

1 MUNSTER AVE, GALWAY

New-Build Infill Social Housing including Refurbishment of Existing Terraced House



CONSTRUCTION METHODOLOGY

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1.0 OVERVIEW

1.1 Introduction

The construction methodology outlined in this document aims to ensure compliance with Regulation 42 of the Habitats Regulations, in support of the AA screening for the proposed social housing development at 1 Munster Ave, Galway for Galway City Council (GCC).

This methodology addresses the potential environmental impacts of the construction activities, and has been developed to ensure that the management of all construction activity is carried out in a planned, structured, and considerate manner.

A detailed CEMP (Construction and Environmental Management Plan) will be prepared by the Contractor for submission to the local authority for approval prior to work commencing on site. It is the duty of the Contractor to ensure that all works within their scope are carried out in accordance with best practice guidelines and these requirements.

The following will be incorporated into the CEMP by the Contractor:

- Statutory consent - If approval is granted for the proposed development, the entire contents of the planning consent will be included in the CEMP.
- Environmental Method Statement as set out in the project Contract Documents
- Relevant Environmental Performance Criteria prescribed in environmental legislation and in Contract Documents
- Register of all applicable legislation, including relevant standards, Codes of Practice and Guidelines.

An Environmental Clerk of Works (ECoW) will be appointed by the client (GCC) to independently monitor the works, to provide ecological site inductions and tool box talks to construction personnel, and to aid in ensuring works are carried out in compliance with environmental safeguarding requirements.



View of new corner at 1 Munster Ave

1.0 OVERVIEW

1.2 Project Overview

Galway City Council have commissioned a Design Team to prepare a planning application for the provision of 4no. social housing units, located at 1 Munster Ave, Galway.

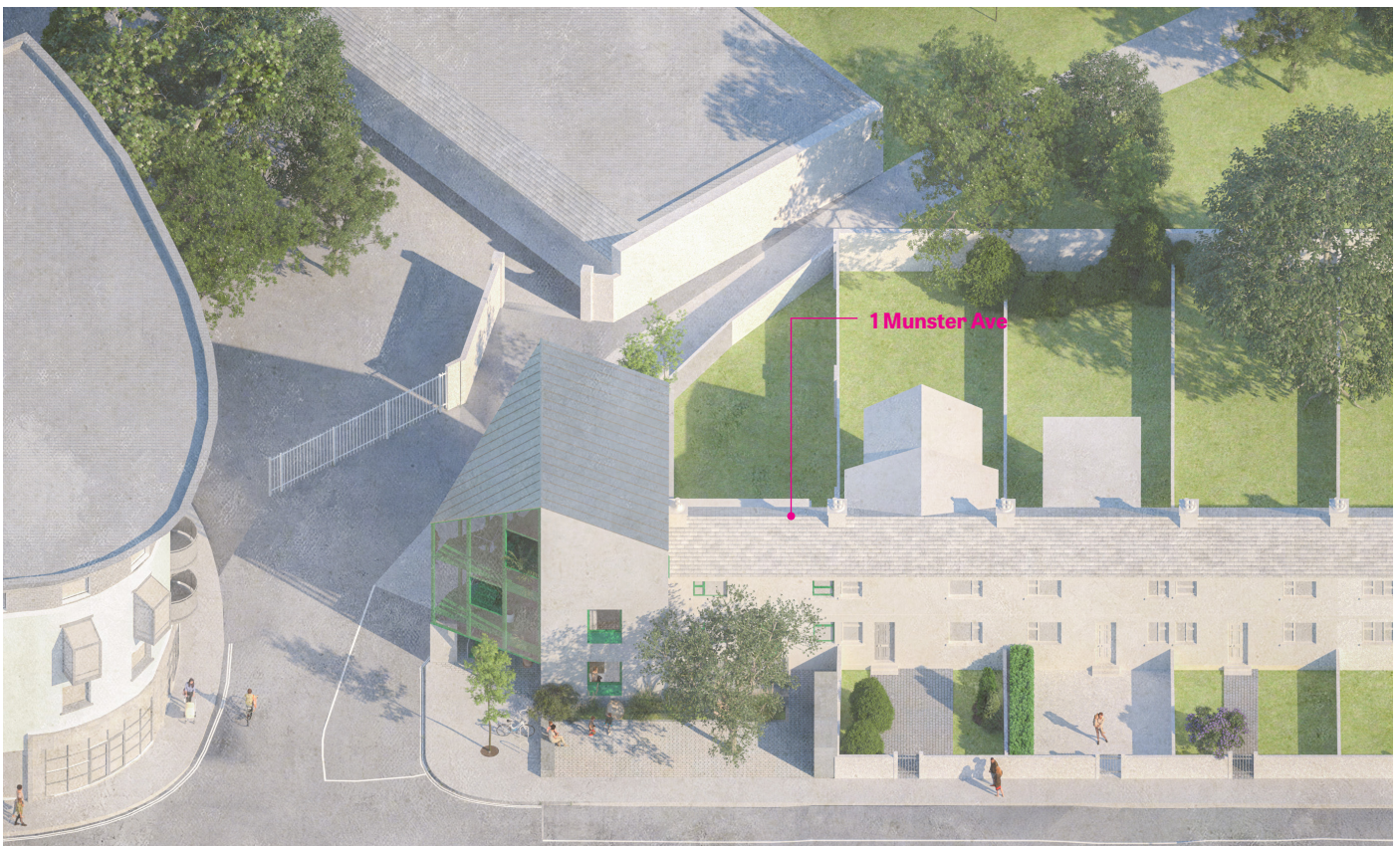
The development will consist of:

