

Construction and Environmental Management Plan

Old Fort Road, Ballincollig, Cork

May 2020

Prepared on behalf of
O'Flynn Construction Co. Unlimited Company

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1.0 Introduction

O'Flynn Construction Co. Unlimited Company intend to apply for planning permission for the development of:

- The construction of 123 no. residential units in 3 no. blocks which range in height from 3 to 6 storeys and comprising a mix of 1 & 2 bed apartments;
- 1 no. creche / childcare facility, internal residential amenity space and residents gym;
- The provision of landscaping and amenity areas including play/amenity areas at podium level;
- The provision of a set-down area, footpaths, cycle lane and table-top junction arrangement at the access to the development on the Old Fort Road; and
- All associated ancillary development to include pedestrian/cyclist facilities, lighting, drainage, boundary treatments, bin storage, plant, ESB Sub-station and bicycle, motorbike and car parking provided at ground and under-croft level.

The purpose of the Construction and Environmental Management Plan (CEMP) is to outline the details in relation to the environmental measures to be implemented on site to prevent any potential impacts on the surrounding environment. Accordingly, this Construction and Environmental Management Plan identifies the main objectives for the managed procedures which are required to ensure the construction related activities on the development site are executed in a safe and controlled manner and to minimise disruption and impacts on the amenities in the area.

The objective of this submission is therefore to identify the potential issues which are relevant to the project, to address these issues and to provide solutions which are satisfactory to all concerned.

1.0 Construction Waste Management Policy and Regulations

Ireland's waste policy is influenced by a range of EU Directives.¹ The Waste Framework Directive sets out the management regime applicable to waste in the territory of the community and is enshrined in Irish law by the Waste Management Act 1996 and the European Communities (Waste Directive) Regulations 2011.² These Directives and a number of other Directives set out a range of policy principles, mandatory targets and regulatory frameworks which member states must transpose into national law.

Waste management policy is set by the Government and is detailed in a set of four policy documents produced since 1998:

- Changing Our Ways
- Delivering Change
- Taking Stock & Moving Forward
- A Resource Opportunity

The Irish Government issued a policy statement in September 1998 called 'Changing Our Ways' which was the first in a series of comprehensive government policy documents on the management of waste in Ireland. It endorsed the integrated waste management approach, based on the internationally adopted hierarchy of options which places greatest emphasis on waste prevention, followed by minimisation, re-use, recycling, energy recovery and finally, the environmentally sustainable disposal of residual waste. The target for

¹ Packaging Directive (94/62/EC); Restriction of Hazardous Substances in Weee Directive (2002/95/EC); Batteries Directive (2006/66/EC); Landfill Directive (1999/31/EC) and Waste Framework Directive (2008/98/EC).

² S.I. no 126 of 2011.

construction and demolition (C&D) waste in this Strategy was to recycle at least 50% of C&D waste within a five-year period (by 2003), with a progressive increase to at least 85% over fifteen years (by 2013).

In response to the 'Changing Our Ways' report, a task force (Task Force B4) representing the waste sector of the already established Forum for the Construction Industry, released a report titled 'Recycling of Construction and Demolition Waste' concerning the development and implementation of a voluntary construction industry programme to meet the governments objectives for the recovery of construction and demolition waste. In light of the recommendations of the Forum for the Construction Industry, in the Task Force B4 final report, the National Construction and Demolition Waste Council (NCDWC) was launched in June 2002.

'Delivering Change – Preventing and Recycling Waste' published in 2002 built on 'Changing Our Ways' moving to concrete proposals to give authorities more power to tackle the problem of waste. The document also announced the establishment of a National Waste Prevention Programme in the Environmental Protection Agency.

