

ENVIRONMENTAL IMPACT ASSESSMENT REPORT FOR THE DEMOLITION OF AGRICULTURAL STRUCTURES AND THE DEVELOPMENT OF A MATERIALS RECOVERY FACILITY AT DERRYARKIN, RHODE, CO. OFFALY

VOLUME 2 – MAIN BODY OF THE EIAR CHAPTER 4 – EXISTING AND PROPOSED ENVIRONMENT

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Date: September 2022

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4. EXISTING AND PROPOSED DEVELOPMENT

4.1 Introduction

The proposed development is defined broadly in Chapter 1 Introduction. This Chapter outlines a detailed description of the site, existing development on-site and the proposed development.

Sections 4.2 of this chapter describes the existing site and agricultural development on-site.

Section 4.3 describes the proposed development.

The following Appendices documents have been prepared in support of this chapter:

- Appendix 4.1 Asbestos Survey
- Appendix 4.2 Site Suitability Assessment / On-site Wastewater Treatment System Detail
- Appendix 4.3 Construction Environmental Management Plan

These are included in Volume 3 of this EIAR.



4.1.1 Statement of Competency

Richard Deeney and James O' Neill of Fehily and Timoney and Company were responsible for completing this chapter.

Richard is a Senior Environmental Scientist working as part of the Waste and Environment Team in Fehily Timoney and Company. Richard is a Chartered Environmentalist with the Society for the Environment. Richard has ten years' experience working in the area of environmental assessment/management.

Richard is experienced in project managing and coordinating Planning Applications, Environmental Impact Assessment Reports and Environmental Assessment. He also has a vast amount of experience developing Environmental Management Plans and Systems, carrying out Environmental Auditing and assisting clients with Environmental/Permit/License Compliance.

Richard has a substantial amount of experience coordinating and completing Environmental Impact Assessment (EIA) Reports and EIA Screening Reports for a wide variety of development projects including landfill facilities, materials recovery facilities, soil recovery facilities, healthcare waste management facilities, quarries, power generation facilities, metal processing facilities and tourism development. Richard has a wide and thorough understanding of the various environmental factors that need to be considered during the EIA process and has an in-depth understanding of the legislation and up-to-date case law governing EIA practice in Ireland and the EU. Richard has an in-depth understanding of every stage of the EIA process from the Screening Stage to the Scoping Stage, up to the EIAR completion stage, and have a clear and in-depth understanding of Proposed Development description requirements within the EIA process.

James O' Neill is a Principal Engineer working as part of the Waste and Environment Team in Fehily Timoney and Company. with Fehily Timoney and Company working as par. James is a Chartered Engineering who has 12 years' experience working in the area of Environmental and Waste Management Engineering.



James' primary experience relates to the waste management sector, in particular landfill remediation and aftercare works, specified engineering works, investigation and remediation of contaminated lands, leachate and landfill gas management, civic amenity site design, operation and construction and environmental & operational management of waste processing facilities.

James is vastly experienced in the design of waste management facilities and was responsible for the preparation of the preliminary design for this proposed development. James was responsible for the preparation of the engineering elements of this chapter.

4.2 Description of the Application Site and Existing Development On-site

This section describes the site and existing development on-site.

4.2.1 Site Access

Access to the site is via a single carriage, tarmac private access road from the R400 regional road (which is located approximately 2.2 km east of the site). There are two gated accesses to the site from the site access road. Plates 4-1 and 4-2 show depict how the site is accessed.



Plate 4-1: View of Access Road (looking west) to Existing Site (middle right)



Plate 4-2: View of Main Agricultural Shed and Field Gates from Access Road

4.2.2 Existing Site Structures

The Existing Site Layout Plan (Drawing Ref: P2344-0100-0002) provides detail on the existing structures on-site. The following structures are on the site:

- 1 no. portal frame agricultural shed with concrete slatted floor, and underground slurry storage tank (c. 990 m² in area)
- 1 no. 4 bay shed unit (c. 148 m² in area)
- Covered access passage between portal frame agricultural shed and 4 bay shed unit
- 1 no. steel frame hay shed (c. 235 m² in area)
- Open concrete hardstand yard area (north of sheds) (c. 1,932 m² in area)
- 1 no. existing pump house
- 1 no. existing overground ground fuel oil storage tank
- 1 no. feed silo
- 1 no. above ground, raised water storage tank,
- 1 no. stone soakaway (c. 33 m² in area)
- 2 no. covered pits (one along the western boundary and one toward the north west of the site within the concreted yard)
- Concrete hard surfaces between all shed units



- Earthen bund along north-western, northern and north-eastern boundaries of the site (c. 118m in length)
- Overhead power lines traversing along the eastern boundary external to the site, in the south eastern corner of the site and along the western boundary of the site.
- Post and wire fencing along western, northern and eastern boundary.

4.2.2.1 Agricultural Buildings/Sheds

There are three disused agricultural buildings onsite. These comprise one portal frame livestock housing unit (measuring c. 18 m wide x 55 m long) on a concrete base with concrete slatted floor and underground slurry storage tank. The walls of the building comprise coated metal cladding on a concrete stub wall concrete block base and steel portal frame with metal cladding. The building comprises a cladded roof (eave height: 82.70 mOD, ridge height: 85.68 mOD). Plates 4-3, 4-4 and 4-5 depicts the main agricultural building on-site, its interior and the slatted floor / slurry tank beneath the building.



Plate 4-3: Main Agricultural Building from Private Access Road



Plate 4-4: Interior of Main Agricultural Building



Plate 4-5: Concrete Slatted Floor of Main Agricultural Shed Unit

Another agricultural shed unit (measuring c. 5.1m wide x 29 m long) comprising 4 no. separated housing bays for livestock is located east of the main building described above. This structure includes a steel frame and steel cladding roof (eave height: 84.04 mOD) which extends to the main shed (see Plate 4-6 and Plate 4-7).

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Plate 4-6: Adjacent four bay agricultural shed unit

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Plate 4-7: Adjacent four bay agricultural shed unit with steel cladding roof

A hay storage shed (measuring c. 9.37 m wide x 25.1 m long) is located to the front (south-east) of the site (See Plate 4-8). This shed is constructed of a block wall base with steel frame and cladded walls and roof (eave height: 84.67 mOD, ridge height: 85.84).



Plate 4-8: Hay Storage Shed

4.2.2.2 Concrete Yard and Berm/Mound

The northern portion of the site comprises an open concrete hardstand yard (c. 1,932 m² in area) and earthen mound/berm which runs along the northern boundary and a portion of western and eastern boundary of the site (c. 118m in length) (See Plates 4-9 and 4-10 below).



