Our Case Number: ABP-314724-22

Your Reference: Union Investment Real Estate GmbH

An Bord Pleanála

John Spain Associates
39 Fitzwilliam Place
Dublin 2
D02 ND61

Date:

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 (including your fee of €100) 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.

Please be advised, there is no fee for an affected landowner, listed on the schedule, to make an observation on this case. Further note, there is also no fee required to request an oral hearing, therefore, a cheque refund of €100 is enclosed.

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.

Yours faithfully,

pp BM

Niamh Thornton
Executive Officer
Direct Line: 01-8737247

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Tel 01 662 5803
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The Secretary,
An Bord Pleanála,
64 Marlborough Street,
Dublin 1,
D01 V902

Date: 13th January 2023
Our Ref: LW JN 16227

RAILWAY (METROLINK–ESTUARY TO CHARLEMONT VIA DUBLIN AIRPORT) ORDER 2022

RE: SUBMISSION ON THE METROLINK RAILWAY ORDER APPLICATION IN RELATION TO THE SITE OF A COMMERCIAL DEVELOPMENT AT 2 GRAND PARADE, RANELAGH, DUBLIN 6.

AN BORD PLEANÁLA REFERENCE: NA29N.314724

INTRODUCTION

On behalf of our client, Union Investment Real Estate GmbH, Real Estate Project Management International, Valentinskamp 70 / EMPORIO, 20355 Hamburg, Germany, we John Spain Associates, 39 Fitzwilliam Place, Dublin 2, wish to make this submission on the application by the National Roads Authority (operating as Transport Infrastructure Ireland – TII) for a Railway Order for the MetroLink project.

The application for a Railway Order was submitted on the 30th of September 2022. The Board's reference number for the application is ABP Ref.: NA29N.314724.

As set out below, our client's wish to request an Oral Hearing on the Railway Order application.

The MetroLink project subject of the current Railway Order application to An Bord Pleanála involves the construction of a new metro railway line and a new underground station (Charlemont Station) taking in the significant northern portion of the site of the permitted commercial development, under Reg. Ref.: 2373/17 / ABP Ref.: 300873-18, as amended

by Reg. Ref.: 4755/19 and Reg. Ref.: 3486/20 / ABP Ref.: 309011-20, at 2 Grand Parade which is currently under construction.

On Figure 1 below, the purple lines represent the buildings that have already been demolished as part of the permitted commercial development and the white area delimits the offices under construction that are part of the permitted development.

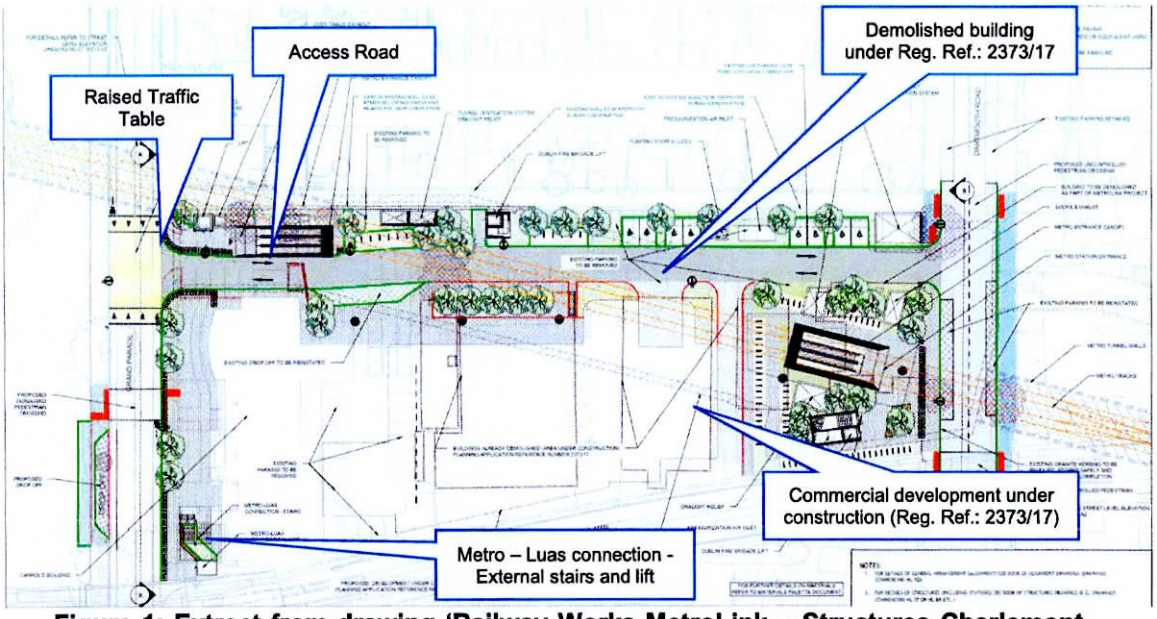


Figure 1: Extract from drawing 'Railway Works MetroLink – Structures Charlemont Station Proposed Street Level Design'

The proposed development subject of the Railway Order application involves the permanent and temporary acquisition of lands within the site of the commercial development at 2 Grand Parade, Dublin 6. As set out above, our client respectfully requests the reconsideration of the permanent and temporary land take extents shown, and the substratum acquisition area.

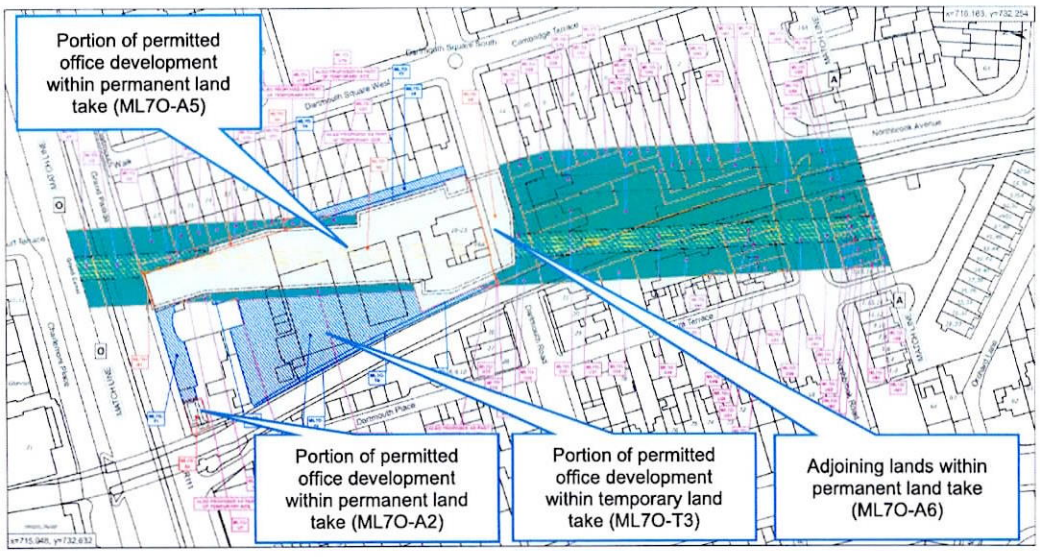


Figure 2: Extract from drawing 'Railway Works MetroLink – Property Details Grand Parade to Northbrook Road' – permanent land take in grey and temporary land take in blue

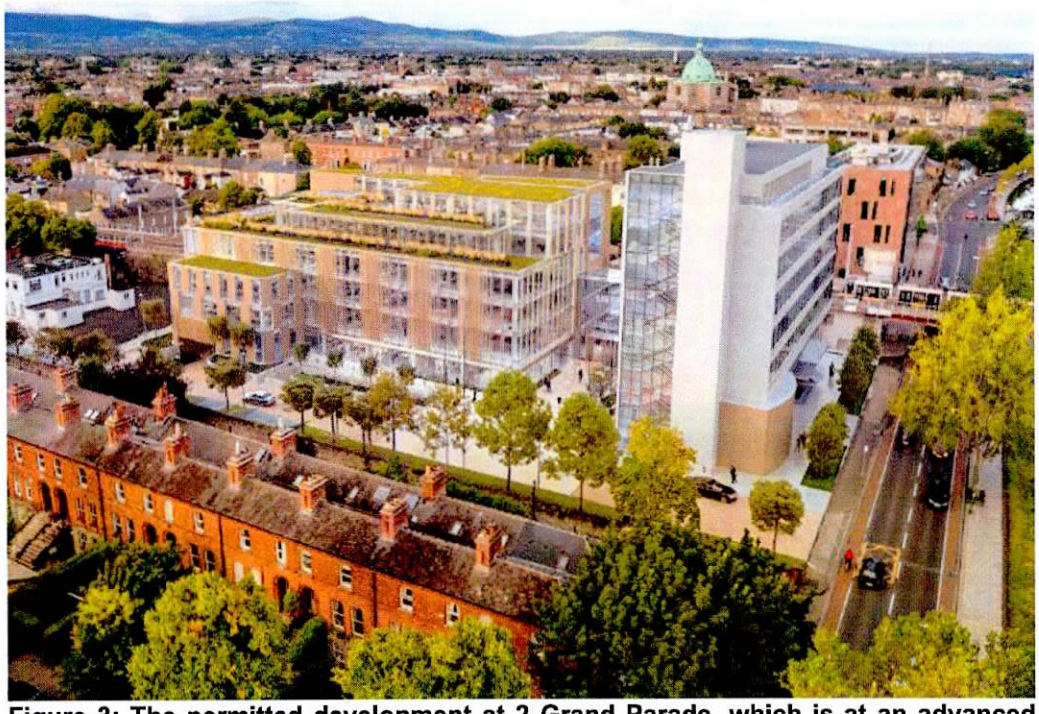


Figure 3: The permitted development at 2 Grand Parade, which is at an advanced stage of construction on site

The permanent and temporary land take indicated includes areas within and adjoining the permitted commercial development comprising the permitted offices that are currently under construction.

The existing Carrolls Building (a protected structure) is the only part of the overall site which is not indicated on the Railway / Order drawings as being within the area of either temporary or permanent land take.

Our client supports the delivery of MetroLink as a key piece of public transport infrastructure which will enhance accessibility across the city.

However, our client has a number of specific observations in relation to the proposed TII Railway Order application to An Bord Pleanála and they request that these be addressed by making amendments to the project and Railway Order or providing further information as set out below.

It is noted that TII have engaged constructively with our client to date, and our client looks forward to continued consultation with TII going forward.

The key grounds of submission relate to the following:

1. Permanent and Temporary Land Take
2. Lift and Stairway to the west of the Carroll's Building
3. Entrance escalators and impact on building operations
4. Raised table junction and pedestrian junction
5. Hard and soft landscaping
6. Tunnel ventilation, air inlet, and firefighting lift
7. Alterations to permitted car parking at 2 Grand Parade and location of cycle parking
8. Noise and vibration during construction
9. Noise and vibration during operation
10. Construction sequencing and phasing
11. Ground settlement and potential impact on 2 Grand Parade
12. Pre-construction condition surveys required and Reinstatement
13. Maintenance of services to the 2 Grand Parade development is required during construction
14. Maintenance access and equipment replacement strategy
15. Fire strategy for Charlemont required to include consideration of 2 Grand Parade
16. Construction stage impacts on fire safety for 2 Grand Parade
17. Requirement for detailed Fire Authority engagement
18. Grounds of submission raised by the estate agents for the 2 Grand Parade development

These grounds of submission are dealt with in further detail below.

This submission includes the following appendices, which provide further detail on the issues listed above and summarised below:

- Appendix 1 – Architectural observations report prepared by Henry J Lyons Architects
- Appendix 2 – Engineering observations technical note prepared by DBFL Consulting Engineers
- Appendix 3 – Fire safety observations technical note prepared by MSA

GROUNDS OF SUBMISSION

This section sets out the grounds of submission which our client wishes to raise in respect of the Railway Order application. The following represents a summary of the content within the appendices listed above, which have been prepared by the relevant experts, and which set out the grounds of submission in detail.

We refer the Board to the accompanying appendices for further details.

1. Permanent and Temporary Land Take

As noted above, the land acquisition mapping forming part of the Railway Order application indicates the entire site in the ownership of our client (with the exception of the existing Carroll's Building) within the permanent and temporary land take for the MetroLink project.

It appears that this may represent a mapping error which should be clarified prior to the granting of a Railway Order or any associated Compulsory Purchase Order. As currently indicated, the land acquisition details illustrated on the Property Details drawings would not be acceptable to our client.

As noted in the figure below, parts of the permanent and temporary land take illustrated at 2 Grand Parade actually fall within the built footprint of the office development which is nearing completion on site (as permitted under Reg. Ref.: 2372/17 / ABP Ref.: 300873-18, as amended by Reg. Ref.: 4755/19 and Reg. Ref.: 3486/20 / ABP Ref.: 309011-20). Therefore these areas of the site are not suitable either for temporary or permanent acquisition.

While it is understood that the actual intended land acquisition as part of the Charlemont station will in fact be limited primarily to substratum acquisition (with the exception of specific above ground elements such as station accesses, vents etc.), it is submitted that this requires clarification of and amendments to the Railway Order drawings and documentation. Our client looks forward to engaging constructively with TII in relation to this matter.

It is submitted that the extent of permanent land take should be revised to take in only the elements of ground-level development proposed as part of the Charlemont station (i.e. escalators, vents, station building etc.).

Similarly, the temporary land take should be reduced to cover areas which will actually be required (and available) for use during the construction phase. This must exclude the footprint of the office building under construction and nearing completion on site, along with any lands necessary to maintain the access, underground services and operation of the office development.

Additionally, the extent of the substratum land take proposed should be reviewed in light of the existing / under construction office development on site, and the points set out above in relation to the permanent and temporary land take areas.

The extents of permanent, temporary, and substratum acquisition included on the Railway Order application drawings differ from previous agreements pertaining to development at this location.

Finally, the grounds set out below (including in particular those relating to the location and design of surface level escalators, lifts, vents, and stairways) may necessitate further alteration to the extent of permanent and temporary land take at this location, to reflect the design changes requested in this submission.

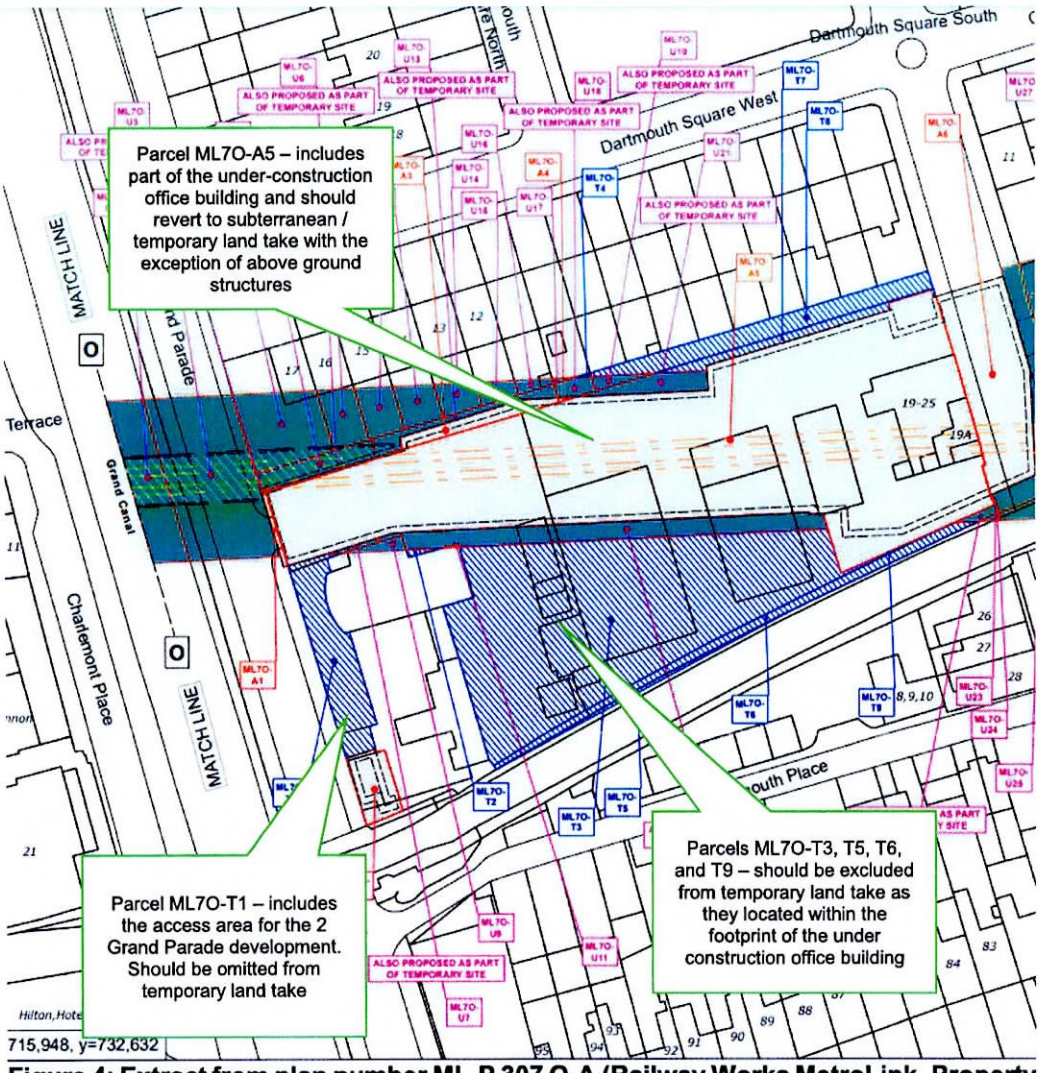


Figure 4: Extract from plan number ML-P 307 O-A (Railway Works MetroLink- Property Details Grand Parade to Northbrook Road)

2. Lift and Stairway to the west of the Carroll's Building

It is proposed to provide a Metro-Luas connection lift and stair to the northwest of the Carrolls Building within the 2 Grand Parade site.

