Construction & Operational Environmental & Waste Management Plan

#73 H4AB BHA4

#72 H44AA BH444

#70 H4AA

#85 H3AB BHA2 #71 H4AB BHA4

#84 H3AA BHA2

#69 H4AB BHAA #58 H3AA BHA2

> #29 14444

> > ARD

RUSHEEN

RUSHEEN ARD

14

#30 H4AB BHA4

#54 #3443 #14444

H3AB BHA2

#56 H3AA BHA2

#55 H3AB BHA2

April 2024

John Walter Burke

Caltragh LRD,

Contents

Section 1 – Introduction 1
1.1 Planning Context1
1.2 Plan Context1
1.3 Site Location & Description 2
1.4 Proposed Construction Schedule & Sequence4
1.5 Resources Requirements5
1.6 Working Hours6
1.7 Extent of Works
1.8 Site Welfare & Compound6
1.9 Design Philosophy
1.10 Best Practice Construction Methods8
1.11 Objectives for Construction10
Section 2 - Key Environmental Impacts and Control Measures
Section 2 - Key Environmental Impacts and Control Measures
2.1 Noise & Vibration 11
2.1 Noise & Vibration
2.1 Noise & Vibration112.2 Dust122.3 Hazardous Substances13
2.1 Noise & Vibration112.2 Dust122.3 Hazardous Substances132.4 Refueling and Plant13
2.1 Noise & Vibration112.2 Dust122.3 Hazardous Substances132.4 Refueling and Plant132.5 Spill Response14
2.1 Noise & Vibration112.2 Dust122.3 Hazardous Substances132.4 Refueling and Plant132.5 Spill Response142.6 Traffic Management17
2.1 Noise & Vibration112.2 Dust122.3 Hazardous Substances132.4 Refueling and Plant132.5 Spill Response142.6 Traffic Management172.7 Parking Management19
2.1 Noise & Vibration112.2 Dust122.3 Hazardous Substances132.4 Refueling and Plant132.5 Spill Response142.6 Traffic Management172.7 Parking Management192.8 Access for Residents19
2.1 Noise & Vibration112.2 Dust122.3 Hazardous Substances132.4 Refueling and Plant132.5 Spill Response142.6 Traffic Management172.7 Parking Management192.8 Access for Residents192.9 Access to Commercial/Business Properties19

	2.13 Cleanliness of Roads	. 20
	2.14 Flooding Mitigation Measures	. 20
	2.15 Ecological Assessment Measures	. 20
	2.16 Pest Control	. 21
	2.17 Invasive Species	. 21
S	ection 3 – Waste Management	. 22
	3.1 Waste Prevention & Waste Regulations	. 22
	3.2 Implementation	. 23
	3.3 Excavated Material	. 25
	3.4 C&D Waste	. 26
	3.7 Estimated Volume of Construction Waste	. 27
	3.8 Proposal for Minimisation, Reuse and Recycling of Waste	. 27
	3.9 Waste Auditing	. 28
	3.10 True Waste Costs	. 28
	3.10 True Waste Costs 3.11 Control Measures	
S		. 29
s	3.11 Control Measures	. 29 . 31
s	3.11 Control Measures	. 29 . 31 . 31
s	3.11 Control Measures Section 4 Fire Management & Security 4.1 Introduction	. 29 . 31 . 31 . 31
s	 3.11 Control Measures. Section 4 Fire Management & Security. 4.1 Introduction. 4.2 General Requirements . 	. 29 . 31 . 31 . 31 . 31
s	 3.11 Control Measures. Section 4 Fire Management & Security. 4.1 Introduction. 4.2 General Requirements 4.3 Role of the Fire Safety Officer 	. 29 . 31 . 31 . 31 . 32 . 32
s	 3.11 Control Measures. Section 4 Fire Management & Security. 4.1 Introduction. 4.2 General Requirements . 4.3 Role of the Fire Safety Officer . 4.3 Emergency Services . 	. 29 . 31 . 31 . 31 . 32 . 32 . 32
S	 3.11 Control Measures. Section 4 Fire Management & Security. 4.1 Introduction. 4.2 General Requirements 4.3 Role of the Fire Safety Officer 4.3 Emergency Services 4.4 Emergency Procedures 	. 29 . 31 . 31 . 31 . 32 . 32 . 32 . 33
S	 3.11 Control Measures. Section 4 Fire Management & Security. 4.1 Introduction. 4.2 General Requirements 4.3 Role of the Fire Safety Officer 4.3 Emergency Services 4.4 Emergency Procedures 4.5 Portable Fire Extinguishers 	. 29 . 31 . 31 . 31 . 32 . 32 . 32 . 33
S	 3.11 Control Measures	. 29 . 31 . 31 . 31 . 32 . 32 . 32 . 33 . 33 . 34

4.10 Site Security	35
Section 5 - Duties and Responsibilities	36
5.1 Key Personnel and Organisations	36
5.2 Emergency Services	36
5.3 Gardaí Síochána	36
5.4 Local Authority Road Engineers	37
5.5 Local Authority Environmental Department	37
5.6 Regulatory Bodies	37
5.7 Contact Details	37
Section 6 – Operational Phase	38
6.1 Overview	38
6.2 Waste Description	38
6.3 Operational Phase Waste Disposal	39
6.4 Waste Management and Mitigation Measures	39
6.5 Predicted Impacts of the Proposed Development	40
Section 7 – Conclusion	41
7.1 Training	41
7.2 Records	41

Appendix A: Proposed Certified Waste Sites Appendix B: Proposed Certified Waste Carriers

Section 1 – Introduction

1.1 Planning Context

Planning permission is being submitted for a development which will comprise the following:

- CONSTRUCTION OF 118 NO. RESIDENTIAL UNITS TO INCLUDE; 8 NO. 2 BEDROOM SEMI-DETACHED HOUSES, 40 NO. 3 BEDROOM SEMI-DETACHED HOUSES, 8 NO. 4 BEDROOM DETACHED HOUSES, 33 NO. 4 BEDROOM SEMI-DETACHED HOUSES, 1 NO. 5 BEDROOM SEMI-DETACHED HOUSE, 8 NO. 1 BEDROOM APARTMENTS, 20 NO. 2 BEDROOM APARTMENTS;
- DEVELOPMENT OF 1 NO. CRECHE FACILITY WITH ASSOCIATED OUTDOOR PLAY AREAS AND PARKING;
- ANCILLARY STRUCTURES INCLUDING ESB SUBSTATIONS AND ASSOCIATED SWITCH ROOMS, BICYCLE AND BIN STORES;
- PUBLIC AND COMMUNAL OPEN SPACES, PRIVATE OPEN SPACE, SITE LANDSCAPING, PUBLIC LIGHTING, FOOTPATHS, ROADS, PARKING, FOUL AND SURFACE WATER DRAINAGE AND ALL ASSOCIATED SITE DEVELOPMENT WORKS;
- THE APPLICATION INCLUDES THE PROVISION OF 2 NO. ACCESS ROADS AND CONSTRUCTION OF FOOTPATH & CYCLEPATH ALONG THE NEWTOWNHOLMES ROAD;

1.2 Plan Context

This plan sets out procedures for the construction and operation phases for environmental and waste management of the works taking into account appropriate environmental protection and waste management measures. The document also sets out organisational structures and responsible parties associated with the development.