Plate 4-9: View of Concrete Yard and Earthen Mound/Berm (piggery in background)

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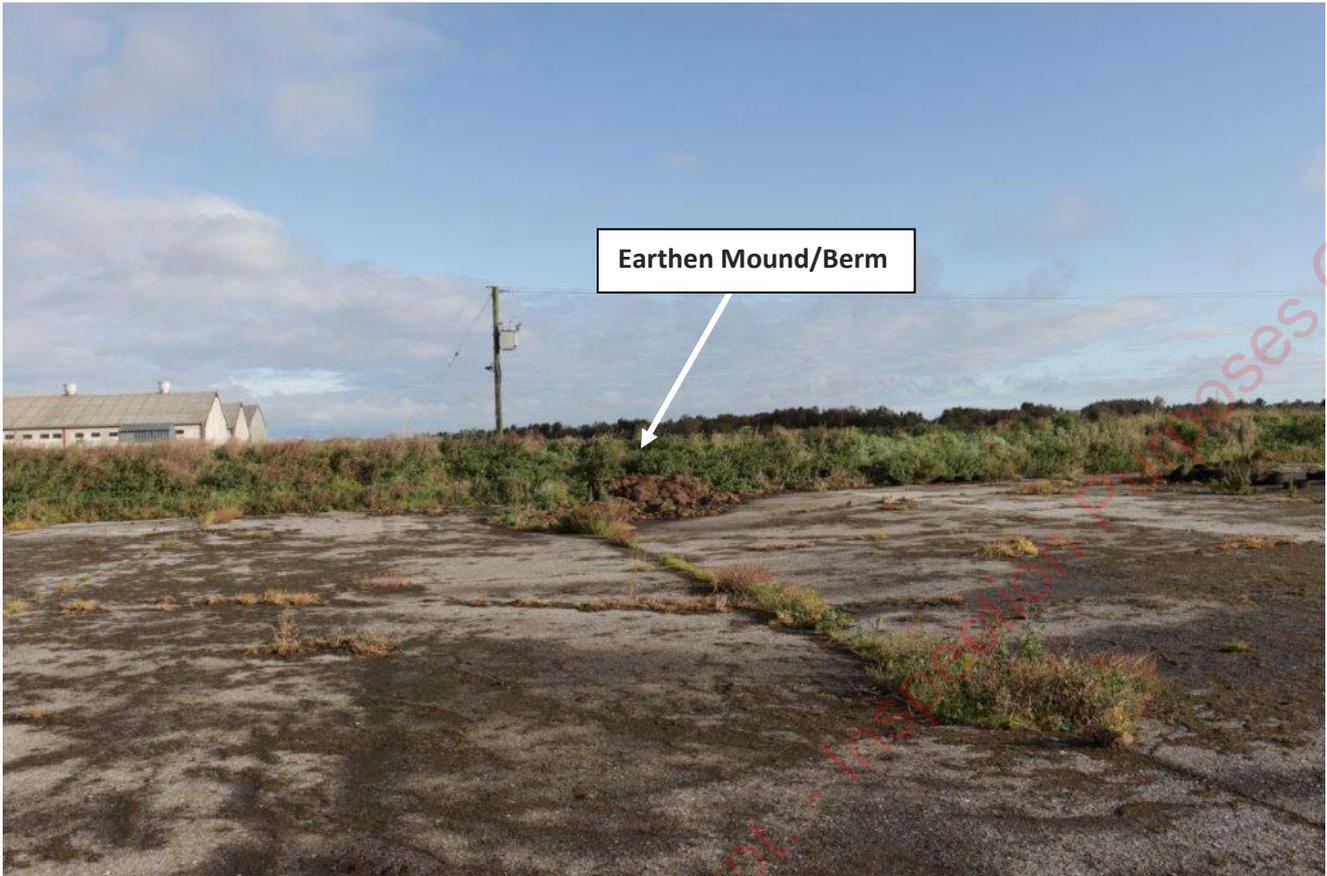


Plate 4-10: Concrete Yard and Earthen Mound/Berm

4.2.2.3 Ancillary Structures

Other ancillary existing structures at the site include:

- 1 no. pump house,
- 1 no overground fuel oil tank
- 1 no. feed silo
- 1 no. above ground, raised water storage tank
- 1 no. stone soakaway
- 2 no. covered pits

See Plate 4-11 to Plate 4-14 below for photos depicting various existing structures present on-site.



Plate 4-11: Disused Pump House

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Plate 4-12: Raised Fuel Oil Storage Tank

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Plate 4-13: Existing Feed Silo

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Plate 4-14: Above Ground Raised Water Storage Tank

4.2.3 Utilities

Electricity is supplied to the site via 38kV overhead power lines. Overhead power lines run along the western boundary of the site and adjacent to the piggery access road to the east of the site. A power line traverses the south eastern section of the site. One electricity pole is situated on-site to the south east of the site. Overhead power lines continue north following the piggery access road, immediately east of the development site. (see Plate 4-15).



Plate 4-15: (Left) Electricity Pole located on site (front of site), (Right) Electricity Supply on adjacent access road to piggery

4.2.4 Stormwater and Foul Water Management

Existing stormwater drainage infrastructure on the site comprises a stone soakaway c. 33 m² in area located along the west boundary of the site which drains clean stormwater from hard surface areas at the site. Foul water generated during past agricultural operations was previously diverted to and collected within the underground slurry holding tanks beneath the portal frame shed on-site.

4.2.5 Site Security

The site is not fully enclosed. The site is accessible from the private access road. There are two gated entrances to the site from the access road. A post and wire fence runs along the western, northern and eastern boundary of the site.

4.2.6 Asbestos Survey

As the proposed development includes the demolition of existing structures which have been in place for many years, an asbestos survey was conducted to confirm the presence of any asbestos containing materials (ACM) within these structures.





The survey identified ACMs within the following structures and materials:

- Main shed roof and gables – Asbestos Cement sheeting;
- Main shed roof - asbestos cement ridge capping;
- Main shed surround - asbestos cement debris;
- Shed 2 (4 bay shed) - Asbestos Cement sheeting.

3 no. material samples (main shed roof cement sheeting, main shed cement ridge capping, shed 2 cement sheeting) were taken and analysed for asbestos by an accredited laboratory. Samples were confirmed to contain Chrysotile asbestos.