This lift and stairway are understood to provide passenger interchange between the underground Metrolink Station from ground level to the Charlemont Luas stop, which is elevated at this location atop a bridge (spanning the Grand Canal) and an embankment.

As set out in the accompanying HJL Architects report (Appendix 1), and further elaborated on in the MSA Technical Note (Appendix 3), the location and design of this stairway and lift access would negatively impact on our client's development at 2 Grand Parade as follows:

- The structure would obstruct designated fire escape routes from the 2 Grand Parade development,
- There would be an additional risk of fire spread in the event of a fire due to proximity to the existing building.

- Additional information needed in relation to pedestrian traffic flow and capacity for both normal and evacuation scenarios.
- The stairway and lift shaft will negatively impact on the appearance and setting of the Carroll's Building, a protected structure which is integrated into the 2 Grand Parade commercial development.
- The stairway and lift could give rise to privacy issues within the adjacent office building.

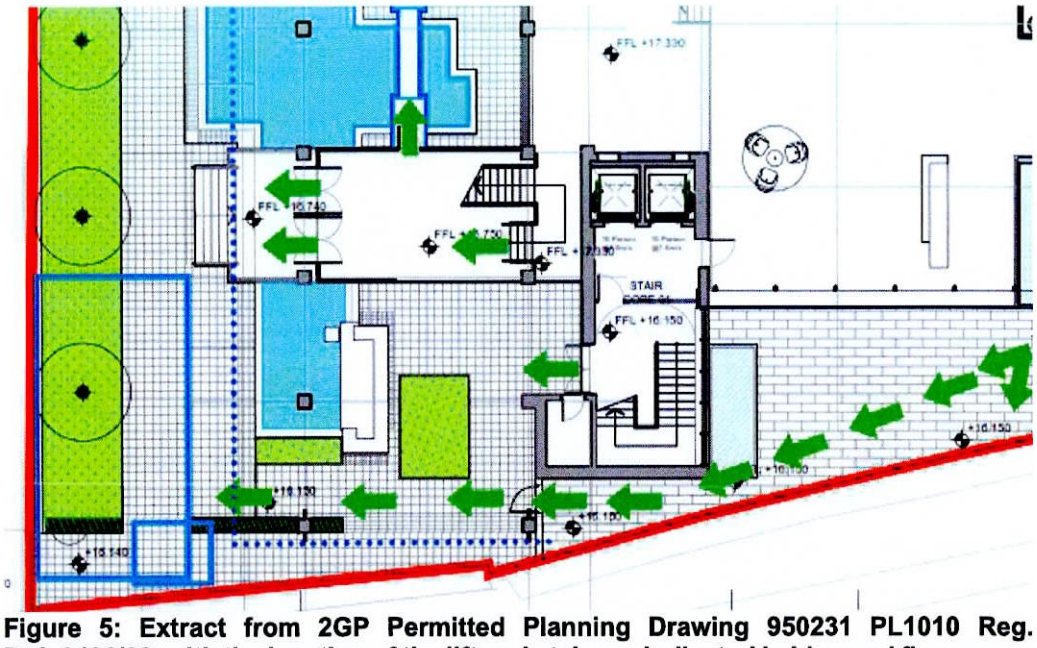


Figure 5: Extract from 2GP Permitted Planning Drawing 950231 PL1010 Reg. Ref.:3486/20, with the location of the lift and stairway indicated in blue and fire escape routes denoted by green arrows

Having regard to the foregoing, it is submitted that the lift shaft should be relocated to an alternate location (potentially the opposite side of Grand Parade adjacent to the Grand Canal) and the staircase proposed should be reconfigured to address the concerns raised.

It is also noted that there is already a stair and lift immediately west of the Luas stop northbound platform.

In its current form the stairway and lift would not be acceptable to our client, and it is requested that revisions are made to this aspect of the design prior to the granting of any Railway Order.

We refer to the accompanying appendices prepared by HJL Architects and MSA for further details.

3. Entrance escalators and impact on building operations

As set out within the appendices prepared by HJL and DBFL (Appendix 1 and 2 respectively), the Railway Order application includes the provision of access escalators and an associated lift to the north of the existing Carrolls Building, also within our client's landholding.

The HJL Architects, DBFL, and MSA documents set out the following points in relation to this aspect of the design:

- Part of the permitted 2 Grand Parade scheme is a 6m roadway to access the development (with the width of the access based on two-way car traffic, fire access, cyclists, and to accommodate perpendicular parking). The escalators proposed would reduce the width of the access to an extent which would interfere with the accessing of the development.
- This will also result in the realignment of the internal access road and of the main vehicular executive Drop-Off, impacting on the landscaped atrium plaza and alignment with the building entrance configuration, and on the removal of 5 no. existing trees adjacent to Dartmouth Lane (the eastern boundary of the site).
- The design currently does not indicate a kerb along side the escalators (which would be required) and this would further obstruct the access to the 2 Grand Parade development.
- In this regard the DBFL technical note sets out that the minimum width considered acceptable by our client would be 5.5 metres for the carriageway, with a 2 metre footpath provided in addition to this.
- In addition to this, the MSA note states that this aspect of the design would have an adverse effect on escape from the 2 Grand Parade development via stair core 2.

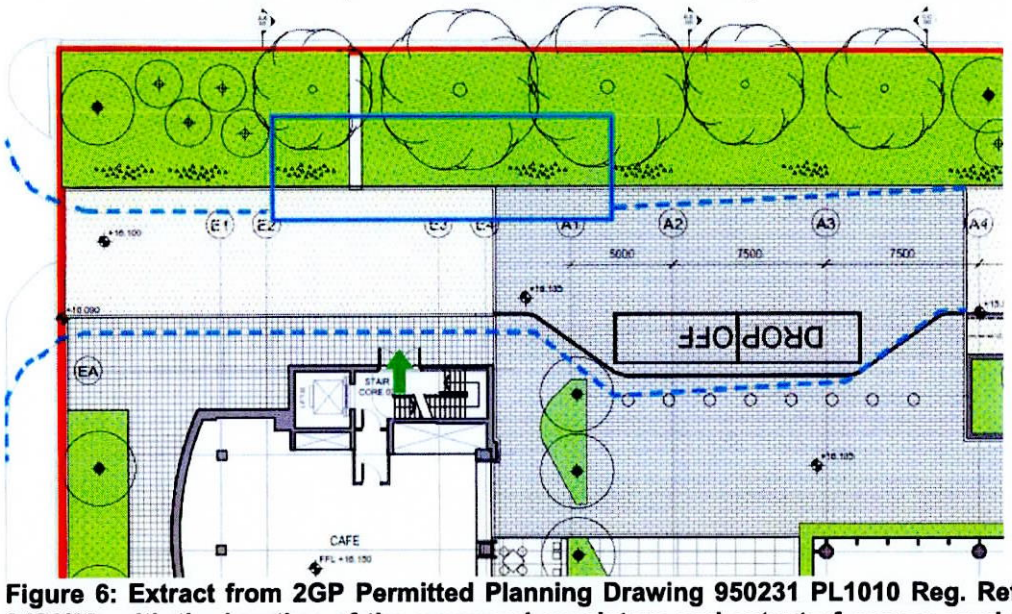


Figure 6: Extract from 2GP Permitted Planning Drawing 950231 PL1010 Reg. Ref.: 3486/20, with the location of the proposed escalators and extent of access road in blue, and fire escape route denoted by green arrow

Having regard to the foregoing, revisions should be made to the Railway Order application drawings and documents, to ensure that a minimum 5.5 metre carriageway and a 2-metre paved footpath to maintain adequate access (including fire access).

We refer to the HJL, DBFL, and MSA appendices for further details in relation to this ground of submission.

4. Raised table junction and pedestrian junction

The HJL submission report (Appendix 1) sets out that there is intended to be a raised table junction at the access to the 2 Grand Parade development from Grand Parade to the west.

The HJL document notes that further details are required in relation to the level of the raised table interface with the adjacent public road and the 2 Grand Parade access.

Additionally, a significant number of bollards are indicated along the frontage to Grand Parade and along the 2 Grand Parade access road. It is noted that some of these bollards would impinge on fire escape from stair core 2 of the Carrolls Building, and additionally it is noted that there are already several trees permitted along this frontage as part of the permitted 2 Grand Parade development.

Furthermore, it is noted that a new pedestrian crossing will be provided crossing Grand Parade and aligning with the main entrance to the 2 Grand Parade development. Clarification is required in relation to the details and finishes for the adjacent paving and the paving at the entrance to the 2 Grand Parade development. Clarification is also required on the anticipated pedestrian flows associated with this crossing, noting that Charlemont is predicted to be one of the busiest stations on the MetroLink line (with predicted peak passenger numbers boarding and alighting of over 2000 and almost 4000 respectively by 2065).

Further detail should be provided as part of the Railway Order application process on the foregoing, prior to the granting of any Railway Order. We refer to the HJL report (Appendix 1) for additional details.

5. Hard and soft landscaping

As set out within the accompanying HJL Architects report (Appendix 1), further detailed consideration will be required of the hard and soft landscaping to be provided alongside the 2 Grand Parade development to ensure coordination with permitted tree planting and landscaping.

6. Tunnel ventilation, air inlet, and fire fighting lift

As set out in the accompanying HJL report (Appendix 1), further detail is required prior to the granting of a Railway Order in relation to the design, dimensions, and finishes proposed for above ground ventilation, lift shafts, and pumprooms, in order to appraise the impact of the development on the 2 Grand Parade development.

As currently indicated / laid out, these aspects of the project would impact on car parking (referred to in further detail below), landscaping, and on a brick and stone wall adjoining the 2 Grand Parade site, which forms part of the curtilage of protected structures adjoining the site facing onto Dartmouth Square West.

It is also noted that mitigation measures should be provided prior to the granting of a Railway Order to ensure that any smoke and hot air emanating from vents are vented away from users of the 2 Grand Parade development.

7. Alterations to permitted car parking at 2 Grand Parade and location of cycle parking

As set out in Appendix 1, to the west of the access road, it is proposed to provide over track exhaust tunnel ventilation systems adjacent to the Dartmouth Square boundary of the 2 Grand Parade site, and adjacent to the Dartmouth Road entrance, a pressurized air inlet pumping room access, a Dublin fire brigade lift and a tunnel ventilation system draught relief structure are proposed. This will result in a reduction from 14 to 8 no. car parking spaces at ground level. These structures are also located at the location of a brick boundary wall which is protected fabric. It is therefore requested to consider an alternative for these structures.

In the event of the loss or curtailment of access to car parking for the duration of the MetroLink construction stage, provision should be made for replacement parking elsewhere.

Finally, it is proposed to provide bicycle parking spaces to the south of the 2 Grand Parade Building, at the location of a designated fire escape access and egress route from stair core 1 within the development under construction, which would result in an important fire escape route being compromised, and also potentially impact on access to ESB substation rooms at this end of the 2 Grand Parade building. It is requested therefore that this bicycle parking be altered to avoid impinging on this route. A revised design in this respect should be submitted prior to the granting of a Railway Order.

8. Noise and vibration during construction

As set out within the DBFL technical note (Appendix 2) it is noted that noise level thresholds will be exceeded throughout the duration of construction, by more than 10db for some operations, and will have a 'Significant to Very Significant' effect on 2 Grand Parade. This is set out within Appendix A13.7 "Construction Phase modelling" of the EIAR submitted with the Railway Order application.

Considering that the property is in the 'further mitigation measure' category, noise and vibration threshold limits should be agreed with all stakeholders and that procedures are to be put in place to mitigate exceedance of agreed thresholds. Further information regarding these mitigation procedures is required, and must be sufficiently precise, detailed, and enforceable. Further detail in this regard is necessary prior to the granting of any Railway Order.

It is noted by DBFL that the PPV limit relating to ground-borne noise and vibration has been established at 7.5m/s within the Appendix E 'Blasting Strategy' A5.20 of the EIAR. Clarification on how these limits will be set and monitored is required and needs to be agreed with all stakeholders prior acceptance. Further detail in this regard is also requested prior to the granting of any Railway Order.

An assessment of the new-build portion of the permitted (and under construction) development at 2 Grand Parade in relation to blasting should be carried out as blasting methods will be used for the excavation of the Charlemont station box and a significant proportion of excavation for this station is directly below the development. Further information in this regard is required to ensure that the excavation of the Charlemont Station does not adversely impact the 2 Grand Parade building, and the baseline limits and monitoring regimes should be agreed with all stakeholders prior to acceptance and granting of a Railway Order.

9. Noise and vibration during operation

As further noted within the DBFL technical note (Appendix 2), during the operation of the metro, the noise and vibration thresholds set out within the EIAR are likely to be exceeded, therefore an assessment of operational noise and vibration is required for the 2 Grand Parade Building and mitigation measures in this regard should be set out in full detail prior to the granting of any Railway Order.

10. Construction sequencing and phasing and access to the 2 Grand Parade Development

The technical note prepared by DBFL Consulting Engineers also sets out grounds of submission in relation to the phasing and management of the construction stage on this

site. As set out therein, a scenario whereby vehicular, pedestrian, or cycle access to the 2 Grand Parade office development was curtailed during the construction phase would not be acceptable to our client.

Firstly, it is noted that for one of the two proposals for the sequencing of construction of Charlemont Station, the basement of the 2 Grand Parade development will be accessible only for emergency purposes during the construction period. It is requested that the basement, plant areas and ESB substation are accessible to vehicles, pedestrians, and cyclists during the construction period.

The second option provides for access to the basement during the construction period, however it is requested to provide further information in relation to the various element of the construction sequence to properly assess the impact on the 2 Grand Parade Building.

Further detail and / or revised proposals in this regard are required prior to the granting of a Railway Order. Please refer to the DBFL technical note for further details.

11. Ground settlement and potential impact on 2 Grand Parade

As set out within the DBFL technical note (Appendix 2) it is noted within the Appendix 'Building Damage Report' A5.17 of the MetroLink EIAR, protection works are not necessary for the protected structure (the Carrolls Building) at 2 Grand Parade that is located within 2m of the station box.

However, given the proximity of the building to the station, the report states potential mitigation will be required to reduce the effect of the ground movement on the Carrolls Building. Any proposal for ground/foundation improvement requirements is to be agreed with all stakeholders prior to implementing this as a solution, and further detail in this regard is requested prior to the granting of a Railway Order.

12. Pre-construction condition surveys required and reinstatement

The DBFL technical note (Appendix 2) further notes that pre-construction condition surveys of all assets (including structures, building fabric, water services, and mechanical and electrical services) for the entire 2 Grand Parade development (including the development currently under construction and nearing completion) are required and need to be agreed in advance of any site activities commencing. A condition to this effect should be included in any Railway Order.

Additionally, a mitigation measure should be included to provide for the reinstatement of the area impacted by the MetroLink project at Charlemont / 2 Grand Parade, to provide certainty that the impact of the development on the 2 Grand Parade office development will be addressed post-construction.

13. Maintenance of services to the 2 Grand Parade development is required during construction

As set out within the DBFL technical note (Appendix 2) clarification is sought on how services at 2 Grand Parade will continue to operate and be accessible during the construction period. It is noted that service diversions are to be agreed with DCC and utility providers, further information is requested in this respect, as it is important that all services remain operational to the 2 Grand Parade development during the construction process.

