Stage 1 Method Statement for Demolition of Existing Building

Proposed Shared Living Development at Brady’s Public House, Old Navan Road, Dublin 15

Client: Bartra Property (Castleknock) Limited

Job No. B094

August 2020
OUTLINE METHOD STATEMENT FOR DEMOLITION OF EXISTING BUILDING

PROPOSED SHARED LIVING DEVELOPMENT AT BRADY’S PUBLIC HOUSE,
OLD NAVAN ROAD, DUBLIN 15

CONTENTS

1. INTRODUCTION ......................................................... 1
2. SITE LOCATION AND PROPOSED DEVELOPMENT ................. 2
3. OUTLINE METHOD STATEMENT FOR DEMOLITION ............. 4
4. CONCLUSION ............................................................ 12

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Job Ref. | Author | Reviewed By | Authorised By | Issue Date   | Rev. No.
---------|--------|-------------|--------------|--------------|--------
B094     | LG     | NB          | NB           | 24.10.2018    | -      
B094     | LG     | NB          | NB           | 07.05.2019    | A      
B094     | LG     | NB          | NB           | 13.08.2020    | B      

File Location: J:\B_JOBS\Job-B094\B_Documents\C_Civil\A_CS Reports\Demo Report
1.0 INTRODUCTION

Cronin & Sutton Consulting Engineers (CS Consulting) have been commissioned by Bartra Property (Castleknock) Limited to prepare an Stage 1 Method Statement for Demolition of Existing Buildings to accompany a planning application for a proposed shared living development at Brady’s Inn, Old Navan Road, Dublin 15.

The development will principally consist of: the demolition of the existing part 1 to part 2 No. storey over partial basement public house and restaurant building (1,243 m²) and the construction of a part 1 to part 5 No. storey over basement Build-to-Rent Shared Living Residential Development (6,549 m²) comprising 210 No. bedspaces (182 No. single occupancy rooms, 4 No. accessible rooms and 12 No. double occupancy rooms).

The development also consists of the provision of communal living/kitchen/dining rooms at each floor level to serve the residents of each floor; communal resident amenity spaces for all residents including tv/cinema room at basement level, gymnasium and lounge/reception area at ground floor level, a library/study at fourth floor level and a private dining room at fifth floor level; external roof terrace at fourth floor level (78m²) facing north-east, north-west and south-west; external communal amenity courtyards at basement (170 m²) and ground floor level (336 m²); external amenity space at basement level accessed from the communal living/kitchen/dining room (30 m²); balconies at fourth floor level facing north-east (13.8 m²); resident facilities including launderette, linen store, stores and bin store; 2 No. accesses to the public park along the north-eastern boundary; 2 No. car-share parking spaces; a lay-by and delivery bay; emergency gate access to the courtyard (north-west boundary); bicycle parking; boundary treatments; hard and soft landscaping; plant; PV panels; substation; switch room; generator; lighting; and all other associated site works above and below ground.
2.0 SITE LOCATION AND PROPOSED DEVELOPMENT

2.1 Site Location

The site is located in a residential area with the N3 and M50 roads nearby to the north and east and the Royal Canal located to the south. The site is bounded by the Old Navan Road to the south, public amenity space to the north, Talbot Downs road to the west and a residential private property to the east. On the site there is an existing two-storey over basement public house with a restaurant on the first floor, which closed in March 2020. The remaining site consists mostly of paved parking that served the public house and restaurant. The site is located in the administrative jurisdiction of Fingal County Council and has a total area of circa 0.317 ha.

Figure 1 – Site location
(image: Google)
2.2 Proposed Development

Bartra Property (Castleknock) Limited intend to apply to An Bord Pleanála for permission for a strategic housing development at this 0.3,170 ha site at Brady’s Public House, Old Navan Road, Dublin 15, D15 W3FW.