For further detail the asbestos survey report is provided in Appendix 4.1, Asbestos Survey Report, in Volume 3 of this EIAR.

4.3 Description of the Proposed Development

4.3.1 Overview of the Proposed Development

The development will consist of the demolition of existing agricultural sheds and structures on-site and the construction and operation of a Materials Recovery Facility for the acceptance and processing of up to 90,000 tonnes per annum of household, commercial and industrial (C&I), and construction and demolition (C&D) waste.

Elements of the proposed development include the following. (1) The demolition of all existing site agricultural sheds and structures on-site (which cover an area of 1,417 m²). (2) The construction and operation of a Materials Recovery Facility, comprising: (a) A site entrance, (b) A weighbridge, (c) Trucking set down and parking areas, (d) Staff parking, comprising 24 parking spaces including disabled parking and EV charging, (e) A concrete yard area, (f) A fuel storage area, (g) External waste storage bays, (h) Skip / bin storage areas, (i) A perimeter boundary wall (4 m in height) and perimeter fencing (2.1 m in height), (j) A stormwater drainage and attenuation system, (k) An administration two-storey building (with an overall floor area of c. 396m² and c.7.35m in height), (l) A single storey Materials Recovery Facility (with an overall floor area of c. 2,850m² to a maximum height of c.13m), (m) A truck loading bay, (n) An on-site wastewater treatment system, associated percolation area and ancillary services, (o) An on-site ESB sub-station and adjoining electrical room (with a combined floor area of 61 m² and 2.175 m in height), (p) Solar panels (covering a total area of 737 m²) mounted atop the proposed Administration and Materials Recovery Facility buildings. The application is accompanied by an Environmental Impact Assessment Report and Natura Impact Statement.

The proposed development will accept up to 50,000 tonnes of waste per annum and operate under a Waste Facility Permit from Offaly County Council during Phase 1 of operations. The proposed development will accept up to 90,000 tonnes of waste per annum and operate under an Industrial Emissions licence from the Environmental Protection Agency during Phase 2 of operations.



4.3.2 Proposed Built Infrastructure

A description of the proposed elements of the proposed development is presented below.

A Proposed Site Layout Plan showing the infrastructural elements broadly on-site is provided in Volume 4 of this EIAR (Drawing Ref: P2344-0100-0005).

4.3.2.1 *Site Entrance*

The site entrance will be developed at the centre of the southern perimeter of the site. The entrance will be set back to accommodate truck waiting at the entrance. Sufficient sight lines will be provided at the site entrance in accordance with relevant design standards, as demonstrated in a Sight Lines drawings shown in Volume 4 of this EIAR (Drawing Ref: P2344-0700-0001). A sliding access gate will be situated at the entrance.

4.3.2.2 *Truck Set Down and Parking Areas*

A Temporary Set Down Area will be provided adjacent to the site entrance outside the main body of the site. The set down area will be hard-standing and will drain to the site surface water drainage system. A designated truck parking area will be provided in the external yard area proposed to allow for overnight truck parking at the facility.

4.3.2.3 *An At-grade Weighbridge*

An at-grade weighbridge will be installed on-site to facilitate the weighing of waste when incoming waste haulage vehicles access the site. This weighbridge will be located to the drivers left as they access the main body of the site from the site entrance.

4.3.2.4 *Staff Parking*

Twenty-four car parking spaces will be provided on-site for staff. Eight car parking spaces will be provided to the south of the administration building in the south western corner of the site and sixteen car parking spaces will be provided in the south eastern corner of the site adjacent to the proposed Wastewater Treatment Plant. Disabled parking and Electric Vehicle charging spaces will also be provided.

4.3.2.5 *Concrete Yard Area*

An external concrete yard area will be provided on-site. This area will be utilized for waste vehicle traffic movements, queuing and overnight parking. The concrete hard-stand area will drain to the underlying surface water drainage system.

A dedicated Fire Quarantine Area will be situated in the centre of the yard area. This must be kept available at all times for use if a hot load is imported, or if a hot-spot is identified in a stockpile, and turning or digging out to isolate are considered suitable measures



4.3.2.6 Fuel Storage Area

A Diesel Tank (55,000 litres in size) will be situated within this yard adjacent to the western boundary fence just north of the administration building. Refuelling of mobile plant utilized on-site will be carried out here. This tank will be double skinned and will be surrounded by a raised wall to protect against vehicle strikes.

4.3.2.7 External Waste Storage Bays

A number of external waste storage bays are proposed along the western perimeter of the site. An indicative Waste Storage Plan detailing these bays is provided in Volume 4 of the EIAR accompanying this planning application (Drawing Ref: P2344-0101-0001). These bays will drain to a foul water and washwater collection system on-site. Bunker blocks will be utilized at these bays to alter waste storage arrangement as necessary.

4.3.2.8 Skip / Bin Storage Area

A skip / bin storage area will be provided adjacent to the external waste storage bays. This dedicated area will be used for skip and bin storage and bin washing. This area will drain to the foul water and washwater collection system on-site.

4.3.2.9 Perimeter Boundary Wall and Perimeter Fencing

A perimeter boundary wall (pre-cast, 4 m in height) will be provided at the front and front sides of the facility. This wall will stem from the MRF building to the east of the site and the Administration Building to the west of the site.

A perimeter fence (2.1 m in height) will be developed around the entire boundary of the site for security purposes and to screen views into the site. This fence will consist of a palisade fence.

4.3.2.10 Stormwater Drainage and Attenuation System

A stormwater drainage and attenuation system will be provided on-site. External yard areas (excluding external waste storage bays and the skip / bin storage area) and building roof areas will be served by this system. The yard will be formed in a manner that allows all surface water generated in it to fall toward an underlying drainage network. Stormwater entering the drainage system will be directed to a pre-cast attenuation tank. This tank will be 480.5 m³ in size (41 m x 6.5 m x 1.8 m), providing an attenuation volume of 253 m³, a rainwater harvesting volume of 151 m³, and a firewater volume 76.5 m³. The attenuation volume provided has been designed to accommodate a 1:100-year event in addition to a 20% climate change allowance volume.

This tank will drain to a Class I Full Retention Separator (2.610 m length x 1.225 m wide), before being piped to the south of the site to a discharge point which discharges to a drainage channel approximately 20 metres south of the site. A slam shut valve and hydrobrake (limiting flow to 9.0 l/s) will be situated prior to the point of site discharge. The slam shut valve will ensure site containment in the event of any spill of hazardous material or environmental emergency.