The Project Supervisor Construction Stage (PSCS) is advised that environmental and waste management is considered a significant issue for this project and must ensure that appropriate control measures are in place. Environmental and waste management controls are to be in accordance with all relevant legislation. This plan is to be further developed beyond the purpose of planning compliance in due course by the appointed

PSCS. The PSCS shall coordinate the implementation of the developed plan during the construction of the works.

1.3 Site Location & Description

The proposed development site is located on the Newtownholmes Road at Caltragh, Co. Sligo.

The site is located approximately 1.3km south of Sligo town centre, 8.5km north of Collooney town centre and 56km southwest of Enniskillen town centre. The area surrounding the site consists of agricultural grassland and a single residential dwelling to the north, Newtownholmes Road, residential dwellings and commercial properties to the east, agricultural grassland to the south and the N4 Sligo to Castlebaldwin road to the west.

The proposed development consists of the construction of residential accommodation in the form of 118 no. units and a creche as set out above. There is grassland, hedgerows and treelines to the north and south and trees to the centre of the site.



Figure 1.1 – Proposed Site Location. Site Outlined in Red.

1.4 Proposed Construction Schedule & Sequence

The development is currently programmed to take 30 months to complete the construction works. This will be done as five phases. The start date will depend on the grant of planning permission, pre-commencement conditions and procurement. This programme takes due cognisance of the requirements of the likely planning conditions imposed. Mitigation measures in relation to the construction process are dealt with in this plan accordingly. Prior to any construction work commencing, environmental control measures will be prepared as outlined in this plan. A detailed programme and scope of work will be compiled and implemented in due course.

It is intended that the work will be undertaken in the following stages:

- Site set up and establishment.
- Marking out of site services on the ground.
- Set up environmental control measures.
- Site clearance
- Demolition of existing derelict house
- Marking out of road and house locations.
- Digging foundations and groundworks.
- Importing stone and pouring foundations.
- Blockwork/concrete formwork.
- Roofing.
- Windows and doors.
- First fix electrical, plumbing and carpentry.
- Internal and external plastering.
- Second fix electrical, plumbing and carpentry.
- Finishing external groundworks and landscaping.
- Commissioning and decorating.

The PSCS's proposed sequence of works will take due cognisance of the requirements of any planning conditions and the PSCS's contractual obligations. Environmental control measures will be implemented and maintained during construction works. The PSCS will also develop individual Environmental/Construction Work Method Statements, tailored to the project which will outline the method of work in further detail. These documents will have:

- A clear scope.
- A description of the particular construction activities and location.
- A description of the potential environmental effects and safety hazards that relate to the specific activities.
- Detailed site or activity-specific mitigation measures.
- Details on any permits or connection agreements.
- A description of training requirements.
- A table detailing revision history.

The PSCS will identify all potential environmental risks within the works or access areas, report these to the Site Manager and see that all employees working on-site follow, and strictly adhere to site procedures as minimum requirements.

<u>1.5</u> Resources Requirements

The resources required for the project will be similar to a housing construction project of this size and scale. In addition to the site compound plant, it is envisaged that the following plant will be required onsite:

- 1 No. 3, 8, 2 no. 12 and 22.5-ton excavator and attachments
- 2 No. 9-ton dumper s
- 2 No. 14m teleporters
- 1 No. wheel wash power washer
- 4 No. site van/jeep
- 4 No. cement mixers
- 2 No. 6inch water pumps
- 1 No. 5ton roller
- 2 No. whacker plates
- 20-ton tipper lorries (As required for deliveries & excavation)

1.6 Working Hours

Normal working hours on the site shall be Monday to Friday between 08:00 am and 18:00 pm and 08:00 am to 16:00 pm on Saturdays. No work will be carried out on Sundays or Public Holidays.

1.7 Extent of Works

The PSCS shall confine his work operations to the minimum extent necessary for carrying out the works safely and responsibly.

1.8 Site Welfare & Compound

The site compound will include a site welfare unit, site offices, fuel store, skips and a compound area with stores for materials and parking facilities for staff (Figure 1.2). This will be located to the centre of the site to avoid any potential spillages etc reaching the public road and also to be cognisant of existing residents. It will remain in this location for the majority of the work. The compound will naturally reduce in size as the majority of the work is completed. All parties arriving on site must report to the compound upon arrival on site.

The compound will be powered up by a competent electrician with approved materials and the installation signed off. All electrical equipment will be fit for purpose and inspected regularly. All heaters and cooking appliances i.e. microwave will be properly installed and adequate ventilation provided. Fire blankets will be provided with canteen facilities and drying rooms will be stocked with CO2 and dry powder extinguishers. Heaters will have a protective cover to ensure materials cannot come in contact with the element. The sanitary facilities for the construction workers will discharge to a sealed bunded temporary integrated storage area which will be extracted as required by a licensed contractor for disposal offsite at a licensed facility.



Figure 1.2 – Proposed Site Compound Location and Layout

1.9 Design Philosophy

The detailed design will be completed before works commence on-site and in line with the planning permission drawings submitted. The main features of the design philosophy are to:

- Minimise the extent of new work required and therefore reduce the impact on the environment and residents.
- Minimise, where possible, the number of deep excavations for wastewater infrastructure and foundations.
- No works are to take place outside the planning boundaries.
- Minimise, where possible, the amount of fill required for the construction and formation levels.
- Minimise the noise impact on the surrounding areas during the construction period.
- Minimise the number of deliveries to the site, and traffic volumes on public roads.

1.10 Best Practice Construction Methods

The protection of the surface water bodies is of the utmost importance in considering the most appropriate drainage proposals for the proposed development. The proposed development drainage will be designed specifically to have no negative impact on the water quality of the proposed works areas and associated water bodies, and consequently no impact on associated species and ecosystems.

It will be a contractual obligation that the PSCS implements Best Practice Construction Methods into their design for these proposed works. In that regard, the PSCS will be contractually obliged to update this COEWMP, in consultation with the Employer and include Construction Method Statements for the following:

- Site run-off will not discharge directly to the adjacent water bodies.
- Re-vegetation or reinstatement of the site as soon as possible to stabilise any bare soil and reduce the potential for silting and consequential suspended solids.
- Hydrocarbons and other toxic substances must not enter any waterbody. Should such substances be required to be stored on-site, they will be kept in secure bunded areas away from the adjacent watercourses. The bunded area will accommodate 110% of the total capacity of the containers within it.

- On-site refuelling will take place at a specifically designated refuelling area, to be located in the temporary compound (this will be decided by the appointed PSCS). This refuelling area will be bunded appropriately for the volume of fuel usage for the period of the construction.
- All machinery will be maintained in good working order, free from leakage of fuel or hydraulic fluid.
- Care will be taken to see that mud from the site does not become a hazard on the internal estate and public roads. Any debris will be cleaned up immediately by hand or with the aid of a road sweeper if excessive.
- A fuel interceptor will form part of the works to filter any surface water prior to discharge.

