MWP

Structural Condition Report

Steeven's Lane 110kV Substation

The Electricity Supply Board (ESB)

July 2026

Contents

Appendices

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1. Introduction

The inspection undertaken was a visual, non-intrusive inspection only, carried out in general accordance with current professional practice for structural condition inspections.

The inspection was limited to those parts of the structure that were readily accessible and visible at the time of the visit. No opening up of the structure, digging, lifting of floor finishes, removal of ceiling linings, or dismantling of elements was undertaken. The inspection did not include exposure of foundations, structural connections, or concealed elements.

1.1 Scope and Purpose of Report

This Structural Condition Report has been prepared by MWP in respect of the proposed Steeven's Lane 110 kV / MV Gas Insulated Switchgear (GIS) Substation in Dublin 8.

The Proposed Development comprises a new electricity substation, located within the Diageo Complex.

The primary objectives of this report are to:

- Present an overview and background of the existing structures and current site condition;
- Provide a summary of the existing buildings, setting out the known information relating to the site and establishing a baseline condition before any demolition activity begins.
- Identify any areas of existing buildings or the site that pose immediate or potential safety risks.
- Provide information to aid in developing a site demolition plan.

The overall purpose of this report is to demonstrate due diligence in assessing the existing site conditions and approaching demolition and proposed new building layout responsibly.

2. Project Overview

2.1 Site Location and Context

The proposed development comprises the construction of a 110kV substation at a site fronting onto Steeven's Lane, Dublin 8, together with associated underground grid connection works located within the Diageo site complex and the public road network along Bow Lane West, St. James's Street, and Echlin Street, Dublin 8.

The substation site is located within lands associated with the Diageo complex and fronts onto Steeven's Lane. The surrounding area is characterised by a mix of industrial, commercial, institutional, and residential land uses. Steeven's Lane forms the western boundary of the site and accommodates pedestrian, cyclist, Luas Red Line, and limited vehicular movements. The wider area includes the Diageo Guinness Brewery lands, residential developments, commercial premises, and healthcare facilities, including St. James's Hospital.

The associated underground grid connection works extend from the proposed substation site through lands within the Diageo complex and along sections of the public road network comprising Bow Lane West, St. James's Street, and Echlin Street.

The site location within the greater Dublin area is shown in Figure 1 below.

