documents.

- Wider Effects Report; and
- Natura Impact Statement
- National Cultural Institutions Act 1997

- **The National Cultural Institutions Act**

The National Cultural Institutions Act sets the framework for which National Cultural Institutions must operate. The act provides for the establishment of Boards for the national institutions.

- **National Cultural Institutions (National Concert Hall) (Amendment) Bill 2022**

A Bill entitled an Act to provide for the transfer of certain functions, staff, property, rights and liabilities of RTÉ to the National Concert Hall; to provide for the validity and effect of acts by RTÉ and the National Concert Hall in relation to that transfer; to extend the functions of the National Concert Hall and to make certain changes to its board and, for those purposes to amend the National Cultural Institutions (National Concert Hall) Act 2015; to increase the aggregate amount of liability in respect of undertakings given for cultural objects on loan from a person resident outside the State and, for that purpose to amend the National Cultural Institutions Act 1997; to make certain changes to the objects of RTÉ and, for that purpose to amend the Broadcasting Act 2009; and to provide for related matters.

National Planning Policy Context

The key provisions of the national planning policy, including the Planning Guidelines, as it relates to the proposed project are set out. A summary list of the relevant national planning policies and planning guidelines consist of the following:

- All-Ireland Pollinator Plan 2021-2025
- Architectural Heritage Protection Guidelines for Planning Authorities
- Climate Action Plan 2023
- Guidelines for Landscape and Visual Impact Assessment
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (August 2018)
- Heritage at the Heart: Heritage Council Strategy 2018-2022
- Housing for All – A New Housing Plan for Ireland
- Investing in Our Transport Future – Strategic Investment Framework for Land Transport 2015
- National Adaptation Framework 2018 accompanied with Sectoral Adaptation Plan for Transport Infrastructure 2019
- National Biodiversity Action Plan 2017-2021
- National Development Plan 2021-2030
- National Investment Framework for Transport in Ireland 2021
- National Landscape Strategy for Ireland 2015-2025
- National Planning Framework (Project Ireland 2040)
- National Sustainable Mobility Policy
- Places for People – National Policy on Architecture
- Road Safety Strategy 2021-2030
- Smarter Travel – A Sustainable Transport Future; A new Transport Policy for Ireland 2009-2020
- Sustainable Urban Housing: Design Standards for New Apartments – Guidelines for Planning Authorities December 2022
- The National Cycle Policy Framework 2009-2020
- The Sustainable Development Goals National Implementation Plan 2018-2020
- The White Paper, Ireland's Transition to a Low Carbon Energy Future 2015-2030

- Town Centre First
- Traffic and Transport Assessment Guideline
- Transport Access for All 2012
- Urban Development and Building Height Guidelines 2020

Regional Planning Policy Context

The key provisions of the regional planning policy as it relates to the proposed project are now set out in the following sections. A summary list of the relevant regional planning policies consists of the following:

- Draft Greater Dublin Area Cycle Network Plan 2021
- Draft Greater Dublin Area Transport Strategy 2022-2042
- Dublin Agglomeration Environmental Noise Action Plan 2018-2023
- Dublin Metropolitan Area Strategic Plan (MASP)
- Greater Dublin Area Cycle Network Plan
- Regional Spatial and Economic Strategy for the Eastern and Midland Region 2019-2031
- Transport Strategy for the Greater Dublin Area 2016-2035

Local Planning Policy Context

The key provisions of the local planning policy as it relates to the proposed project are now set out. A summary list of the relevant local planning policies consists of the following:

- Ballymun Local Area Plan 2017
- Barryspark & Crowcastle Masterplan 2019
- Dardistown LAP 2013
- Docklands Public Realm Plan
- DRAFT Fingal County Development Plan 2023-2029
- DRAFT Lissenhall East Local Area Plan
- DRAFT Scheme of Special Planning Control: O'Connell Street and Environs 2022
- DRAFT Sustainable Swords Strategy
- Dublin Airport Local Area Plan
- Dublin City and County Archaeology GIS Dataset
- Dublin City Biodiversity Action Plan 2021-2025
- Dublin City Centre – Developing the Retail Core
- Dublin City Council Climate Action Plan 2019-2024
- Dublin City Development Plan 2016-2022
- Dublin City Development Plan 2022-2028
- Dublin City Industrial Heritage Record
- Dublin City Park Strategy 2019-2022
- Dublin City Strategic Heritage Plan 2022-2028
- Estuary Central Masterplan
- Fingal County Development Plan 2017-2023