14. Plant replacement strategy

The DBFL technical note finally sets out that further detail should be submitted prior to the granting of a Railway Order in relation to the strategy for the replacement of large plant items and station equipment, and particularly in relation to the northern (Grand Parade) end of the station.

15. Fire strategy for Charlemont required to include consideration of 2 Grand Parade

The MSA technical note (Appendix 3) submitted herewith outlines that it is not clear from the Railway Order application documentation whether TII have considered the impact of the MetroLink project in terms of fire safety on the 2 Grand Parade project, in terms of impact on means of escape (set out previously), occupant numbers and flows, external fire spread between structures, required separation and boundary distances, fire service vehicle and personnel access to the site and building, station vent locations, potential fire alarm interfaces.

Therefore, it is submitted that a detailed fire safety document to address interactions with an impact on the 2 Grand Parade development should be submitted prior to the granting of any Railway Order (with any resulting alterations to be incorporated into the design of the proposed development).

16. Construction stage impacts on fire safety for 2 Grand Parade

The MSA technical noted (Appendix 3) sets out that there has not been adequate consideration of the impact on the 2 Grand Parade development in fire safety terms during the construction phase. The construction management and phasing of development should be revised to address this issue.

Please refer to the MSA technical note for further details.

17. Requirement for detailed Fire Authority engagement

While the Railway Order application does note that consultation has been undertaken with Dublin Fire Brigade, the MSA technical note included as Appendix 3 sets out that greater detail is necessary in this regard, including in terms of fire strategy preparation, lodgment and approval.

Please refer to the MSA technical note for further details in relation to this ground of submission.

18. Estate management issues

In addition to the foregoing grounds of submission, the Railway Order application documents have been reviewed by the estate agents for the 2 Grand Parade development (Savills), who have raised the following additional points (not already set out above) which should be addressed prior to the granting of a Railway Order:

- **Apportionment of Estate Costs**: It would be appropriate for the applicant for MetroLink to contribute towards the repairs, maintenance and upkeep of estate lands which users of the 2 Grand Parade office development and the Metro station pass over. This would require development of a particular schedule of costs common to both 2 Grand Parade and the Metro station and an apportionment of these costs agreed between both parties.

- **Cleaning Requirements**: Periodic cleaning of all building fabric should be undertaken by the MetroLink contractor on a frequency agreed with our client. There would also be a possible requirement for additional cleaning/maintenance of M&E equipment (changing of filters etc) which may be required during construction works.

Conclusion

There may be other detailed matters which will require further clarification and information from TII as they relate to the interface of the project with the operation of the 2 Grand Parade commercial development. Our clients wish to reserve their position in this respect.

Our clients also wish to request that an Oral Hearing is held in respect of the Railway Order application so that the points raised within this submission can be further clarified and addressed at the hearing for the benefit of all parties.

We enclose the fee of €50.00 in respect of this submission (although we note that no fee is payable for landowners affected) a further fee of €50.00 in respect of the Oral Hearing request is also enclosed.

As noted previously, our client supports the delivery of the MetroLink project, and looks forward to engaging further with TII during the subsequent stages of the Railway Order process.

We respectfully request An Bord Pleanála to consider this submission and to make appropriate amendments to the Railway Order to address the points set out above.

Yours Faithfully

John Spain Associates

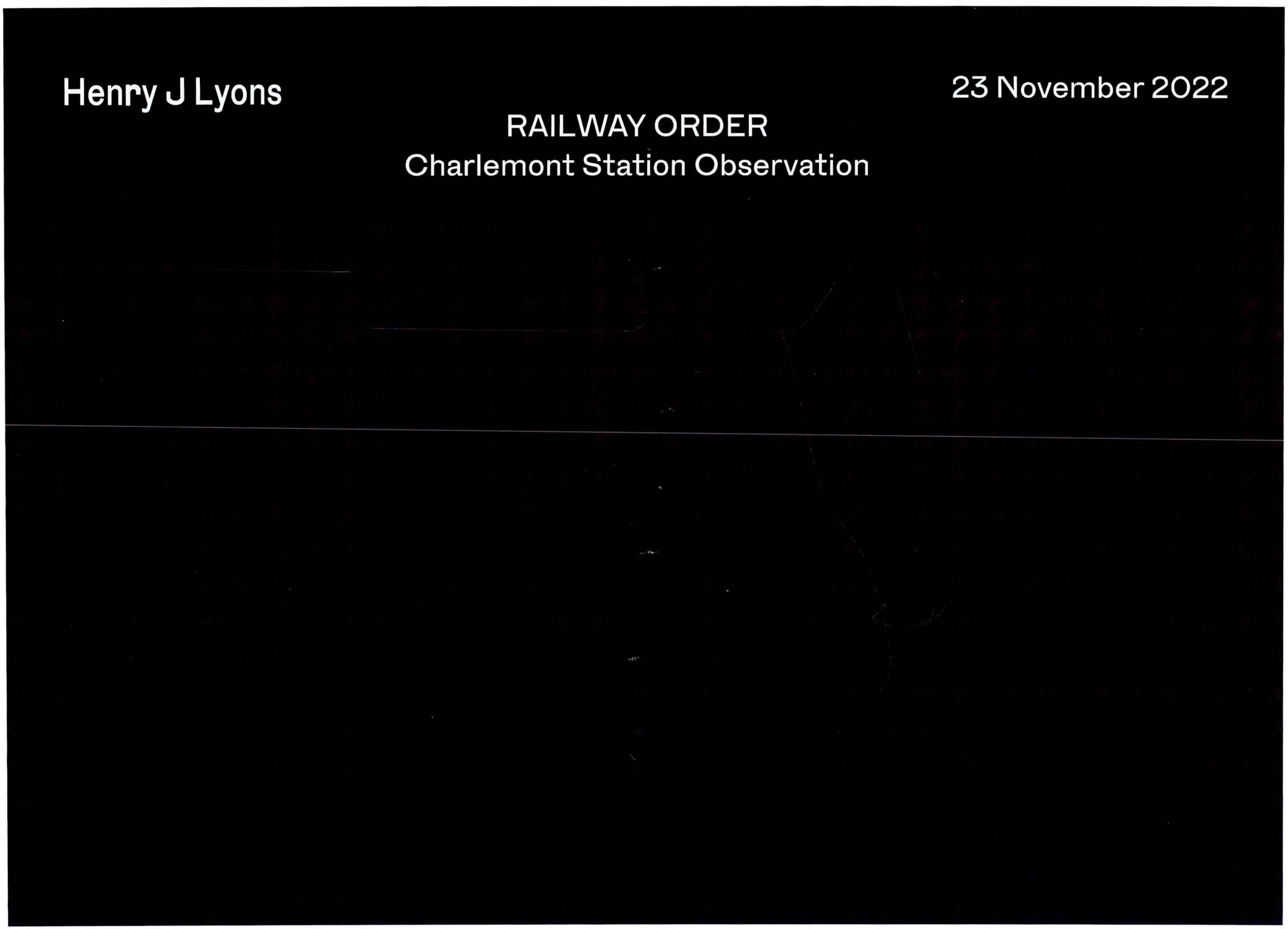
APPENDIX 1: SUBMISSION REPORT PREPARED BY HENRY J LYONS ARCHITECTS

Henry J Lyons

23 November 2022

RAILWAY ORDER

Charlemont Station Observation



1.INTRODUCTION

This report has been prepared by Henry J Lyons Architects under the appointment of our client, Union Investment Real Estate GmbH.

The report forms part of an Observation regarding the application by the NRA/TII for the Railway Order (Metrolink) and has been compiled in conjunction with the following:

- Structural Engineers – DBFL Consulting Engineers
- Project Managers - Aecom Project Management
- Planning Consultants - John Spain Associates
- Fire Consultants - Michael Slattery Associates

The report includes Observations in relation to the Charlemont Station Railway Order Plans/Drawings where the proposals interface with the 2 Grand Parade commercial development that is currently under construction.

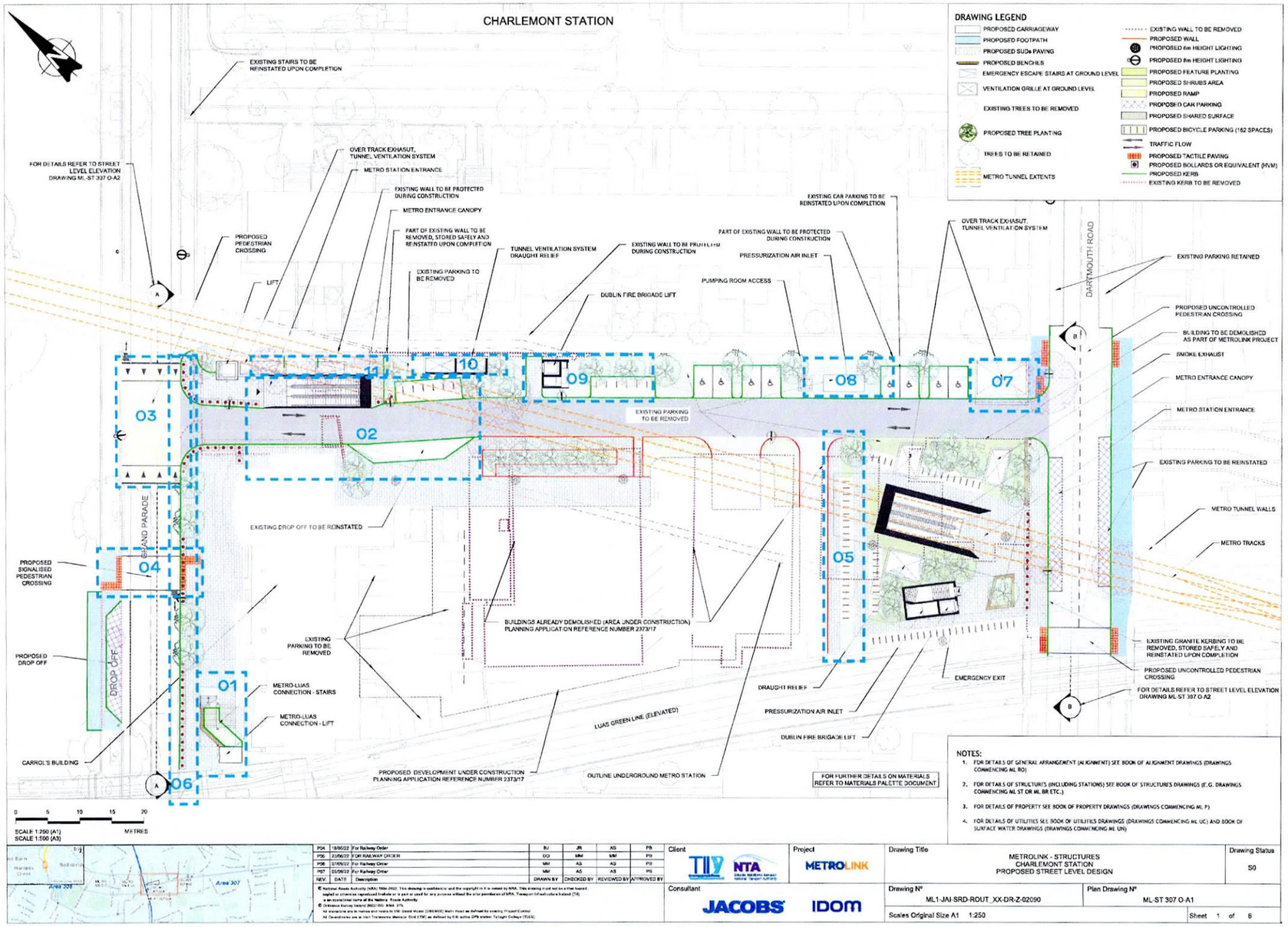
OBSERVATIONS

2.1 SUMMARY OBSERVATIONS

The following observations are indentified on the submission drawing:
ML1-JAI-ARD-ROUT_XX-DR-Y-02090
Further detail is provided for each observation in Section 2.2.

01 Grande Parade metro luas link lift and stair
02 Grand Parade metro entrance escalators
03 Grand Parade raised table junction
04 Grand Parade pedestrian crossing
05 Charlemont station bicycle parking at the southern station entrance escalators
06 Hard and soft landscaping at Grand Parade

07 Over track exhaust tunnel ventilation system adjacent to Dartmouth Road entrance
08 Pressurized air inlet pumping room access
09 Dublin Fire Brigade lift
10 Tunnel ventilation system draught relief
11 Over track exhaust tunnel ventilation system adjacent to Dartmouth Square boundary



2.1 SUMMARY OBSERVATIONS

The observations are overlayed on HJL permitted planning drawing 950231 PL1010 for information purposes to provide detail on the interfaces with the 2GP building configuration in conjunction with the MetroLink proposals.

The 2GP development under construction on site was originally permitted under Reg. Ref.: 2372/17/ ABP Ref.: 300873-18, as subsequently amended by Reg. Ref.: 4755/19 and Reg. Ref.: 3486/20/ ABP Ref.: 309011-20

01 Grande Parade metro luas link lift and stair
02 Grand Parade metro entrance escalators
03 Grand Parade raised table junction
04 Grand Parade pedestrian crossing
05 Charlemont station bicycle parking at the southern station entrance escalators
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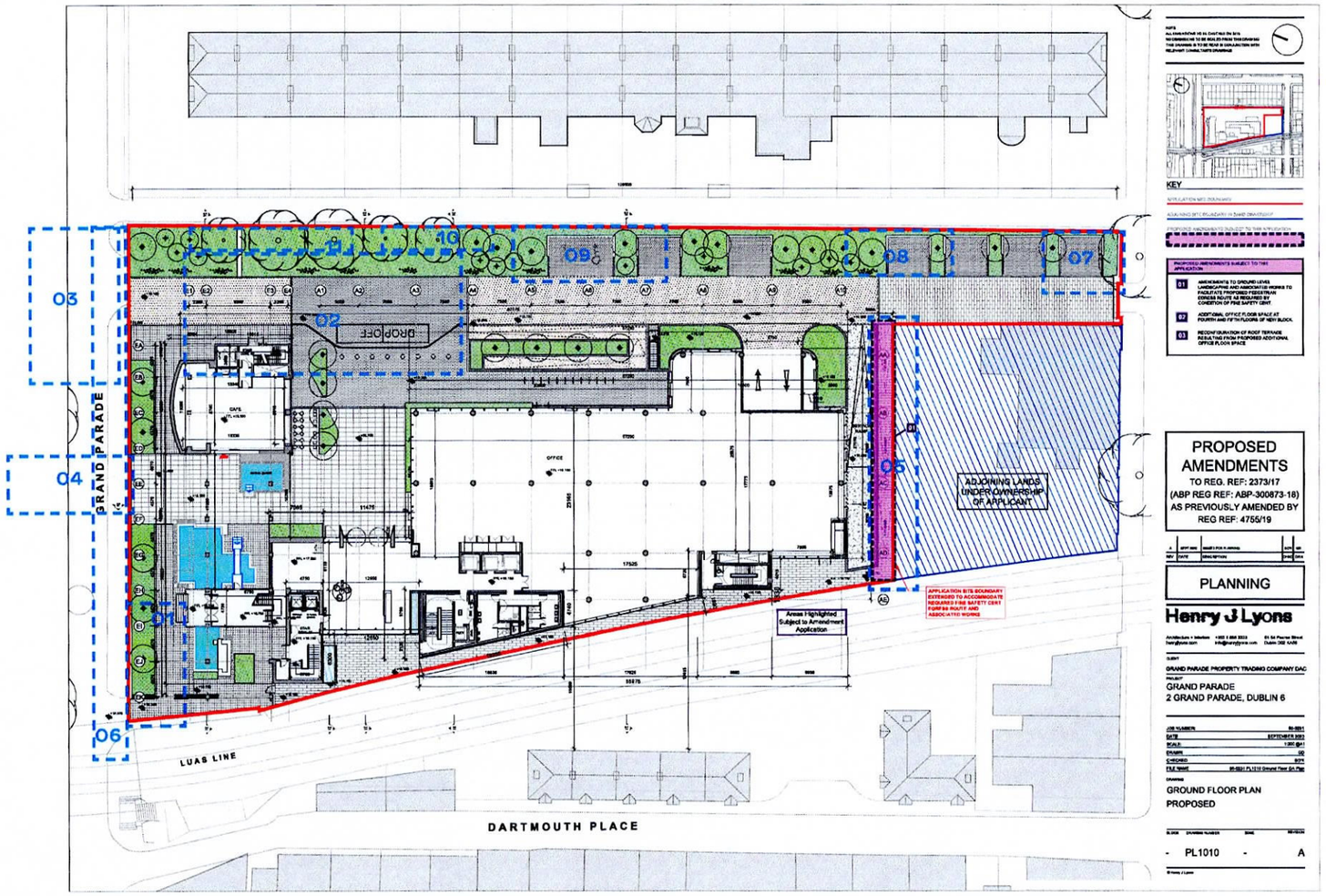
11 Over track exhaust tunnel ventilation system adjacent to Dartmouth Square boundary



2GP Permitted Planning Drawing 950231 PL1010 Planning Ref. 3486/20

2.1.01 DETAIL OBSERVATIONS

The following observations are indentified on the submission drawing ML1-JAI-ARD-ROUT_XX-DR-Y-02090

01 Grande Parade Metro Luas Link Lift and Stair

The proposed position and configuration of the luas link lift and stair is within the 2 Grand Parade (2GP) development site and in close proximity to the existing protected structure, the Carrolls Building, that forms part of the 2GP development.
As configured and located this lift and stair will impact the 2GP development as follows:

• At ground level it will encroach on a major fire escape route from and fire-fighting access to the building compromising the fire safety within the building and potentially on the LUAS stairs.
The fire service personnel access route and escape from the firefighting shaft in the 2GP building (Stair 3) and the escape route externally from (Stair 1) are compromised by the location of the proposed Stair and Lift. This requires reconsideration and amendment to the railway order proposals.

