OUTLINE DEMOLITION METHOD STATEMENT

St. Vincent's Hospital Redevelopment,

Richmond Road and Convent Avenue,

Fairview, Dublin 3

PROJECT NO. R517

MARCH 2023

OCSC
O'CONNOR | SUTTON | CRONIN
Multidisciplinary
Consulting Engineers

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NOTICE

DOCUMENT CONTROL & HISTORY

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1 INTRODUCTION

1.1 Appointment

O'Connor Sutton Cronin & Associates (OCSC) have been commissioned to undertake a Basement Impact Assessment Report associated with the proposed development at St. Vincent's Hospital, Richmond Road and Convent Avenue, Fairview, Dublin 3.

1.2 Administrative Jurisdiction

The proposed development is located in the jurisdiction of Dublin City Council (DCC), and therefore this report was carried out with reference to the Dublin City Council Development Plan (2022 – 2028).

1.3 Proposed Development Context

In summary, the proposed development can be described as follows:

- Provision of a new part two and part three storey hospital building, providing mental health services, accommodating 73 no. beds, associated facilities, a single storey facilities management building, plant rooms and service areas, associated car and cycle parking, access roads, and open space, all on a proposed hospital site of c. 2.67 ha.
- Refurbishment and repurposing of existing buildings on site including Brooklawn (RPS Ref.: 8789), Richmond House, including chapel and outbuildings (RPS Ref.: 8788), the Laundry building and Rose Cottage for ancillary uses associated with the new hospital. The existing gate lodge building will remain in residential use and used by visiting members of staff to the new hospital.
- Change of use, refurbishment, alterations and extensions, to the existing hospital building (part protected structure under RPS Ref.: 2032), to provide residential amenity areas, a gym, a café, co-working space, a library, a childcare facility, and a community hall (referred to as Block K).

- The proposal includes the demolition of existing structures on site with a GFA of 5,872 sq.m, including the (1) westernmost range of the hospital building, which includes St. Teresa's and the Freeman Wing, (2) extensions to the south and north of the main hospital building, including the conservatory extension, toilet block extension, an external corridor, toilet core, lift core, and stair core (which are all part of / within the curtilage of RPS Ref.: 2032), (3) hospital buildings and outbuildings located to the north of the existing main hospital building, (4) St. Joseph's Adolescent School located in the southeast of the site, (5) Crannog Day Hospital located in the southwest of the site, and (6) extensions to the Old Laundry Building and Rose Cottage.
- Provision of 9 no. residential buildings (Blocks A, B, C, D-E, F, G, H, J, and L) providing a total of 811 no. residential units, including 494 no. standard designed apartments (in Blocks A, B, C, G, H, J, and L) and 317 no. Build to Rent apartments (in Blocks D-E and F). Residential amenities and facilities are proposed in Block C, D-E, J and K. A retail unit is proposed in Block A and a café in Block F. Block J is proposed as an extension of the existing hospital buildings (protected structure RPS Ref.: 2032- referred to as Block K).
- The building heights of the proposed residential blocks range from part 2 to part 13 storeys. A proposed basement / lower ground level, containing car and cycle parking and plant areas, is located below and accessed via Blocks C, D-E and F.
- Access to the new hospital and associated grounds is provided from Richmond Road and Convent Avenue, with separate internal access points. A separate vehicular access to the residential development is provided from Richmond Road. The development includes a proposed pedestrian / cycle connection to Griffith Court, requiring alterations to the service yard of the Fairview Community Unit, pedestrian / cycle connections to the Fairview Community Unit campus to the north (providing an onward connection to Griffith Court), a pedestrian / cycle connection to Grace Park Wood, and makes provision internally within

the site for a potential future connection to Lomond Avenue / Inverness Road.

- The proposal includes public open space, including allotments, children's play areas, a central park, a linear park and an entrance plaza, with a set down area at Richmond Road, and communal open space at surface level. The proposal includes communal roof terraces on Block C and Blocks D-E and private balconies / terraces for the apartments.
- The proposal also includes provision of internal access roads, car and cycle parking, pedestrian and cycle infrastructure, associated set down areas, alterations to existing landscape features, landscaping, boundary treatments, lighting, telecommunications infrastructure at roof level of Block B, green roofs, lift overruns and plant at roof level, site services, including a watermain connection / upgrade via Griffith Court, Philipsburgh Avenue and Griffith Avenue, site clearance, and all associated site works.

