

ST. STEPHEN'S GREEN PARK

DRAFT SCHEDULE OF RAILWAY ORDER CONDITIONS

1 Access / disruption

TII will ensure that there is no disruption to access for St Stephens Green Park and OPW buildings for their day-to-day uses and functions. Vehicular (fire tenders etc.) access must be maintained at all times at the Leeson St Gate. In the event of any disruption being necessary, TII will seek agreement with the OPW on the timing and duration of such disruptions, prioritising the smooth functioning of St Stephens Green Park & facility.

2 Ground movement, noise and vibration, dust, blasting and water lowering assessments.

TII, along with all contractors and subcontractors involved in the Metrolink project, will ensure that comprehensive pre-construction and post-construction surveys, and where necessary trials and monitoring, of St Stephens Green Park and buildings are carried out, that take account of ground movement, noise and vibration, dust, blasting and water lowering, as well as construction traffic impacts. The proposed mitigation measures to be implemented, where required, are set out in the Environmental Impact Assessment Report (EIAR) submitted by TII with the Railway Order application.

3 Ground movement impact / settlement assessments

- TII will conduct comprehensive Stage 2 and Stage 3 assessments for ground movement impact and settlement on OPW building and mitigation measures will be implemented as necessary, following agreed criteria and methodologies outlined in the EIAR.
- *Stage 4 (Construction Stage):* All surveys, monitoring, and proposed mitigation measures for OPW property will be agreed upon with the OPW. TII, along with all contractors and subcontractors involved in the project, will engage Professionally Qualified Engineers/Surveyors with the appropriate expertise to undertake pre- and post-condition surveys.
- *Stage 5 (Close out):* TII will share the closeout monitoring report that will demonstrate that construction ground movements have ceased, the report will also present historical movement information. In the event of repairs, TII will attend to same, and these will be scheduled.

4 Ground water monitoring / avoidance of ground water lowering.

TII will put in place a ground water monitoring regime during all MetroLink constructions works so as to minimise and mitigate ground water lowering in accordance with the EIAR.

5 Floating track slab

Floating track slab will be installed between the following chainages:

Location	Receptor(s)
AZ4, Ch 17+600 to Ch. 17+980	Trinity College Buildings
AZ4, Ch 17+980 to Ch. 18+760	National Museums & Leinster House & Agriculture House
AZ4, Ch 18+760 to Ch. 18+940	National Concert Hall

6 Future development of OPW property

TII commits to constructive engagement with the OPW regarding future development plans with a view to ensuring that any such plans can proceed in a manner compatible with the MetroLink project.

7 Instrumentation and Monitoring Plans

- TII will procure its contractors to develop Instrumentation and Monitoring Plans in tandem with Monitoring Action Plans to ensure that any risks associated with tunnelling and station excavations impacting OPW property are appropriately managed and controlled.
- TII will provide details of any monitoring proposed by the contractor at detailed design stage and agree the methodology of installation to OPW property.
- TII will provide advance notice of any attendance that the monitoring contractor may require.
- TII will ensure that ground movement monitoring is commenced 3 months prior to the construction activities that would give rise to the settlement and the termination of this monitoring will be linked to a determination by TII that settlement has effectively ceased. TII will share the closeout monitoring report that will demonstrate that construction ground movements have ceased.
- TII will ensure that continuous monitoring is conducted at OPW property, commencing 3 months in advance of construction, and only conclude 6 weeks after MetroLink is operational.

8 Property protocols

TII confirms that contractors working on its behalf on OPW property comply with property protocols in respect of access, security and safety.

9 Best industry practice

TII confirms adherence to best industry practice in the implementation of MetroLink and OPW property. The following non-exhaustive list of standards to be complied with: -

- BS 5837: 2012: Trees in relation to Design, Demolition and Construction
- BS 3998: 2010: Tree Works
- BS 4428: 1989 General Landscape Operations
- BS 3936-1:1992 Nursery Stock

10 Protection of sensitive information

TII will liaise with the OPW to develop a protocol to ensure that sensitive information in respect of structure and operation of OPW properties are protected.

11 Air Quality Management Plan

TII will ensure strict adherence to the Air Quality Management Plan throughout MetroLink construction activities. This Air Quality Management Plan to include the entire St Stephens Green Park area along with agreed mitigation measures.

12 Advance notice of TBM

TII will notify the OPW as far in advance as practicable of the timing of the passing of the tunnel boring machine under OPW properties so as to preserve business continuity and normal park operations.