In July 2006, the NCDWC published 'Best Practice Guidelines for the Preparation of Waste Management Plans for Construction and Demolition Projects' in conjunction with the then Department of the Environment, Heritage and Local Government. The Guidelines outline the issues that need to be addressed at the pre-planning stage of a development all the way through to its completion. These Guidelines have been followed in the preparation of this document.³ Other Guidelines followed in the preparation of this report include:

- "Construction and Demolition Waste Management – a handbook for Contractors and Site Managers" published by FAS and the Construction Industry Federation (2002);
- "Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects" Department of the Environment, Heritage and Local Government, 2006 (SPGWMP);
- "European Waste Catalogue and Hazardous Waste List" Environmental Protection Agency, 2002 (EWC);
- "Pollution Prevention Guidelines: Working at Construction and Demolition Sites" PPG6, UK Environmental Alliance (PPG6)
<http://publications.environment.agency.aoy.uk/JPDFIPMH00410BSGN.E.E.pdf>;
- Environmental Good Practice on Site, C502, CIRIA 1999;
- "Control of water pollution from construction sites; Guidance for consultants and contractors", C532, CIRIA 2001;
- The SUDS Manual, C697, CIRIA 2007; and
- "Site Handbook for the Construction of SUDS", C698, CIRIA 2007.

Waste Management – 'Taking Stock and Moving Forward' published April 2004) reviewed the progress and the continuing challenges in dealing with waste. It envisages the near-term introduction of thermal waste treatment as an alternative to landfill.

The most up to date waste policy document, published in July 2012, is entitled 'A Resource Opportunity'. This Policy Document stresses the environmental and economic benefits of better waste management, particularly in relation to waste prevention. The document sets out a number of actions. In relation to C&D waste it commits

³ The NCDWC Best Practice Guidelines for the Preparation of Waste Management Plans for Construction and Demolition Projects (July 2006) have been followed in the preparation of this document and include the following elements: Predicted demolition & construction wastes and procedures to prevent, minimise, recycle and reuse wastes; Waste disposal/recycling of C&D wastes at the site; Provision of training for waste manager and site crew; Details of proposed record keeping system; Details of waste audit procedures and plan; Details of consultation with relevant bodies i.e. waste recycling companies, Cork County Council etc.

to undertake a review of specific producer responsibility requirements for C&D projects over a certain threshold.

The proposed development is located within the Local Authority responsibility area of Cork City Council. The Southern Region Waste Management Plan 2015 - 2021 is the new regional waste management plan for the Cork City Council area published in May 2015. This plan replaces the previous Cork City Waste Management Plan due to changing national policy as set out in 'A Resource Opportunity: Waste Management Policy in Ireland' and changes being enacted by the Waste Framework Directive (2008/198/EC) 11. The Southern Region Waste Management Plan 2015- 2021 (SRWMP) addresses all areas of waste management - from waste prevention and minimisation, to its collection, treatment, recovery and final disposal. The SRWMP builds on the EC (Waste Directive) Regulations 2011 which set a 70% target for the REUSE, recycling and recovery of man-made C&D waste in Ireland by December 2020.

2.0 Project and Construction Details

2.1 Existing Site

The subject site, which is 1.22 hectares in area, is located in Ballincollig, approximately 200m to the north of the main street and 8.2km from Cork City Centre. The site is 1.9km from the N22 – Ballincollig Bypass which is situated to the south of the site. The site area comprises 1.13 hectares and has a sloping topography. The site is rectangular in shape and formed part of the overall Ballincollig town centre redevelopment. Permission for the development of these land was originally granted under Ref. 03/122 on September 12th, 2003.

The site is within easy walking distance of a number of commercial and community facilities including local shops, churches and school. The main street of Ballincollig is situated 200m to the south and the Castlewest (Ballincollig) Shopping Centre is less than 100m to the south. The major employment centre of Barrack Square is to the east of the site with Dell EMC to the west of the town. The site is adjacent to a number of residential developments including 'Waltham Abbey' housing estate to the west and 'The Crescent' apartment complex to the south. The site is located approximately 200m from a bus route and stop, offering transport connections to the wider County and City via the 220 and 233 bus routes. A bus serves the area every 15 minutes 7 days a week, 24 hours a day. The area is well serviced with several large amenity sites located within walking distance of the site with the closest being the Ballincollig GAA Club bounding the site to the north east and the Ballincollig Regional Park 1.4km to the west. The site is served by the Old Fort Road which runs to the south of the site and connects to the N22



Fig. 1 Context of Site (site outlined in red).

