

# Proposed Residential Development at Stoney Hill Road, Rathcoole, Co. Dublin

Construction Management Plan

Romeville Developments Ltd.

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# 1. Introduction

A Construction Management Plan (CMP) has been prepared by AECOM to accompany an application for a proposed residential development on a site located to the east of Stoney Hill Road, Rathcoole, Co. Dublin. A small portion of land for the provision of a creche facility is located within the Peyton Residential Estate located to the west of the existing roundabout north of Stoney Hill Road.

This outline CMP is a preliminary plan which includes a description of the proposed works and how these works will be managed for the duration of the construction on site. It also presents the potential environmental impacts, the proposed management and monitoring methodologies based on the concept of Best Practice and the proposed mitigation measures to be implemented at the site. This plan shall be updated by the contractor and agreed with South Dublin County Council (by the appointed Contractor) in advance of the construction phase.

The development will be under the control of a main contractor who will be appointed after the approval is granted for the Planning Application. Once familiar with the site and having developed a final detailed methodology for the works required, the contractor will prepare a Detailed Construction Management Plan prior to the on-site activities commencing. It is anticipated the detailed plan will be based upon this preliminary plan and expanded to provide a project specific site management plan, incorporating:

- Operational Health & Safety (OH&S) Management Plan;
- Detailed Environmental Management Plan;
- Detailed Waste Management Plan;
- Detailed Traffic Management Plan.

The Construction Management Plan will be integrated into and implemented throughout the construction phase of the project to ensure the following:

- That all site activities are effectively managed to minimise the generation of waste and to maximise the opportunities for on-site reuse and recycling of waste materials.
- To ensure that all waste materials generated by site activities, that cannot be reused on site, are removed from site by appropriately permitted waste haulage contractors and that all wastes are disposed of at approved waste licensed / permitted facilities in compliance with the Waste Management Act 1996, the Waste Management (Amendment) Act 2001 and the Protection of the Environment Act 2003.
- To manage and control any environmental impacts (noise, vibration, dust, water) that project construction work activities may have on receptors and properties that are located adjacent to project work areas and on the local receiving environment.
- To comply with planning conditions and requirements relating to waste management as required by South Dublin County Council.

This document has been prepared to demonstrate how the appointed contractor and the appointed Project Supervisors will comply with the following relevant legislation, and relevant Best Practice Guidelines:

- The South Dublin County Council Development Plan 2016-2022;
- Safety, Health and Welfare at Work (Construction) Regulations 2013;
- Traffic Signs Manual Chapter 8 Temporary Traffic Measures and Sign Roadworks (2008);
- Addendum Transport Chapter 8, Temporary Traffic Measures and Sign Roadworks (2008);
- Traffic Management Guidelines, Department of Transport (2003);
- Integrated Pollution Prevention and Control Directive (1996/61/EC);
- The Waste Framework Directive (Directive 2008/98/EC);
- The Eastern-Midlands Regional Waste Management Plan 2015-2021;
- Environmental Protection Agency Act 1992;

- CIRIA document 133 Waste Minimisation in Construction;
- Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects (DoEHLG), June 2006;
- Construction Code of Practice for the Sustainable Use of Soil on Construction Sites (DEFRA), September 2009;
- The Litter Pollution Act 1997;
- Waste Management Act 1996, the Waste Management (Amendment) Act 2001 and the Protection of the Environment Act 2003;
- Waste Management (Collection Permit) (Amendment)(No.2) Regulations 2016;
- Waste Management (Permit) Regulations 1998 (SI No. 165 of 1998);
- Department of the Environment, Heritage and Local Government – Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects – June 2006;
- Local Government Water Pollution Act 1977.

## 2. Site Location

### 2.1 Site Location

The primary site of the proposed development is located to the east of Stoney Hill Road, Rathcoole, Co. Dublin. A small portion of land for the provision of a creche facility is located within the Peyton Residential Estate located to the west of the existing roundabout north of Stoney Hill Road.

The total development area is 7.985 hectares which comprises 7.783 hectares to the east of Stoney Hill Road and 0.202 hectares to the west of the existing roundabout north of Stoney Hill Road. The site also includes part of Stoney Hill Road and the roadway at the eastern side of Rathcoole Park. The primary site is bounded to the north by the existing Rathcoole Park residential estate, to the west by Stoney Hill Road, to the south and to the east by undeveloped lands.