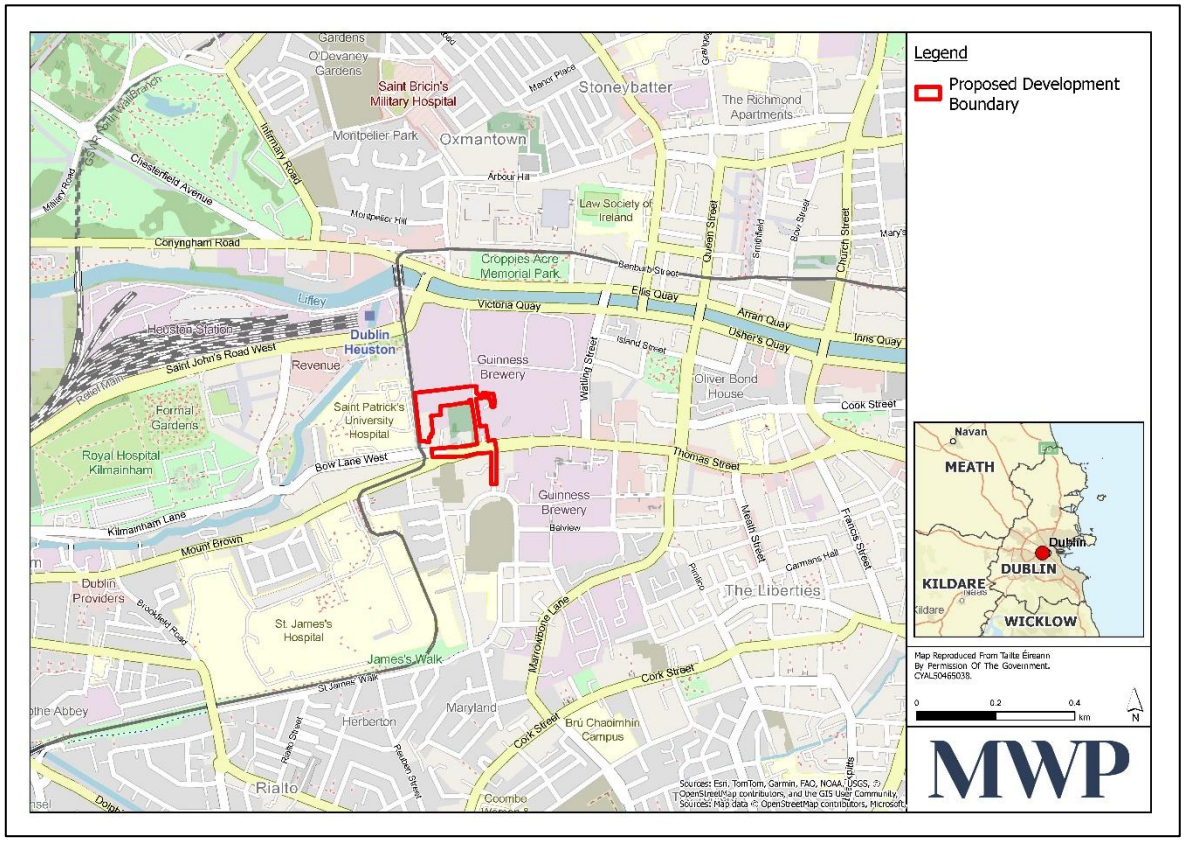

Figure 1: Site Location

2.2 Description of the Proposed Development

The characteristics of the proposed development are fully described in the Planning and Environmental Considerations Report (PECR) and the Outline Construction Environmental Management Plan (oCEMP) accompanying this planning application, and this report should be read in conjunction with those documents. In addition, full details of the proposed design, layout, elevations, sections, and associated site development works are provided within the planning drawings.

The location and configuration of the Proposed Development is shown in Figure 2 below, comprising the site boundary, overall layout and indicative underground cable routes.