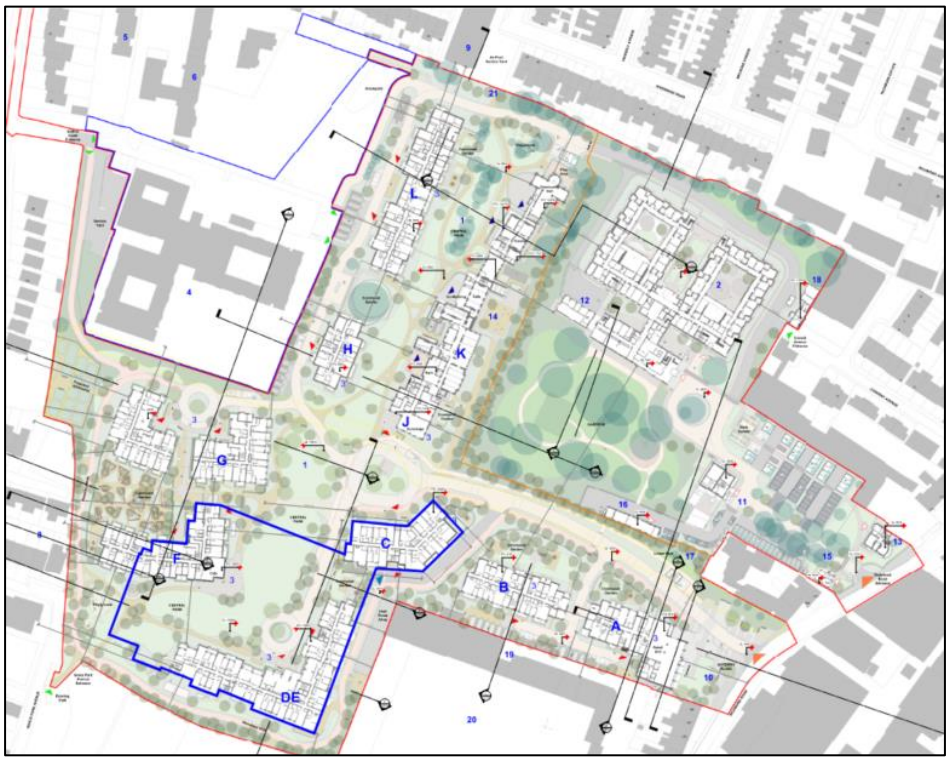

Figure 1– Proposed Site Layout showing proposed basement outlined in blue

2 BASELINE CHARACTERISTICS OF THE PROJECT

2.1 Site Context

The subject site is located at St. Vincent's Hospital, Richmond Road and Convent Avenue, Fairview, Dublin 3. The site contains protected structures under RPS Ref.: 2032 (St. Vincent's Hospital), 8788 (Richmond House) and 8789 (Brooklawn).

The site is bound by the Grace Park Wood residential development to the northwest, Griffith Court and the 'Fairview Community Unit' nursing home to the north, the An Post depot on Lomond Avenue and residential properties on Inverness Road to the east, existing residential and commercial properties on Richmond Road and Convent Avenue to the south and Charthouse Business Centre, Dublin Port Stadium and Ierne Sports and Social Club to the west of the site. Fairview is located northeast from the River Tolka and extends to Clontarf Road DART Station along Fairview Park to the south, and along Victorian part of Philipsburgh Avenue to the north. Neighbouring districts are Clontarf to the east, North Strand and Ballybough to the west and Marino to the north.

Figure 2 - Site Location Map

3 OUTLINE DEMOLITION METHOD STATEMENT

This report is an outline Demolition Method Statement for a proposed development at St Vincent's Hospital, Fairview, Dublin 3. This Method Statement is provided for Planning Permission purposes only. The Contractor must develop a Construction Manage Plan including proposed demolition works prior to operations beginnning. 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. Work shall be carried out in accordance with BS EN 6187: 2011 Code of Practice for Full and Partial Demolition.

3.2 Existing Structures

The site is bounded to the north by Grace Park Wood residential development, to the north-east by the recently constructed nursing home (Fairview Community Unit) and the Gheel autism service, to the east by the rear gardens of nineteenth century housing (Inverness Road and Foyle Road), to the south by the open space of the existing hospital and to the west primarily by sports facilities and the Charthouse Business Centre.

The area of open space immediately south of the existing main hospital buildings is proposed as location of the new hospital with potential for future expansion if required in the future.

The existing development on site includes the principal hospital buildings and ancillary structures to the north of same which are located to the eastern part of the site, set back from Richmond Road by approximately 250m.

The western part of the site is largely undeveloped except for the single storey unit (Crannog Day Hospital) located to the southern portion fronting onto Richmond Road.

The existing site is occupied by numerous buildings as outlined below of various historical importance. Reference should be made to the Architectural Conservation Report prepared by STW for more details on the existing historical fabric and use.

The following details are taken from the architectural reports, which outline the various elements to be demolished and also note the approximate age. It must be noted that there are a number of items identified in the Architectural Hertiage packages that are to be retained and kept for later use. Reference is made to seperate packages for details of the same.