A drawing depicting the stormwater drainage/collection and attenuation system is contained in Volume 4 of this EIAR (Drawing Ref: P2344-0500-0001).





4.3.2.11 Domestic Wastewater Drainage System

Domestic wastewater generated in sanitary facilities within the Administration Building will be directed to the proposed on-site wastewater treatment system via a wastewater pipeline for appropriate treatment.

A drawing depicting the proposed wastewater drainage system on-site is contained in Volume 4 of this EIAR (Drawing Ref: P2344-0500-0001)

4.3.2.12 Foul Water and Washwater Drainage and Collection System

A foul water and wash water drainage and collection system will be developed on-site. Stormwater generated at external waste storage bays will drain to this system (i.e. dirty stormwater, otherwise known as 'foul water' in the context of this planning application). Washdown water arising at indoor waste processing and storage areas will also drain to the system. This foul water / wash water mix will be held in an underground pre-cast wastewater collection tank (12 m x 6.5 m x 1 m). Wastewater collected in this tank will be periodically tankered off-site and brought to an appropriately authorized wastewater treatment plant operated by Irish Water for treatment (under agreement with Irish Water).

A drawing showing the detail of the above system as described is provided in Volume 4 of this EIAR (Drawing Ref: P2344-0500-0002)

4.3.2.13 Administration Building

An Administration Building will be developed on-site in the south western corner of the site. This Administration Building will house offices for administration staff, sanitary facilities and canteen facilities. This building will have a floor area of 396m² and will be c.7.35m in height.

Water supply to this building will be sourced from an existing groundwater well situated on-site. Electrical heating will be provided within this building.

Drawings showing the detail of this building are provided in Volume 4 of this EIAR (Drawing References: P2344-1700-0005, & P2344-1700-0006).

4.3.2.14 Materials Recovery Facility / Workshop Building

An L-Shaped Materials Recovery Facility / Workshop building will be developed on-site. The MRF section of the building will house Construction and Demolition / Commercial and Industrial processing operations and the Municipal Solid Waste processing operations, including associated waste reception areas, processing line plant and equipment, and internal waste storage bays. There will be four access/egress points into this building for vehicles to allow for waste unloading and loading, with one of these points consisting of a loading pit.

A small workshop will adjoin the south eastern corner of the MRF section of the building. This area will be utilized for plant repair and servicing activities.

The overall materials recovery facility / workshop building will have a floor area of c. 2,850 m² and will have a maximum height of c.13m.



Water supply to this building will be sourced from an existing groundwater well situated on-site.

Drawings showing the detail of this building are provided in Volume 4 of this EIAR (Drawings References: P2344-1700-0001, P2344-1700-0002, P2344-1700-0003, & P2344-1700-0004).

4.3.2.15 *Truck Loading Bay*

A truck loading bay will be provided within the MRF Building on-site adjacent. This bay will be recessed and ramped to facilitate the loading of waste into haulage vehicles.

4.3.2.16 *An On-site Wastewater Treatment System*

Domestic wastewater generated at staff sanitary facilities present in the Administration Building will be directed by way of foul pipelines toward an on-site wastewater treatment plant, which will be located to the south east of the site. Wastewater will pass through a treatment process consisting of secondary treatment and soil polishing at this plant before being discharged to ground via a connected percolation area.

Percolation testing and a Site Suitability Assessment has been undertaken to demonstrate that the ground present in the proposed percolation area is suitable for safely filtering and moving treated effluent from the proposed wastewater treatment system, and to confirm that the system is acceptable having regard to ground conditions. The results of this testing, the Site Suitability Assessment Report and detail on the design of the proposed on-site wastewater treatment system can be found in Appendix 4.2, Site Suitability Assessment, in Volume 3 of this EIAR.

4.3.2.17 *ESB Sub-station / Electrical Room*

An Electrical Sub-station and adjoining electrical room (with a combined floor area 61 m² in size) will be developed on-site for the purpose of facilitating the transfer of electricity from the power grid to the site. This building will be situated in the south eastern corner of the site. The building will also accommodate ancillary electrical equipment required for the rooftop solar panels proposed as part of the development.

Details in relation to this sub-station are shown in a Sub-station Plan and Details drawing which is contained in Volume 4 of this EIAR (Drawing Ref: P2344-1700-0008).

4.3.2.18 *Roof Mounted Solar Panels*

Roof mounted solar panels covering a total cumulative area of 737 m² will be mounted atop the MRF building and Administration building on-site as part of the proposed development.

This installation will provide power supply to the site. It is not proposed to generate excess power and distribute it to the public electricity grid.

The following ancillary solar related infrastructure will also be provided:

- Inverters,
- Ancillary cables, break and isolator,



- EGIP controller,
- Access ladders and fall protection .

Drawings showing the layout and elevation detail of the proposed rooftop solar panel installations are provided in Volume 4 of this EIAR.

A drawing showing typical detail for the proposed solar panels for the site is shown in Volume 4 of this EIAR.

4.3.3 Construction Phase of the Proposed Development

This section describes the construction stage of the proposed development and how each element of the proposed development will be constructed (Section 4.3.3.1 – 4.3.3.7). It then goes on to describe how construction stage activities will be managed (Section 4.3.3.8).

4.3.3.1 *Advance Works and Installation of Temporary Construction Site Compound*

Advanced site works will be required prior to full site mobilisation and will include preliminary clearance of the site, removal of vegetation and trees, development of a temporary construction compound and establishment of construction stage site services (E.g. generators, temporary potable water supplies and storage area).

A temporary site compound and parking area will be developed to facilitate the construction works on-site. The compound will consist of a hardcore area surrounded by secure fencing, and will comprise a site office, canteen, temporary toilet facilities, storeroom, and staff parking areas. Fuel/oil storage areas will be bunded in accordance with best practice. The compound will move around the site appropriate as construction progresses to accommodate the various phases of construction. A temporary wheel wash will be provided on-site during construction.

Temporary lighting will be provided on-site as appropriate. Temporary toilet facilities will be required for construction workers. These will consist of temporary 'portaloo' type chemical toilets located within the construction site compound.

Advanced site works will be completed using track excavator for preliminary clearance and formation of hardcore areas for the construction compound and storage area. Truck mounted cranes will be used for unloading site containers and support infrastructure, plant and equipment.

4.3.3.2 *Re-routing of Existing ESB Lines traversing the site*

The re-routing of existing ESB electricity lines traversing the site will need to be undertaken during the initial stages of the construction phase so as to allow for the safe carrying out of proposed construction and operational activities on-site.