The PSCS will also have a copy onsite and refer to the following best practice guidance documents:

- The Inland Fisheries:
 - Guidelines on the protection of fisheries during Construction work in and adjacent to waters
 - Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites
- CIRIA (Construction Industry Research and Information Association) Guidance Documents:
 - Control of water pollution from construction sites (C532)
 - Control of water pollution from linear construction projects: Technical Guidance (C648)
 - Control of water pollution from linear construction projects: Site Guide (C649)
 - Environmental Good Practice on Site (C692)
- NRA Guidance Documents:
 - Guidelines for the Crossing of Watercourses during the Construction of National RoadSchemes

<u>1.11</u> Objectives for Construction

The main project objectives are as follows:

- Groundwater bodies and biodiversity are not negatively impacted by the construction works.
- Humans are not negatively impacted by dust from the construction works.
- Humans are not negatively impacted by noise or vibration from the construction works.
- Impacts on habitats and wildlife are minimised during the construction works.
- Visual impact is minimised during the construction works.
- The development is constructed in compliance with the Planning Conditions

Section 2 - Key Environmental Impacts and Control Measures

2.1 Noise & Vibration

It is the policy of the Developer to comply with the requirements of the Safety, Health and Welfare at Work (General Application) Regulations 2007 (Part 5 Chapter 1 Control of Noise at Work). Works will only be carried out during the permitted hours. Wherever possible;

- Consider alternative methods of work which will eliminate or reduce exposure.
- Choose appropriate equipment, emitting the least possible noise levels.
- Provide operatives with adequate information, instruction and training on the equipment being used.
- Consider noise reduction by technical means.
- Organise work to reduce noise by limiting the duration and intensity of exposure, and appropriate work schedules with rest periods.
- Plant and machinery selection will ensure that noise controls are fitted and that the machinery is serviced regularly to ensure they are fit for use.

Random monitoring (if required) will be undertaken at the site boundary, by the use of a sound level meter. Records and readings from such monitoring will be issued to the appropriate parties upon request. If high-risk work activities concerning noise are identified then the monitor will be set up at the site boundary and levels recorded over an 8 hour period. Should baseline noise data be required, a baseline nosie survey will be completed by an independent qualified technician.

The design takes account of the rock onsite and has been designed to reduce the amount of rocking breaking required considerably. However, it is not possible to eliminate this task. When conducted rock breaking, monitoring will be accompanied by noise and vibration monitoring where required. Noise reduction measures will be implemented and the extent of rocking breaking kept to a minimum as far as is reasonably practicable.

<u>2.2 Dust</u>

Dust control will be achieved by:

- Offsite prefabrication and factory cutting of materials where possible.
- Dust extraction equipment.
- Dampening down the dust at the source.
- By the use of barriers such as debris netting on scaffolding around the building to block dust from escaping where the building is within 10m of the site boundary where residential properties exist.
- Wheel wash equipment will be set up at the site compound and be available for use by all construction vehicles as required. Once the initial excavation and groundworks are completed it is not envisaged that the works will result in dirt or debris on the roadway.
- Road sweeper if required on internal and external roads.
- Erecting barriers to the site boundaries with netting/sheeting if required.
- No fires are permitted on site.
- Plan site layout machinery and dust causing activities should be located away from sensitive receptors such as residents.
- All vehicles to switch off engines when not in use no-idling vehicles.
- No site runoff of water or mud is permitted in public areas.
- Misting to control dust on haul roads if necessary or when activities are likely to generate large amounts of dust.
- Internal speed limits to reduce airborne dust from haul roads.
- Aggregates for the internal haul roads to be spread directly behind the excavator to protect subsoils and reduce fugitive dust generation and the potential for suspended solids being washed into watercourses and drains.

Monitoring of dust (if required) will be undertaken by the installation of Bergerhoff dust jars at agreed locations which will provide dust level results in mg/m2/day. The jar sample will be removed and analysed for dust concentrations on a regular basis.

2.3 Hazardous Substances

All stores on site of oil, fuel, chemicals etc will be checked daily (in particular in extreme weather conditions) for evidence of leaks or spills. These checks will be visual inspections to look for evidence of contamination. Records of all visual checks will be maintained and be available for inspection on request. A designated storage location will be identified during the site set up stage. This will be away from drains, and other combustible materials and on a hardstand concrete base. Suitable spill kit materials will also be located in the area. The Site Manager is to ensure that the storage of substances does not pose or cause harm to the environment.

2.4 Refueling and Plant

All employees including subcontractors are to follow this instruction and to store, decant and handle substances in the manner stated. The Site Manager will record and report any incidents to the Safety & Environmental Manager. A minimum number of bulk containers and a minimum volume of substances should be stored on-site at any one time. A nominated person shall supervise all deliveries (and decanting) operations. Bulk containers (e.g. tanks and bowsers) shall be double skinned / bunded. A designated refuelling area will be set up on-site. This is to be away from any site drains and out of the path of vehicles. Refuelling equipment will be fitted with a "*Dead Man's Handle*" which cuts off automatically and prevents overfilling.



Figure 2.1 – Refueling Large Plant



Figure 2.2 – Refueling Small Plant

Bunds shall hold 110% of the capacity of the tank and shall be enclosed to prevent rainwater from entering it (e.g. container of 1000 litres, requires a bund of at least 1100 litres). Rainwater would reduce capacity and creates the potential for disposal of contaminated water. The bund shall be impervious and sealed to prevent any seepage/leakage from occurring. The tank/bowser must be in good condition and be maintained. Regular checks are to be undertaken on the condition of the bund and tank. Outlet pipes shall be tied up and locked when not in use. Trigger nozzles shall be used and shall not be wedged open to aid dispensing.

The distance substances are transported should be minimized as far as is reasonably practicable. If decanting use jerry cans etc. which are specifically designed for this and are capped. Ensure funnels are used where appropriate. Tanks and containers must be clearly labelled to indicate their contents.

No heavy maintenance of heavy machinery/plant will take place on-site with preventative maintenance carried out before entering the site.

2.5 Spill Response

Spill kits are to be located close to the substances and be easily accessible. Any spill must be dealt with immediately in line with the spill response procedure (outlined below). Do not clean out tanks/bowser by jet washing or any other means or allow the contents to enter the ground drain or watercourse. Static plant and equipment to be provided with a drip tray which is regularly maintained checked and emptied. The PSCS will purchase, and maintain, the following throughout the construction stage for any accidental environmental hydrocarbon spills:

- Silt fences.
- Drip trays.
- Spill kit equipment including absorbent booms and pads.
- Emergency spill response company point of contact.



Figure 2.3 – Sample Spill Kit

The spill response procedure is as follows:

- 1. Identify the source. Make sure the spill is diverted from any drains or watercourse. Check the material data sheet to identify the hazards of the spilt material.
- 2. Stop the spill. Stop the flow to avoid the spill spreading further. Patch a hole or turn off a valve? Ask work colleagues for help.
- 3. Contain the spill. Use spill socks to create a barrier. Use the granules or absorbent pads to stop it from spreading. Ensure you are wearing non-permeable gloves.
- 4. Clean up. Collect absorbent material and mop up the spilt substance. Work from the outside in. Put into a hazardous waste disposal bag.
- 5. Dispose of the spill kit and any contaminated waste into the designated hazardous waste bin. Restock the spill kit with new material from the stores.
- 6. Report. Immediately report to a supervisor

2.6 Surface Water

All domestic effluent and greywater generated at the residential properties shall be discharged to the Irish Water sewerage network. Any surface water will be discharged through the attenuation system and petrol interceptor as designed by the environmental consultant and engineers.

It is the responsibility of the Site Manager to ensure that before any work commences that all potential environmental impacts have been identified and that all required permits and consents are received in writing. All requirements of the consent shall be met in full throughout the project and daily inspections are undertaken to review the water quality where applicable. There are no watercourses within 50m of the site (Figure 2.4). The nearest watercourse is west of the site and is approximately 344m from the nearest point on the site.