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The development also consists of the provision of communal living/kitchen/dining rooms at each floor level to serve the residents of each floor; communal resident amenity spaces for all residents including tv/cinema room at basement level, gymnasium and lounge/reception area at ground floor level, a library/study at third floor level and a private dining room at fourth floor level; external roof terrace at third floor level (78m²) facing north-east, north-west and south-west; external communal amenity courtyards at basement (170 m²) and ground floor level (336 m²); external amenity space at basement level accessed from the communal living/kitchen/dining room (30 m²); balconies at third floor level facing north-east (13.8 m²); resident facilities including launderette, linen store, accessible WC and bin store; 2 No. accesses to the public park along the north-eastern boundary; 2 No. car-share parking spaces; a lay-by and delivery bay; emergency gate access to the courtyard (north-west boundary); bicycle parking; boundary treatments; hard and soft landscaping; plant; PV panels; substation; switch room; generator; lighting; and all other associated site works above and below ground.

The proposed development shall be constructed in one phase.
3.0 METHOD STATEMENT FOR DEMOLITION

This Method Statement is provided for Planning Permission purposes only. The Contractor must develop a Construction and Demolition Waste Management Plan in accordance with the “Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects” (Department of Environment, Heritage and Local Government, 2006). The Contractor must ensure that all demolition material is managed, stored and disposed of in an appropriate manner in accordance with all relevant waste legislation. A Stage 1 Construction Management Plan in enclosed as part of this planning application.

Following decanting of the building by the tenant, any necessary investigatory work, sampling and/or testing can be carried out. Work shall be carried out in accordance with BS EN 6187: 2011 Code of Practice for Full and Partial Demolition. Refer to the “Stage 1 Construction Management Plan” for reference to demolition construction traffic.

3.1 Building Structure

As the public house was operational at the time of writing this report the structural review was based on a visual inspection and publicly available drawings. Brady’s public house is two-storeys with a curved arching roof broken in the east-west direction in the centre by a glazed atrium that extends only as far down as first floor level. The roof structure is composed of lightweight steel trusses spanning in the east-west direction from the outer walls to the central atrium. The atrium itself is supported by a short-span triangular couple truss laterally braced off the main long-span roof trusses. The roof is supported by steel columns and the outer walls.
The first-floor spans, evident downstand beams and apparent large column sizes suggest the first-floor is constructed with two-way spanning RC slabs supported on an RC beam frame. However, alternative steel floor systems cannot be discounted. The building is likely enclosed and braced with double-leaf masonry walls based on the evident wall thicknesses. An exception is the east elevation, which has a full-height glazed curtain wall from ground floor to roof level.

Figure 3 – Existing Building on Site
3.2 Installation of hoarding

Solid timber hoarding 2.4m in height will be provided along the perimeter of the site to protect members of the public from machines and materials on site. Hoarding will be erected off a vertical frame which will either consist of uprights encased in concrete ‘Kelly’ blocks or else using bolted steel shoes which will be placed in the ground. The Kelly blocks will be carefully lifted into place with a teleporter whose movement will be controlled, sequenced and managed by a qualified banksman. Once the vertical frame has been installed the hoarding panels (which will be prefabricated) will be loaded by hand into place.

For additional protection of pedestrians either a fully enclosed roof to the hoarding or an additional 600mm fluted section can be provided to the hoarding on Old Navan Road. This can also be done along the route access to the south of the site. Hoarding will be designed by a competent temporary works engineer.

3.3 Removal of services

Prior to demolition works all services will be identified on site with reference to the previously commissioned site investigation, topographical and utility surveys with additional investigation works carried out as required. All services on site will be disconnected, diverted or removed as agreed with service providers. Please see Appendix A for Utility Infrastructure Report.