2.2 Construction Details

The development consists of The construction of 123 no. residential units in 3 no. blocks which range in height from 3 to 6 storeys and comprising a mix of 1 & 2 bed apartments; 1 no. creche / childcare facility, internal residential amenity space and residents gym; the provision of landscaping and amenity areas including play/amenity areas at podium level; the provision of a set-down area, footpaths, cycle lane and table-top junction arrangement at the access to the development on the Old Fort Road; and all associated ancillary development to include pedestrian/cyclist facilities, lighting, drainage, boundary treatments, bin storage, plant, ESB Sub-station and bicycle, motorbike and car parking provided at ground and under-croft level.

The external lighting for the site clearance phase will consist of task lighting. These task lights will be positioned to direct light away from the site boundary and will only be in use, as required, during the hours of construction. The lighting associated with the operational stage will submitted and agreed with the Council prior to installation.

The main objective of this Construction and Environmental Management Plan is to minimise the impact of the construction process on the receiving environment. Included below are the main elements and tasks involved in the construction of the site and the management process of same.

Main tasks to be completed are:

- Erection of site hoarding and site signage;
- Set up Site Offices and Contractor's Compound;
- Relocation of existing underground and overhead services;
- Excavation to formation level and storage of any excavated material for reuse on site in making up levels;
- Excavation for foundations and provision of reinforcement steel fixing and concreting foundations, erection of structural frame and concrete floors completions;

- Building envelope including roofing, cladding and curtain walling, internal partitions, ceilings, Mechanical and Electrical services, flooring and finishes; and
- External works including underground services, external finishes, hard and soft landscaping.

In terms of the Delivery and Phasing of Development the following will be the key stages:

Phase 1- Construction Site Set Up

The subject site will undergo enabling works and site clearance works.

The construction site set up will include well secured and appropriate signage to ensure maximum site security during the demolition phase and will remain in situ until the completion of the project.

This phase will take a maximum of 1-2 weeks to complete and will include the setup of site offices and a contractor's compound at the entrance of the site. This task will take approximately 2-3 staff.

Phase 2 – Main Contract

The Main works of the contract consist of the construction of the building foundations, including piling laying of all underground services and the construction of the building superstructures. These works are proposed to be completed by summer 2022 and are expected to have approximately 30 to 75 staff members depending on the work being carried out at the different stages.

4.0 Construction Management Details

4.1 General

There are a number of potential sources of pollution from construction works, which may impact upon the surrounding environment:

-) Silt run-off from exposed ground, e.g. temporary material stockpiles (aggregate and excavated/overburden soil), tracks and haul routes, and recently reinstated areas (road verges etc.);
-) Plant washing and vehicle wheel wash areas;
-) Fuel storage/refuelling areas;
-) Dust emissions from traffic and excavation/construction areas; and
-) Sewage and waste water from construction compound building amenities.

Good construction practice, appropriate mitigation and monitoring are therefore essential for prevention of potential pollution from any of the sources noted above.

The following points (not exhaustive) indicate general pollution prevention measures in accordance with those highlighted within the guidelines referenced in this document. Pollution prevention measures relating to specific tasks are also detailed in the respective sections of this document.

Fuel pipes on plant, outlets at fuel tanks etc. will be regularly checked and maintained to ensure that no drips or leaks to ground occur. The following precautions will also be installed on fuel delivery pipes:

- Any flexible pipe tap or valve must be fitted with a lock where it leaves the container and be locked when not in use;
- Flexible delivery pipes must be fitted with manually operated pumps or a valve at the delivery end that closes automatically when not in use;
- Warning notices including “No smoking” and “Close valves when not in use” shall also be displayed;
- Spill kits will be available within each plant/vehicle on site and also located close to identified pollution sources or sensitive receptors (fuel storage areas, etc.);