Figure 2.4 - Snapshot Showing no watercourses within 50m

The following control measures will be followed:

- Contact appropriate authorities for licenses and consent prior to work commencing.
- Implement a monitoring regime suitable for the site and its particular location and proximity to drains, ditches etc.
- Liaise with the relevant authority on any specific requirements/controls.

- Prevent or reduce the formation of silt runoff onto roads, into drains, onto the ground from the earthworks, buildings, materials etc.
- All connections to sewers shall be by prior consent only.
- Washout from concrete trucks and mixing is high in ph. Ensure plans are implemented to capture water; dispose of it correctly, this may require neutralizing first. Ensure these planned activities are located away from points of risk. Where possible trucks will return to the batching plant to wash out.
- No detergents or other substances are to be discharged into drains.
- All plant and equipment to be in good order and regularly maintained to prevent leaks of oil etc.

2.7 Traffic Management

The two core principles for planning, developing and implementing traffic management proposals are:

- To maximise the safety of the workforce and the travelling public.
- To keep traffic flowing as freely as possible and reduce the impact of any roadworks to a minimum.

The PSCS shall have regard to the above principles to ensure minimal effect on the commercial and socio-economic life of the surrounding environs affected by the works. The PSCS shall endeavour to meet these principles by adequate planning of the works and compliance with the relevant procedures. The PSCS shall properly plan and manage the works to ensure that:

- Works within the road network do not result in a safety hazard to road users or the workforce involved in the works.
- Any resulting increase in traffic delays and congestion is minimised.

The PSCS should note that traffic is sensitive to other construction events on the road network and circumstances, therefore, they shall keep informed by close liaison with the Garda, Sligo CoCo Roads Department, and the Employer of other ongoing or planned construction events, which may impact on the works. In light of this, the PSCS shall incorporate measures that will minimise the effect of the works on traffic in the planning and programming of the works.

The following mitigation measures have been considered:

- Concrete and stone will be sourced locally and will reduce the volume of trips required on the public road network.
- HGV movements will be limited to 08:00am 18:00pm Monday to Friday and 08:00am – 16:00pm on Saturdays, unless otherwise agreed in writing with the Planning Authority. Deliveries will be scheduled, where possible, to avoid peak times around the morning and evening peak hours. This will avoid HGV traffic arriving during the morning peak hour creating conflict with local residents on their commute/school run.
- Wheel wash equipment will be used on-site to prevent mud and stones from being transferred to the public highway. In addition, any dust-generating activities will be minimised where practical during windy conditions, and drivers will adopt driving practices to minimise dust creation. Finally, loads will be covered into and out of the site where required.
- During the construction phase, clear construction warning signs (In line with the relevant specifications) will be placed on the roads advising the general public and locals as to the presence of the construction site. The site entry point will also be appropriately signed. Access to the construction site will be controlled by on-site personnel and all visitors will be asked to sign in and out of the site by security/site personnel. Security gates will be sufficiently set back from the road so that vehicles entering the site will stop well clear of the public road. Site visitors will all receive a suitable Health and Safety site induction, and Personal Protective Equipment ("PPE") will be worn.
- Pedestrian diversions will be put in place at locations where the works may interfere with existing pedestrian facilities.
 Once construction of the development is completed, all portacabins, machinery and

equipment will be removed.

• Dedicated parking facilities will be provided within the site for construction personnel and visitors to the site. No parking will be allowed on the public road.

2.8 Parking Management

Any construction activity by the PSCS, which may temporarily alter, adjust or remove parking spaces, requires advance notice and agreement with residents. Removal of parking spaces or places will require approval and advance notice. The works will have some minor effects on existing parking facilities in the vicinity. A designated parking area shall be established prior to works commencing. No parking is permitted outside the site entrance on footpaths or kerbs or where visibility of pedestrian or construction traffic may be impeded.

2.9 Access for Residents

The PSCS shall make provision for safe access at all times to private residences in proximity to the construction works. Local residents should be informed prior to works commencing on the construction site and associated increased construction traffic movements in the area.

2.10 Access to Commercial/Business Properties

The PSCS shall at all times make provision for safe access to commercial and business premises for employees, customers, the general public and for deliveries.

2.11 Pedestrian Safety

The PSCS shall ensure that throughout the works its operations do not put pedestrians at any risk.

2.12 Public Road

The following procedures are to be implemented to ensure public roads are maintained cleanly and safely for the duration of the project:

- PSCS will provide its own road sweeper, if required, with gully cleaning attachment for the site clearance and substructure phase and thereafter intermittently when deemed necessary.
- Upon commencing on site, hardcore will be transported to the site to form the hardstand access route around the site and for the positioning of the site accommodation. Note existing site roads will be utilised where possible.

- The installation of the access roadway will commence from the site entrance with delivery stone lorries tipping at the entrance and the site excavator levelling and compacting the stone. This process will continue until the roadway is formed and will ensure that vehicles constantly travel on clean stone minimising the risk of debris etc. being spread onto the public road.
- Delivery drivers will inspect the lorry's wheels and undercarriage in advance of leaving the site and if required the power hose will be used to clean down the vehicle. Wheels will also be inspected for trapped stones between double tyres and will be removed in advance of leaving the site to prevent them from dislodging on the roadway.
- Sides of lorries will also be inspected and any protruding material or materials on the site of the lorries will be placed within the lorry or removed and included in the next lorry.

2.13 Concrete Wash Out

In relation to the treatment/disposal of wash water from concrete trucks, no concrete washout will be permitted on site. Concrete trucks will not be permitted to wash out on site. They will return to the batching plant to wash out thus eliminating any possible contamination. Also, concrete washout requirements will be included in the contract with the concrete delivery company. This is dependent on travel time to the plant.

2.14 Cleanliness of Roads

The PSCS shall provide sufficient resources on-site, including road sweeping equipment, to ensure the cleanliness of the adjacent road network and internal estate roads are maintained at all times.

2.15 Flooding Mitigation Measures

The site is not in a flood risk zone.

2.16 Ecological Assessment Measures

As outlined in the Natura Impact Statement, the control measures identified in the report will be implemented.

2.17 Pest Control

Best practice for control of rodents and other pests will be implemented on site to prevent health risks to on site personnel and adjacent properties. This will consist of the following controls:

- Site to be kept in a tidy manner
- All food waste to be correctly disposed of in closed waste bins
- All food to be kept in sealed cupboards in lunch rooms and offices
- Suitable traps to be laid in the event of pests being encountered on site
- Poison to be laid in a responsible manner and in accordance with manufacturers recommendations to prevent any risk to human health or non-target species
- Engagement of a pest control specialist if required

2.18 Invasive Species

There are currently no invasive species identified on site. Should any invasive species be uncovered during works, these will be removed from site and disposed of in the correct manner to avoid contaminating other areas.

Section 3 – Waste Management

3.1 Waste Prevention & Waste Regulations

The following are regulations, statutory instruments and guidance documents of note in the production of this plan concerning waste:

- Waste Management Acts 1996 to 2008
- S.I. No. 126/2011 European Communities (Waste Directive) Regulations 2011 infers a duty on all waste producers to take measures to apply the waste hierarchy priority order.
- Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects, Dept. of Environment, Heritage & Local Government, July 2006.
- Article 4 of the Waste Framework Directive (Directive 2008/98/EC) outlines the five steps for dealing with waste.