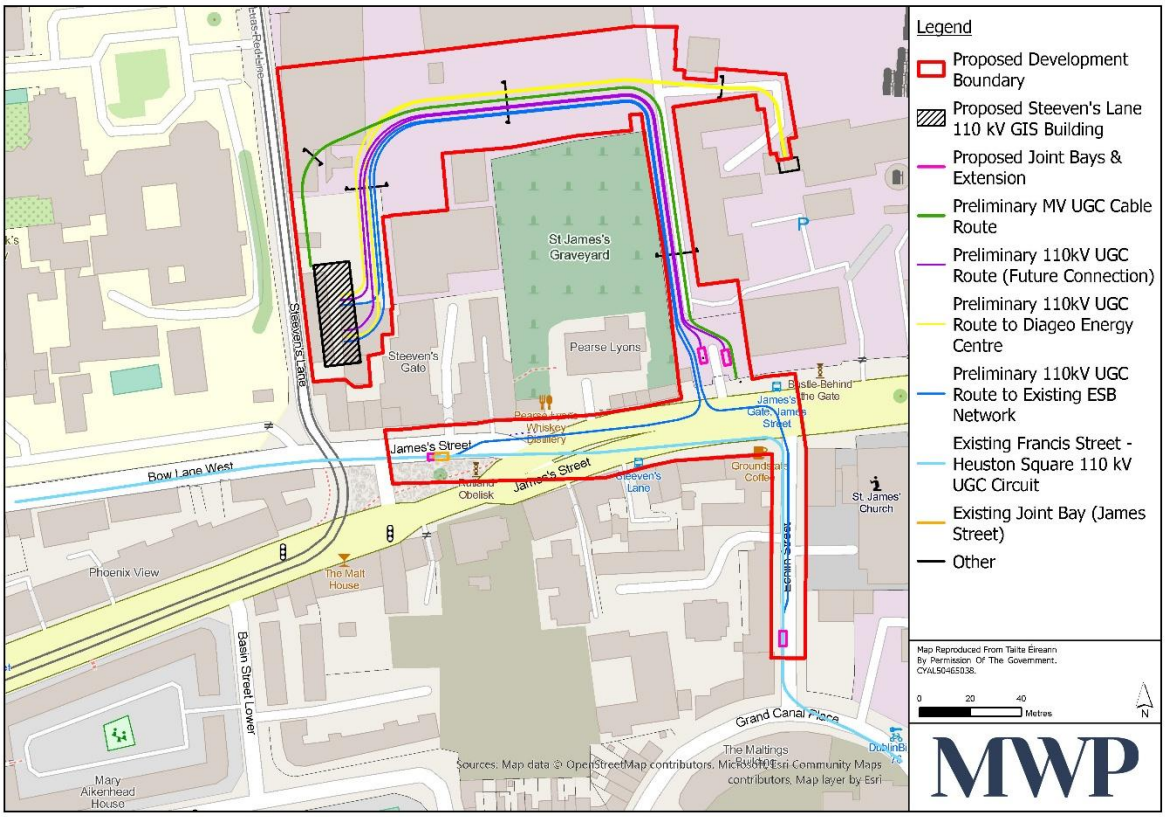

Figure 2: Proposed Development Footprint within the development boundary

2.2.1 Proposed Substation Development

The Proposed Development will consist of a 110 kV / MV Electrical substation and will include the following elements:

- Demolition of all existing buildings on site including a former office building, warehouse and storage shed;
- The construction of 110 kV / MV substation compound with the following electrical plant within the substation:
  - A two storey 110 kV / MV Gas Insulated Switchgear (GIS) building (c. 559 m2; 14.1 m in height);
  - Two bunded 110 kV / MV transformers in transformer bays (c. 5.75 m in height) and surrounding fire walls (c.6.1 m high) and associated electrical equipment;
  - All associated and ancillary site development and infrastructural works, including site clearance, demolition of existing western boundary wall and gates, provision of new boundary treatments and gates along the western site boundary, replacement of the existing retaining wall along the northern and northeastern site boundary, provision of new boundary treatments along the southern and south eastern site boundary, site services including electrical circuits, lighting, telecommunications, drainage and boundary treatments.

2.2.2 Proposed Connection to Electricity Grid

The Proposed Development will also involve the installation of six 110 kV underground cable (UGC) circuits connecting the proposed Steevens Lane 110 kV substation to key locations, including:

- Loop-in connection joint bays on the existing Francis Street – Heuston Square 110kV circuit at Bow Lane West and Echlin Street / James' Street;
- Diageo's 110kV substation (subject to a separate and future consenting process); and
- Ducting for future use to be terminated in joint bays at St James's Gate Medical car park, north of James' Street.

And the installation of 14 circuit MV UGC between the proposed substation and Bow Lane West.

The combined total length of the circuits is approximately 1.5 km, and they will be installed as either double or single circuits.

3. Description of Existing Structures

A number of existing buildings are located within the site boundary. All structures are understood to be scheduled for demolition to facilitate the proposed substation development (refer to Planning Drawings pack for further information). A summary of the principal buildings is provided below.

3.1 Office Building

Situated along the western side of the site is a two-storey office building of mixed construction. The northern portion incorporates a concrete basement level; however, due to the natural topography and the sloping ground profile, the basement is only partially below external ground level. The remainder of the building steps with the site gradient, resulting in varying floor and external ground relationships.

The office building was originally constructed as two separate structures. One section comprises a reinforced concrete frame with masonry infill panels and includes the basement level. The adjoining section is formed using steel framing with timber floor beams and masonry wall panels.

Based on the site inspection and available information, no structural stability issues were identified that would impede or complicate the proposed demolition works. The western perimeter building wall is in close proximity to the LUAS line. Accordingly, demolition works will need to be carefully planned and executed to ensure that no adverse impact occurs to LUAS infrastructure or operations.

Asbestos has been identified in the cement flue and front gasket of the boiler within the basement.

3.2 Warehouse Building

A two-storey warehouse structure is situated in the south-eastern portion of the site. The building incorporates a pitched roof supported by steel trusses. Based on visual inspection undertaken during the site visit, the structural system appears to comprise a combination of loadbearing masonry walls and steel framing elements, which collectively support both the roof and intermediate floor structures.

The warehouse shares boundaries with existing adjoining buildings along its southern and south-eastern sides. It should be assumed that these neighbouring structures may possess integral or party walls in contact with, or

structurally connected to, the warehouse. Accordingly, these interfaces will impose constraints during demolition works, and careful detailing, sequencing, and protection measures will be required to avoid adverse impact on the adjacent buildings.