- Fostertown Masterplan 2019
- George's Quay Local Area Plan 2012 (Extended to July 2022)
- Grafton Street Quarter Public Realm Plan
- Local Environmental Improvement Plans
- Merrion Square Conservation Plan
- Moore Street and Environs Local Area Plan
- Moore Street Battlefield Site Plan
- National Concert Hall Statement of Strategy 2022-2026
- National Gallery of Ireland – Strategic Plan 2019-2023
- National Library Ireland 2022 – 2026 Strategy
- National Museum 2019 – 2022 Strategic Plan: Building Capacity, Driving Change
- Oireachtas Strategic Plan 2022-2024
- Scheme of Special Planning Control: O'Connell Street & Environs 2016
- Seatown North Masterplan
- Seatown South Masterplan
- South Fingal Transport Study 2019
- St. Stephen's Green Park Conservation Management Plan 2015-2020
- Strategic Development Regeneration Area 2: Ballymun
- Strategic Development Regeneration Area 18: National Concert Hall Quarter
- The Future of the South Georgian Core
- The Heart of Dublin – City Centre Public Realm Masterplan
- Your City Your Space – Dublin City Public Realm Strategy
- Your Swords – An Emerging City Strategic Vision 2035

APPENDIX 2: GROUND MOVEMENT ASSESSMENT

The following sets out the requirements for assessing the impact of ground movement resulting from underground construction, such as tunnelling, embedded wall installation, and excavation for station boxes, together with requirements for monitoring and the close out.

The Designer shall investigate the potential for ground movement associated with the design and possible construction:

a) To assess risk of building damage by identifying those zones where the implementation of the design is likely to cause ground movements which will result in risk of Damage Category 2 'Slight' being exceeded (see Table 1) or where damage exceeds the agreed tolerable limits. To assess the risks of such degrees of damage occurring and either investigate alternative designs or advise interfacing Designers that alternatives need to be considered and modify the design as necessary. To undertake an assessment of the potential consequences where there is a significant likelihood that Risk of Damage Category 2 'Slight' will be exceeded or where damage exceeds the agreed tolerable limits and identify specifically what the risks are. Design protective measures where necessary to mitigate against the risk of damage exceeding Risk of Damage Category 2 or where damage exceeds the agreed tolerable limits.

b) To demonstrate that the environmental effects of excavation induced ground movements have been considered and taken account of in the design.

c) To assess the risk of damage to utilities and to design mitigation measures in agreement with the utility owner.

d) To assess the effects of excavation to existing above ground and underground infrastructure and to design suitable mitigation measures.

e) To indicate where property may require demolition or structural modification.

f) To enable the preparation of contingency plans to deal with residual risks.

Stage 1 – Scoping

Schedules and plans shall be prepared to identify all assets assessed to experience ground movement exceeding 1mm using conservative parameters.

Stage 2 – Initial Assessment

The designer shall carry out initial assessment calculations using simple empirically calibrated methods and moderately conservative parameters to classify the risk of damage to assets. For masonry building structures the risk should be classified in accordance with Table 1. For non-masonry buildings and infrastructure, the level of risk should be determined by ensuring that deformations do not exceed tolerable values determined in consultation with the asset owner.

A schedule and plans of predicted damage shall be prepared, along with outline trigger levels.

The assessment calculations shall be based on record drawings, where available and an inspection for assessment. Assets estimated to be a risk of damage greater than Category 2 'Slight' or where damage exceeds the agreed tolerable limits require further detailed assessment at Stage 3.

Table 2. Building Damage Classification

Damage Category	Description of degree of damage*	Description of typical and likely forms of repair for typical masonry buildings	Approx. crack width** (mm)	Max. tensile strain %
0	Negligible	Hairline cracks		<0.05
1	Very slight	Fine cracks easily treated during normal redecoration. Perhaps isolated slight fracture in building. Cracks in exterior visible upon close inspection	0.1 to 1.0	0.05 to 0.075
2	Slight	Cracks easily filled. Redecoration probably required. Several slight fractures inside building. Exterior cracks visible; some repainting may be required for weathertightness. Doors and windows may stick slightly	1 to 5	0.075 to 0.15
3	Moderate	Cracks may require cutting out and patching. Recurrent cracks can be masked by suitable linings. Tuck pointing and possible replacement of a small amount of exterior brickwork may be required. Doors and windows sticking. Utility services may be interrupted. Weather tightness often impaired	5 to 15 or a number of cracks greater than 3	0.15 to 0.3
4	Severe	Extensive repair involving removal and replacement of walls especially over door and windows required. Window and door frames distorted. Floor slopes noticeably. Walls lean or bulge noticeably. Some loss of bearing in beams. Utility services disrupted	15 to 25 but also depends on number of cracks	> 0.3
5	Very severe	Major repair required involving partial or complete reconstruction. Beams lose bearing, walls lean badly and required shoring. Windows broken by distortion. Danger of instability	Usually, > 25 but depends on No. of cracks	