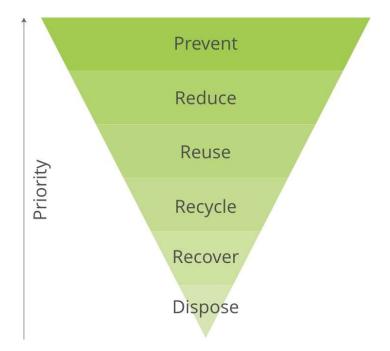


Figure 3.1 – Waste Management Hierarchy

The PSCS shall have regard to the waste management hierarchy principles to ensure minimal effect on the environment which may be affected by the works. The PSCS shall endeavour to meet these principles by adequate planning of the works and compliance with the relevant procedures. The following table outlines practical measures in line with the waste hierarchy.

Target Materials	Steps Taken to Prevent/Minimise/Reuse/Reduce/ Recycle/Recover
Topsoil	Onsite Landscaping Offsite waste recovery locations
Sub-Soil	Recovery to offsite waste recovery locations and other permitted sites
Masonry	Reused on site for fill purposes Offsite waste recovery locations
Concrete	Reused on site for fill purposes Offsite recovery
Steel	Fully recycled off-site
Timber	Fully recycled at a licensed waste recovery facility
Hazardous Waste	Removed to the licensed hazardous waste facility by a licensed hazardous waste contractor
Packaging	Returned to supplies or stored in a dry location on site prior to picking up and recycling off-site

Table 3.1 – Proposed Waste Hierarchy Measures

3.2 Implementation

The PSCS will appoint a person to implement and monitor the requirements of this plan. This includes an inventory of the types and estimates of the waste to be produced onsite. The aim will be to keep volumes of waste produced below the estimates of waste to be produced. The appointed person should ensure that a Site Waste Audit is carried out every six months. A waste management review will be carried out at the end of construction. All workers on-site should be fully briefed on the waste requirements onsite as part of the site induction process. All site visitors will be briefed on appropriate waste storage and disposal units. Littering on site will not be tolerated. All personnel have a duty of care to challenge others noted littering on site. The Site Manager will be designated as the responsible person and have overall responsibility for the implementation of the onsite Waste Management Plan. The responsible person will be assigned the authority to instruct all site personnel to comply with the specific provisions of the Plan. At the operational level, a manager from each subcontractor on the site shall be assigned the direct responsibility to ensure that the operations stated in the plan are performed on an ongoing basis. Responsibilities are defined as follows:

Item	Activity	Responsibility
1.1	All waste generated on-site is categorised according to the European Waste Catalogue (EWC) and Hazardous Waste List (HWL), both of which are issued by the EPA. Each category is designated as either Hazardous or non-hazardous in the EWC publication.	Site Manager
1.2	Clearly identifiable bins, skips, drums, etc., are located at waste generation points on site. For large volume C&DW waste streams, specific locations will be identified.	Site Manager
1.3	All employees are responsible for ensuring the correct segregation of waste streams.	All onsite
1.4	 Encourage employees, through appropriate environmental awareness training sessions, too; Reduce waste by, for example, properly storing and handling construction materials. Reuse materials, for example, shuttering, boarding and fencing can be reused many times before they need to be thrown away. Save and reuse materials such as paints, thinners, either on-site or at another location. 	Site Manager & Subcontractor Appointed Person
1.5	In general, hazardous waste streams such as resin, paint, thinners and treated timber, should be disposed of at the earliest opportunity to avoid possible contamination of other C&DW streams.	Site Manager

1.6	Notification of appropriate approved Waste Disposal Contractors for hazardous waste disposal when the collection is due.	Site Manager
1.7	Check that all Waste Disposal Contractors used to have the appropriate waste disposal permit/licence to collect and transport waste in accordance with the Waste Management Regulations.	Site Manager
1.8	Prevent large volumes of non-hazardous waste streams such as soil, bricks, sand, gravel and excavated rock is not sent to landfills.	Site Manager

Table 3.2 – Proposed Waste Activity Project Manager Task List

3.3 Excavated Material

Topsoil will be stored on-site for periods for reuse for lawns etc. Once the site formations are formed, spoil haulage will begin and continue to during the substructure construction stage.

With excavated material from the site the following procedures will be taken:

- Topsoil/stone will be stockpiled on-site in a designated area, and covered if necessary to prevent wind whipping and silting rainwater run-off, as the topsoil is considered suitable for reuse in the site landscaping. This material will be stored to the south of site compound, so it is at the furthest point from any watercourse or drainage ditch.
- 2. Materials which will be transported off-site will be done so by the appointment of permitted hauliers to licensed landfills. Copies of all permits/licenses will be kept on file on site along with records of the number of loads removed off-site.
- 3. Excavated material will be transported in suitable lorries with the excavated material loaded in a manner to ensure no overflow or potential movement. The sides, wheels and undercarriage of the lorries will then; in advance of leaving the site; be cleaned/washed down.

3.4 C&D Waste

Where feasible, depending on site limitations, C&D waste segregation will take place on the site. Clearly labelled skips for general waste, wood, metals, hazardous waste, etc. will be provided. Where separation of mixed wastes takes place subsequently off-site, the activity is regarded as a sorting, rather than segregation. All C&D wastes removed off-site will be done so by an approved licensed waste contractor and will be transported to a licensed facility. Copies of all appropriate permits will be held onsite. Please refer to Appendix A which outlines proposed licenced contractors and disposal sites considered. These were checked on the EPA and NWCPO websites on 3rd November 2022.

Demolition waste from the demolition of the existing structure will be segregated as necessary. This will include timber from the roof, windows and doors; concrete blocks from the main structure; and roof tiles. There are no internal finishes present in the dwelling due to a previous fire.

3.5 Hazardous Waste

Hazardous wastes will be identified, removed and kept separate from other construction waste materials to avoid further contamination. It is the intention to engage a specialist hazardous waste service contractor, who will possess the requisite authorisations, for the collection and movement of waste off-site and bring the material to a facility which currently holds a waste licence/waste permit.

3.6 Records

The Site Manager retains the following waste records for the duration of a job:

- 1. Up-to-date copies of waste disposal contractor licences/permits.
- 2. Daily waste acceptance and rejection record sheets.
- 3. Consignment and disposal notes for hazardous waste.

Following the completion of a job, all waste records are transferred to the head office and archived in the job file. This will be available to Sligo CoCo upon request as per the planning compliance conditions.

3.7 Estimated Volume of Construction Waste

During construction, an estimated 10,355 tons of waste material will be generated. This includes spoil, concrete, timber, blockwork waste removal and packaging. It is proposed to utilise local waste facilities as far as reasonably practical. Please refer to the tables below for the estimated quantities. The majority of the waste is natural fill material required to be removed to construct the houses.

C&D Waste Material	Quantity (tonnes)
Demolition / Rubble Masonry	200
Demolition Spoil & Concrete	540
Spoil - Foundations & Houses	8,000
Blockwork Waste	315
Roof Tiles	18
Timber	99
Packaging	45
Plaster Board / Plaster	45
Electrical Wiring / Pipework	45
Hazardous Waste	<u>13</u>
Total	9,320

Table 3.3 – Estimated Waste Quantities

3.8 Proposal for Minimisation, Reuse and Recycling of Waste

Waste will arise during the project mainly from the excavation of foundations for the construction of houses (unavoidable construction waste). Materials will be ordered so that the quantity delivered, the timing of the delivery and the storage of material on site is not conducive to the creation of unnecessary waste. Excavation clay will be carefully stored in segregated piles on the site for subsequent re-use/removal from the site for direct beneficial use elsewhere. Where possible construction waste will be segregated at source and supplied take back schemes utilised e.g. Pallets etc.