• The proximity of the stair and lift to the 2GP façade regarding fire spread- proposals to be considered to ensure that the structures proposed do not create an external fire spread issue for the adjacent buildings. Currently the analysis for the North Elevation of the 2GP building is taken to the centre of the public roadway, as is permitted in the guidance.
Refer to the MSA report for further fire safety details.

• There will be additional pedestrian traffic exiting the stair at street level directly adjacent to the original and main entrance to the protected building that is part of the 2GP development . -
Additional information is sought on the proposed pedestrian traffic movements anticipated for the peak times/special events and impact this will have on the occupants and visitors to the 2GP development.

• The stair and lift will have a significant impact on the visual appearance of the existing protected structure, the Carrolls Building, partially obscuring and encroaching on the original main entrance and adjacent facade - see Fig 02B, 02C and 02D.
• There will be privacy issues with the pedestrian route from the lift and stair passing directly past the office windows - see Fig 02C.

The lift and stair configuration as proposed are a concern to the 2GP development and at a minimum we suggest the relocation of the lift to an alternative location, potentially to the opposite side of the Grand Parade road adjacent to the canal, and the reconfiguration of the staircase to address the observations noted above.

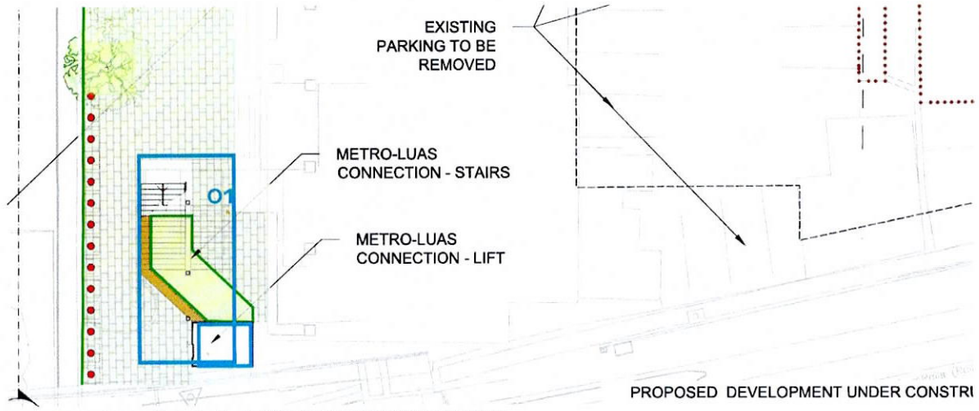


Fig 02A Extract from submission drawingML1-JAI-ARD-ROUT_XX-DR-Y-02090

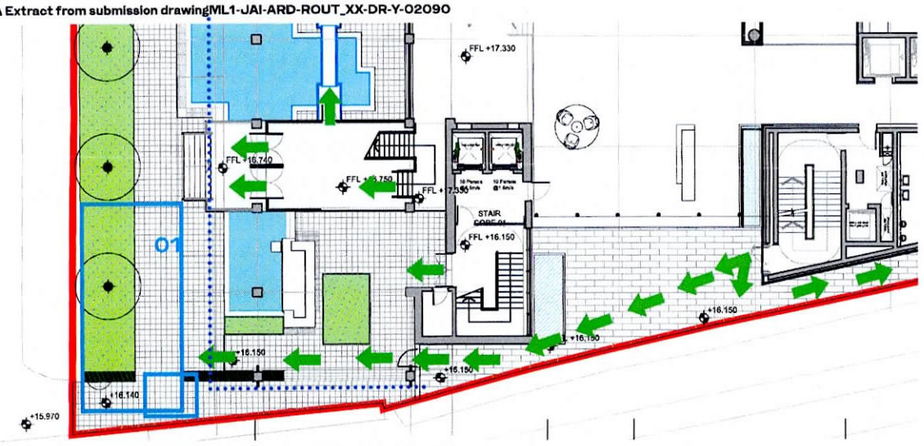


Fig 02B Extract from 2GP Permitted Planning Drawing 950231 PL1010 Ref. 3486/20

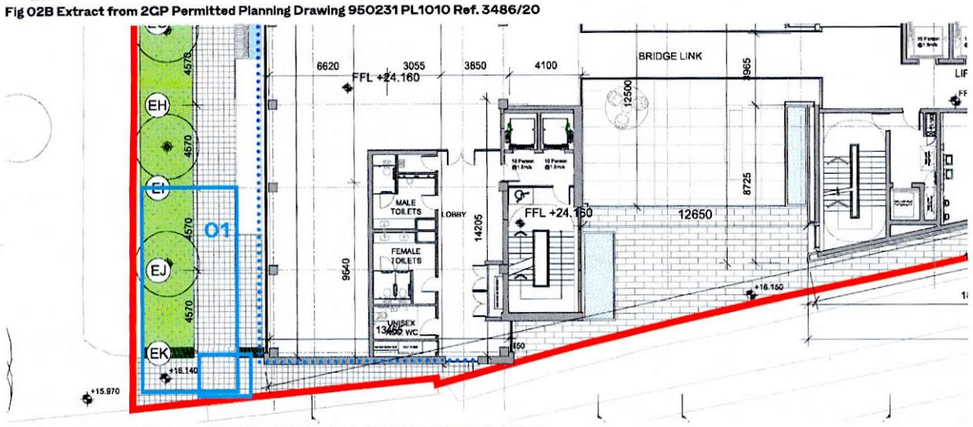


Fig 02C Extract from 2GP Permitted Planning Drawing 950231 PL1012 Ref. 3486/20

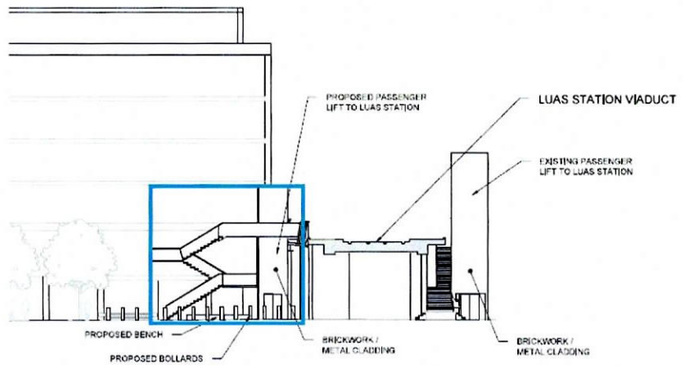


Fig 02D Extract from submission drawingML1-JAI-ARD-ROUT_XX-DR-Y-02091

In Fig 02B, the proposals for the luas link lift and stair are outlined in blue on the 2GP site layout plan to assist in demonstrating the close proximity of the proposals to the 2GP building and the impact it would have on a main fire access and egress route linking the 2GP escape stairs directly through the proposed stair and lifft location to the road at Grand Parade.

In Fig 02C, the proposals for the luas link lift and stair are outlined in blue on the 2GP second floor plan to assist in demonstrating the close proximity of the proposed lift and stair to the glazed facade of the 2GP building.

2.1.02 DETAIL OBSERVATIONS

The following observations are indentified on the submission drawing ML1-JAI-ARD-ROUT_XX-DR-Y-02090

02 Grande Parade Metro Entrance Lift and Escalators

The main vehicular and pedestrian access to the 2 Grand Parade office development is located off Grand Parade.
As part of the permitted 2 Grand Parade (2GP) office scheme, the access has been designed as a shared surface with a 6 metre roadway width being related to movements including cars passing, cyclists, fire tender access and to accommodate perpendicular parking, as part of the hard landscaping "space".
Parallel to the 6 metre roadway is 2.6 metre pedestrian paved zone which provides general access and an escape route from the 2GP building eastern stair core providing a clear width in compliance with the fire strategy for the development. See Fig 01B.

The Metro proposals locate the Entrance Escalators parallel to and encroaching into this 6 metre roadway reducing the overall width to approximately 7 metres, leaving approximately 4.5 metres for the roadway excluding kerbs. There is no consideration for a kerb or protection to the escalator structure which if introduced would further encroach on the roadway width reducing it below 4.5 metres. Fig. 01A.

The proposed escalator position also indicated the realignment of the 2GP internal access road introducing an angle to the road and associated realignment of the main vehicular executive Drop-Off space in front of the main building entrance. This will impact on the landscaped atrium plaza and alignment with the building entrance configuration.

To allow the 2GP development to continue to operate and comply with the fire strategy requirements a reduction to a minimum overall clear road width of 5.5 metres between kerbs could be considered in addition to a 2 metre paved zone.

This would also allow the parallel Drop-Off zone configuration to be maintained. Our client would be concerned that anything less than this provision would curtail the operation of the permitted development currently under construction on site.

In addition, there are 5no. trees that are protected under the 2GP planning permission located along the Dartmouth Lane perimeter that will be impacted by the proposals that will need consideration. We request that the location and design of the escalators and the lift be considered further, and amendments introduced prior to the granting of a railway order.

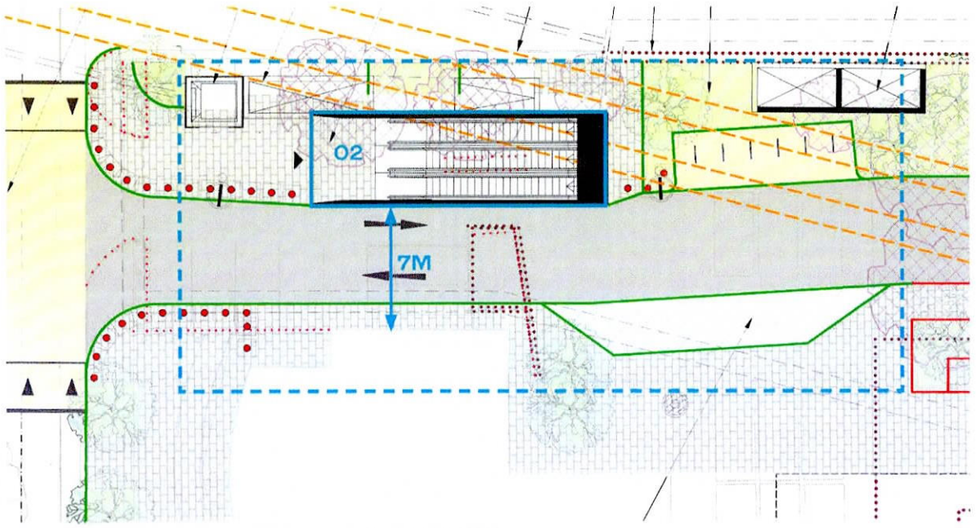


Fig01A Extract from submission drawing ML1-JAI-ARD-ROUT_XX-DR-Y-02090

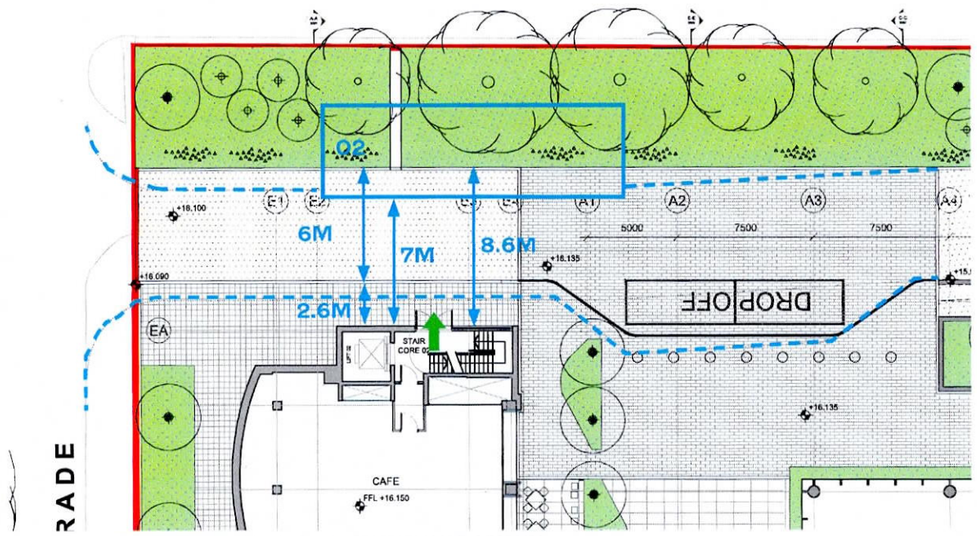


Fig 01B Extract from 2GP Permitted Planning Drawing 950231 PL1010 Ref. 3486/20

In Fig 01B, the metro proposals for the escalators and roadways are outlined in blue on the 2GP site layout plan to assist in demonstrating the impact of the proposed reduction in the road and paved zone widths and splayed Drop-Off zone.

2.1.03 DETAIL OBSERVATIONS

The following observations are indentified on the submission drawing ML1-JAI-ARD-ROUT_XX-DR-Y-02090

03 Grande Parade raised table junction and pedestrian crossing
04 Grand Parade pedestrian crossing

A raised table pedestrian crossing is proposed directly at the main access road entrance into the 2 Grand Parade (2GP) development.

Clarification is sought on proposed levels of the raised table and interface with the adjacent public roadway and pavement and entrance to 2GP existing levels.

Bollards are indicated at the outer pavement edge and returning into the 2GP development. As indicated these will block the designated fire escape route and general pedestrian access route into the 2GP development parallel the internal access road.

A signalized pedestrian crossing is proposed (Observation Item no. 04) is located approx. 12m west of the raised table pedestrian crossing. The crossing extends into the 2GP development site and as with item 3, clarification is sought on the proposed interface details and finishes with the adjacent public paving the paving at the entrance to the 2GP development.

Clarification is sought on the details of these crossing locations and anticipated use/pedestrian flows from each crossing that will direct pedestrians through the 2GP development.

This further detail should be provided prior to the granting of any railway order.