- A Demolition of a single-storey side extension to existing house at No. 1 Munster Avenue

And provision of:

- B Refurbishment of existing house (No. 1 Munster Avenue) to provide 1no. 2-bed dwelling
- C New-build 3-storey apartment building on the site of the demolished side extension to No. 1 Munster Avenue, to provide 3no. 1-bed dwellings
- D External covered communal circulation to each unit
- E Public realm/ entrance works on Munster Ave
- F New service/ utilities connections

It is noted that the site is within Flood Zone A for coastal flooding (Site Specific Flood Risk Assessment - Munster Avenue, 2024) and has been designed in accordance with the requirements of the "Planning System and Flood Risk Management Guidelines for Planning Authorities", November 2009 and the Galway City Council Development Plan 2023-2029 Strategic Flood Risk Assessment.



Bird's Eye View of New Development at 1 Munster Ave

1.0 OVERVIEW

1.3 Site Overview

The overall site covers 0.04ha of brownfield residentially zoned land, on the edge of Galway City Centre. It consists of the side garden of an existing 2-storey terraced house. An existing single-storey side extension is to be demolished to make way for the construction of a new small social housing development.

The site is bounded by Munster Ave to the North, Fr Burke Park to the South, and is surrounded by a mixture of commercial and residential developments. The area is urban in character, being located in the West End of Galway City Centre.

The site is accessed by foot only (from the public footpath) and no vehicular access points or car-parking spaces exist or are proposed in the new development.