3.4 Demolition of existing building

Prior to demolition works a full structural review of the existing structure will be carried out to review the stability of the existing structure and to assess the temporary measures such as propping that will be required during the demolition stage. These measures will be provided to insure the structure is
demolished in a controlled manner and there is a negligible chance of an unplanned structural collapse. After completion of the site hoarding, a full height scaffolding will be erected which will be tied back to the existing building. This will have access platforms at each 2m level to provide access to the covered safety netting which will be installed along the building elevations. The scaffolding will not be used for demolition but for access to the safety netting to prevent dust and debris from falling onto the footpath and affecting the surrounding area.

Prior to demolition works a soft strip of the building will be completed to remove any loose fixtures and fittings. Once the property has been cleared back to its base shell demolition will commence. Demolition will take place from the top down starting with removal of the lightweight steel roof. Any temporary propping or crash decks required will be designed by suitably experienced chartered design engineers with a proven record in temporary works design. The building below will continue to be carefully demolished using hand tools to cut the structural members, such as the steel columns/trusses or RC floor/beams, into manageable sections for easier removal. Road saws or other suitable equipment will be used rather than using mechanical breakers where possible. Steel members can be dismantled and removed where feasible. The Safety netting/plastic sheeting and noise blankets installed along the scaffolding to control noise, dust and debris will be taken down in a progressive fashion with each floor level, always leaving a minimum of 5m extended scaffolding height above the demolition works. Whilst it is envisaged that the demolition will follow this low impact/low noise type approach certain parts of the foundation slabs will no doubt need to be removed using more aggressive techniques. These will be kept to an absolute minimum and strict noise and vibration protocols will be kept in place during these works.
3.5 Minimising risk of collapse

Following on from the soft strip out of the building a more thorough assessment of the structure will be completed by the demolition engineers. This will confirm the assumptions made heretofore and will inform on any particular risk that needs to be accounted for. Once the assessment has been made fully detailed demolition methodology will be submitted to all relevant parties for approval. This submission will outline the sequence of works and identify any hazards which may affect the demolition.

The following is a high-level method statement for the demolition of the building:

- Establish a site set-up and welfare facilities;
- Erect any necessary hoarding around the perimeter of the site;
- Carry out an intrusive asbestos survey to identify the presence of any carcinogenic materials, in particular as possible fire protection to steel work, and in plant areas;
- Use the existing services survey of the site to identify all buried services, determine what services are live, redundant and potentially serve neighbouring properties;
- Carry out any necessary services diversions and decommissioning works;
- Carry out a soft strip of the building to remove free-standing units, office furniture, floor finishes, ceiling tiles, window blinds, partitions, doors and door frames, ceiling bulkheads, M&E services, radiators, light fittings, fixtures and fittings, first fix joinery, kitchens and toilet areas;
- Demolish the building lightweight steel roof structure and using angle grinders and gas torches to cut the steel into small sections to be dismantled and removed with a teleporter.

- Demolish the building masonry walls using sledge hammers and/or a mini digger. Cut and remove the RC first floor slab and beams hand tools where possible.

As part of the comprehensive site-specific Construction and Demolition Waste Management Plan all debris will be separated on site and stored in skips for removal to licensed tips or exported where suitable facilities are not available locally.

### 3.6 Dust

Dust prevention measures shall be included for control of any site airborne particulate pollution. The Contractor shall put in place and monitor dust levels in the vicinity using a Bergerhoff gauge instrument. The minimum criteria to be maintained shall be the limit for Environmental Protection Agency (EPA) specification for licensed facilities in Ireland, which is 350mg/m²/day. The Contractor shall continuously monitor dust over the variation of weather and material disposal to ensure the limits are not breached throughout the project. It is proposed to use a “Dust Boss” spray cannon machine (or similar) in order to contain dust on site. The cannon is capable of spraying a water mist up to 45m and has been used in Dublin city centre recently during the demolition of buildings up to 8 storeys in height. This dust suppression method is very successful in containing dust on-site. The machine has a range of controls and adjustability to accurately target sources of dust generated from demolition works.
3.7 Dirt

Given the volumes of construction traffic generated by the Site Works it shall be a requirement that the Contractor shall ensure that:

- A "Full-Body Self Contained" wheel wash shall be constructed and located within the site confines;

- All vehicles will be required to pass through the wheel wash before exiting the site to the public road network. The wheel wash must be kept in place and used throughout the construction works. If conditions require it then a manned power washer shall be put in place to assist the wheel wash system;

- A dedicated road sweeper shall be retained for the duration of the haulage works. Water supplies shall be recycled for use in the wheel wash. All waters shall be drained through appropriate filter material prior to discharge from the site.