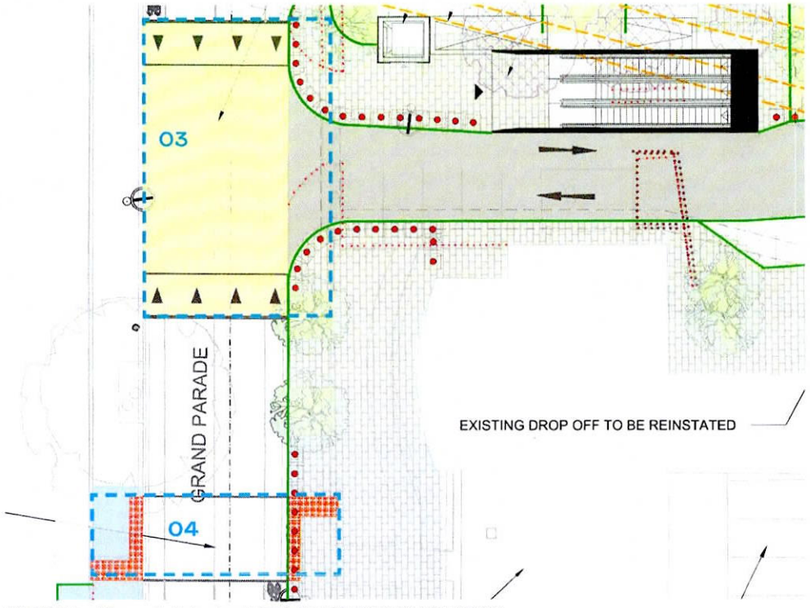


Fig 03A Extract from submission drawingML1-JAI-ARD-ROUT_XX-DR-Y-02090

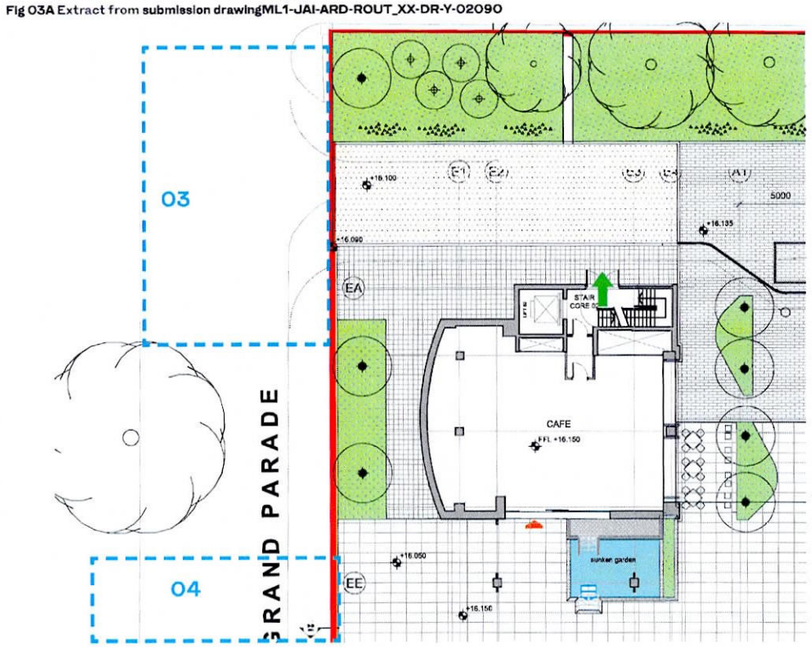


Fig 03B Extract from 2GP Permitted Planning Drawing 950231 PL1010 Ref. 3486/20

2.1.06 DETAIL OBSERVATIONS

The following observations are indentified on the submission drawing ML1-JAI-ARD-ROUT_XX-DR-Y-02090

05 Charlemont Station bicycle parking at Dartmouth Road station entrance

The proposed bicycle parking and associated circulation area to the north of the cycle stands extends into the 2GP development - see Fig 05A and 05B with blue outline,

A clear zone as indicated in Fig. 05B provides a designated fire escape access and egress route which will be compromised by the current bicycle parking configuration and consideration taken to limit access to the cycle stands from the southern side, on this basis, the cycle parking should be reconfigured to avoid impacting on this route.

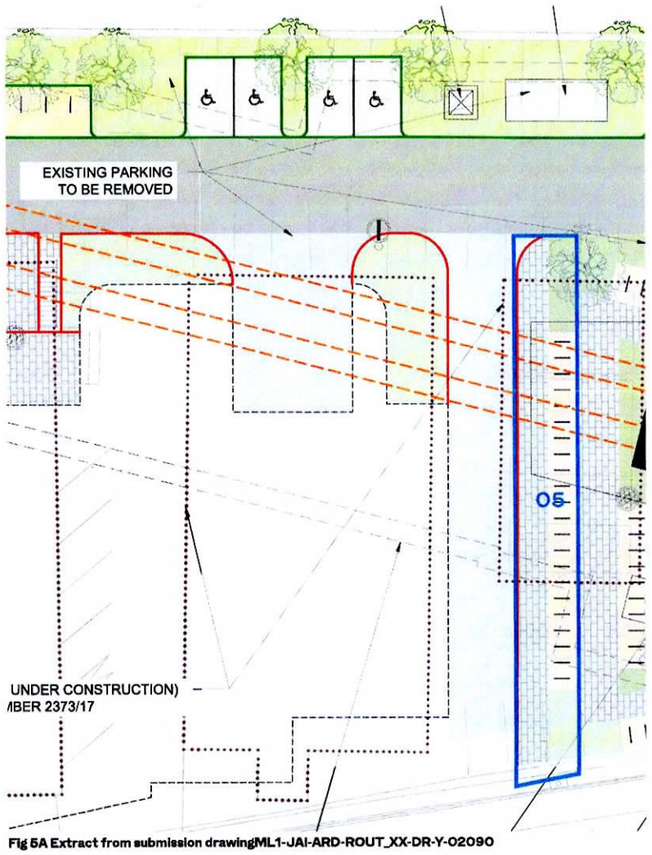


Fig 5A Extract from submission drawingML1-JAI-ARD-ROUT_XX-DR-Y-02090

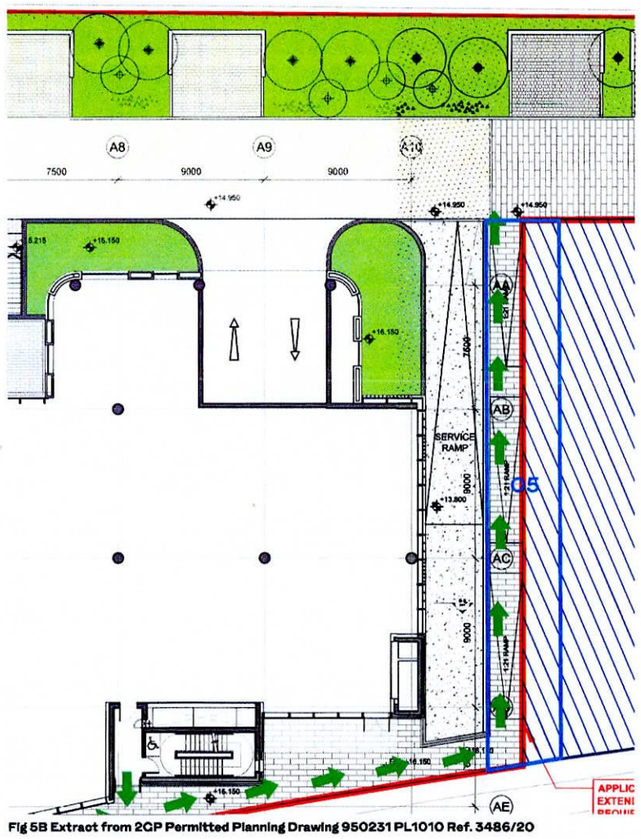


Fig 5B Extract from 2GP Permitted Planning Drawing 950231 PL1010 Ref. 3486/20

2.1.03 DETAIL OBSERVATIONS

The following observations are indentified on the submission drawing ML1-JAI-ARD-ROUT_XX-DR-Y-02090

06 Hard and Soft Landscaping at Grand Parade

The proposed hard and soft landscaping within the public realm that interface with the 2 Grand Parade (2GP) development will need further consideration to ensure co-ordination between the tree planting and intefaces with the paving finishes and levels and entrance locations to the permitted and under construction 2GP development.

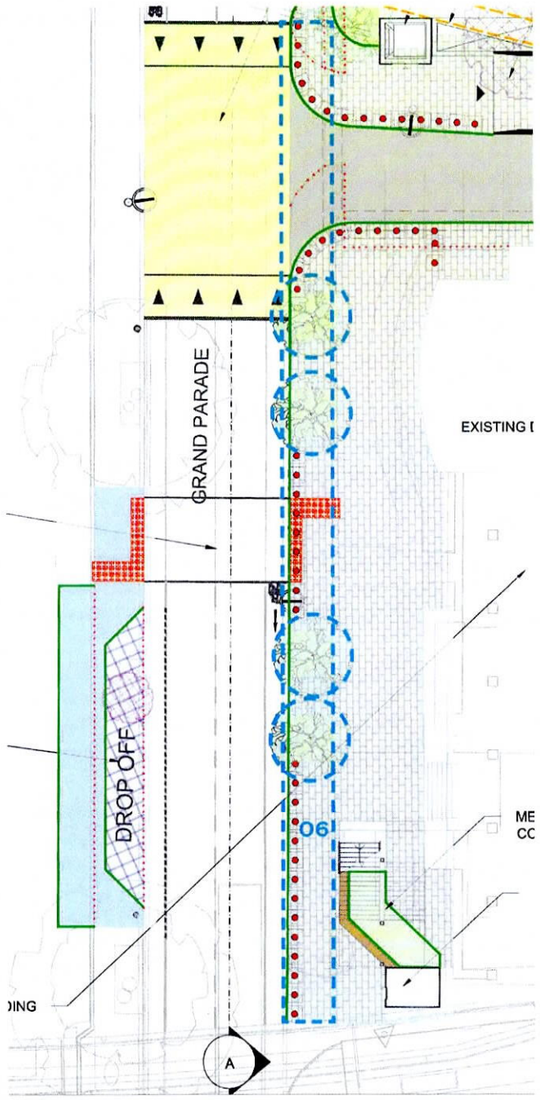


Fig 06A Extract from submission drawingML1-JAI-ARD-ROUT_XX-DR-Y-02090

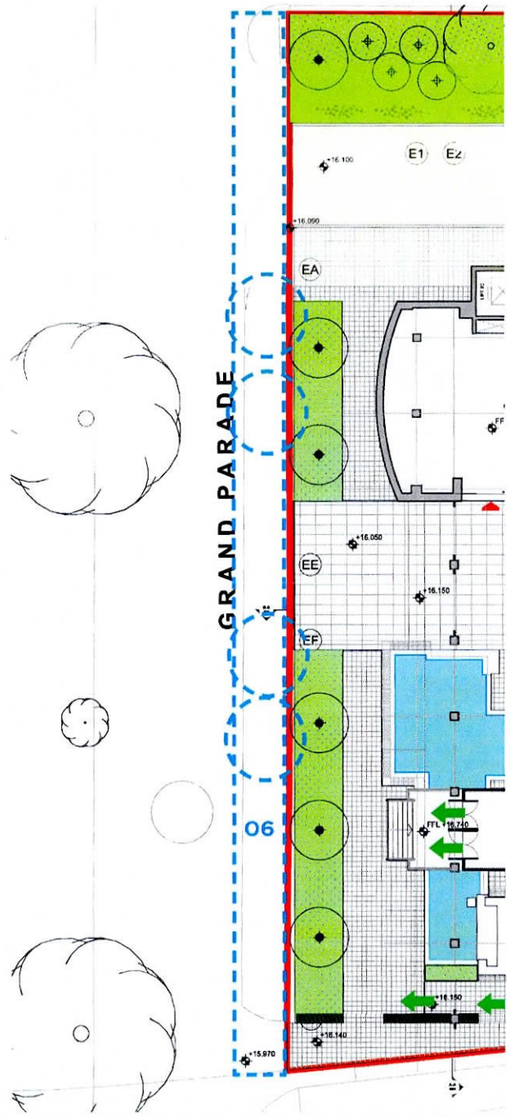


Fig 03B Extract from 2GP Permitted Planning Drawing 950231 PL1010 Ref. 3486/20

2.1.07 DETAIL OBSERVATIONS

The following observations are indentified on the submission drawing ML1-JAI-ARD-ROUT_XX-DR-Y-02090

07 Over track exhaust tunnel ventilation system adjacent to Dartmouth Road entrance
08 Pressurized Air Inlet Pumping Room Access
09 Dublin Fire Brigade Lift
10 Tunnel ventilation system draught relief
11 Over track exhaust tunnel ventilation system adjacent to Dartmouth Square boundary

Further design information is sought on the proposed vents , lift shafts and pumping room, with detail to include heights and proposed finishes in order to demonstrate the potential visual impact to the adjacent 2GP development.

As indicated on Fig 07A and 07B, the proposed vents, lifts and cycle parking will encroach/impact on various elements of the 2GP development as summarised below:

Observation 07
Carparking bays, as per the permitted planning, are located in this location. An alternative location for the proposed vents should be considered.
The existing brick boundary wall and gate pillars which are within the curtilage the protected structures on Dartmouth Square and therefore protected fabric.

Observation 08 + 09
Carparking bays, as per the permitted planning, are located in this location. An alternative location should be considered. Further detail and consideration in these respects should be furnished and included on the application file prior to the granting of any railway order.

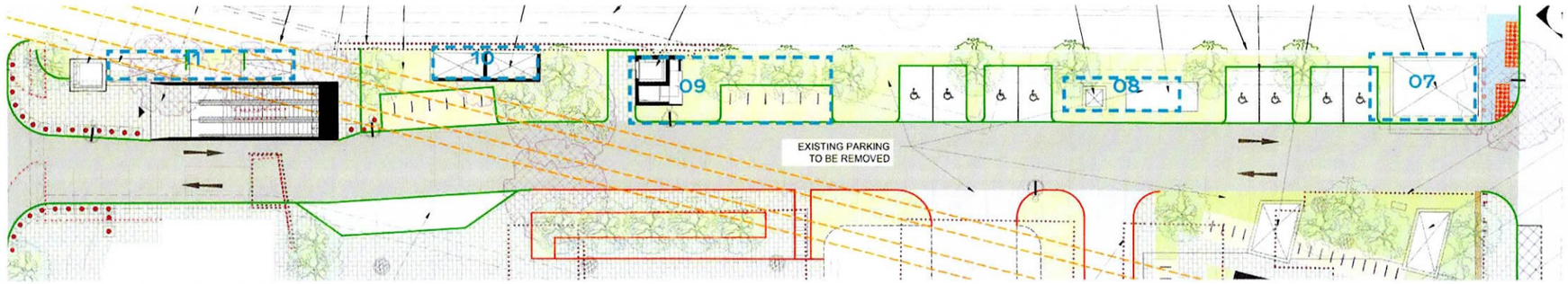


Fig 06A Extract from submission drawingML1-JAI-ARD-ROUT_XX-DR-Y-02090

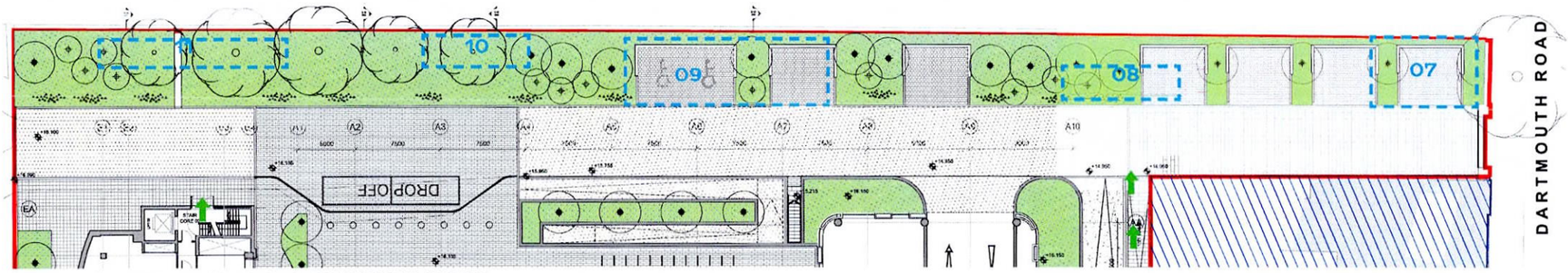


Fig 06B Extract from 2GP Permitted Planning Drawing 950231 PL1010 Ref. 3486/20

Henry J Lyons

APPENDIX 2: ENGINEERING TECHNICAL NOTE PREPARED BY DBFL CONSULTING ENGINEERS

DBFL Consulting Engineers

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TECHNICAL NOTE 220184-TN-001

Project:	Commercial Development at 2 Grand Parade		
Title:	Metrolink Railway Order Observations	**Date:**	November 2022
Client:	Union Investment	**Job No:**	220184

1. INTRODUCTION

This Technical Note was prepared to set out a series of civil/structural engineering observations on the Railway Order associated with the construction of the Metrolink as it interfaces with the commercial development of 2 Grand Parade, which is at an advanced stage of construction on site. This Technical Note is prepared in association with all other consultants' observations and is to be included as an appendix to John Spain and Associates observation cover letter.

The location and indicative extents of the development site in the context of the Metrolink station and tunnel is shown in Figure 1 below.