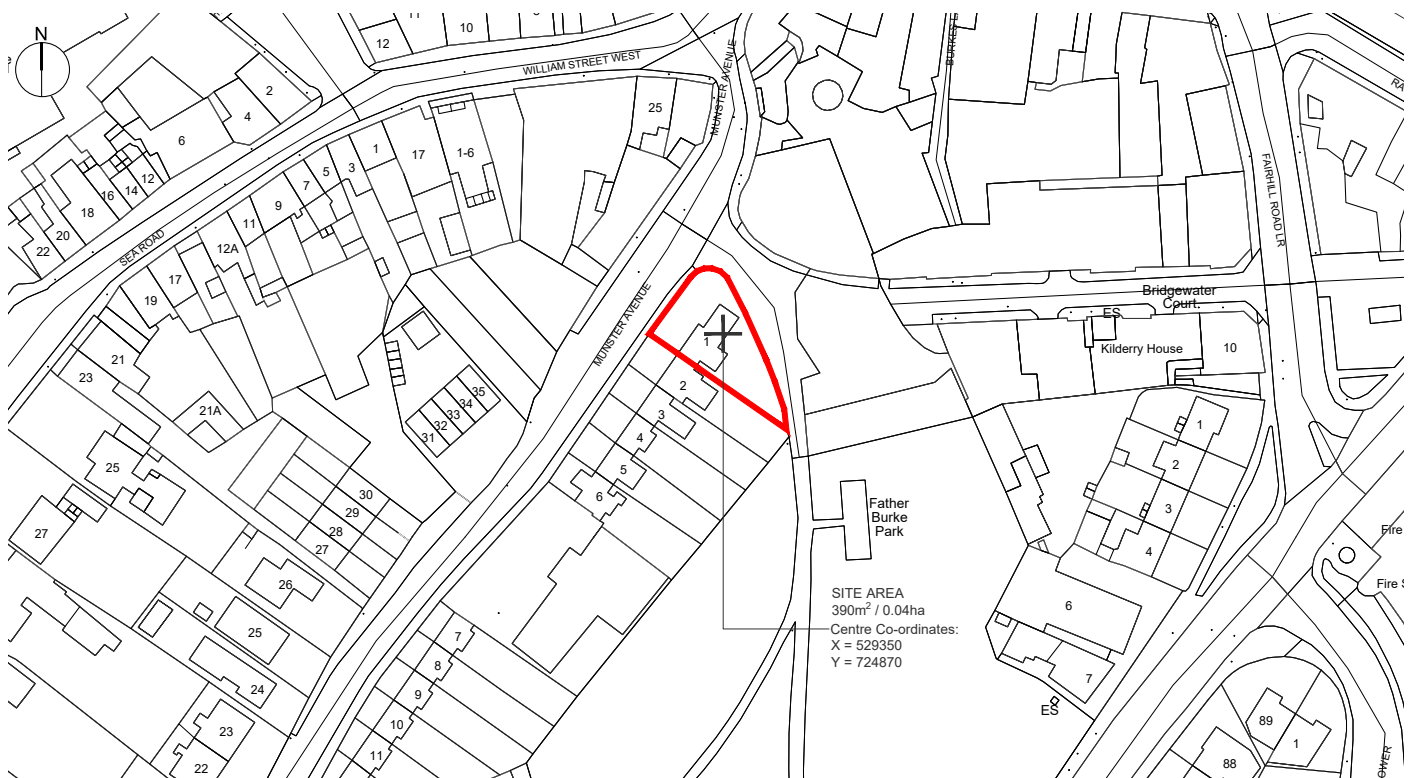
1.4 Pre-Planning Site Investigations

It is important to establish existing site conditions as early as possible in advance of detailed design and construction processes to ensure a safe and planned approach to construction and the safe-guarding of the natural environment.

The following pre-planning site investigations have taken place:

- (i) Topographical Survey
- (ii) GPR (Ground Penetrating Radar) Survey
- (iii) Ground Investigations
- (iv) Below Ground Drainage CCTV Report
- (v) Invasive Species Assessment Report
- (vi) Bat Roost Suitability Report

The results of these investigations have informed the proposed Construction Methodology outlined in Section 2.



Site Location Map, 1 Munster Ave, Galway

1.0 OVERVIEW



View of 1 Munster Ave



View of side extension (to be demolished)

TAKA

1.0 OVERVIEW

1.5 Policy and Guidance Overview and Implementation

The appointed works contractor will comply with, and implement, all relevant Irish and EU safety, health and environmental legislation. The Contractor's developed CEMP must refer to various industry standard best practice guidance and policy documents that can be used to address significant environmental risks.

TII's Construction Guidance and CIRIA's 'Environmental good practice on site guide' (C741) and C532 'Control of water pollution from construction sites. Guidance for consultants and contractors' should also be consulted for practical guidance about managing construction sites to control environmental impacts and how to deliver sustainable construction on site by effectively managing a range of environmental issues. At a minimum, the Contractor shall adhere to this guidance.

Flood resilient design and construction methods will be implemented as per CIRIA's 'Development and flood risk – guidance for the construction industry' (C624), and 'Code of practice for property flood resilience' (C790), and these measures will be highlighted to the Contractor prior to the preparation of their CEMP.

The works contractor(s) will be required to designate an Environmental Manager for the project whose duty it will be to identify and monitor all potential environmental impacts. They will be required to monitor and maintain registers for noise and dust impacts and shall be responsible for the integrity of the surrounding lands and their protection from potential impacts of the construction operations. The works contractor(s) will be responsible for ensuring that their works conform to the latest relevant guidance and policy.