- Irrespective of the buffer distance and location of refuelling, interceptor drip trays (or similar, e.g. plant nappies, – open metal drip trays are not acceptable) will be available in accordance with standard good practice across the construction industry;
- Interceptor drip trays will be positioned under any stationary mobile plant to prevent oil contamination of the ground surface or water. Plant and site vehicles are to be well maintained and any vehicles leaking fluids must be repaired or removed from site immediately. Any servicing operations shall take place over drip trays;
- Areas used to store fuel and oil on the site will be appropriately sited to prevent the downward percolation of contaminants to natural soils and groundwater;
- Fuel for construction vehicles will be stored on an impervious base within a bund able to contain at least 110% of the volume stored. Rainwater will not be allowed to accumulate within the bund and in any way compromise the required 110% volume capacity. No tanks or containers may be perforated or dismantled on site. A competent operator shall empty all contents and residues for safe disposal elsewhere; and
- Suitable wheel wash facilities, complete with C/W silt traps will be put in place to ensure vehicles entering/existing the site do not carry/transport debris.

4.2 Construction Traffic Management

Traffic management measures will be implemented to ensure staff construction traffic is managed properly. Parking for construction staff cars will be within the site and contain holding areas to prevent queuing on the public road.

The following Construction Traffic Management Plan identifies the main objectives for the managed procedures which are required to ensure the construction related activities are executed in a safe and controlled manner. The aim is to identify the potential issues which are relevant to the project, to address these issues and to provide solutions which are satisfactory to all concerned. The issues which we believe to be the key issues are as follows:

-) Proposed Traffic Routes – Planning and Management of same;
-) Construction traffic logistics;
-) Planning and management of expected traffic flow rates;
-) Planning and management of delivery times;
-) Site access and egress;
-) Maintenance of public roads; and
-) Communication with local authorities and neighbours.

There are specific traffic management issues which the applicant can control. These are listed as follows:

-) Extensive and thorough site rules for site traffic. This is issues to all sub-contractors at pre-appointment stage and are contractually bound;
-) Detailed delivery routes and times as a part of the rules which are in accordance with this traffic management plan;
-) Gated access and egress will be established at the entrance to the development site allowing in only authorised traffic which has arrived at the appointed time and by the appointed route; and
-) Approved contractor parking for all construction related personnel – this will be provided internally within the secured development site area.

The rules regarding access routes, clearways, minimum road width, parking near hydrants, etc. will be relayed to all site staff. Any driver who breaches the rules will be noted and reported to their employer and any driver who consistently or knowingly breaks the rules will be refused further access to the site.

To ameliorate / mitigate impacts on the surrounding area and in order to mitigate noise levels emanating from the site, all site development and building works will be carried out only between the hours of 08.00 to 18.00 Mondays to Fridays inclusive, between 08.00 to 14.00 on Saturdays and not at all on Sundays and Public Holidays. Any deviation from these times will be submitted to the Cork City Council for approval. Noise levels will be monitored during construction and will generally not be greater than 75dBA when measured from the boundary of the site.

4.3 Planning and Management of Delivery Times

In relation to deliveries to the site, all large deliveries will have to be notified to site management at least 24 hours in advance. No large deliveries will be allowed to the site during peak traffic times for the area. All deliveries must enter the site at the designated entrance and report to site security who in turn will contact the relevant persons to take charge of unloading, etc.

4.4 Site Access and Egress

The main point of access to the site for construction traffic, plant and deliveries will be via the existing entrance on Old Fort Road. The contractor is to create a secure entrance here for vehicles to enter and leave the site. A separate entrance will be provided for pedestrians accessing the site.

Each contractor will have assigned Banksmen who will oversee the movement of all large construction vehicles both within the site and as they enter and leave the site. Each contractor will also have assigned traffic marshals who will oversee the movement of all vehicles entering and leaving the site.

4.4 Maintenance of Public Road

For the duration of the construction period there will be a power washer located inside the main entrance to the site. This will wash the wheels and undercarriages of all vehicles leaving the site to ensure no debris leaves the site on vehicles. Adequate provision will be made on site for drainage of this area. All truck drivers must also inspect their vehicles before they leave the site for stones caught in their tyres or any other debris.