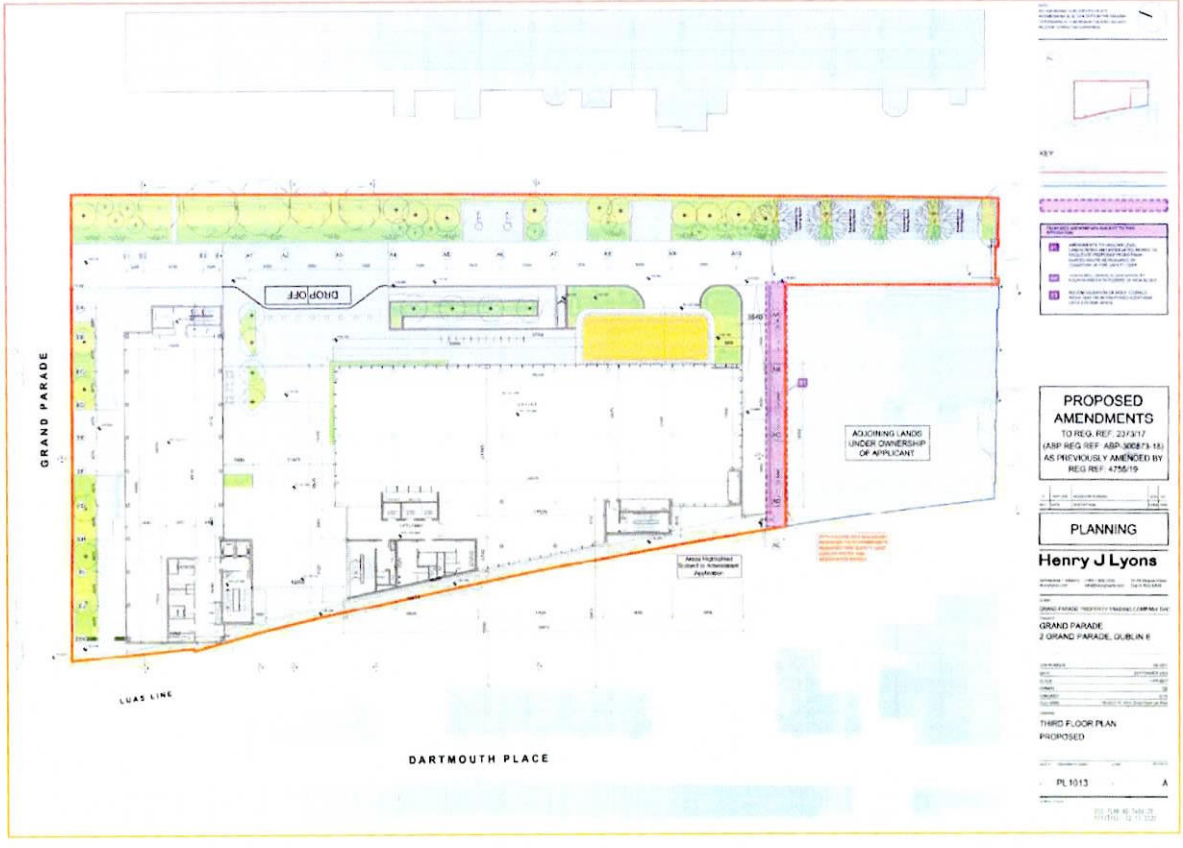

Figure 1a - Location of Development Site – Permitted Development

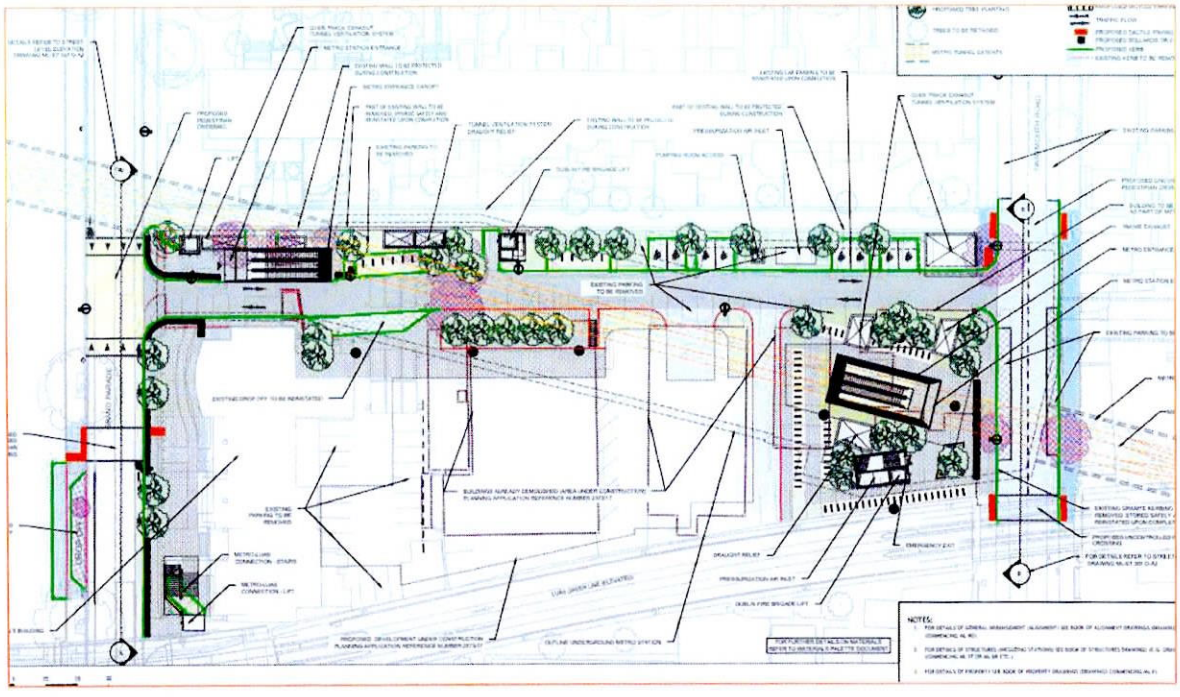

Figure 1b - Location of Development Site – Metrolink Proposal – Charlemont Station

The grounds of the observation are listed below and are covered in detail within section 2:

1. Alterations to Access Road
2. Raised Traffic Table shown on Grand Parade
3. Proposed alterations to parking within Property
4. Noise and vibration during construction
5. Noise and Vibration During Operation
6. Sequence of Construction
7. Ground Settlement
8. Pre-construction condition Surveys
9. Combined Services

2. OBSERVATIONS

1. Alteration to Access Road

Refer to HJL observation number 1 'Grand Parade Entrance Escalators' regarding the alterations to the access to the commercial development from Grand Parade. The size and location of the escalators is such that alterations to the access road are proposed to accommodate them. It is noted that as part of the permitted scheme for 2 Grand Parade a 6m wide access road is required to allow access for 2 vehicles to pass each other. This road is proposed as 4m wide following the completion of the Metrolink development (refer to figure 3) which is insufficient for 2-way traffic. The minimum width considered acceptable is 5.5m clear from inside face of kerbs. The Railway Order drawings and documents should be revised to reflect this width.

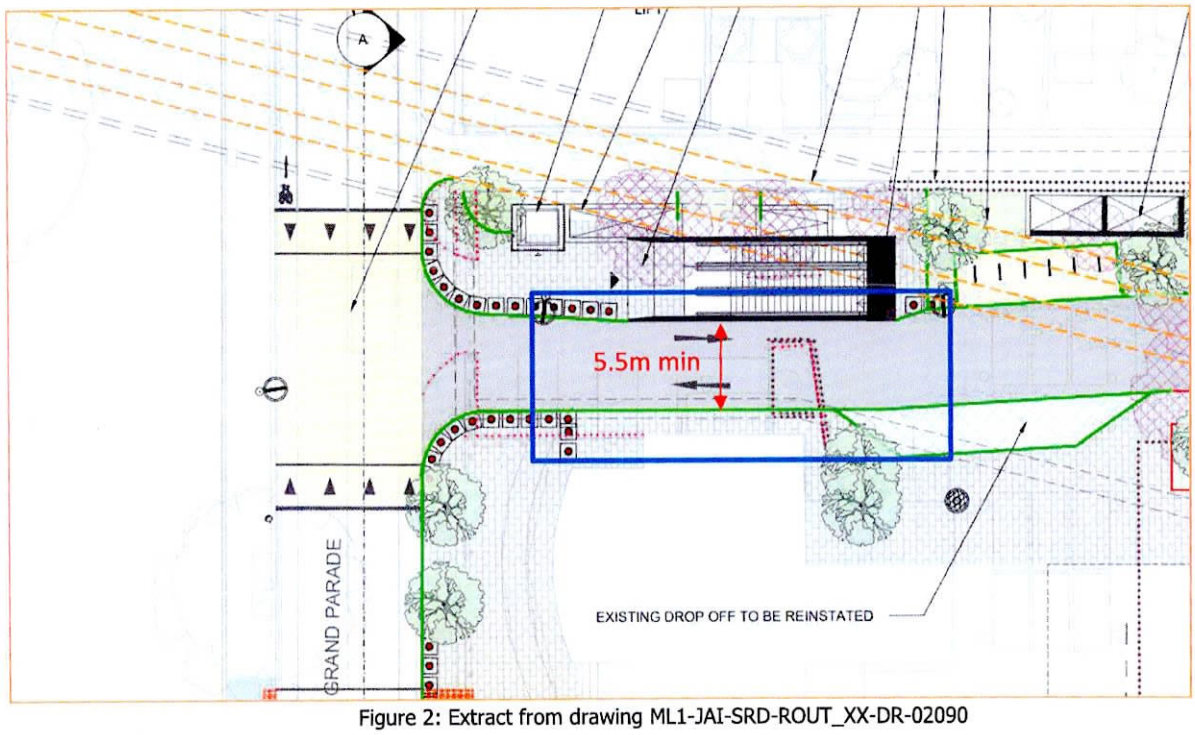

Figure 2: Extract from drawing ML1-JAI-SRD-ROUT_XX-DR-02090

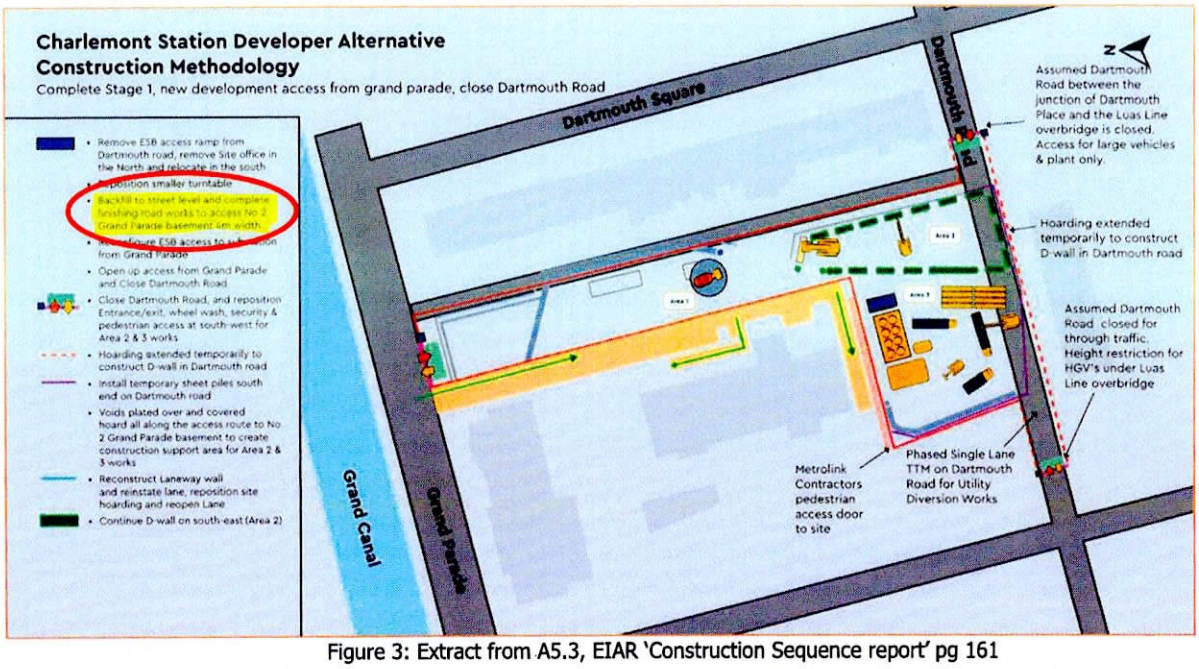

Figure 3: Extract from A5.3, EIAR 'Construction Sequence report' pg 161

2. Raised traffic table shown on Grand Parade

A raised traffic table is proposed at the entrance to the property from Grand Parade as shown on figure 2. This alteration will result in changes to the access road levels and permitted drainage strategy and as such further information is required to assess the implications of this aspect of the design.

3. Proposed Alterations to parking within Property

Refer to HJL observations numbered 7-11. The proposed layout of the station requires ventilation shafts and Dublin Fire Brigade Lift (DFB) that encroach within the curtilage of the development and alterations to parking provisions are proposed to accommodate this. The proposal reduces the number of carparking spaces from the 14 number permitted under the 2 Grand Parade planning to 8, resulting in a considerable loss of spaces. Alternative locations for these ventilation shafts/DFB lift should be considered as outlined within HJL's observations to retain parking as per currently permitted development on site.

4. Noise and Vibration during construction

Construction operations considerably affect the property for the duration of the construction period. Refer to Appendix A13.7 "Construction Phase modelling" within the EIAR report which states that noise level thresholds will be exceeded throughout the duration of construction and will have a *'Significant to Very Significant'* effect on 2 Grand Parade (refer to figures 4, 5 & 6).

South Station Works Excavation - Gound Level (includes batching plant)	31	66 Dartmouth Sq	69	UT52	65	65	Moderate to Significant	Moderate to Significant
	32	64 Dartmouth Sq	67	UT52	65	65	Moderate to Significant	Moderate to Significant
	33	62 Dartmouth Sq	65	UT52	65	65	Slight to Moderate	Slight to Moderate
	34	11 Cambridge Sq	82	UT52	65	65	Significant to Very Significant	Significant to Very Significant
	35	10 Cambridge Sq	79	UT52	65	65	Significant to Very Significant	Significant to Very Significant
	36	7 Cambridge Sq	77	UT52	65	65	Significant to Very Significant	Significant to Very Significant
	37	5 Cambridge Sq	71	UT52	65	65	Significant to Very Significant	Significant to Very Significant
	38	3 Cambridge Sq	69	UT52	65	65	Moderate to Significant	Moderate to Significant
	39	34 Dartmouth Rd	85	UT51	70	70	Significant to Very Significant	Significant to Very Significant
	40	32-33 Dartmouth Rd	84	UT51	70	70	Significant to Very Significant	Significant to Very Significant
	41	31 Dartmouth Rd	80	UT51	70	70	Significant to Very Significant	Significant to Very Significant
	42	30 Dartmouth Rd	79	UT51	70	70	Significant to Very Significant	Significant to Very Significant
	43	29 Dartmouth Rd	77	UT51	70	70	Significant to Very Significant	Significant to Very Significant
	44	26 Dartmouth Rd	79	UT51	70	70	Significant to Very Significant	Significant to Very Significant
	45	27 Dartmouth Rd	79	UT51	70	70	Significant to Very Significant	Significant to Very Significant
	46	28 Dartmouth Rd	78	UT51	70	70	Significant to Very Significant	Significant to Very Significant
	47	8 Dartmouth Pl	63	UT51	70	70	Not Significant	Not Significant
	48	10 Dartmouth Pl	63	UT51	70	70	Not Significant	Not Significant
	49	1-2 Dartmouth Pl	58	UT51	70	70	Not Significant	Not Significant
	50	The Mews, Dartmouth	55	UT52	75	75	Not Significant	Not Significant
	51	Dartmouth Court (Crec	53	UT52	65	65	Not Significant	Not Significant
	52	7 Dartmouth Pl	51	UT52	65	65	Not Significant	Not Significant
	53	3 Dartmouth Pl	50	UT52	65	65	Not Significant	Not Significant
	54	1 Dartmouth Pl	49	UT52	65	65	Not Significant	Not Significant
	55	1a & 2a Dartmouth Pl	48	UT52	65	65	Not Significant	Not Significant
	56	Dartmouth House	66	UT52	65	65	Moderate to Significant	Moderate to Significant
	57	Hilton Hotel	67	UT52	70	70	Not Significant	Not Significant
	58	21 Charlemont Pl (Offic	72	UT52	75	75	Not Significant	Not Significant
	59	Charlemont House (Off	73	UT52	75	75	Not Significant	Not Significant
	60	2 Grand Parade	92	UT51	75	75	Significant to Very Significant	Significant to Very Significant
	61	Hines Building (South)	86	UT51	70	70	Significant to Very Significant	Significant to Very Significant
	62	Hines Building (East)	87	UT52	65	65	Significant to Very Significant	Significant to Very Significant
	63	16 Harcourt Terrace	61	UT52	65	65	Not Significant	Slight to Moderate
	64	15 Harcourt Terrace	64	UT52	65	65	Slight to Moderate	Slight to Moderate