It is assumed the roof slates and room 4 floor tiles of the warehouse building are containing asbestos

3.3 Lightweight Shed Structure

A small shed is also present within the site. This structure is of lightweight construction, consisting primarily of corrugated metal cladding supported over a simple concrete ground slab. Access to the interior was not available at the time of the inspection; therefore, the assessment is based exclusively on external observation.

The steel shed shares a boundary with the site's perimeter wall, which in turn lies in close proximity to the LUAS line. As a result, demolition activities in this area will require careful planning and controlled execution to ensure that no adverse impacts occur to LUAS infrastructure or operations.

4. Boundary Walls

The site is bounded by retaining structures along its northern and eastern perimeters and a masonry block boundary wall along Steeven's Lane. These walls exhibit varying forms of construction and levels of deterioration. A description of each boundary wall is provided below.

4.1 Northern Retaining Wall

Along the northern boundary, adjacent to the keg storage yard, the retaining wall appears to be constructed from stone masonry and retains an approximate height of 5 m. A sloped concrete buttress is present at the base of the northern face; this feature does not appear to form part of the original construction and is likely associated with subsequent remedial or stabilisation works.

The northern retaining wall exhibits significant outward movement, with noticeable bulging along its length. General deterioration, including vegetation growth within the wall fabric, is also evident. Based on its current condition, the wall does not appear to have adequate capacity to sustain any future surcharge loading. It is therefore recommended that this retaining wall be demolished and replaced with a new structure designed to meet the requirements of the proposed substation layout.

4.2 Eastern Retaining Wall

The eastern boundary is formed by a masonry retaining wall with a stone capping course. The wall is rendered; however, large sections of the render have detached, exposing the underlying masonry. A galvanised palisade fence has been fixed to the crest of the wall to increase its effective height, though the fence connections have failed at numerous locations.

Cracking and general deterioration are visible along the length of the eastern retaining wall. The construction type and foundation details are unknown. Given the current condition of this wall, it is advised that no additional surcharge loading be applied to the adjacent ground. A new retaining structure should be provided to accommodate the anticipated surcharge loads associated with the substation development.

4.3 Western Boundary

The western boundary of the site, along Steeven's Lane, is defined by a masonry block wall containing several openings that provide access to the lane. This wall is understood to be scheduled for demolition as part of the proposed substation development.

The wall is located in close proximity to the LUAS line. Accordingly, demolition works will need to be carefully planned and executed to ensure that no adverse impact occurs to LUAS infrastructure or operations. Appropriate coordination with the relevant transport authorities, along with suitable protective measures and controlled demolition sequencing, will be required to avoid disruption and maintain the integrity of the adjacent rail line.

Appendix 1

Structural Inspection Photographic Record

Figure 3: Existing Office Building Steel Roof Truss Connection Detail

Figure 4: Existing Warehouse Building Deterioration of External Walls (northwest corner)

Figure 5: Existing Warehouse Ground Floor – General Internal Condition

Figure 6: Existing Warehouse Ground Floor Interior Ceiling Framing

Figure 7: Existing Warehouse Basement – General Condition

Figure 8: Existing Warehouse Upper Floor – General Condition

Figure 9: South External Façade of Existing Steel Shed

Figure 10: Roof Condition of Existing Steel Shed

Figure 11: Northernmost Access Point to Steevens Lane – Looking West

Figure 12: Steevens Lane Main Gate – Looking West

Figure 13: Steevens Lane Main Gate Structural Condition

Figure 14: Southernmost Access Point to Steevens Lane (Looking West) and existing RoW

Figure 15: Existing Retaining Wall – Eastern Boundary

Figure 16: Existing Retaining Wall – Eastern Boundary (zoomed in structural condition)

Figure 17: Existing Retaining Wall – Northern Boundary

Figure 18: Existing Retaining Wall – Northern Boundary (zoomed in structural condition)

Figure 19: Retaining Walls at Intersection Point

Figure 20: Western External Façade of Existing Building and Boundary Wall to Steevens Lane

Figure 21: Boundary Wall to Steevens Lane – looking east

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