Overhead power lines run along the western boundary of the site and adjacent to the piggery access road to the east of the site. A power line traverses the south eastern section of the site. One electricity pole is situated on-site to the south east of the site.



A plan showing the proposed re-routing to take place is contained in Volume 4 of this EIAR (Drawing Ref: P2344-0100-0006). The following is proposed:

- ESP Pole / EP1, EP3, EP4, EP5 & EP8 (as denoted the adjoining plan drawing) will remain in place'
- EP2 & E 7 (as denoted the adjoining plan drawing) will be removed'
- EP6 (as denoted the adjoining plan drawing) will be relocated away from boundary corner'
- An underground duct / cable will be installed from EP1 to the proposed sub-station and then to EP3. Existing overhead wires connecting these points will be removed'
- An underground duct /cable will be installed from EP8 to EP6. Existing overhead wires connecting these points will be removed.

The Applicant engaged with ESB Networks on the proposed electricity line re-routing to take place on-site. An on-site meeting between the Applicant's engineering team and Tara Hanrahan, Engineering Officer of ESB Networks, who is responsible for managing the electricity network in the jurisdiction where the development site is located, regarding re-routing proposals was undertaken in June 2021. The proposed re-routing was agreed in principle during this meeting, and it was agreed that the Applicant submit a re-routing application to ESB networks upon completion of detailed design for the proposals.

It is planned that these works are undertaken by the ESB, however it may be the case that the laying of the ducting to carry the underground cables will be undertaken by the development construction contractor (with approval from, and under supervision of, the ESB).

4.3.3.3 Demolition of Existing Structures On-site and Site Clearance

The proposed development will include the demolition and removal of all existing above ground structures and infrastructure as described in Section 4.2. This will be undertaken in the following manner:

- Existing agricultural buildings and ancillary structures to be demolished and/or removed by specialist demolition contractor.
- All Asbestos Containing Materials (ACM) to be removed by Specialists.
- Existing earth bund to be removed for reuse on site or recovery/disposal elsewhere.
- Existing concrete yard to be broken out and concrete to be crushed and reused as fill.
- Existing stormwater drainage infrastructure to be excavated and removed.
- Site levelling
- Existing vegetation situated to the south west of the site will be cleared and removed from the site.

A drawing depicting the demolition and site clearance works to be undertaken is contained in Volume 4 of this EIAR (Drawing Ref: P2344-0100-0003). Associated demolition / site clearance sections are provided also in Volume 4 of this EIAR (Drawing Ref: P2344-0100-0004).

While it is intended to remove foundations and sub-surface, it is possible that structures such as concrete foundations could be left in place and infilled in cases where removal may not be practical.





All Asbestos containing materials will be stripped and removed prior to demolition in accordance with the Safety, Health and Welfare at Work (Exposure to Asbestos) Regulations 2006, and the relevant HSA Guidance documents. A suitably qualified contractor will be procured to carry out these works. Site-specific risk assessments and method statements will be developed for the Asbestos removal works to be undertaken. Asbestos waste material arising during the demolition / site clearance processed will be taken from the site by an appropriately authorized waste collector and will be subject to final disposal in an appropriately authorized destination waste facility.

All inert demolition related waste material generated during this stage of construction will be recycled for reuse as fill on-site and/or removed from the site where necessary and transported to the adjacent Kilmurray Pre-cast Concrete Ltd Construction and Demolition (C&D) / Soil Recovery Facility, also situated in Derryarkin, Rhode, Co. Offaly (WFP References: WFP-OY-19-0204-01).

4.3.3.4 Construction of the Materials Recovery Facility



The following broad steps will be carried out to achieve construction of the proposed facility:

- Excavations work will be undertaken to facilitate the development / installation of proposed foundations, tanks and the drainage network.
- Concrete, steel and other materials required for construction will be imported to the site. All concrete and stone materials will be sourced from the adjoining Kilmurray Pre-cast Concrete Ltd quarry site.
- Excavated areas will be appropriately backfilled where required utilizing a suitable fill material. Where possible excavated material from the site will be reutilized as fill material.
- The stormwater drainage and attenuation network including will be installed.
- The installation of a surface water discharge outfall will take place (this will consist of a pre-cast concrete headwall on 100mm thick bed of lean mix concrete).
- The wastewater drainage network will be installed.
- Existing underground tank void space will be backfilled.
- The foul water and washwater collection network will be installed.
- Building foundations will be constructed. The foundations will be ground bearing reinforced concrete pads/strips on a suitable compacted hardcore stratum/sub-base.
- Sub-base material will be placed on-site and appropriately compacted where necessary. Imported sub-base fill shall be a granular engineered fill, compacted to provide a suitable subgrade for the building floors and hard standing yard areas.
- Hard-standing concrete surfaces and ramps will be laid. These surfaces will consist of steel or fibre reinforced concrete. Slabs will be jointed to control cracking. Slabs will bear on a layer of compacted granular sub-base fill. Services and drainage in the yard area will run underneath the slab. The concrete slabs will be laid to falls, to facilitate the collection of surface water and foul water as required.
- Blockwork walls and reinforced concrete push walls for all buildings, bays and storage areas will be erected. Push walls will be designed to retain the weight of stockpiled material and pushing forces from loading vehicles to an identified height.
- Structural steelwork frames will be erected at buildings on-site. These frame will consist of rolled steel columns and suitably spaced rafters. Cold rolled light gauge steel purlins and cladding rails will be fixed to the main columns and rafters.



- Building cladding and roofing will be installed.
- Roof drainage consisting of gutters and downpipes will be installed at buildings.
- Processing plant will be delivered to the site and installed in-situ.
- Electrical/mechanical equipment, roller doors, emergency access/fire doors and the truck loading bay, and the on-site weighbridge will be installed.
- Buildings will be fitted out to make the space suitable occupation and intended production and administrative uses.
- Site clean-up and commissioning and ancillary construction will take place.

Excess soil and stone material generated on-site during construction will be removed from the site and transported to the adjacent Kilmurray C&D / soil recovery facility, also situated in Derryarkin, Rhode, Co. Offaly (WFP Reference: WFP-OY-19-0204-01). It is envisaged however that the vast majority of soil and stone material generated on-site will be reutilized through infilling on-site.

