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METROLINK Railway Order
An Bord Pleanála Oral Hearing

ABP-314724-22

Submission
Prepared by

Mr Luke Wymer

On behalf of

Union Investment Real Estate GmbH

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1.0 INTRODUCTION

Qualifications and Professional Experience

1.1 My name is Luke Wymer. I am an Executive Director of John Spain Associates, a leading firm of planning consultants. I have 7 year's planning and development consultancy experience in Ireland. I am a Corporate Member of the Irish Planning Institute, a Licentiate Member of the Royal Town Planning Institute (RTPI), a member of the RTPI Executive Committee for Ireland, and a member of the RTPI Policy, Practice and Research Committee (PPRC).

1.2 My qualifications include:

- BA (Geography and Archaeology) – University College Dublin
- Masters in Regional and Urban Planning (MRUP) – University College Dublin
- Advanced Diploma in Planning and Environmental Law – The Honourable Society of Kings Inns
- Diploma in Project Management – Dublin Business School
- Professional Certificate in Environmental Management – University College Dublin

1.3 John Spain Associates are planning consultants for Union Investment Real Estate GmbH ('Union Investment'), of Valentinskamp 70 / EMPORIO, 20355 Hamburg, Germany.

1.4 Union Investment are the owner of a recently completed commercial development at 2 Grand Parade, which comprises the refurbished Carroll's Building (a protected structure), and a recently completed modern office building to the rear of and connected with the protected structure.

1.5 John Spain Associates are also planning consultants for Grand Parade Property Trading Company DAC of 32 Molesworth Street, Dublin 2. Grand Parade Property Trading Company DAC support the current submission to the Oral Hearing.

1.6 This evidence does not reiterate the detailed points addressed within the original submission on the Railway Order which are considered as read by all parties. JSA will however address the TII Response to Submissions.

1.7 Our client wishes to note their support for MetroLink, which is a crucial project for the delivery of a high standard of public transport infrastructure for Dublin city.

Background

1.8 The site of 2 Grand Parade lies at the southernmost end of the proposed MetroLink line, adjacent to the existing Charlemont Luas station, which sits on an elevated embankment and bridge across the Grand Canal to the west of the site.

1.9 The front of the site is occupied by the former Carroll's Building, which is a protected structure[1], and which was designed by Paddy Robinson of Robinson Keefe and Devane (RKD) Architects in the early 1960s.

1.10 In April 2019 (following an appeal[2] including an Oral Hearing and a request for revisions to the scheme under section 132 of the Act), An Bord Pleanála granted

[1] RPS Ref. No.: 3280
[2] DCC Reg. Ref.: 2373/17 and ABP Ref.: 300873-18

permission for the refurbishment of and alterations to the Carroll's Building, and the construction of a modern office building to the south (rear) of the existing protected structure.

1.11 The parent permission has since been subject to several amendment applications[3], and the development is now completed.

1.12 2 Grand Parade is the site of the proposed Charlemont MetroLink station and the interchange between the proposed MetroLink line and existing Luas services at Charlemont.

Figure 1: The development at 2 Grand Parade

[3] Reg. Ref.: 4755/19, Reg. Ref.: 3486/20 & ABP Ref.: 309011-20, and Reg. Ref.: 4753/23

2.0 NOISE AND VIBRATION IMPACT ASSESSMENT

Noise Impact Assessment

2.1 In relation to noise impacts, we note TII's response to the submission made on behalf of Union Investment as follows:

"Following the granting of the Railway Order, the Noise and Vibration limits as proposed in the EIAR or other limits that An Bord Pleanála consider appropriate will have to be adhered to by the appointed main works contractors during the construction phase.

The EIAR assessments present the worst-case scenario modelled for noise and vibration during construction at Charlemont. As outlined in the EIAR, construction noise levels along the south and east façade of the Hines building development exceed the "Noise Insulation" threshold for all work phases at this site. Noting that the assessment undertaken in the EIAR (as is outlined by BS5228 guidance) determines indicative noise levels at the building façade only.

As the site includes new buildings with an upgrade to the Carrolls Building, it is likely that the buildings already have sufficient "noise insulation" to ensure that construction noise levels are mitigated.

In order to further allay any concerns, TII are agreeable to undertaking a further step that is normally undertaken much later during the detail design phase – i.e., to undertake further calculations to determine what the internal noise levels are likely to be in this building. To do this, TII will need details of the building acoustic design characteristics to be provided.

This work will allow us to understand (1) if the existing building façade has sufficient capacity to attenuate predicted noise levels, (2) if additional building specific measures need to be introduced and/or (3) as a last resort, if the noise insulation is not sufficient, how long would the building need to be vacated for.

It is important to note that the modelled external noise levels for the works does not currently identify the need for the building occupants to be relocated.

TII have prepared a Metrolink Airborne Noise &Groundborne Noise Mitigation Policy (See Appendix A14.6 of the EIAR) which includes the proposal to engage with all stakeholders at least 6 months in advance of the works commencing to discuss the limits set and mitigation measures to be taken at each construction location."

2.2 As noted in their response to submissions on the Railway Order application, TII have committed to undertaking additional detailed assessment and calculations to determine the likely internal noise levels during construction at 2 Grand Parade.