Figure 8 – Proposed demolition on the site

The existing structures appear primarily to be of masonry and brick construction with timber upper floors and timber roofs. In addition to masonry there are certain elements within of reinforced concrete, structural timber and other construction techniques. The proposed demolition of the existing structures can only be undertaken once the new Hospital facility has been constructed and handed over. This will then allow the current users of the existing facilities relocate which will then allow the buildings to be demolished where required. The process of coordinating this and relocated equipment etc will be undertaken by the Hospital / Client and possibly proposed contractor. The following is a high-level method statement for the demolition of the buildings;

- 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, in plant areas, and ceiling tiles;
- Carry out a detailed 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;
- It may be necessary to remove all ACM (asbestos containing materials) and make the site safe for general demolition prior to any soft strip-out;
- Carry out a soft strip of the building to remove free-standing units, furniture, floor finishes, ceiling tiles, windows, partitions, doors and door frames, M&E services, radiators, light fittings, fixtures and fittings, first fix joinery, kitchens and toilet areas;
- Demolish the various buildings on site. Given the height of the existing structure high reach equipment maybe required which will also depend on the proposed demolition sequence.

3.3 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. These limits are to be agreed prior to works beginning on site. 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.

3.4 Noise

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

- 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 hroughout 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; and 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.

3.5 Vibration

The Contractor shall provide and maintain vibration-monitoring equipment for the duration of the works. Condition surveys of adjacent buildings will be required before excavations 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.

4 TRAFFIC MANAGEMENT

4.1 Site traffic, Traffic and Pedestrian Management

The anticipated truck movements from and to the site in relation to the preliminary programme for the works will be nominated in the construction methodology by the main contractor.

The construction site will be delineated by means of hoardings and lockable gates with screened fencing at the entry and exit points. The Contractor will pay particular attention to pedestrian traffic and safety at the entrances. Where possible, all vehicles will enter and exit the site in a forward direction. Pedestrians will have right of way. If required, alternate pedestrian routes around the site will be created and clearly signed.

4.2 Vehicle movements during construction

The major construction items include demolition, excavation, construction and fit out. It is anticipated that the peak of HGV movements to and from the site will be during demolition, excavation works, and construction of the building foundations. The peak LGV movements to and from the site will be during the building construction and demolition along with basement construction and excavation. It is anticipated that the construction traffic impact on the surrounding local road network will be minimal given the short distance to adjacent connecting regional roads which will allow for ease of traffic to flow to and away from site. The Contractor must submit a Construction Traffic Management plan to the Local Authority for approval. Haulage vehicle movements should be fully coordinated to comply with the requirements of the layout and requirements herein.

At no time should construction associated vehicles be stopped or parked along the routes

- Haulage vehicles should not travel in convoys of greater than two vehicles at any time.
- Haulage vehicles should be spaced by a minimum of 250m at all times.

- Strictly at no time should haulage vehicles be parked or stopped at the entrance to the site.
- All loading of excess material will occur within the site boundary.
- All off-loading of deliveries will take place within the site, away from the public road and will access via the construction site access.

The routes to and from the site shall depend on where the excavated material will be taken to and from where construction material will be brought into the site. The above locations will be identified by the Contractor at a later stage and appropriate routes will be the Council as part of the Contractors more detailed construction management plan.

The increase in traffic as a result of construction will be minor and can be readily accommodated within the existing road network as discussed in our Transport documents. However, the site is located where road and junction space is shared with vulnerable road users and the flow of construction traffic will need to be marshalled and regulated to ensure that potential conflicts are avoided as much as possible.

4.3 Minimisation of construction vehicle movements

Construction-related vehicle movements will be minimized through consolidation of delivery loads to/from the site and scheduling of large deliveries to occur outside of peak periods;

- reuse of 'cut' material generated by the construction works on site where possible, through various accommodation works;
- provision of adequate storage space on site;
- promotion of public transport use by construction personnel, in order to minimise staff vehicle movements.

The following headings identify some of the measures to be encouraged:

Cycle parking spaces will be provided on the site for construction personnel. In addition, lockers will be provided to allow cyclists to store their cycling clothes

Car Sharing subject to the Health Service Executive Guidelines on Covid 19, car sharing among construction personnel will be encouraged, especially from areas where construction personnel may be clustered. The contractor shall aim to organize shifts in accordance with personnel origins, hence enabling higher levels of car sharing. Such a measure offers a significant opportunity to reduce the proportion of construction personnel driving to the site and will minimise the potential traffic impact on the surrounding road network.