4.3.3.5 Junction Upgrade to Accommodate the Proposed Development

As part of the proposed development, and in collaboration with Kilmurray Precast Concrete Limited, the applicant proposes upgrading the existing junction between the private access road leading to the site and the R400. The proposed junction will be provided with a visibility splay as well as kerbing, paving, appropriate road markings and signage.

The following works will be carried out when upgrading the junction:

- Vegetation clearance,
- Sub-base laying and compacting,
- Installation of drainage and kerbing,
- Pavement laying,
- Installation of signage and road markings.

The following set of drawings showing the layout of the proposed junction, longitudinal sections, cross-sections, and visibility splays, pavement and kerb design, proposed road marking and signs, and swept path analysis are enclosed with this planning application (See Appendix 13.3 of Volume 4 of this EIAR):

- Drawing Reference: 10884-2000
- Drawing Reference: 10884-2001
- Drawing Reference: 10884-2002
- Drawing Reference: 10884-2003
- Drawing Reference: 10884-2004
- Drawing Reference: 10884-2005
- Drawing Reference: 10884-2006
- Drawing Reference: 10884-2007



A Road Safety Audit (Stage 2) for the proposed junction upgrade has been prepared and is enclosed in Appendix 13.3 of Volume 4 of this EIAR. A Letter of Consent from Kilmurray Precast Concrete Ltd granting consent to the applicant for use of these drawings as part of this planning application is contained in Appendix 13.3 also.

4.3.3.6 *Development of On-site Wastewater Treatment System and Associated Percolation Area*

An on-site wastewater treatment system (WWTS), consisting of a secondary treatment and soil polishing treatment system, and an adjoining percolation area will be developed in the south east corner of the site. Domestic wastewater arising at sanitary facilities situated in the proposed Administrative Building will be directed by a wastewater drain to this WWTS for treatment.

The following steps will be undertaken to ensure the successful construction and installation of the WWTS:

- Excavation work will be undertaken to facilitate placement of the WWTS and adjoining percolation in the sub-surface at the desired locations.
- A bed of compacted hardcore material will be placed on the bottom of the excavation trench where the WWTS will be placed.
- The proprietary WWTS will then be placed in-situ, appropriately affixed and connected to the foul drain coming from the proposed Administrative building.
- The adjoining percolation bed and distribution pipes will be laid at the same time.
- Backfilling will then take place to sufficiently cover the WWTS and adjoining percolation area.
- The area overlying the system will be levelled before being seeded with grass seed. This area will exist as a kerbed and raised, soft surface area.

4.3.3.7 *Development of an On-site ESB Sub-station / Electrical Room*

An ESB sub-station and an adjoining Electrical Room will be developed on-site to facilitate the required level of electrical transmission on-site. This sub-station/electrical room will be developed in the south eastern corner of the site, adjacent to the WWTS area, and will have a floor area of 61 m².

This building/unit will be constructed in accordance with the ESB's Construction Specification for Medium Voltage Substation Building.

The following steps will be undertaken ensure the successful construction of sub-station:

- Excavation work will be undertaken to facilitate foundation construction
- Building foundations will be laid on a suitable sub-base
- Steel reinforced concrete floors will be laid. The reinforcing steel will be earthed.
- Blockwork walls will be erected upon foundations
- Building roofing will be installed
- ESB approved doors, external roof drainage pipes, cable duct walls, a copper earthing mat and an oil trap will be installed.



- The ESB will install the required electrical systems within the sub-station. The system will be tested before being commissioned.
- The solar provider will install solar related ancillary equipment within the electrical room of the sub-station.

4.3.3.8 *Installation of Roof Mounted Solar Panels*

The following steps will be carried to successfully install the proposed solar panels on the MRF and Administration building roofs:

- Solar panels and associated ancillary infrastructure and systems will be imported to the site and securely stored in a temporary storage area on-site.
- The solar panel provider will carry out the following installation works:
 - Installation of solar panels and associated roof mounted fixings,=,
 - Installation of Inverters,
 - Installation of ancillary cables, breaker and isolator,
 - Installation of EGIP controller,
 - Installation of access ladders and fall protection.
- The existing local voltage switch board will be extended to facilitate electrical transmission.

4.3.3.9 *Construction Management*

4.3.3.9.1 Hours of Construction

Construction work will generally be carried out during daylight hours. Construction work will generally be confined to the following times:

- 07:30 to 18:30 Monday to Saturday

4.3.3.9.2 Construction Programme

It is expected that construction phase will be approximately 12 months in duration.

Site preparatory and demolition and clearance works will be carried out during the first month of the construction phase. This stage will include removal of demolition related waste from the site.

It is expected site excavation works, construction material importation, concrete laying, and sub-structure and superstructure development will then be carried out over a 5-month period .

The first 6 months will be the most intensive period of construction given the need for waste removal from the site and material importation to the site.



It is then expected cladding, roofing, solar panel installation, processing and ancillary plant and equipment installation, building fit outs, and site clean-up and commissioning will then be carried out over the final 6 months of the construction period.

4.3.3.9.3 Construction Traffic Management

The construction of the facility will lead to construction-related traffic being generated on the roads in the proximity of the development.

A detailed traffic management plan for construction phase activities will be prepared in advance of construction and subsequently implemented.

Construction traffic will access the site by way of the private site access road leading to the site from the R400 situated approximately 2.2 km to the east of the site. A dedicated banksman will be responsible for directing traffic to and from the site and around the site. Appropriate construction site signage will be erected at the junction with the R400 and at the private access road leading to development site prior to commencement of construction to facilitate the safe movement of vehicles and pedestrians on and in the vicinity of the site.

A temporary wheel wash will be utilized at the site entrance during the construction phase of the development to prevent tracking of mud and dirt off-site.

Construction traffic levels and potential traffic related impacts are addressed in detail in the Chapter 13 of this EIAR Traffic and Transportation.

4.3.3.9.4 Environmental Management during Construction

A Construction Environmental Management Plan (CEMP) has been developed in order to manage, prevent and control potential environmental impacts associated with Construction Phase activities. This document is included as Appendix 4.3, Construction Environmental Management Plan, in Volume 3 of this EIAR. This document outlines construction phase activities to be undertaken and environmental control and mitigation measures to be adopted to prevent adverse impacts on the environment due to these construction activities. This Plan also addresses Construction Phase Waste Management.

4.3.4 Operational Phase of the Proposed Development

As discussed, the facility will operate over two phases.

The proposed development will accept up to 50,000 tonnes of waste per annum and operate under a Waste Facility Permit from Offaly County Council during Phase 1 of operations. The proposed development will accept up to 90,000 tonnes of waste per annum and operate under an Industrial Emissions licence from the Environmental Protection Agency during Phase 2 of operations.