13 TBM Operational Specifications and Ground Movement and Monitoring Specifications

TII will develop both TBM Operational Specifications and Ground Movement and Monitoring Specifications to ensure that risks are appropriately managed in accordance with the mitigation measures identified, described and assessed in the EIAR.

14 Anti-terrorism and security measures

TII will ensure that MetroLink is operated in line with best practice in relation to anti-terrorism and security measures. The historical context of St Stephens Green to be considered within the design plan which is to be agreed with OPW so as to protect the site and visitors. The design and operation of the measures to be agreed with OPW including any Hostile Vehicle Management Bollards.

15 Disruption to Utilities

TII will ensure that during construction the day-to-day operations of OPW property will not be interrupted by disruptions to utilities. If disruptions are deemed necessary, TII will collaborate with the OPW to agree on timing and duration.

16 Operational surveys to verify actual impacts of MetroLink.

TII will ensure that operational surveys are undertaken to verify actual impacts of MetroLink for the entire Park.

17 Assessments of the impact of blasting

TII will undertake in accordance with the EIAR specific assessments of the impact of blasting on OPW properties including St Stephens Green Park and share the results with the OPW.

18 Traffic impacts

TII will include adverse impacts of station construction within the risk assessment studies for the OPW properties and will apply the mitigation measures identified, described and assessed in the EIAR where construction of stations will generate additional lorry movements for both deliveries and spoil removal. TII and its contractors will ensure that vehicular access to St Stephens Green Park is maintained at all times and not impeded or disrupted.

19 Access control regimes

Where required by the OPW, TII will set up access control regimes in coordination with the OPW.

20 Reinstatement with mature and semi-mature trees

- On completion of construction activities at SSG, TII shall at a minimum replace the 79 of Category A, B, C and U tress lost with 90 semi-mature native trees (18 – 20 cmg) and 1 no. feature tree (200– 220 cmg trunk). Additional small trees will also be planted. Acknowledging its expertise in this field, TII shall consult and agree with the OPW in relation to the details of this tree replacement programme. These trees will be in place on the opening day of the Project or earlier if possible. TII is committed to increase the age of trees planted on day one to match those presented by the photomontage in the EIAR for year 10. See image 'LCCA 22 Aerial Proposed 10 years tree size' attached.

- A Landscape Plan including tree and shrub layers is to be prepared by TII and agreed with OPW in advance of works commencing on site. This is to include full details of all hard and soft landscaping proposals including a pallet of materials being considered.

21 Protection of retained trees.

- Prior to commencement of development, all trees, groups of trees, hedging and shrubs which are to be retained shall be enclosed within stout fences not less than 1.5 metres in height in accordance with the tree management plan. All tree works to comply with British Standards BS 5837:2012: Trees in relation to Design, Demolition and Construction.
- No construction equipment, machinery or materials shall be brought into St Stephen's Green for the purpose of the development until all the trees which are to be retained have been protected by this fencing.

22 Tree management and landscape management plan

- A tree management plan and landscape management plan will be prepared by TII and agreed in writing with the OPW prior to commencement of development (this must include habitat management proposals, timing and frequency of the measures, and all monitoring to be conducted by an ecologist or arborist or horticulturalist).
- TII will be responsible for maintenance and management of the area of Metrolink for a 10-year period, post completion of works on site. This is to include for the replacement of any and all materials including plant materials.

23 Removal, storage and reinstatement of heritage items

The railings, gates, plinth walls and heritage items including sculptures will be removed by a specialist heritage contractor in accordance with a method statement to be prepared by the Project Conservation Architect (PCA) and agreed with OPW, brought into secure storage for the duration of the works and conserved as necessary. At the completion of the construction of the station, the railings, plinth wall and gates will be reinstated in their original locations in accordance with a method statement prepared by the PCA and agreed with OPW. The reinstatement of other heritage items including sculptures will be to their original locations (save for the Wolfe Tone monument which shall be relocated in accordance with the EIAR) in accordance with a method statement prepared by the PCA agreed with OPW. The OPW and the Minister's office (Housing) will be consulted on the method statement prior to commencement of works.

24 Early commencement of landscaping and tree replacement

TII will work with the OPW to enable the commencement of landscaping and tree planting to commence as early as practicable following the completion of the St Stephen's green roof box. TII estimate this will be approximately 6.5 years from the commencement of St Stephen's Green works.