** In assessing the degree of damage, account must be taken of its location in the building or structure.*

*** Crack width is only one aspect of damage and should not be used on its own as a direct measure of it. Burland, J.P. and Wroth, C.P., Settlement of Buildings and Associated Damage, Proceedings of a Conference on the Settlement of Structures, Cambridge, 1974, pp 611-54 and 764-810.*

The heritage value of a Listed or Protected Building should be considered during the initial assessment by reviewing the sensitivity of the building structure and of any particular features together with the initial assessment calculations. The heritage assessment examines the following:

a) The sensitivity of the building/structure to ground movements and its ability to tolerate movement without significant distress. The potential for interaction with adjacent buildings/ structures is also considered. A score within the range of 0-2 should be allocated to the building/structure in accordance with the criteria set out in Table 2.

b) The sensitivity to movement of particular features within the building/structure and how they might respond to ground movements. A score within the range of 0-2 should be allocated to the building in accordance with the criteria set out in Table 2.

The scores for each of the two categories (a) and (b) should be combined and added to the category determined in Stage 2 to inform the decision-making process. In general, Listed Buildings which score a total of 3 or higher should be subject to further assessment as part of the Stage 3 – Detailed Assessment. Buildings that score a total of 2 or less are predicted to suffer a degree of damage which may be easily repairable using standard conservation-based techniques and hence no protective measures for the building's particular features should be required. However, ultimately the professional judgement of engineering and historic building specialists should be used to determine whether additional analysis is required.

Table 3. Scoring for Sensitivity Assessment of Listed Buildings

Criteria		
Score	**a) Sensitivity of the structure to ground movements and interaction with adjacent buildings**	**b) Sensitivity to movement of particular features within the building**
0	Masonry building with lime mortar not surrounded by other buildings. Uniform façades with no particular large openings.	No particular sensitive features
1	Buildings of delicate structural form or buildings sandwiched between modern framed buildings which are much stiffer, perhaps with one or more significant openings.	Brittle finishes, e.g., tight-jointed masonry, which are susceptible to small movements and difficult to repair.
2	Buildings which, by their structural form, will tend to concentrate all their movements in one location.	Finishes which if damaged will have a significant effect on the heritage of the building, e.g., cracks through frescos.

Stage 3 – Detailed Assessment, Mitigation Design and Monitoring Plans

The Designer shall carry out detailed assessments of structures that will be affected by the works so that any monitoring works and mitigation works can be designed and implemented.

For structures at risk of exceeding Damage Risk Category 2 'Slight' or where damage exceeds the agreed tolerable limits the designer shall undertake a detailed assessment (more rigorous) to determine:

a) The influence of the structure and its foundations on the predicted ground movements (soil/structure interaction).

b) The volume loss at which the risk of damage to the structure (or any sensitive finishes/features) is 'slight' or better.

c) Whether this volume loss may be achieved by the proposed excavation design/control measures.

d) Any special control measures required to reduce the predicted damage to acceptable levels (i.e., Risk Category 2 'slight' damage category and below or below the agreed tolerable limits) such as significantly higher face pressures with EPBM tunnelling and the practicality of these.

e) The amount of ground movement that the structure (and or any sensitive finishes/features) can accommodate without exceeding Damage Risk Category 2 or where damage exceeds the agreed tolerable limits.

f) The level of residual risk if intrusive mitigation measures are not implemented.

The detailed assessments should include a number of iterations to determine how the risk of damage to a building may be reduced. Asset-specific empirical models shall be prepared successively using moderately conservative and best estimate parameters. If after these iterations the use of empirical methods do not reduce the risk of building damage to acceptable levels (i.e., Damage Category 2 'slight' damage category and below or below the agreed tolerable limits), the damage assessment shall be refined by increasing the sophistication of the analysis with the aim of reducing the risk of asset damage to acceptable levels and to eliminate the asset from further assessment.

If the risk of damage cannot be shown to be reduced by detailed assessment to acceptable levels, then mitigation measures shall be designed. The primary means of settlement mitigation shall be practical measures to control ground movement by good design and construction practice. This could include staged excavation sequences within sprayed concrete lining (SCL) works, ground treatment, face stabilisation, spiling/face dowels, increasing face pressure when using a tunnel boring machine (TBM), adopting stiffer walls/propping for rectangular shafts etc.