1.6 Environmental Clerk of Works (ECoW)

GCC have committed to appointing an Environmental Clerk of Works for the duration of Construction. During Construction, the ECoW will independently monitor and brief the Contractor on all aspects of environmental protection measures, particularly in relation to monitoring and notifying the Contractor of potential flood events and any required change to construction sequencing as a result.

Pre-Construction, the ECoW will prepare an Environmental Method Statement. The Method Statement will contain project-specific guidance for the carrying out of the works for inclusion with Contract Documents. It will include environmental protection measures, requirements for method statements for removal of invasive species, and restrictions to work during flood warning events.

2.0 CONSTRUCTION METHODOLOGY

2.1 Introduction

This section outlines the construction methodology for the development at 1 Munster Ave, Galway with a focus on incorporating relevant construction industry guidance. The methodology aims to ensure sustainable construction practices, environmental protection, and compliance with regulatory requirements.

This section should be read in conjunction with associated planning-stage drawings and specifications. This methodology is not intended to be used as a construction-stage document.

2.2 Pre-Construction Activities

The Contractor will be directed to produce a Construction and Environmental Management Plan (CEMP) for submission to the local authority for approval, prior to commencement on site. The CEMP shall incorporate relevant construction and environmental guidance and include the following:

- (i) Project Overview
- (ii) Site Description
- (iii) Construction Methodology
- (iv) Waste Management
- (v) Site Access and Traffic Management
- (vi) Pollution Prevention
- (vii) Removal of Invasive Species
- (viii) Emergency Response Plan
- (ix) Noise and Vibration Management
- (x) Monitoring and Reporting (incl Identification of Contractor's Environmental Manager)
- (xi) Regulatory Compliance

The CEMP will be based on, and will be required to incorporate, all details & requirements set out in the Construction Methodology, the ECoW's pre-construction Environmental Method Statement, and the project-specific construction design for the development. The ECoW will carry out site inductions and toolbox talks advising on environmental protection procedures and best practice.

With the incorporation of these measures, the CEMP will provide sufficient safeguards for the environment during the construction phase.

2.0 CONSTRUCTION METHODOLOGY

2.3 Site Clearance

The following construction activities will take place during the 'Site Clearance' phase:

- (i) Remove/Amend site boundary walls as required
- (ii) Set up site hoarding/ boundary fencing
- (iii) Set up Main Contractor's compound (parking, offices, welfare etc)
- (iv) Remove Invasive Species in compliance with recommendations as outlined in the Invasive Species Assessment Report
- (v) Remove Asbestos Containing Materials identified in asbestos survey for existing house
- (vi) Demolish single-storey side extension
- (vii) Break out concrete ground surfaces as required

Particular attention will be paid to the guidance contained in CIRIA C532 'Control of water pollution from construction sites. Guidance for consultants and contractors' during site clearance to protect water quality. The Contractor's Waste Management Plan will take into account guidance for proper sorting, storage, and disposal of demolition waste. Standard methods will be employed to control noise and dust during demolition works. Asbestos removal and disposal will be carried out by a suitably qualified Asbestos Specialist in compliance with Regulation 16 and Schedule 4 of the Safety, Health and Welfare at Work (Asbestos) Regulation 2006.

2.4 Ground Works

The site investigation confirms the site consists of made ground over assumed rock which varies between 0.80m and 2.0m below ground level. Ground water is noted at 1.0m below ground level.

The engineer's strong preference for this site is for traditional strip foundations cast onto the rock level.

In 1 Munster Ave, the ground water level is above the rock level - which could result in environmental contamination as a result of pouring concrete below the ground water level.

The following methodology for the ground works has been formulated to avoid the pouring of concrete below the existing ground water level and to avoid risks of contamination from wet concrete during a flood warning or event.

The following construction activities will take place during the 'Ground Works' phase:

- (i) Excavation of trenches down to rock
- (ii) Temporary dewatering of trenches
- (iii) Backfilling of trenches with lean mix trench fill to a formation level of 900mm below ground level.
- (iv) Pouring of traditional strip foundations above ground water level
- (v) Construction of blockwork rising walls
- (vi) Installation of suspended concrete ground floor slab

The foundations and slab are located above the site water table. The timing of the pouring of the lean mix trench fill, strip foundations and suspended slab will be controlled by the ECoW, who will ensure that concrete is not poured within a designated period before/after a local flood warning. This strategy will prevent surface water or flooding run-off from wet concrete.