The contractor will ensure that construction works do not give rise to dirt or litter on the public road and shall be responsible for the immediate removal from the public road, of any dirt or litter caused by the construction works.

There will be no car parking spaces available onsite for the construction employees. It is expected that the majority of construction employees will arrive on site prior to the heavy morning traffic and will leave site after the heavy evening traffic. Carpooling and other sustainable modes of transport will be promoted as the primary mode of transport for the contractors. On street parking will not be acceptable under any circumstances nor will any unauthorised entry be permitted.

3.0 Environmental & Waste Management Strategy

5.1 Disposal of Waste

Based on the Best Practice Guidelines on the Preparation of Waste Management Plans for Construction & Demolition Projects the objective for the project is to manage all waste in accordance with the relevant statutory provisions and to conduct all activities so as to:

-) Minimise the generation of waste materials and the volume of waste sent to landfill; and
-) Maximise the reuse of materials on site and the recycling of all recyclable wastes.

The waste recycling targets for the project are:

-) 100% recycling of reinforcement and metals;
-) Reuse of all suitable earthworks materials on site;
-) Reuse of some unsuitable material in landscape areas on site; and
-) Export the minimum possible to approved licensed facility.

Generally, the waste management goal will be achieved as follows:

-) Giving preference to the purchase of materials with minimum packaging;
-) Storing materials in designated areas and separate from wastes to minimise damage;
-) Returning packaging to the producer where possible;
-) Reusing rock/soil on-site during the construction of the project;
-) Reusing and recycling materials on site during construction where practicable;
-) Recycling other recyclable materials through appropriately permitted / licences contractors and facilities; and
-) Disposing of only non-recyclable wastes to licensed landfills.

5.2 Waste Materials

During construction of the proposed development, there will be construction waste generated, such as off-cuts of timber, oversupply of materials and damaged or broken concrete blocks and tiles, along with packaging materials such as cardboard, plastic and polystyrene.

The main non-hazardous waste streams that will be generated by the construction activities at the site are:

-) Stones/bedrock, topsoil and subsoil
-) Concrete, brick, tiles and ceramics
-) Asphalt, tar and tar products
-) Plasterboard
-) Scrap Metal
-) Cardboard (packaging)
-) Waste wood
-) Paper

The hazardous waste streams may include the following:

-) Asbestos
-) Batteries
-) Wood Preservatives
-) Oils/Fuels from machinery & equipment

5.3 Waste Handling Procedures

Construction works will be carried out according to best practice with standard environmental controls (see CIRCA 2010). Furthermore, all wastes generated during demolition and construction works will be transported off the site by licensed contractors. These subcontractors will be identified nearer the commencement of construction. The Site Manager will ensure that the permits / authorisations held by each specialist subcontractor used have the necessary permits in place for each waste type being managed.

During construction, covered waste containers will be provided and rotated as soon as they will be filled. A number of skips (20m³ typical) will be kept in a secure area. Wastes will be sorted and disposed of as per waste type to the nearest recycling / treatment facilities.

Excavated material (soil and stone — EWC Code 17 05 04) will be re-used on site where possible; any surplus will be taken off site for recovery. Any excavated rock (if encountered) will be processed on site for reuse as fill material under structures and hard standings. Surplus rock will be stored on site for future use or taken off site to approved licenced facilities. Any excavated material stockpiled on site during construction will be stored in such a manner as to ensure no silt or run-off from these stockpiles enters any watercourse. In order to prevent any damaging run-off from the site, the developer will ensure that there will be a suspension of work during heaving rainfall and there will be no stockpiling of soil within any open areas. Excavation work will be completed by heavy track machinery with suitable material moved by dumper trucks to designated storage areas on-site.