A description of the operational phases of the Proposed Development is provided in this section under the following headings:

- Overview of Proposed Operations
- Proposed Waste Activities





- Proposed Facility Operations
 - Operating Hours
 - Recording Waste Types and Quantities
 - Waste Acceptance Procedures
 - Waste Processing Operations
 - Waste Processing Plant
 - Waste Storage
- Facility Management
- Environmental Management during Facility Operations
- Environmental Monitoring

4.3.4.1 *Overview of Proposed Operations*

The operational phase of the Proposed Development Project will then be undertaken over two phases.

Phase 1 of the operation will involve the acceptance of up to 50,000 tonnes per annum of waste material on-site. Municipal Solid Waste (MSW), Construction and Demolition (C&D) / Commercial and Industrial (C&I) skip waste, and Dry Mixed Recyclable (DMR) waste accepted on-site will undergo bulk loading and/or recovery processing, and onward transfer during Phase 1 operations. Timber waste accepted on-site will undergo shredding, bulk loading and onward transfer during Phase 1 operations.

Phase 2 of the operation will involve the acceptance of 90,000 tonnes per annum of waste material on-site. C&D and C&I skip waste, DMR, will be accepted on-site for processing / pre-treatment, bulk loading and onward transfer during Phase 2 operations. Timber waste shredding operations will continue to take place on-site. Broadly, waste accepted at the facility during Phase 2 will be sorted and processed into various discrete fractions before being sent for off-site recovery/recycling (preferred option) or disposal at appropriate destination waste facilities.

4.3.4.2 *Proposed Waste Activities*

4.3.4.2.1 The Proposed Waste Activity during Phase 1 of the Project

It is proposed to accept up to 50,000 tonnes of waste material at the facility per annum over the course of Phase 1 of the proposed development.

Table 4-1 details the types of waste to be accepted at the facility, the corresponding List of Waste (LoW) codes for each waste type, and the maximum amount of each waste type that will be accepted at the facility per annum, over the course of Phase 1 of the Project.



Table 4-1: Proposed Waste Activity Details during Phase 1 of the Project

Waste Type	Waste Source	List of Waste (LoW) Description	Max tonnes per Annum (tpa)
Municipal Solid Waste (MSW) (Household, Commercial &/or Industrial sources)	Household kerbside and commercial / industrial back door waste collections	20 01 01, 20 01 02, 20 01 08, 20 01 10, 20 01 11, 20 01 38, 20 01 39, 20 01 40, 20 02 01, 20 02 02, 20 02 03, 20 03 01, 20 03 02, 20 03 03, 20 03 07.	20,000
Construction & Demolition (C&D) Waste / Commercial & Industrial (C&I) Waste	Skip collections from construction sites and from household, commercial and industrial properties	17 01 01, 17 01 02, 17 01 03, 17 01 07, 17 02 01, 17 02 02, 17 02 03, 17 03 02, 17 04 01, 07 04 02, 07 04 03, 07 04 04, 17 04 05, 17 04 06, 17 04 07, 17 04 11, 17 05 04, 17 05 06, 17 05 08, 17 06 04, 17 08 02, 17 09 04.	20,000
Dry Recyclables (DMR) / Commercial / Industrial / Other	Compactor skip collections from commercial customers, open skip containers and skip compactors from Local Authority Civic Amenity sites (CAS) together with curtain sided trailer collections of cardboard and baled recyclables from commercial customers.	02 01 03, 02 01 04, 02 01 07, 02 01 10, 03 01 01, 03 01 05, 09 01 07, 09 01 08, 09 01 10, 09 01 12, 15 01 01, 15 01 02, 15 01 03, 15 01 04, 15 01 05, 15 01 06, 15 01 07, 15 01 09, 16 01 03, 19 01 02, 19 01 12, 19 01 14, 19 01 16, 19 01 18, 19 01 19, 19 02 10, 19 03 05, 19 03 07, 19 05 03, 19 08 01, 19 08 02, 19 10 01, 19 10 02, 19 12 01, 19 12 02, 19 12 03, 19 12 04, 19 12 05, 19 12 07, 19 12 08, 19 12 09, 19 12 10, 19 12 12, 20 01 41.	10,000
Total			50,000



The following Classes of Activity as per Part 1 of the Third Schedule of the Waste Management (Facility Permit and Registration Regulations), as amended, will be carried out at the facility during Phase 1 of the project:

- Class 7 - Recovery of inert waste arising from construction and demolition activity, including concrete, bricks, tiles, or other such similar material, at a facility (excluding land improvement or development) where – (a) the annual intake shall not exceed 50,000 tonnes, and (b) the maximum quantity of residual waste consigned from the facility for collection, onward transport and submission to disposal at an authorised facility shall not exceed 15% of the annual intake.
- Class 10 (Principal Class of Activity) - The recovery of waste (not mentioned elsewhere in this part of the third schedule), other than hazardous waste or an activity specified in Category 5 of Annex I of Council Directive 96/61/EC, where – (a) the annual intake does not exceed tonnes, and (b) the maximum quantity of residual waste consigned from the facility for onward transport and submission to disposal at an authorised facility shall not exceed 15% of the annual intake.
- Class 11 - The reception, storage and transfer of waste (other than hazardous waste) for disposal at a facility (other than a landfill facility) where the annual intake does not exceed 7,500 tonnes.



4.3.4.2.2 The Proposed Waste Activity during Phase 2 of the Project

Phase 2 of the operation will commence upon grant of the IE licence from the EPA. This licence will replace the pre-existent Waste Facility Permit. 90,000 tonnes per annum of waste material will be accepted for processing over the course of Phase 2 of the proposed development.

Table 1-2 details the types of waste to be accepted at the facility, the corresponding List of Waste (LoW) codes for each waste type, and the maximum amount of each waste type that will be accepted at the facility per annum, over the course of Phase 2 of the Project.

A number of hazardous C&D waste types will also be accepted at the facility for onward transfer only (on an occasional basis and in relatively small volumes) during Phase 2 of the project.