In the event that physical mitigation measures are still required (i.e., to control building damage to Damage Category 2 'slight' and below or below the agreed tolerable limits), the Designer shall seek to obtain the Asset Owners approval.

The Designer shall also undertake a comparative risk assessment to demonstrate that the risks associated with installation/implementation of any intrusive mitigation measures (such as compensation grouting) are no worse than the risks associated with the base case.

The relevant Local Authority and the OPW shall be consulted on the results of the Protected Building assessment reports and the proposals for protective measures, if any are required. The OPW shall also be consulted in relation to Listed or Protected Buildings where they would normally be notified or consulted on planning applications or listed building consent applications.

When considering the need and type of protective measures for Listed or Protected Buildings, due regard should be given to the sensitivity of the particular features of the building which are of architectural or historic interest and the sensitivity of the structure of the building to ground movement. Where the assessment highlights potential damage to the features of the building which it will be difficult or impossible to repair and/or if that damage will have a significant effect on its heritage value, the assessment may recommend appropriate measures to safeguard those features either in-situ or by temporary removal and storage off-site if those with relevant interest(s) in the building consent.

The form of monitoring of Listed Buildings should be determined based on the results of the assessment process.

Where repair works are necessary, they will require the consent of those with relevant interest(s) in the building.

For railway track and track support structures the designer shall:

a) Review the track surveys (including specifying additional surveys if required) and establish that ground movement can be accommodated without exceeding track standard operational tolerance in conjunction with the relevant Infrastructure Manager.

b) Identify locations where fettling of the track is required pre-construction and/or during construction to ensure the track geometry and clearances are acceptable.

The designer shall prepare plans and sections showing the zone of influence of the works that is defined by ground movements exceeding 1mm.

The designer shall develop an instrumentation and monitoring plan to validate that ground movements within the zone of influence are in accordance with design assumptions and that the infrastructure remains within acceptable limits. The designer shall ensure that there is a clear distinction between parameters measured to confirm the change in any parameter is in accordance with the design and parameters measured to limit damage to the assets. This plan shall identify the minimum period of time required to obtain base line data for each monitoring point.

Note: *A competent engineer responsible for the works shall consider those factors which may influence the monitoring data and shall determine an appropriate period and frequency for baseline monitoring. This decision-making process will include an element of engineering judgement to account for the possible effects of any underlying environmental trends (seasonal, diurnal, tidal) in the assets under consideration.*

Note: *The designer shall demonstrate that the monitoring system complies with the British Tunnelling Society Monitoring Underground Construction best practice guide.*

Note: *A review of the monitoring system against the checklists provided in Appendix B of the BTS Monitoring Underground Construction best practice guide may be used as a tool to demonstrate compliance.*

The detailed assessments shall define the control limits that need to be imposed on the TBM/SCL excavation in the zone of influence. The designer shall state these control measures on drawings and specifications.

The designer shall identify the critical parameters to be monitored and define the Asset Control Limits based on:

a) The ability of the asset or structure to withstand ground movement investigated.

a) During the assessments carried out in Stage 2 and 3.

b) The risk to third party operations.

The designer shall link the Asset Control Limits to actions within an Emergency Preparedness Plan.

The Instrumentation and Monitoring Plan and Emergency preparedness Plan shall be agreed with the relevant Asset Owner.

Stage 4 – Construction

Contingency plans shall be developed and agreed with the OPW to cover the risks posed to the OPW before commencement of the construction activity.

Contingency plans shall be implemented where the results of monitoring or inspection so indicate.

Ground movement and construction progress records shall be maintained and reported in regular reviews when construction processes are taking place within the zone of influence.

Predictions and assumptions made during design in respect of both ground movement and the effects which such ground movement will have on adjacent assets shall be verified by measurement during construction.

Stage 5 – Completion and Close-out

After ground movement has stopped, as confirmed by instrumentation and monitoring, the designer shall prepare a "Completion Report". This shall include the following:

a) Details of any modifications/mitigation measures to the existing structure.

b) Graphs that show the ground movement and construction progress over time.

c) With at least 3 months duration of readings which show no change.

d) A schedule showing actual movement compared to predicted movement.

e) A schedule of defects recording only the exceptions (changes) identified during the post construction defects survey.

f) Details of any remedial works undertaken.

g) As-built records (including any temporary works remaining in situ on completion of the works).

Schedule of Defects

A schedule of defects shall be recorded prior to the start of construction for all buildings, structures, utilities and facilities and Outside Party assets predicted to experience ground movement exceeding 1mm.