Figure 4: Extract from page 20 of Appendix A13.7, EIAR– 'Construction Phase Modelling- south station works excavation'

Further examples of different construction operations that will exceed the threshold limits are shown below in figures 5 and 6:

Station Piling Works North	30	68 Dartmouth Sq	49	UT52	65	65	Not Significant	Not Significant
	31	66 Dartmouth Sq	48	UT52	65	65	Not Significant	Not Significant
	32	64 Dartmouth Sq	47	UT52	65	65	Not Significant	Not Significant
	33	62 Dartmouth Sq	46	UT52	65	65	Not Significant	Not Significant
	34	11 Cambridge Sq	67	UT52	65	65	Moderate to Significant	Moderate to Significant
	35	10 Cambridge Sq	66	UT52	65	65	Moderate to Significant	Moderate to Significant
	36	7 Cambridge Sq	66	UT52	65	65	Moderate to Significant	Moderate to Significant
	37	5 Cambridge Sq	64	UT52	65	65	Slight to Moderate	Slight to Moderate
	38	3 Cambridge Sq	63	UT52	65	65	Slight to Moderate	Slight to Moderate
	39	34 Dartmouth Rd	68	UT51	70	70	Slight to Moderate	Slight to Moderate
	40	32-33 Dartmouth Rd	66	UT51	70	70	Slight to Moderate	Slight to Moderate
	41	31 Dartmouth Rd	46	UT51	70	70	Not Significant	Not Significant
	42	30 Dartmouth Rd	46	UT51	70	70	Not Significant	Not Significant
	43	29 Dartmouth Rd	39	UT51	70	70	Not Significant	Not Significant
	44	26 Dartmouth Rd	41	UT51	70	70	Not Significant	Not Significant
	45	27 Dartmouth Rd	40	UT51	70	70	Not Significant	Not Significant
	46	28 Dartmouth Rd	40	UT51	70	70	Not Significant	Not Significant
	47	8 Dartmouth Pl	42	UT51	70	70	Not Significant	Not Significant
	48	10 Dartmouth Pl	41	UT51	70	70	Not Significant	Not Significant
	49	1-2 Dartmouth Pl	40	UT51	70	70	Not Significant	Not Significant
	50	The Mews, Dartmouth	41	UT52	75	75	Not Significant	Not Significant
	51	Dartmouth Court (Crec	42	UT52	65	65	Not Significant	Not Significant
	52	7 Dartmouth Pl	42	UT52	65	65	Not Significant	Not Significant
	53	3 Dartmouth Pl	42	UT52	65	65	Not Significant	Not Significant
	54	1 Dartmouth Pl	43	UT52	65	65	Not Significant	Not Significant
	55	1a & 2a Dartmouth Pl	43	UT52	65	65	Not Significant	Not Significant
	56	Dartmouth House	64	UT52	65	65	Slight to Moderate	Slight to Moderate
	57	Hilton Hotel	65	UT52	70	70	Not Significant	Not Significant
	58	21 Charlemont Pl (Offic	71	UT52	75	75	Not Significant	Not Significant
	59	Charlemont House (Off	72	UT52	75	75	Not Significant	Not Significant
	60	2 Grand Parade	89	UT51	75	75	Significant to Very Significant	Significant to Very Significant
	61	Hines Building (South)	46	UT51	70	70	Not Significant	Not Significant
	62	Hines Building (East)	85	UT52	65	65	Significant to Very Significant	Significant to Very Significant
	63	16 Harcourt Terrace	58	UT52	65	65	Not Significant	Not Significant
	64	15 Harcourt Terrace	64	UT52	65	65	Slight to Moderate	Slight to Moderate

Figure 5: Extract from page 18 of Appendix A13.7, EIAR – 'Construction Phase Modelling– Station Piling Works North'

Advanced Enabling & Utility Works, Site Preparation Works	31	66 Dartmouth Sq	64	UT52	65	65	Slight to Moderate	Slight to Moderate
	32	64 Dartmouth Sq	60	UT52	65	65	Not Significant	Slight to Moderate
	33	62 Dartmouth Sq	59	UT52	65	65	Not Significant	Slight to Moderate
	34	11 Cambridge Sq	77	UT52	65	65	Significant to Very Significant	Significant to Very Significant
	35	10 Cambridge Sq	72	UT52	65	65	Significant to Very Significant	Significant to Very Significant
	36	7 Cambridge Sq	70	UT52	65	65	Moderate to Significant	Moderate to Significant
	37	5 Cambridge Sq	64	UT52	65	65	Slight to Moderate	Slight to Moderate
	38	3 Cambridge Sq	63	UT52	65	65	Slight to Moderate	Slight to Moderate
	39	34 Dartmouth Rd	77	UT51	70	70	Significant to Very Significant	Significant to Very Significant
	40	32-33 Dartmouth Rd	79	UT51	70	70	Significant to Very Significant	Significant to Very Significant
	41	31 Dartmouth Rd	75	UT51	70	70	Moderate to Significant	Moderate to Significant
	42	30 Dartmouth Rd	74	UT51	70	70	Moderate to Significant	Moderate to Significant
	43	29 Dartmouth Rd	72	UT51	70	70	Moderate to Significant	Moderate to Significant
	44	26 Dartmouth Rd	74	UT51	70	70	Moderate to Significant	Moderate to Significant
	45	27 Dartmouth Rd	73	UT51	70	70	Moderate to Significant	Moderate to Significant
	46	28 Dartmouth Rd	72	UT51	70	70	Moderate to Significant	Moderate to Significant
	47	8 Dartmouth Pl	57	UT51	70	70	Not Significant	Not Significant
	48	10 Dartmouth Pl	56	UT51	70	70	Not Significant	Not Significant
	49	1-2 Dartmouth Pl	50	UT51	70	70	Not Significant	Not Significant
	50	The Mews, Dartmouth	49	UT52	75	75	Not Significant	Not Significant
	51	Dartmouth Court (Crec	47	UT52	65	65	Not Significant	Not Significant
	52	7 Dartmouth Pl	45	UT52	65	65	Not Significant	Not Significant
	53	3 Dartmouth Pl	45	UT52	65	65	Not Significant	Not Significant
	54	1 Dartmouth Pl	44	UT52	65	65	Not Significant	Not Significant
	55	1a & 2a Dartmouth Pl	43	UT52	65	65	Not Significant	Not Significant
	56	Dartmouth House	61	UT52	65	65	Not Significant	Slight to Moderate
	57	Hilton Hotel	62	UT52	70	70	Not Significant	Not Significant
	58	21 Charlemont Pl (Offic	65	UT52	75	75	Not Significant	Not Significant
	59	Charlemont House (Off	67	UT52	75	75	Not Significant	Not Significant
	60	2 Grand Parade	81	UT51	75	75	Significant to Very Significant	Significant to Very Significant
	61	Hines Building (South)	79	UT51	70	70	Significant to Very Significant	Significant to Very Significant
	62	Hines Building (East)	83	UT52	65	65	Significant to Very Significant	Significant to Very Significant
	63	16 Harcourt Terrace	53	UT52	65	65	Not Significant	Not Significant
	64	15 Harcourt Terrace	58	UT52	65	65	Not Significant	Not Significant

Figure 6: Extract from page 17 of Appendix A13.7, EIAR– 'Construction Phase Modelling– Advanced Enabling Works'

Note that for some operations the threshold limit is exceeded by more than 10db which puts the property in the '*further mitigation measures'* category in accordance with document in Appendix A14.6, EIAR – 'Airborne Noise & Groundborne Noise Mitigation Policy'. It is noted that noise and vibration threshold limits should be agreed with all stakeholders and that procedures are to be put in place to mitigate exceedance of agreed thresholds. Further information is required to establish a regime where exceedance of the thresholds is mitigated appropriately to the satisfaction of all stakeholders.

Further information on the Groundborne noise and vibration is also required. Within the document entitled 'Blasting Strategy' (Appendix A5.20, EIAR) it is noted that a preliminary assessment on the 'Carroll's' building was made. Whilst the specific report on this building was not made available, the summary report (A5.20) states that the PPV limit is set at 7.5m/s (refer to table on page 44 Appendix E 'Blasting Strategy' A5.20, EIAR). All proposals for setting and monitoring these limits are to be agreed with all stakeholders prior to acceptance.

It is also noted that an assessment of the new-build portion of the development at 2 Grand Parade in relation to blasting has not been carried out despite it being stated within A5.20 (refer to figure 7) that the intention for excavation of the Charlemont station box is to use blasting methods from 11mbgl down.

Location	Level of Rock from Street Level	Closest Building (horizontal)	Distance	Patterns (95%ile)	Note
Albert College Park	20m	50m	*56.2m*	A1, A2, A3, 1, 2, 3	
Griffith Park	12m	26m	*30.9m*	A1, A2, A3, 1 &2	Assuming dressing room/shops can be replaced and is not a receptor. Assuming houses are not sensitive.
Mater: church end	24m	5.4m	*25.2m*	A3	Assumed church is sensitive.
Mater: north end	24m	16m	*30.3m*	A1, A2, A3, 1 &2	Assuming Hospital is not sensitive
O'Connell Street	23m	0m	23m	A1, A2, A3, 1	
Tara Street Station	9m	4m	*11.1m*	A1 & A3	Mechanical excavation for less than 100m³ then A1 & A3. Railway arches: assuming not sensitive
St Stephen's Green	11m	22m	26.9m	A3	Assuming Buildings are sensitive
Charlemont	11m	0m	11m	Mechanical excavation or A4	Mechanical breaking or pattern A4 can be used for the first 4m from top of rock (11mbgl) to 15mbgl. Then from 15mbgl to 20mbgl patterns A1 and A3 can be used. Lower than 20mbgl all patterns can be used.

Figure 7: Extract from Tbl 4.4 in Appendix A5.20 'Blasting Strategy', EIAR

Note that a significant proportion of excavation for this station is directly below the 2 Grand Parade Development and further information is required to ensure that blasting in the vicinity of the building does not adversely affect it. All baseline limits and monitoring regimes are to be agreed with all stakeholders prior to acceptance. Further information in this regard is required prior to the approval of the project

5. Noise and Vibration during operation

It is noted that noise & vibrations during the operation of the metro could be an issue and that exceedance of calculated thresholds is likely. A full assessment of operational noise and vibrations on the 2 Grand Parade building is required and any mitigation measures to reduce, such as the utilisation of specialised trackform within the vicinity of 2 Grand Parade, is to be considered.

Initial assessments previously carried out by WSP on behalf of Hines (the previous owner of the site) note that '*it is recommended that the design team for 2 Grand Parade should work closely with Transport Infrastructure Ireland to ensure that details of the trackform are specified so as to control groundborne noise and vibration at source and thereby ensure that the resulting impact on the development at 2 Grand Parade remains within acceptable limits'*.

6. Sequence of Construction

There are 2 proposals outlined for Charlemont station from page 150-165 in Appendix A5.3 'Construction Sequence Report' within the EIAR. The first option entitled *'Charlemont – Construction Sequence'* describes a methodology that does not allow for any access (other than emergency) to the basement of 2 Grand Parade during the construction period and is considered unacceptable by our client (refer to example in figure 8).

Note that our client will require 24 hour unimpeded access for vehicles and cyclists to the basement, plant areas and ESB substation.

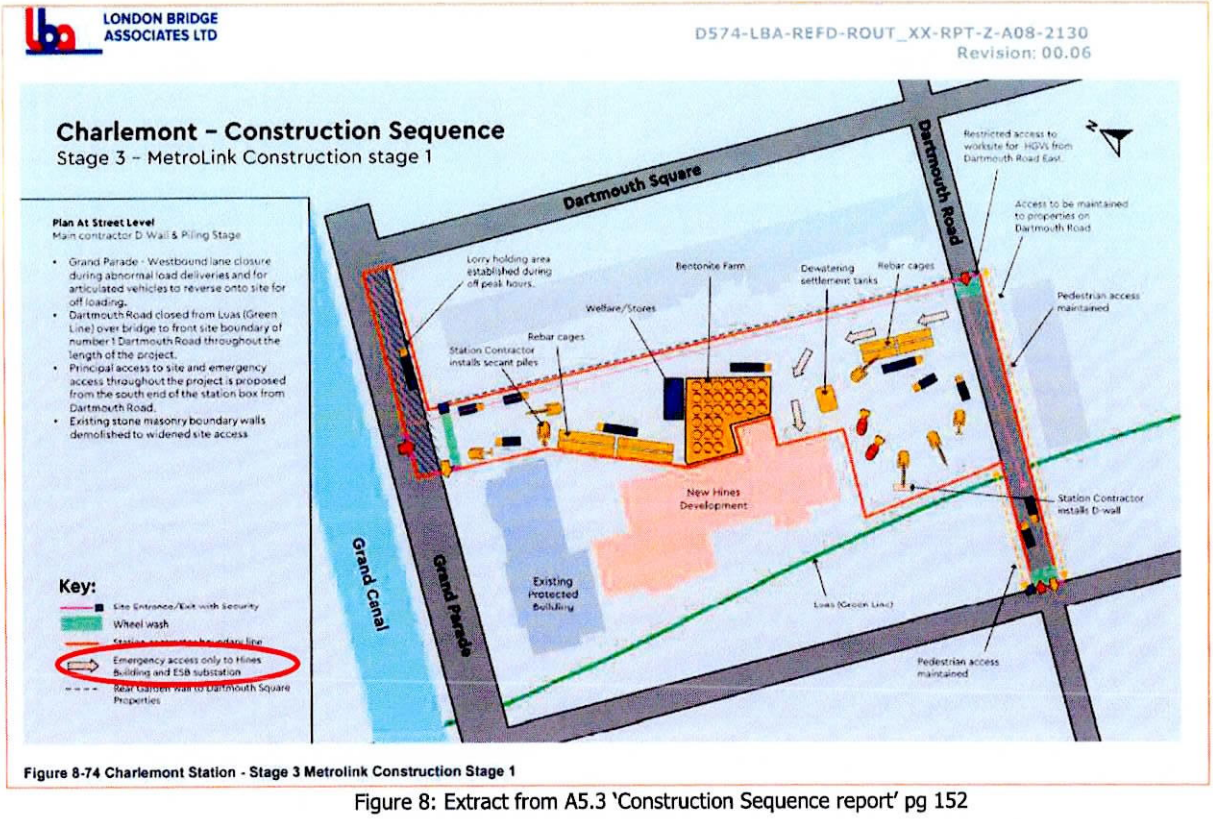

Figure 8-74 Charlemont Station - Stage 3 Metrolink Construction Stage 1

Figure 8: Extract from A5.3 'Construction Sequence report' pg 152

The second option entitled *'Charlemont Station Developer Alternative Construction Methodology'* allows for access to the basement of 2 Grand Parade for the full duration and is the only option that is considered potentially acceptable to our Client (refer to example in Figure 9). The Construction Programme, contained in Appendix A5.2 of EIAR, indicates that the duration of construction of the station is 8.5 years and our Client has serious concerns over this. The construction sequence provides a very limited amount of information in relation to the various elements of the works. This needs to be expanded to break the sequence down into smaller more detailed segments and include timeframe for each of these elements so that a proper assessment of the impact on the 2 Grand Parade building during the construction phase can be made.

At a minimum our Clients requirements are as follows:

- 24 hours safe access to the basement car park.
- 24 hours safe access to bicycle parking.
- 24 hours safe access to ESB substation.
- 24 hours safe access for Emergency Vehicles
- All site services to be kept live at all times

Note that fire escape access is covered in a separate observation document by MSA.