3.9 Waste Auditing

The Site Manager shall arrange for full details of all arising, movements and treatment of construction and demolition waste discards to be recorded during the construction stage of the project. Each consignment of construction waste taken from the site will be subject to documentation, which will conform with Table 3.4 and ensure full traceability of the material to its final destination.

Particulars
eg. Site at Caltragh, Co. Sligo
eg. Soil, demolition concrete/waste, C&D dry mixed
waste, wood.
eg. 17 tonnes
Eg. 09/10/2023
e.g. Sligo Plant Hire & Haulage Ltd, Mullane Plant
Hire Ltd, Atlantic Metals Ltd,
eg. Transfer station, appropriate licensed landfill site
eg. Landfill, recycling

Table 3.4 – Waste Consignment Details

Details of the inputs of materials to the construction site and the outputs of wastage arising from the project will be investigated and recorded in a waste audit, which will identify the amount, nature and composition of the waste generated on the site. The waste audit will examine how the waste is produced and will provide a commentary highlighting how management policies and practices may inherently contribute to the production of construction and demolition waste. The measured waste quantities will be used to quantify the costs of management and disposal in a waste audit report, which will also record lessons learned from these experiences which can be applied to future projects.

3.10 True Waste Costs

The total cost of construction waste management will be measured and will take into account of the purchase cost of materials (including imported soil), handling costs, storage costs, transportation costs, revenue from sales, disposal costs etc. Costs will be calculated for the management of a range of construction waste materials, using the format shown in Table 3.5. Final details of the quantities and types of Construction Waste arising from the project will be forwarded to the Environmental Protection Agency, Local Authority etc. as required or requested.

Material	Estimated Quantities & Costs (Tonnes & Euro)
Quantity of Waste (tonnes)	
Purchase cost ie., import costs (€)	
Materials handling costs (€)	
Material storage costs (€)	
Material transportation costs (€)	
Revenue from material sales (€)	
Material disposal costs (€)	
Material treatment costs (€)	
Total Waste Soil Management Costs (€)	
Unit Waste Soil Management Costs (€)	

Table 3.5 - Standard Record Form for costs of Construction Waste Management

3.11 Control Measures

The following waste control measures will be employed on the site in line with best practice waste management techniques:

- Avoid or minimise the volume of waste generated.
- Not store waste within 50m of a watercourse.
- Carry out waste storage and disposal in a way which prevents pollution in compliance with legislation.
- Store hazardous waste in clearly labelled suitable containers. Only trained operatives should handle hazardous substances.
- Provide bunded storage where required. All Oil Storage facilities of over 200litres need secondary containment facilities of 110% storage capacity (eg. bund, enclosure, drip tray). These should be regularly inspected.
- Clearly locate and sign waste storage.
- Enable regular waste collections to prevent onsite buildup. Storage facilities are to be monitored daily.

- Prepare for all waste to be transported off-site to a licensed disposal site. Duty of Care Waste Control dockets must be produced and filed on-site with each load. These must detail:
 - 1. An adequate description of the waste.
 - 2. Where the waste came from.

3. The appropriate code from the List of Wastes Regulations for the waste (commonly referred to as the EWC code).

4. Information on the quantity and nature of the waste and how it is contained.

5. Names and addresses of the transferor (the person currently in control of the waste) and the transferee (usually either a registered waste carrier or a waste management licence holder (waste manager).

6. The Standard Industry Classification (SIC) code (2007 or 2003 for hazardous waste only) of the business from where the waste was received.

7. Where applicable, indicate that the Waste Hierarchy has been complied with.

8. The place, date and time of transfer of the waste.

9. If the waste is being taken to a landfill the transfer note must also contain details of any treatments or processes that have already been applied

Section 4 Fire Management & Security

4.1 Introduction

The purpose of this section is to outline measures that prevent fires on construction sites as far as reasonably practicable and to reduce the severity of those that do occur. Most fires can be prevented by reducing the number of hazards present, both in terms of potential sources of ignition as well as the fire load. The measures need not be onerous or result in major changes to the pattern of work or the processes and procedures that are undertaken. In most cases, there will be no impact on the timescale of the construction process.

All parties concerned in a project, of whatever size, should work together to ensure that adequate but practical measures are introduced during the construction planning process to achieve the highest standard of general fire precautions ensuring the maximum level of protection to the contractors and the structure during the construction operations. As well as minimising the occurrence of accidental fires, compliance with the measures set out in this plan will also assist in reducing the incidence of malicious fire arising. The measures in this plan apply to the construction process only, not the completed structure.

4.2 General Requirements

Planning for fire safety must include making available adequate resources, in terms of time, materials and money for the provision and maintenance of suitable and sufficient general fire precautions for the duration of the project.

Suitable procedures and standards need to be set out and adopted by all parties concerned in the project regarding the prevention of fires. The Developer shall require subcontractors to observe their duties relevant to this plan and to legislation to ensure that fire risk and potential for damage have been properly assessed and are kept to a minimum during construction.

4.3 Role of the Fire Safety Officer

The person responsible for the fire safety management system on this site is the Site Manager with the assistance of the Company Safety Officer, who will enable the following:

- That all procedures, precautionary measures and safety standards as laid out in this plan are clearly understood and complied with by all site personnel.
- That a system for the issuing of hot work permits is established and monitored.
- That escape routes are maintained and signage provided.
- Provision and maintenance of adequate quantities of firefighting equipment.
- Carry out visual inspections of firefighting equipment.
- Carry out inspections of the location of electrical cables, housekeeping on-site and storage of combustible waste materials.
- Conduct periodic fire drills.
- Take action to promote a fire safe working environment at all times.

4.3 Emergency Services

Fire brigade access routes to the site and building must be maintained clear and unobstructed at all times. These routes will be agreed upon by liaison with the appropriate authorities. If there is a requirement for the fire service to call to site the following information is required

- The location and quantity of hydrants on or near the site should be known by site management.
- Location of hazardous items i.e. gas cylinders, gas mains, electrical risers etc.

4.4 Emergency Procedures

The Assembly point is located at the site compound.

Emergency Procedures Drawing Layout will be developed and posted in various locations around the site and within the new building as the building works to develop, confirming emergency contact numbers, emergency access routes (which must be kept clear at all times) assembly point location, the position of firefighting equipment, designated storage locations, etc.

In the case of a fire which cannot be reasonably controlled using extinguishers, call the emergency services and proceed to the assembly point notifying site management and any operatives on the route from the fire and directing them to the assembly point.

The site management will use the emergency air horn to notify the site by giving one (1) loud blast of the horn which will last approximately 5 seconds. On hearing the horn all operatives must evacuate the building site immediately even if the source of the fire does not appear visible and tell others on their way out. Do not return to the building until the all-clear is given by fire officials or management.

All subcontractor foremen must be present and check off that all their men are present at the Assembly Point; this will then establish if there is anyone within the buildings still. The sign-in / out register will be referenced to determine attendance. If there is someone unaccounted for, the emergency services will be given this information and only the emergency services will re-enter any building to locate them.