As the site has previously been disturbed, any unsuitable material discovered during excavation, will be stored separately and will be carted off site to designated dumping areas, by licenced contractors. This will be done in accordance with the “Waste Management Acts 1996-2008.” All bulk excavation will be undertaken in accordance with current Health and Safety Legislation and Building Regulations. All excavations for service runs will be undertaken in accordance with Building Regulations and Health and Safety standards. Any excavation for service runs that are required outside the site will be undertaken with the consent of Local Authorities (e.g. laying of the water supply and foul water drains, etc.), with all associated road opening licenses granted.

Hazardous Wastes

Other Hazardous waste which may be produced or encountered on site includes:

-) Soils contaminated with waste oils or fuels;
-) Waste oils and fuels;
-) Used aerosol containers.

4.0 Dust Minimisation

In order to ensure that no dust nuisance occurs, a series of measures will be implemented. Site access shall be regularly cleaned and maintained as appropriate. Hard surface areas shall be swept to remove mud and aggregate materials from their surface while any un-surfaced areas shall be restricted to essential site traffic only. Furthermore, any area that has the potential to give rise to fugitive dust must be regularly watered, as appropriate, during dry and/or windy conditions. Scaffolding will be erected around the site during construction along with hoardings at ground level. Mesh netting will be erected around the scaffolding during construction as a mitigation measure to minimise dust emissions from the site.

Vehicles delivering or removing material with dust potential shall be enclosed or covered with tarpaulin at all times to restrict the escape of dust.

All vehicles exiting the site shall make use of a wheel wash facility prior to entering onto public roads, to ensure mud and other wastes are not tracked onto public roads. Public roads outside the site shall be regularly inspected for cleanliness, and cleaned as necessary. The roads will be monitored throughout the works and a road sweeper will be employed when required for the duration should the roads become dirty.

Furthermore, during the movement of the soil both on and off-site, trucks will be stringently covered with tarpaulin at all times. Before entrance on to public roads, trucks will be adequately inspected to ensure no potential for dust emissions.

At all times, the procedures put in place will be strictly monitored and assessed. The dust minimisation plan will be reviewed at regular intervals during the construction phase to ensure the effectiveness of the procedures in place and to maintain the goal of minimisation of dust through the use of best practise and procedures.

Weekly dust monitoring will be carried out using a handheld Microdust Pro- Automatic dust monitoring unit. The measures will continue for the duration of the enabling works and the bulk dig which are the periods in which most dust would be created on site.

5.0 Noise Management

To ameliorate / mitigate impacts on the surrounding area and in order to mitigate noise levels emanating from the site, all site development and building works will be carried out only between the hours of 08.00 to 18.00 Mondays to Fridays inclusive, between 08.00 to 16.00 on Saturdays and not at all on Sundays and Public Holidays. Any deviation from these times will be submitted to the Cork City Council for approval.

Noise arising from the construction and demolition phase will be limited principally to plant operations and traffic movements to and from the site. Noise levels will be monitored during construction and will generally not be greater than 75dBA when measured from the boundary of the site. Worst-case construction noise levels will be within the required threshold limits included in British Standard 5228:2009 and the National Roads Authority Guidelines for the Treatment of Noise and Vibration (2004).

British Standard BS5228 – Noise Control on Construction and open sites Part 1. Code of practice for basic information and procedures for noise control outlines a range of measures that can be used to reduce the impact of construction phase noise on the nearest noise sensitive receptors. These measures will be applied by the contractor where appropriate during the construction phase of the proposed development.

- Ensuring that mechanical plant and equipment used for the purpose of the works are fitted with effective exhaust silencers and are maintained in good working order;
- Careful selection of quiet plant and machinery to undertake the required work where available;
- Machines in intermittent use will be shut down in the intervening periods between work;
- Ancillary plant such as generators, compressors and pumps will be placed behind existing physical barriers, and the direction of noise emissions from plant including exhausts or engines will be placed away from sensitive locations, in order to cause minimum noise disturbance;
- Handling of all materials will take place in a manner which minimises noise emissions;
- A complaints procedure will continue to be operated by the contractor throughout the construction phase and all efforts should be made to address any noise issues at the nearest noise sensitive properties; and
- Where construction activity takes place in the vicinity of residential properties, it will be restricted to the stipulated hours of operation identified above.