The use of a suspended concrete slab will minimise the volume of excavations required to achieve suitable formation levels.

Storing of existing topsoil for reuse will be in compliance with the EPA's 'Guidance on Soil and Stone By-Products' (2019)

2.0 CONSTRUCTION METHODOLOGY

2.5 New-Build Construction

The following construction activities will take place during the 'New Build' phase:

- (i) Construct blockwork cavity walls
- (ii) Construct pre-cast concrete upper floors
- (iii) Construct steel-framed external staircore
- (iv) Construct timber roof structure and install zinc roof covering
- (v) Install external windows and doors
- (vi) Fit-out to apartments

Construction methods will provide flood-resilient constructions in line with CIRIA C790 'Code of practice for property flood resilience'. Demountable flood barriers will be installed in doorways at ground level. No window openings will be installed below the flood datum. All electrical sockets and switches at ground floor will be installed above the flood datum. Anti-backflow valves will be installed on outfall sewer pipes.

During the construction of the new-build apartments, construction practices will comply with CIRIA's 'Environmental good practice on site guide' (C741).

2.6 Refurbishment

The following construction activities will take place during the 'Refurbishment' phase:

- (i) Strip out existing house
- (ii) Replace ground floor construction with new insulated concrete slab (where required for new drainage runs)
- (iii) Construct new service connections
- (iv) Refurbish and insulate existing roofs
- (v) Install internal dry-lining
- (vi) Replace external windows and doors
- (vii) Fit-out existing house

Requirements regarding flood resilience similar to the new-build will be applied to the existing house, where possible. The Contractor's Waste Management Plan will take into account guidance for proper sorting, storage, and disposal of waste from strip out of the house.

2.0 CONSTRUCTION METHODOLOGY

2.7 Site Services

The following construction activities will take place during the 'Site Services' phase:

- (i) Divert existing services on site as required
- (ii) Construct main surface and foul water drainage runs including manholes
- (iii) Install below ground attenuation tank.
- (iv) Construct tie-ins to existing Irish Water (Uisce Eireann) network (combined sewer and water mains)
- (v) Construct watermain network
- (vi) Construct electrical and comms ducting network

Surface water within the site boundary will be managed in line with SuDS requirements. Surface water will discharge to an on-site attenuation tank with a flow control device restricting the flow to 2.0L/sec discharging to the public surface water network. All hardstanding and pavements surfaces will be of permeable design. Surface water disposal measures will be installed in compliance with CIRIA C698 'Site handbook for the construction of SUDS'

2.8 Landscaping

The following construction activities will take place during the 'Landscaping' phase:

- (i) Repair/Construct garden walls and gates
- (ii) Construct public realm (planters, bin store, bike parking, etc)
- (iii) Repair/Construct public footpath
- (iv) Construct ramp and steps to front entrance of existing house
- (v) Construct permeable hard landscaping to rear gardens
- (vi) Place topsoil to rear gardens and planters

Installation of permeable paving will be in compliance with CIRIA C698 'Site handbook for the construction of SUDS'. New topsoil will be obtained from a local provider and will be free from contaminants. Bike parking is provided in compliance with the GCC development plan. No car or vehicle parking is proposed as part of the development.

3.0 CONCLUSION

3.1 Conclusion

This document has provided an outline Construction Methodology for the proposed social housing development at 1 Munster Ave, Galway City for AA Screening purposes. The proposed development will consist of 3no. new-build 1-bedroom apartments and the refurbishment of of 1no. existing 2-bed house, with associated public realm works.

The Main Contractor, once appointed, will be required to prepare a detailed construction and environmental management plan for the project, taking into account the requirements of this outline Construction Methodology, and in compliance with the requirements of the Environmental Clerk of Works pre-construction Environmental Method Statement.

The methodology aims to ensure sustainable construction practices, environmental protection, and compliance with regulatory requirements.



1 Munster Ave (refurbished) with new corner development