Note: Anyone who tampers or misuses any Fire Fighting Equipment will be instantly dismissed from the site.

4.5 Portable Fire Extinguishers

There should be adequate provision of appropriate portable fire extinguishers, approved and certified by an independent company. Extinguishers must be located in conspicuous positions near exits on each floor. In the open, they should be protected and prominently signposted. All portable firefighting equipment must be serviced annually by a qualified person in accordance with legislation and the maintenance service date recorded, including marking on the appliances.

4.6 Site Storage and use of Gas Cylinders

Cylinders must be stored securely in the site compound within a designated area in an upright position, shaded from the sun and away from materials and debris. Signage should be erected noting "HIGHLY FLAMMABLE LIQUIDS", "NO SMOKING". When in use, should only be operated by a trained and competent person with the appropriate PPE, flashback arrestor fitted, secured in a trolley, with a suitable fire extinguisher and in

possession of and working in accordance to the specific task Hot Works Permit. No gas cylinder will be allowed to be on-site whether in use or not if it is not properly secured within a gas cylinder trolley.

4.7 Hot Work Permits

Where hot work cannot be avoided, the hot work should be undertaken, where possible, in a dedicated area away from the main area of construction work or storage of materials.

A Permit to work system must be adopted where hot work is being undertaken unless there is no risk of damage to any surrounding property.

Site management will issue the Hot Work Permit to the operator for each specific task and last for a maximum of 1 day. The permit is completed with the original issued to the operator and a carbon copy held with the Hot Work Book until it is signed off after a fire inspection is completed 1 hour after the completion of the work.

4.8 Electrical Supplies and Equipment

Electrical supply installations, both temporary and permanent must be installed in accordance with legislation by a competent electrician. Electric cabling, especially temporary installations, should be protected against damage from site activities in the vicinity. Portable electric equipment and leads used on site should be in good condition and visually inspected regularly. Where portable or temporary lights are required these should be located well away from combustible materials, above head height and installed by a competent electrician,

4.9 Site Security against Arson

The most effective method of deterring trespassers, as well as helping prevent malicious fire, is to ensure, as far as reasonably possible, that the site is secured against 34unauthorized entry. This will be achieved by erecting a combination of hoarding and fencing 2.4m in height around the perimeter (where existing walls and fencing are not present) of the site and once the building structure is erected securing window and door openings.

4.10 Site Security

Security Measures to be implemented on-site to prevent unauthorised personnel from entering the site:

- Upon commencement, the site will be secured initially by the erection of fencing panels around the perimeter of the site where there are no existing walls or fencing.
- These boundaries will form a physical barrier which is 2.4m in height.
- Double Vehicular gateway and segregated pedestrian gates will be positioned along the site entrance.
- Once the site boundary is fully formed CCTV System will be erected on the site, this will consist of cameras, speakers and lights.
- The installation of cameras will ensure that they do not extend beyond the site boundary.
- The security system will work on 24/7 basis recording all activity on the site. During out of hour times the system and site will be monitored by an external security company.
- All breaches of Security will be notified to management and a record of the report with CCTV footage will be recorded.
- Signage will be erected around the site boundary in particular at the site entrance and solid hoarding boundaries to advise the public of the dangers within a construction site and to "KEEP OUT"

Section 5 - Duties and Responsibilities

5.1 Key Personnel and Organisations

The following parties will have an input into the Construction, Environmental & Waste Management Plan and will be kept informed of developments in relation to the project:

- PSCS
- PSDP
- Sligo CoCo Environmental Department
- Sligo CoCo Planning Department
- Client
- Engineer
- Architect
- Irish Water

The PSCS shall coordinate the implementation of the plan during the works. Where problems associated with the construction or environmental controls are observed by or notified to the PSCS, the PSCS shall consult with the PSDP and Sligo County Council to revise or modify the plan, as necessary.

5.2 Emergency Services

In relation to accidents occurring on or caused by the works, the PSCS shall provide all necessary assistance to deal with the emergency to the Gardaí, Ambulance and Fire Brigade services. The PSCS shall consult and liaise with the emergency services providers regarding the traffic proposals for work in public areas/on public roads. All communications with the emergency services providers shall be recorded and documented.

5.3 Gardaí Síochána

Gardaí Síochána shall have final authority concerning day-to-day traffic control. The PSCS shall comply with all directions, instructions and requirements of the Garda Síochána concerning traffic management. Should emergencies arise then traffic management may be temporarily suspended if instructed by Gardaí Síochána.

5.4 Local Authority Road Engineers

Sligo CoCo Road Engineers are primarily engaged in the design, maintenance and management of the road network and its services in the region. In respect of all works on, under, and above the road network, they are empowered as officers of the Road Authority to issue directions to undertakers of all works in relation to timing, the manner in which works are carried out, reinstatement and satisfactory completion. The PSCS and Client will ensure to work with the Roads Department at all times where any roadworks are required.

5.5 Local Authority Environmental Department

Sligo Coco Environmental Department is primarily engaged in the protection of the environment and its services in the region. In respect of all works which impact the environment, they are empowered to issue directions to undertakers of all works in relation to timing, the manner in which works are carried out, control measures and satisfactory completion. The PSCS and Client will ensure to work with the Environmental Department at all times.

5.6 Regulatory Bodies

In relation to environmental accidents occurring caused by the works, the PSCS shall provide all necessary assistance to deal with the emergency to the Gardaí, Ambulance, Fire Brigade or EPA services. The PSCS shall consult and liaise with the emergency services providers regarding the proposals to deal with the situation. All communications with the emergency services providers shall be recorded and documented.

5.7 Contact Details

Emergency Services: Sligo Garda Station: Sligo University Hospital ESB: EIR: Irish Water: Sligo County Council: Poison Line: 112 (071) 915 7000 (071) 917 1111 1850 372 999/ 01 852 9534 1850 232 324 1850 278 278 (071) 911 1111 01 837 9964

Section 6 – Operational Phase

6.1 Overview

Waste generated during the development's operational phase shall consist primarily of municipal waste. Communal facilities for the separation of recyclable waste streams shall be maintained by the Management Company.

6.2 Waste Description

The proposed residential development will generate quantities of waste during its operational phase. The principal types of waste generated by the development will include waste from periodic maintenance and cleaning, used packaging/containers and general domestic waste generated by occupants of the development. These waste types will be mainly non-hazardous and may be generally classed as municipal waste. Municipal waste comprises household waste as well as commercial and other waste that, because of its nature or composition, is similar to household waste. It excludes municipal sludges and effluents. In the context of this report, municipal waste consists of three main elements: household, commercial (including non-process industrial waste), and street-cleansing waste (street sweepings, street bins and municipal parks and cemeteries maintenance waste, electoral campaign material). Total municipal waste generation has continued to decrease from a peak in 2007, with municipal waste generated 21% lower in 2012 compared with 2007. Municipal waste generated per capita has decreased from 0.78 tonnes per person in 2007 to 0.59 tonnes per person in 2012. These decreases are linked to declining personal consumption as the economy contracted over the period 2007 to 2012 and occurred despite an increase in population over the same period. In addition, they also indicate a trend towards improved waste prevention in the country. Significantly, 2012 was the first year that the percentage of municipal waste recovered (59%) exceeded the percentage disposed of (41%). Typical municipal waste streams are expected to be produced during the operation of the proposed development. These include:

- cardboard and paper
- plastics (including bottles and other containers);
- food waste
- glass (including green, brown, and clear)

• metals (including aluminium cans and tin cans).