3.8 Noise

The Contractor will be required to monitor base noise levels at the site location before commencement of the project. Noise monitoring will be required throughout the project. Variation of noise levels from those experienced as part of everyday life in an area can result in extreme disruption. The Contractor shall implement measures to eliminate where possible and reduce noise levels where not. The proposed development shall comply with BS 5228 “Noise Control on Construction and Open Sites Part 1: Code of practice for basic information and procedures for noise control (or such further limits as imposed by Fingal County Council).”
Construction equipment for use outdoors shall comply with the European Communities Regulations– Noise Emission by Equipment for Use Outdoors – SI 241 -2006.

3.9 Vibration

The Contractor shall provide and maintain vibration monitoring equipment for the duration of the works. Condition surveys of adjoining buildings will be required before demolitions commence. Vibrations shall be monitored in accordance with BS 7385-1:1990 “Evaluation and Measurement for Vibration in Buildings”, with a limit of 5mm/s ppv.

3.10 Proximity to Public Roads

The demolition works will occur in close proximity to the adjoining public roads. The Contractor will need to develop a Construction Management Plan and agree with Fingal County Council. The Construction Management Plan is to be formulated in the style as specified in the DTO publications “Traffic Management Guidelines” manual and the “Traffic Signs Manual”.

4.0 CONCLUSION

The existing site is occupied by a two-storey over partial basement public house and restaurant with a gross floor area of c. 1,243 m². The proposed development calls for the demolition of this existing structure and the construction of a part 1 to part 5 No. storey over basement shared living residential development (6,549 m²).

This report demonstrates the Stage 1 Method Statement on how this demolition will be carried out in line with the relevant legislation.

This document outlines the approach to demolition of the existing building. The Contractor must develop a Construction and Demolition Waste Management Plan in accordance with the “Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects” (Department of Environment, Heritage and Local Government, 2006).

Lorcan Garrett

Project Structural Engineer

MSc, BEng(hons), BEng.tech, MIEI
Appendix A

Utility Infrastructure Report
BRADY’S PUBLIC HOUSE, OLD NAVAN ROAD, DUBLIN 15
PLANNING REPORT

UTILITY INFRASTRUCTURE REPORT

<table>
<thead>
<tr>
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<th>Issue Date:</th>
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<tr>
<td>01</td>
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<td>MD</td>
</tr>
</tbody>
</table>
**CONTENTS**

<table>
<thead>
<tr>
<th>1.0 Existing Utility Infrastructure</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Electricity</td>
<td>1</td>
</tr>
<tr>
<td>2. Gas</td>
<td>2</td>
</tr>
<tr>
<td>3. Telecoms</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2.0 Proposed Utility Infrastructure</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5</td>
</tr>
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1.0 Existing Utility Infrastructure

1.1 Electricity
1.2 Gas
1.3 Telecoms

1.3.1 Eir
1.3.2 Virgin
2.0 Proposed Utility Infrastructure

It is proposed that new ducting will be installed for all services utilities such as electricity, telecom, water, gas etc. These will be indicated on the M&E site services infrastructure drawings, post liaison with the utility companies and their existing infrastructure maps as part of detailed design. The scheme will be delivered in a single construction phase.
This Report was prepared by:

Michael Downey

Signed:

[Signature]

Michael Downey, Chartered Engineer

J.V. Tierney & Co.

Date: 30/07/2020