The location of the proposed development site is shown in Figure 1.



Figure 1 – Site Location (Screenshot taken from Google Maps)

## 3. Project Description

The development will consist of a residential development of 204 no. units, comprising 151 no. houses (including duplexes) and 53 no. apartments. The houses comprise of 7 no. typologies with a total of 123 no. units with a mix of semi-detached and terrace units and with a breakdown of 111 no. 3 bed units and 12 no. 4 bed units. Typologies F, H, L and M are two storey, typologies D, G and K are two storey plus dormer windows. The duplex units comprise a total of 28 no. 3 storey units in a terrace arrangement with 10 no. two bed house units and 18 no. 3 bed house units, all below apartments at second floor level. The apartments above the duplex units comprise of 10 no. 2 bed units and 4 no. 3 bed units. There are an additional 39 no. apartments in a single block to the north-west comprising of 10 no. 1 bed units, 23 no. 2 bed units and 6 no. 3 bed units located in a single four storey over basement/undercroft parking block (with a setback top floor) to the north-west of the application site.

The proposed development also includes a 2 no. storey creche building of 639.2 sq.m plus an outdoor play area of 624.31 sq.m located on an existing undeveloped portion of the Peyton site located to the west of Stoney Hill Road. The creche includes 10 no. car parking spaces and 20 no. bicycle parking spaces. The crèche development includes all associated and ancillary works.

The proposed schedule of accommodation is shown in Table 3.1 below. Further details of the development proposals including the site layout and transport network arrangements are illustrated in the architects' scheme drawings as submitted with this planning application.

**Table 3.1 – Proposed Schedule of Accommodation**

Unit Type	No. of Bedrooms/GFA	Quantum	Total
Houses	3	111 units	123 Units
	4	12 Units	
Duplexes	2	10 Units	28 Units
	3	18 Units	
Apartments	1	10 Units	53 Units
	2	33 Units	
	3	10 Units	
Creche	639sqm	1 building	-

The basement for the apartment block includes 49 no. car parking spaces, 87 no. bicycle parking spaces, circulation, plant areas, refuse storage areas and other associated facilities. There are an additional 12 no. visitor bicycle parking spaces for the apartment block provided at surface level. Access to the apartment block is directly from Stoney Hill Road via a new access from an existing dropped kerb.

The development also includes 306 no. surface car parking spaces (total car parking provision of 355 no. spaces including 49 no. spaces at the apartment block), 169 no bicycle parking spaces (comprising of 99 no. spaces at basement and surface for the apartment block, 60 no. secure spaces for the apartments in the duplex units, and 10 no. visitor parking spaces at surface level), communal open space for the apartments, public open space including a children's playground and a linear park to the south of the site new vehicular entrances from Stoney Hill Road (one to the apartment building to the north of the site at Stoney Hill Road and a second to the remainder of the development further south on Stoney Hill Road), a separate pedestrian and cycle access adjacent to the existing roundabout on Stoney Hill Road to the north-west of the site, internal vehicular routes to include footpaths and cycleways, 2 no. ESB substations, refuse/bin stores, public lighting, boundary treatment, provision of potential pedestrian/cycle linkages to Rathcoole Park to the north, drainage and civils works to facilitate the development, and all other associated and ancillary development/works. The total gross floorspace of the development described above is circa 23,042.73 sq.m.

## 4. Logistics

### 4.1 Construction Program & Phasing

The construction programme is expected to require 18 – 24 months (approximately) to complete from occupation of the site. The development will be constructed in four phases as follows:

**Phase 1:**

- Construction of 46 units to the south-west of the residential development

**Phase 2:**

- Construction of 50 units to the south-east of the residential development
- Construction of creche facility

**Phase 3:**

- Construction of 69 units to the north-east of the residential development

**Phase 4:**

- Construction of apartment block containing 39 units to the north-west of the residential development

Please refer to C+W O'Brien drawing No. 17-098-113 submitted with the planning application for more information on the phasing of the development.

The development is proposed to be constructed on the following basis;

- Set up site perimeter hoarding, maintaining existing pedestrian and traffic routes around the site;
- Site Clearance;
- Site services installations (drainage, power, water and the like);
- Cut and fill excavations;
- Construct units as per phasing mentioned previously;
- Finish Interior and Exterior Landscaping.