Periodic maintenance and repair activities will generate small quantities of wastes such as green waste, inert building materials (e.g. textiles) and certain chemicals (cleaning products, paints, pesticides, etc.).

6.3 Operational Phase Waste Disposal

An Operational Waste Control Strategy will be developed by the development Management Company to clearly outline the approach to waste disposal, and dedicated waste collection areas shall be established within common areas of the development. The waste will be segregated at the waste collection areas into the following categories:

- cardboard/paper;
- mixed non-recyclable waste
- plastic
- glass
- metals
- organic (food) waste
- electrical waste.

Bins/containers will be clearly labelled and colour-coded, to avoid cross contamination of the different waste streams. Signage will be posted above or on the bins to show exactly which wastes can be put in each. The temporary management company shall make arrangements for the disposal of all waste collected within the development.

6.4 Waste Management and Mitigation Measures

- In order to minimise the disposal of waste material to landfill, the principles of "reduce, reuse, recycle" will be promoted throughout the development. In addition, the following mitigation measures will be employed: Suitable waste materials will be stored in bins or other receptacles in designated, easily accessible locations.
- Waste leaving the site will be transported by suitable permitted contractors and taken to suitably permitted/licensed facilities.

- Where necessary, waste leaving the site will be recorded and copies of relevant documentation maintained.
- Where necessary, waste from the development will be segregated and stored in designated centralised waste storage areas on site.

These mitigation measures will ensure the operational waste generated by the development is dealt with in compliance with the provisions of the Waste Management Acts 1996 to 2013, the Litter Act of 1997, and the Eastern-Midlands Region (EMR) Waste Management Plan 2015-2021, and that optimum levels of waste reduction, re-use and recycling are achieved.

6.5 Predicted Impacts of the Proposed Development

During the operational phase, a structured approach to waste management will promote resource efficiency and waste minimisation. As with the construction phase, waste materials will be generated during the operational phase of the proposed development. Again, careful management of these, including segregation at source, will help ensure that applicable local and national waste targets are met. It is expected that some waste (e.g. mixed non-recyclables) will still be required to be disposed of at landfill. Assuming appropriate on-site storage is provided, environmental impacts (e.g. litter and to a lesser extent contamination of soil or water, etc.) arising from waste storage are expected to be minimal. The use of suitably licensed waste contractors will ensure compliance with the relevant legal requirements and appropriate off-site management of waste.

In summary, it is envisaged that the environmental impact of the development's operational phase will be long-term, neutral and imperceptible with respect to waste management.

Section 7 – Conclusion

7.1 Training

Copies of this plan will be made available to all relevant personnel on-site. All site personnel and subcontractors will be instructed about the objectives of the plan and informed of the responsibilities which fall upon them as a consequence of its provisions. Where source segregation and material reuse techniques apply, each member of staff will be given instructions on how to comply with the plan. Posters will be designed to reinforce the key messages within the plan and will be displayed prominently for the benefit of the site staff.

All site personnel will receive environmental awareness information as part of their initial site briefing. The detail of the information will be tailored to the scope of their work on-site. This will see that personnel are familiar with the environmental aspects and impacts associated with their activities, the procedures in place to control these impacts and the consequences of departure from these procedures.

The COEWMP will be posted on the main site notice board during the project. The environmental performance at the site will be on the agenda of the monthly project management meetings for the project. Elements of the COEWMP will be discussed at these meetings including objectives and targets, the effectiveness of environmental procedures etc. Two-way communication will be encouraged by inviting all personnel to offer their comments on environmental performance at the site.

7.2 Records

The PSCS will insert/file all communication records and reports associated with the implementation of this COEWMP under this Section 5. As a guide, the following subsections of filed information are required (at a minimum):

- 6-A) Meeting minutes and attendance record
- 6-B) Weekly Environmental Reports
- 6-C) Monthly Environmental Reports
- 6-D) Environmental Audit Checklists

- 6-E) Audit Reports
- 6-F) Pollution Prevention, including a Pollution Prevention Measures Register
- 6-G) Licensing and Consents: copies of all permissions, consents, licenses and permits
- and related correspondence.
- 6-H) Waste Management documentation
- 6-I) Risk Assessments and Method Statements
- 6-J) Toolbox Talk Records
- 6-K) Training Records
- 6-L) Delivery Records

All of these documents and records will be made available for inspection in the site office. The documentation will be up to date and will be reviewed on a regular basis with revisions controlled in accordance with the site quality plan.

Appendix A – Proposed Certified Waste Sites.

Please note this list is non-exhaustive, additional sites may be required as works progress and waste materials arise.



Appendix B – Proposed Certified Waste Carriers

Please note this list is non-exhaustive, additional waste carriers may be required as works progress and waste materials arise.

NWCPO Ref	WCP Number	Name	Trading As	Address
NWCPO-15- 11679-01	NWCPO-15- 11679-01	James Clarke		Lugdoon Templeboy Co. Sligo
NWCPO-11- 03376-03	NWCPO-11- 03376-03	Dask Construction Ltd	Taylor Construction & Civil Works	Doonally Co. Sligo
<u>NWCPO-11-</u> 91019-01	NWCPO-11- 91019-01	Sligo County Council		County Hall Riverside Sligo F91 Y763
<u>NWCPO-18-</u> 12133-01	NWCPO-18- 12133-01	McCarrick Plant Hire Ltd		Kilmacowen Co. Sligo
<u>NWCPO-18-</u> 12147-01	NWCPO-18- 12147-01	Sligo Pallets Ltd		Aughamore Far Carraroe Co. Sligo
<u>NWCPO-13-</u> 11209-02	NWCPO-13- 11209-02	Dominic Quinn	Quinn Recovery	Gadden Ballygawley Co Sligo
<u>NWCPO-13-</u> 11230-02	NWCPO-13- 11230-02	Mark Lavery		555 Sligo Road Letterbreen, Enniskillen Co. Fermanagh BT74 9FW
<u>NWCPO-12-</u> 11041-03	NWCPO-12- 11041-03	Frank Gallagher Construction Ltd		O'Connell Street Ballymote Co Sligo
NWCPO-19- 12239-01	NWCPO-19- 12239-01	Westel Utilities Ltd.		Curry Ballymote Co Sligo
NWCPO-19- 12247-01	NWCPO-19- 12247-01	Sligo Plant Hire & Haulage Ltd		Bannabrack Beltra Co. Sligo
<u>NWCPO-14-</u> 11363-02	NWCPO-14- 11363-02	Carty Contractors Ltd		Dublin Road Collooney Co Sligo
<u>NWCPO-08-</u> 01153-03	NWCPO-08- 01153-03	Waterways Ireland		2 Sligo Road Enniskillen Co. Fermanagh BT74 7JY, Northern Ireland
NWCPO-19- 12319-01	NWCPO-19- 12319-01	Asgard Plant & Haulage Limited		Main Street, Riverstown, Sligo,
NWCPO-19- 12343-01	NWCPO-19- 12343-01	North West Cars & Parts Limited		Cashelgarron Carney Co. Sligo
NWCPO-09- 03632-03	NWCPO-09- 03632-03	Willie McGinley		No 3 Ballyfree Halting Site Oakfield Road Carraroe Co. Sligo
NWCPO-20-	NWCPO-20-	John Donlon Plant Hire		Old Cartron Hill Co Sligo