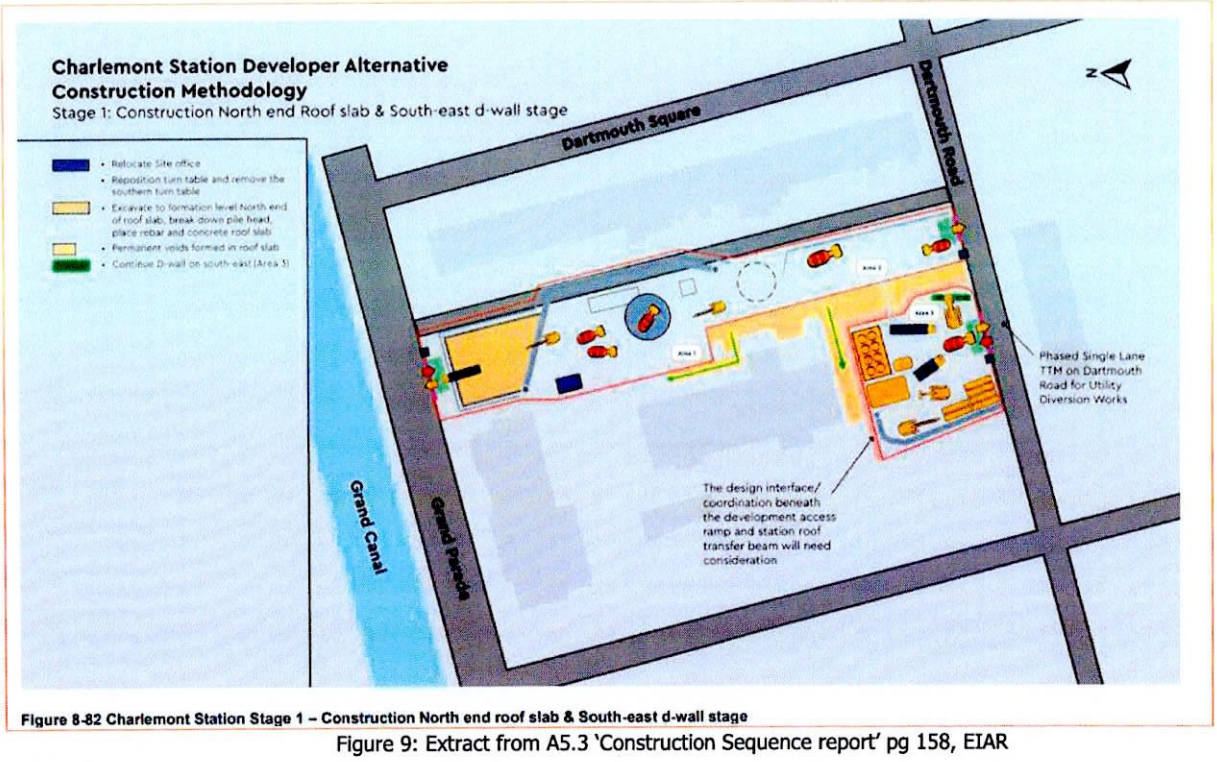

Figure 8-82 Charlemont Station Stage 1 – Construction North end roof slab & South-east d-wall stage

Figure 9: Extract from A5.3 'Construction Sequence report' pg 158, EIAR

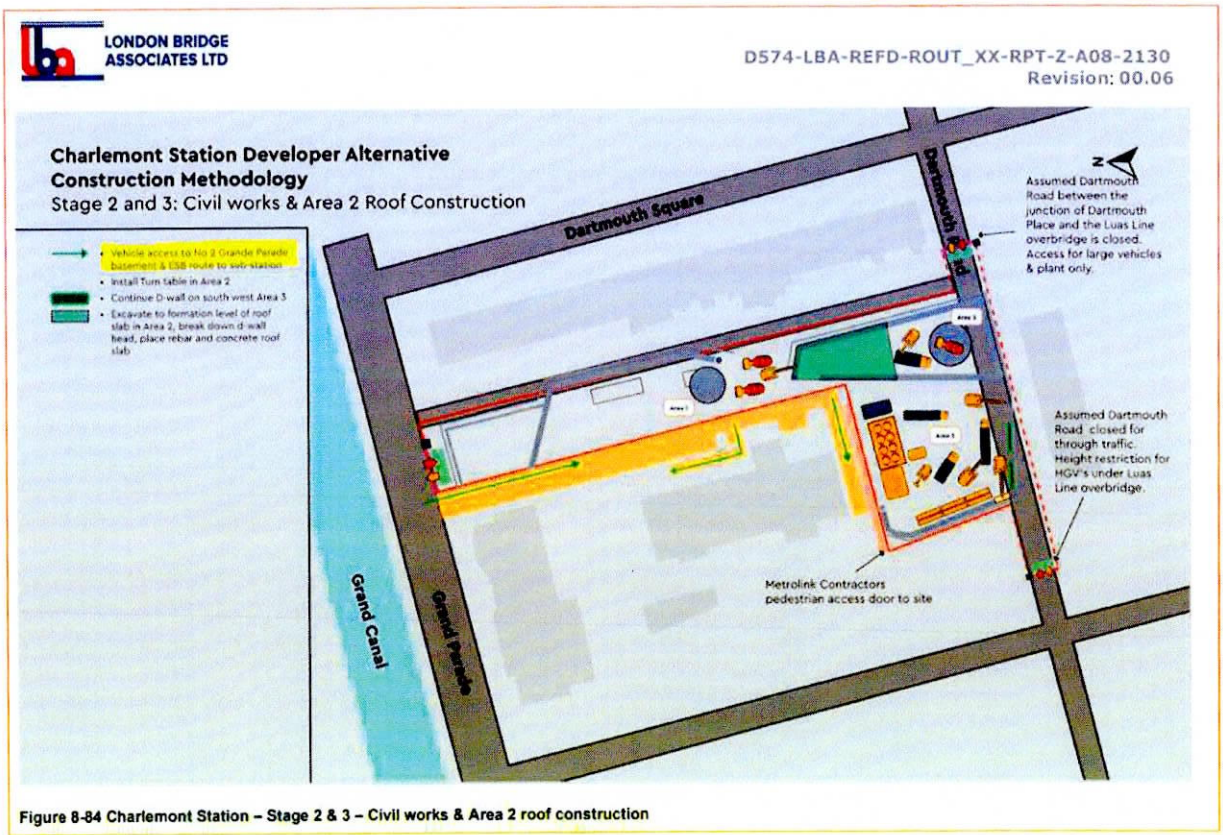

Figure 8-84 Charlemont Station – Stage 2 & 3 – Civil works & Area 2 roof construction

Figure 10: Extract from A5.3 'Construction Sequence report' pg 162, EIAR

7. Ground Settlement

A Ground Settlement assessment was carried out in the vicinity of Charlemont station and the report along with its conclusions are outlined in Appendix A5.17, EIAR 'Building Damage Report'. It is noted that following the assessment of the potential ground movements within the vicinity of the station that the 'Carrolls' building has been cited as a 'special' building is subject to a phase 3 assessment due to the close proximity of the station box with the building.

"The other building of note is the Carrolls Building (B228) which is within 2m of the proposed Charlemont Station perimeter wall. While the ground movement impact assessment has concluded that protection works are not necessary, due to the proximity of the building to the station excavation, it is proposed, as a precaution, that provision at this time is made to be able to treat the ground beneath the building from the station site in the event ground movement mitigation is necessary." EIAR, Appendix A5.17, 'Building Damage Report' Pg 7

*"Despite the damage classification from both the initial and the refined analysis of the Carrolls Building at chainage 19300 table 5-5 intervention may be required. This is due to the proximity of the building, figure 5.1 e to the Charlemont station structure. Local effects including variation in ground, the building ground and construction technique can influence the predictions. Therefore, it is prudent to anticipate a potential intervention around the structure until these are all known. This could be mitigated with very precise construction control, the installation of a physical separation, or ground treatment to prevent any movement."*EIAR, Appendix A5.17, 'Building Damage Report' Pg 54

"In particular, some form of foundation treatment might be required to protect the Carrolls Building (B-228) due to its very close proximity (less than 2m) to the proposed excavation associated with Charlemont station box construction". EIAR, Appendix A5.17, 'Building Damage Report' Pg 50

As noted above a potential solution is to utilise ground improvement techniques within the vicinity of the 'Carrolls' building to mitigate settlement. Further information is required to assess the proposals for ground/foundation improvement and is to be agreed with all stakeholders prior to implementing this as a solution.

8. Pre-construction condition surveys

Pre-construction condition surveys of all assets for the entire 2 Grand Parade development are required in advance of any site activities commencing. The results of these surveys are to be shared with our client and agreed in advance of the works.

Noise, vibration and settlement monitors will be required on and around the environs of the 2 Grand Parade buildings during the course of the works. The locations, threshold levels and procedures in the event of exceedance of these levels are to be agreed in advance of their installation.

9. Combined Services

All services to the 2 Grand Parade building are to remain live for the entire duration of the construction works. Further information is required to confirm how this will be achieved. The construction methodology drawings note that service diversions are to be agreed with DCC and utility providers but not necessarily with the building owners (refer to figure 11) further information should be provided in this respect prior to the approval of any Railway Order.

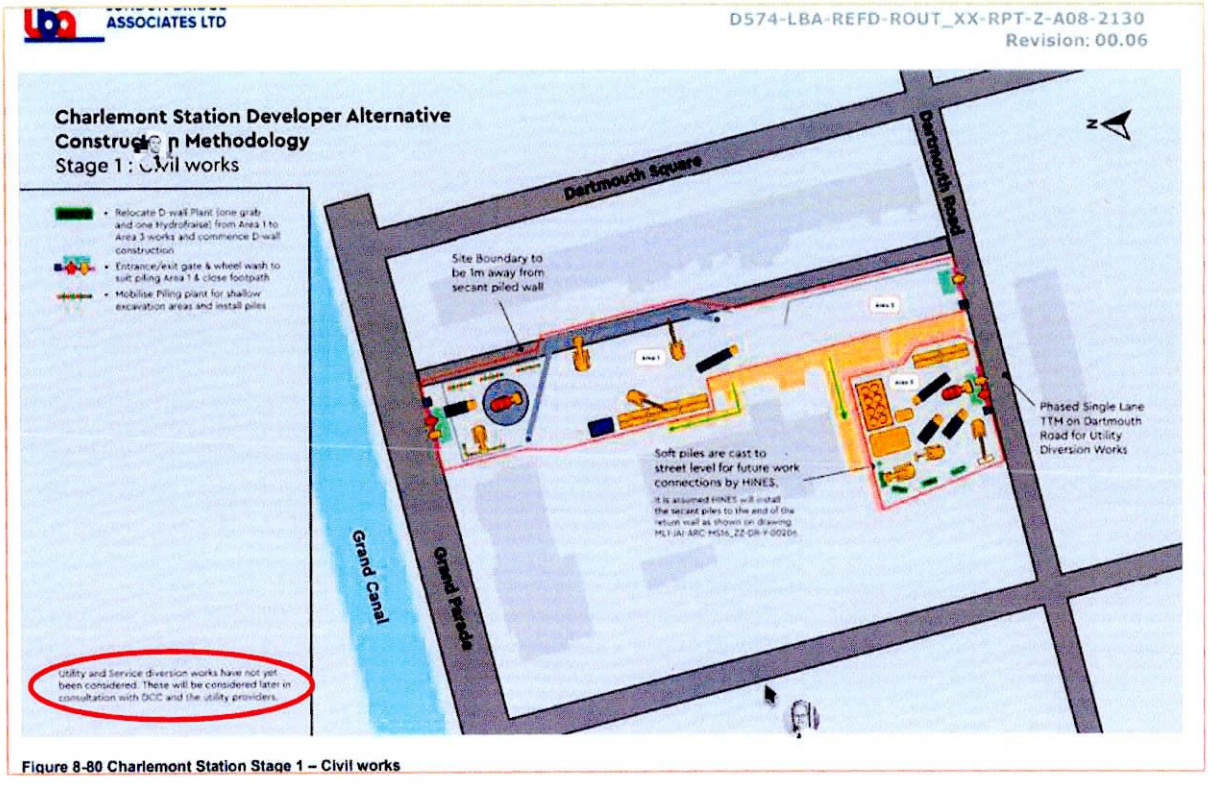

Figure 11: Extract from A5.3, EIAR 'Construction Sequence report' pg 158

10. Maintenance Strategy and future access for replacement of large plant / equipment items

The documents do not appear to fully address the maintenance strategy for the operational metro station. Of particular concern to our client is access required for future maintenance and or removal of large items of station plant and equipment. We note that a TVS/Equipment exit is indicated at the Dartmouth Road end of the station alongside the access route into the 2 Grand Parade building. No access for equipment removal is identified at the north end of the station.

Further information is required outlining the proposed strategy and the likely impacts on access to, and the operation of, the 2 Grand Parade building. Note that our clients requirements in relation to access are as per Item 6 above.

APPENDIX 3: FIRE SAFETY NOTE PREPARED BY MSA

Michael Slattery Associates
Fire Safety Engineers
Our Ref: 22323 > 22323c001a
Date: 16/11/2022
Your Ref:
By Email

www.msa.ie

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Re: 2 Grand Parade Office Development - Metrolink Interface

Dear Sir/ Madam,

This report is issued as a follow up to review of the Transport Infrastructure Ireland (TII), proposals at the Charlemont Metrolink station, as part of the current Metrolink railway order application to An Bord Pleanála, and the potential effect of same on the 2 Grand Parade office development, from a fire safety perspective.

It is considered that further details, and / or revisions to the design presented in the Railway Order application is required in respect of the following issues:

1. The Railway Order drawings do not appear to have taken cognisance of the following items.
    a. *The proposed reduction in roadway width to the East of the 2 Grand Parade building and the adverse effect this has on escape from the building via core 2, and fire service vehicle access along the east Elevation of the building.*

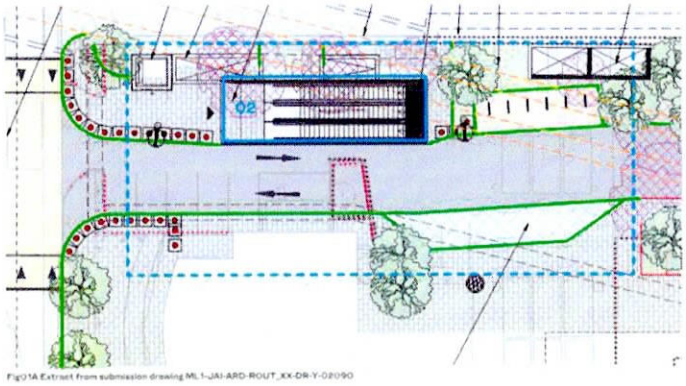

Fig01A Extract from submission drawing ML1-JAI-ARD-ROUT_XX-DR-Y-02090

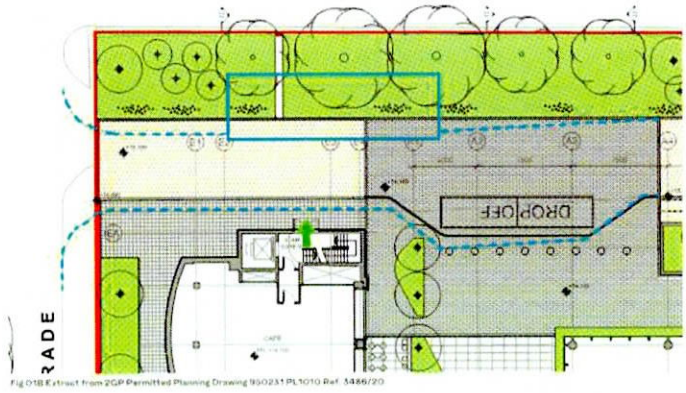

Fig01B Extract from 2GP Permitted Planning Drawing 302231 PL1010 Ref. 3486/20

b. *The proposal to place a stair externally to the North West of the 2 Grand Parade building which has the potential to adversely affect the approved escape and fire tender personnel access into core 3, which is noted as a critical fire fighting shaft for the office building.*

Fig 02B Extract from 2GP Permitted Planning Drawing 950231 PL1010 Ref. 3486/20

2. As part of the Railway Order application process, a Fire Strategy document for Charlemont Metrolink should be provided for review, considering impact of 2 Grand Parade.

   a. *It is unclear from review of the information provided whether TII have considered the impact of their development on the 2 Grand Parade building, in a holistic manner to include impact on means of escape, occupant numbers and flows, external fire spread between buildings and required boundary distances, fire service vehicle and personnel access to the site and building, station vent locations, potential fire alarm interfaces, etc. We would request that such a document is prepared and provided for review, to form part of the approval of any final Railway Order.*

3. Construction Stage Interface.

   a. *It is apparent that the TII construction stage plan has not taken cognisance of the various escape routes and fire service access routes for the 2 Grand Parade building, in this regard, the construction management and phasing should be revisited and revised, to ensure their site compound and hoarding lines do not adversely affect fire safety compliance from the office building during the construction phase.*

4. Local Authority Engagement

    a. *It is envisaged that some level of consultation has taken place between TII and the Fire Authority. It is respectfully requested that the TII team advise what level of engagement has taken place to date with the Fire Authority in relation to the Charlemont Metrolink station, in terms of fire strategy development, lodgement and approval.*

The above is a preliminary list of observations for consideration by the TII team as they develop their fire safety strategy for the Charlemont Metrolink station, it would be appropriate for these items to be addressed in further detail in documentation provided at Oral Hearing stage or otherwise to ensure that these matters are dealt with in any approval for the Railway Order.

Yours Sincerely

Dr Michael Quinn BSc MSc PhD MIEI
Associate Director

For and on Behalf of

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