### 4.2 Vehicular Access to Site

At present there is one vehicular access to the subject site from Stoney Hill Road. This access point serves the existing residential dwellings on the site. The existing vehicular access will be adapted to suit the development layout as part of the development works. It is anticipated that for the duration of the works all access and egress for deliveries will be via the existing access point from Stoney Hill Road. It may also be beneficial to install a pedestrian only entrance to the site to segregate vehicular and pedestrian movements to and from site.

To minimise construction impacts upon the surrounding road network, it is recommended that all construction traffic accesses and exits the site from the N7 travelling down the R120 Regional Road and Main Street turning left onto the Stoney Lane then either turning right at the Stoney Hill Road / Stoney Lane Roundabout to access the creche or continuing straight to access the residential part of the development.

Security personnel will be present at the entrance/exit of the site to ensure all egressing traffic will do so safely. A wheel wash will be installed at the exit from the site to prevent any dirt being carried out into the public road. If necessary, a road sweeper will be used to keep the public road around the site clean.

### 4.3 Protection of Public Areas from Construction Activity

Perimeter hoarding will be provided around the site to provide a barrier against unauthorized access from the public areas. Controlled access points to the site, in the form of gates or doors, will be kept locked outside working hours. CCTV will also be used for periods outside working hours to prevent unauthorised site access.

The hoarding will be well-maintained and will be painted. Any hoardings may contain graphics portraying project information, Contractors logo or marketing images.

#### 4.4 Health & Safety

All personnel working on site must have a valid Safe Pass card.

All site personnel to follow the instructions of the Operational Health & Safety (OH&S) Management Plan.

Client to appoint Project Supervisor Design Process (PSDP) and Project Supervisor Construction Stage (PSCS) before the construction work begins.

All site works to be completed as per the Safety, Health and Welfare at Work (Construction) Regulations 2013.

#### 4.5 Material Hoisting & Movement Throughout the Site

Hoists and teleporters may be utilised as required during the project to facilitate material movement into the structures and waste movements out. With the commencement of the fit-out activities, hoists strategically positioned will play a key role for successful project delivery. They are also less susceptible to being affected by inclement weather conditions.

#### 4.6 Deliveries & Storage Facilities

It is proposed that unloading bays are provided for deliveries to the site within the hoarding perimeter. They should be accessible by fork lifts. Appropriately demarcated storage zones will be used to separate and segregate materials.

All deliveries to site will be scheduled to ensure their timely arrival and avoid need for storing large quantities of materials on site. Deliveries will be scheduled outside of rush traffic hours (8.00am-9.00am and 4.30pm-5.30pm) to avoid disturbance to pedestrian and vehicular traffic in vicinity of the site.

#### 4.7 Site Accommodation

On-site facilities will consist of;

- Materials storage area;
- Site office & meeting room;
- Staff welfare facilities i.e. toilets, drying room, canteen, etc.

Electricity will be provided to the site via the national grid.

Water supply to the site will be provided by means of a temporary connection to the public water main. Similarly, a temporary connection for foul water drainage will be made to the public network.

#### 4.8 Site Parking

There will be sufficient on-site parking for staff and visitors. Construction staff will also be encouraged to use public transport and information on local transportation will be published on site.

#### 4.9 Site Working Hours

Construction operations on site will generally be subject to a planning permission and conditions. However, it may be necessary for some construction operations to be undertaken outside these times, for example; service diversions and connections, concrete finishing and fit-out works, etc.

Deliveries of materials to site will generally be between the hours of 07:00 and 19:00, Monday to Friday (excluding Bank Holidays), and 08:00 to 14:00 on Saturdays. There may be occasions where it is necessary to make certain deliveries outside these times, for example, where large loads are limited to road usage outside peak times.

## 5. Environmental Issues

### 5.1 Noise & Vibration

During the construction works the Contactor shall comply with:

- BS 5228: 2009 Code of Practice for Noise and Vibration Control on Construction and Open Sites, Part 1 and Part 2. 1
- Guidelines for the Treatment of Noise and Vibration in National Road Schemes (NRS, Revision 1, 2004)
- Safety, Health and Welfare at Work (General Application) Regulations 2007, Part 5 Noise and Vibration.