2.3 Union Investment welcome this commitment, and it is requested that the Board apply a condition to require the undertaking of this modelling and the provision of the modelling results and mitigation measures in advance of commencement of construction.

Ground-borne Noise and Vibration

2.4 In relation to ground-borne noise and vibration during construction, the TII response to the submission made on behalf of Union Investment states the following:

"Following the granting of the Railway Order, the Noise and Vibration limits (Including PPV limits for blasting) as proposed in the EIAR, or other limits that An Bord Pleanála consider appropriate will have to be adhered to by the appointed main works contractors during the construction phase.

The EIAR assessments present the worst case scenario modelled for noise and vibration from blasting during construction at Charlemont, whilst noting that it is likely that the levels of vibration generated by the proposed blasting strategy will be lower. Details of this blasting strategy can be viewed in Appendix A5.20 to the EIAR.

Based on the proposed blasting strategy, ***the modelling exercise undertaken for the EIAR has identified that vibration levels resulting from blasting at Charlemont would exceed assessment criteria.*** *See Vol 3, Book 1, Chapter 14: Ground-borne Noise and Vibration, Table 14.34.*

As such, the blasting patterns proposed for Charlemont would need to be adjusted to reduce the potential effects. The blasting designs can be amended by:

- *Preparing a correct blast design based on a survey of the rock face profile prior to design;*
- *Minimisation of the explosive charge per delay.*

This could involve some or all of the following: -

- *Reducing the drilling diameter of the hole for explosives;*
- *Shortening the length of the holes for explosives;*
- *Initiating charges at different times, using the maximum number of detonators possible, and selecting an effective delay time between holes and rows which would avoid wave interaction and provide good rock displacement;*
- *Set the explosive initiation sequence in a way that it progresses away from the structures to be protected;*
- *Use an adequate powder factor (weight of explosives per volume of excavated material). When the powder factor is lower than what is needed, the increase in charge confinement leads to an increase in intensity of vibrations. Excessive consumption will create an unnecessary overload, accompanied by greater disturbing effects;*
- *Increase confinement of the explosive charges with a long stemming height and use adequate, inert material;*
- *Create shields or discontinuities between the structures to be protected and the blasting, place barriers between blasting area and sensitive receptors if required; or cover the blasting area carefully with a blast mat or similar; and*
- *Cover the voids and use acoustic sheds, if required.*

As standard, the above will be supplemented by monitoring of blasting and re-optimising the blast design considering the results, changing conditions and experience.

In the unlikely event that the blasting design cannot be revised to ensure that assessment criteria are not exceeded, then the following further mitigation measures will be considered:

- *Use of non-explosive blasting techniques, such as expanding grout or rock sawing; and*
- *Use of mechanical excavation instead of blasting."*

2.5 Union Investment welcome the additional detail provided within the TII response. Having regard to the acknowledged exceedance of the assessment criteria identified within the EIAR and the additional potential mitigation outlined within the TII response, it is requested that the Board apply a condition to require the selected mitigation measures to be shared with Union Investment and agreed prior to the commencement of development.

2.6 It is similarly requested that the additional assessment to be undertaken by TII takes account of noise and vibration during the operational phase of the development, and that due consideration is given to the introduction of floating slab track at this location if necessary.

3.0 STRUCTURAL ENGINEERING CONSIDERATIONS

3.1 We note the following TII comments in response to our client's submission pertaining to ground settlement and potential impact on 2 Grand Parade:

"The potential for construction generated ground movements impacting the Carrolls Building has been carefully considered. The provision for possible protection measures has been raised as a precaution for future consideration (see below extracts from the EIAR). Irrespective of whether protection measures are subsequently deemed to be required, the impact on the Carrolls Building will be limited to Category 2 or less in accordance with the EIAR.

EIAR Chapter 5 Construction Phase Appendix A5.17 Building Damage Report states the following in section 5.3, last paragraph.

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.

Section 5.4, Assessment Summary and Conclusions, last paragraph concludes: *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.*

During the detailed design and construction planning phase, this building will be assessed again. If an intervention as described above is required, TII will provide full details of the design and build contractors proposals for agreement in advance of work commencing."

3.2 Our client would welcome the opportunity to consult further with TII during the detailed design stage to determine whether any intervention is required to protect the existing structures at 2 Grand Parade.

3.3 It is requested that the Board apply a condition to require the provision of full details of any required protection measures for agreement prior to the commencement of development on site.

4.0 CONCLUSIONS

4.1 Our client supports the delivery of the MetroLink project, including the provision of a MetroLink station and interchange with the Luas station at Charlemont.

4.2 The constructive engagement and responses provided by TII following the submissions on the Railway Order application are welcomed by our client.

4.3 We respectfully request that the Board have regard to the foregoing submission and consider applying conditions as appropriate to ensure that the potential for noise and vibration impact on the commercial development at 2 Grand Parade is mitigated.

4.4 Our client reserves the right to elaborate further on these issues as necessary and we trust this submission will be taken into consideration in assessing the proposals.

4.5 The assessment of compensation would not be limited to the content of this submission.

Yours sincerely,

John Spain Associates