Public Transport Construction personnel will be encouraged to use public transport as means to travel to and from the site, subject to the Health Service Executive Guidelines on Covid 19. An information leaflet shall be provided to all personnel as part of their induction on site, highlighting the location of the various public transport services in the vicinity of the construction site.

4.4 Public Roads

A Visual Condition Survey (VCS) will be carried out of all surrounding streets prior to any site works commencing. The contractor will liaise with the Transportation and Infrastructure department of DCC to agree any changes to load restrictions and construction access routes for the site. Measures will be put in place as required to facilitate construction traffic whilst simultaneously protecting the built environment. All entrances and temporary roads will be continuously maintained for emergency vehicle access. The following measures will be taken to ensure that the site, public roads and surroundings are kept clean and tidy:

- a regular program of site tidying will be established to ensure a safe and orderly site;
- food waste will be strictly controlled on all parts of the site;
- mud spillages on roads and footpaths outside the site will be cleaned regularly and will not be allowed to accumulate;

- wheel wash facilities will be provided for vehicles exiting the site;
- in the event of any fugitive solid waste escaping the site, it will be collected immediately and removed.

4.5 Content of the contractors construction management plan

The Construction Phase Traffic Management Plan shall identify:

- Primary contact name;
- Primary contact mobile phone number;
- Secondary contact name; and
- Secondary contact name mobile phone number.

The primary contact shall act as a Liaison Officer with the Local Authority, TII, Gardaí, local residents and businesses. The Construction Management Plan shall contain information on the following issues, and conform to all locat area guidelines and manuals, where relevant:

- Temporary signage: Type and location;
- Temporary road markings: Type and location;
- Temporary changes to existing signage and markings required to enable a
- road closure;
- Operation of a contra flow traffic lane;
- Location of proposed Temporary Traffic Signals;
- Arrangements for local access and pedestrian access;
- Proposed Lighting Arrangements;
- Proposals for the use of Flag Men;
- Proposals to erect barriers;
- Proposals to change street infrastructure to enable road works e.g. bus stops and taxi ranks;
- Provisions for pedestrian movements including those of mobility impaired;
- Proposed changes to on-street parking; and
- Arrangements made to make owners and residents aware of the traffic management arrangements that will apply during the road works.

5 SAFE DEMOLITION

Safety of members of the public is a primary concern while carrying out demolition works. Various safety measures will be taken to mitigate the risks during all stages of construction.

5.1 Installation of hoarding

It is anticipated that Solid timber hoarding 3.2m in height will be provided along the perimeter of the site along public footpaths to protect members of the public from machines and materials on site. Standard 2.4m high hoarding will be provided in other areas. Hoarding can be established outside the site boundary line with the permission of the local authority. 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 qualified banksmen. For additional protection of pedestrians either a fully enclosed roof to the hoarding or an additional 500mm fluted section to the hoarding can be provided on the roadside as well as along the public footpaths. Hoarding will be designed by a competent temporary works engineer.

5.2 Removal of services

Prior to demolition works services survey will be carried out to identify existing services. All services on site will be disconnected, diverted or removed as agreed with service providers as part of the enabling works.

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 ensure the structure is demolished in a controlled manner and there is no change of an unplanned

structural collapse. After completion of the site hoarding, a full height scaffolding will be erected. It is proposed that this will be enclosed for dust and noise protection for adjacent buildings. Where it is not enclosed, a safety netting will be provided at each level of the scaffolding. This will have access platforms at each 2m level to provide access to the covered safety netting which will be installed along the elevation. The scaffolding will not be used for demolition but for access to the safety netting to prevent dust and debris from falling on footpaths.

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 roof slab. 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 section of the building adjoining third party structure will be carefully demolished using hand tools cutting the structure into manageable sections using road saws or other suitable equipment rather than using mechanical breakers from the inside of the building. Concrete munchers will be used for the remaining sections of the building in order to minimise the noise and dust being generated by the works. The safety netting 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, with always leaving a minimum of 5m extended scaffolding height above the demolition works. Similarly, to the slabs the use of concrete munchers as opposed to hammering etc. will be utilised. It will not be possible to use munching equipment on the ground floor slab or on the foundations. The ground floor slab will be cut into manageable sections using road saws or ther suitable equipment and the material excavated rather than using mechanical breakers. Similarly, the foundations will be removed in sections after being cut. 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.

6 CONCLUSION

This document outlines an approach to demolition of the existing building and the measures to be implemented during the demolition process. The Contractor must also develop a Construction Management Plan in accordance with the latest legislation to inform relevant stakeholders of the proposed method and working systems for the site for not only the new structures but most importantly in the eyes of this report the Demolition works.

Shaun Doody BE MSc CEng MIEI MIStructE RCONSEI

Associate Director

On Behalf of

OCSC MULTIDISCIPLINARY CONSULTING ENGINEERS