The noise limits to be applied for the duration of the infrastructure works are those specified in the B Category of BS5228. These limits are summarised below and will be applied at the nearest sensitive receptors to the works.

- Night (23:00- 7:00) = 50dB
- Evening (19:00-23:00) = 60d
- Day (07:00-19:00) = 70dB

The total noise (LAeq) which should not be exceeded during daytime is therefore 70dB.

Vibration limits to be applied for the infrastructure works are those specified in the NRA document Guidelines for the Treatment of Noise and Vibration in National Road Schemes (NRA, Revision 1, 2004). These limits are outlined below.

Allowable Vibration (in terms of peak particle velocity) at the closest part of sensitive property to the source of vibration, at a frequency of

- Less than 11HZ: 3mm/s
- 11 to 50 HZ: 3 to 8mm/s

In general, the contractor shall implement the following mitigation measures during the proposed infrastructure works:

- Avoid unnecessary revving of engines and switch off equipment when not required.
- Minimise drop height of materials.
- Start-up plant sequentially rather than all together

### 5.2 Air Quality & Dust Monitoring

All works carried out as part of these infrastructure works will comply with all Statutory Legislation including the Local Government (Water Pollution) acts, 1977 and 1990.

Dust prevention measures shall be included for control of any site airborne particulate pollution. The use of appropriate water-based dust suppression systems will greatly reduce the amount of dust and windborne particulates as a result of the construction process. This system will be closely monitored by site management personnel particularly during extended dry periods and in accordance with site management methods.

The Contractor shall monitor dust levels in the vicinity of the site in accordance with planning conditions. Records shall be kept of such monitoring for review by the Planning Authority.

### 5.3 Migrating Dust & Dirt Pollution

Dust will be controlled by wetting roads and area of exposed earth with water during periods of extended dry weather. Wetting will be done at least 3 times a day or more depending on atmospheric conditions.

Surface Water run off from the site will be managed to prevent silt entering the existing piped network.

The Contractor will ensure that all construction vehicles that exit the site onto the public roads will not transport dust and dirt to pollute the external roadways. This will be achieved through a combination of the following measures:

- Ensuring construction vehicles have a clean surface to travel on within the site (i.e. haul road).
- Providing a “Full-Body Self Contained” wheel wash, constructed and located within the site confines.
- Ensuring an appropriate wheel or road washing facility is provided as and when required throughout the various stages of construction on site. If conditions require it then a manned power washer shall be put in place to assist the wheel wash system.

#### **5.4 Harmful Materials**

Harmful material will be stored on site for use in connection with the construction works only. These materials will be stored in a controlled manner. Where on-site facilities are used there will be a bunded filling area using double bunded steel tank at a minimum.

## 6. Waste Management

A Construction and Demolition Waste Management Plan has been prepared as part of this application.

Please refer to this report for details on waste management during the construction and operational phases of the project.

## 7. Traffic Management

A Construction Traffic Management Plan has been included in the Traffic and Transportation Assessment submitted as part of this application.

Please refer to this report for details on traffic management during the construction and operational phases of the project.

## 8. Provisions for Construction

### 8.1 Hoarding, Set-up of Site & Access/Egress Points

The site area will be enclosed with hoarding details of which are to be agreed with South Dublin County Council. Hoarding panels will be maintained and kept clean for the duration of the project.

This will involve erecting the hoarding around the proposed site perimeter in line with the finished development description.

### 8.2 Removal of Services

Prior to any works a utility survey will be carried out to identify existing services. All services on site will be disconnected, diverted or removed as agreed with service providers.

### 8.3 Excavation

This development will involve excavation and removal of material from site for foundations and regrading of the site profile.

It is not envisaged that rock will be encountered during the excavation works.

The Contractor must ensure that all material is disposed of at an appropriately licensed land fill site. The Contractor must also outline detailed proposals within the Detailed Waste Management Plan.

### 8.4 Site Service Installations

Drainage, power, water and the like will be installed to serve the proposed development.

The housing is proposed to be constructed on the following basis;

- Reduced level excavations;
- Traditional strip foundations, ground beams and floor slabs;
- Construct house frames and blockwork;
- Finish interior and exterior landscaping

Please note the above shall be carried out in accordance with the construction phasing.

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