Table 4-2: Proposed Waste Activity Details during Phase 2 of the Project

Waste Type		List of Waste (LoW) Description	Max tonnes per Annum (tpa)
Municipal Solid Waste (MSW) (Household, Commercial & / or Industrial sources)	Household kerbside and commercial / industrial back door waste collections	20 01 01, 20 01 02, 20 01 08, 20 01 10, 20 01 11, 20 01 38, 20 01 39, 20 01 40, 20 02 01, 20 02 02, 20 02 03, 20 03 01, 20 03 02, 20 03 03, 20 03 07.	40,000
Construction & Demolition (C&D) Waste / Commercial & Industrial (C&I) Waste	Skip collections from construction sites and from household, commercial and industrial properties	17 01 01, 17 01 02, 17 01 03, 17 01 06*, 17 01 07, 17 02 01, 17 02 02, 17 02 03, 17 02 04*, 17 03 01*, 17 03 02, 17 03 03*, 17 04 01, 07 04 02, 07 04 03, 07 04 04, 17 04 05, 17 04 06, 17 04 07, 17 04 10*, 17 04 11, 17 05 03*, 17 05 04, 17 05 06, 17 05 07*, 17 05 08, 17 06 04, 17 06 05*, 17 08 02, 17 09 01, 17 09 03*, 17 09 04.	30,000
Dry Mixed Recyclables (DMR) / Commercial / Industrial / Other	Compactor skip collections from commercial customers, open skip containers and skip compactors from Local Authority Civic Amenity sites (CAS) together with curtain sided trailer collections of cardboard and baled recyclables from commercial customers.	02 01 03, 02 01 04, 02 01 07, 02 01 10, 03 01 01, 03 01 05, 09 01 07, 09 01 08, 09 01 10, 09 01 12, 15 01 01, 15 01 02, 15 01 03, 15 01 04, 15 01 05, 15 01 06, 15 01 07, 15 01 09, 16 01 03, 19 01 02, 19 01 12, 19 01 14, 19 01 16, 19 01 18, 19 01 19, 19 02 10, 19 03 05, 19 03 07, 19 05 03, 19 08 01, 19 08 02, 19 10 01, 19 10 02, 19 12 01, 19 12 02, 19 12 03, 19 12 04, 19 12 05, 19 12 07, 19 12 08, 19 12 09, 19 12 10, 19 12 12, 20 01 41.	20,000
Total			90,000



The Proposed Waste Activity during Phase 2 of the Project will be carried out under an Industrial Emission licence enforced by the Environmental Protection Agency (EPA)

The Proposed Waste Activity will fall under the following Classes of Activity as per the New First Schedule to the EPA Act (as amended) will be carried out at the facility during Phase 2:

- 11.1 - The recovery or disposal of waste in a facility, within the meaning of the Act of 1996, which facility is connected or associated with another activity specified in this Schedule (The New First Schedule to the EPA Act, as amended) in respect of which a licence or revised licence under Part IV is in force or in respect of which a licence under the said Part is or will be required. (Is an industrial emissions directive activity, in so far as the process development or operation specified in 11.1 is carried on in an installation connected or associated with another activity that is an industrial emission directive activity)
- 11.4 (b) (Principal Class of Activity) - Recovery, or a mix of recovery and disposal, of non-hazardous waste with a capacity exceeding 75 tonnes per day involving one or more of the following activities, (other than activities to which the Urban Waste Water Treatment Regulations 2001 (S.I. No. 254 of 2001) apply):
 - i. biological treatment;
 - ii. **pre-treatment of waste for incineration or co-incineration;**
 - iii. treatment of slags and ashes;
 - iv. treatment in shredders of metal waste, including waste electrical and electronic equipment and end-of-life vehicles and their components.

4.3.4.3 Proposed Facility Operations

4.3.4.3.1 Operating Hours

The hours of operation of the facility (i.e. waste processing and consignment from the facility) will be 07:00 – 22:00 Monday to Saturday.

Given the spatial extent and spread of waste collection areas in the region, waste acceptance times at the facility will be spread across a long day and will take place very early in the morning. The hours of waste acceptance are therefore 05:00 to 00:00 Monday to Saturday.

The site will be accessible on a 24 /7 basis.

The operating, acceptance and access hours are in line with operational timeframes for similar facilities in the region.

4.3.4.3.2 Waste Sources

MSW, C&D and C&I skip waste and DMR to be accepted at the proposed facility will be sourced from households, commercial and industrial facilities, civic amenity sites and construction sites situated in the Midlands region as well as surrounding regions including areas within Co. Offaly, Co. Westmeath, Co. Roscommon, Co. Kildare, Co. Laois and Co. Meath.





4.3.4.3.3 Recording Waste Types and Quantities

All incoming and outgoing loads at the proposed facility will be weighed over a proposed, calibrated weighbridge. The weighbridge will be connected to a computer and network, where all details regarding incoming and outgoing loads will be recorded. An inventory of the type and quantity of all wastes stored on-site at any one point in time will be maintained.

As the incoming loads are weighed, the following details are recorded: Time; Vehicle Registration; Source or Destination; Haulier's Name, Product Description and European Waste Catalogue (EWC) Code.

All weighbridge dockets will be kept for a suitable number of years, as agreed with the Council and subsequently the EPA. The records of loads in and out of the facility will be stored indefinitely. Appropriately trained weighbridge operators will be designated. The Legal Metrology Service will check the weighbridge for accuracy and calibrate the weighbridge once per year in accordance with specified standards.

4.3.4.3.4 Waste Acceptance Procedures

Waste materials will be delivered to the proposed facility in a variety of waste collection vehicles. Entry to the facility is via a private access road leading from the R400 ca. 2.2 km east of the site. Upon arrival on-site facility staff will inspect and check the waste material contained within a vehicle. Facility staff will check that the waste material is suitably enclosed or covered and that no unauthorized wastes are present in a load. Any non-conforming loads will be rejected at this point. A record and photography of all non-conforming waste will be maintained.

The weighbridge operator on duty will then supervise the weighing of waste at the weighbridge issuing appropriate direction and guidance to the haulier as needed. Weighbridge activities will be undertaken in accordance with a dedicated Weighbridge Recording and Operating Procedure. Drivers will then be advised on queuing areas on-site and directed to the appropriate waste deposition point/s on-site.

Where it is observed by the site supervisor or facility staff that unauthorized waste has been deposited on-site, this waste will be carefully extracted from waste receptacles on-site by loader/bobcat or manually and transferred to a designated quarantine area for temporary storage prior to transfer off-site. Arrangements will be made for these materials to be transferred to a licensed/permitted waste disposal or recovery site (E.g. Landfill, Mechanical Biological Treatment Facility, Hazardous Waste Treatment and Transfer Facility).

4.3.4.3.5 Waste Processing Operations

The following waste processing operations will be undertaken on-site:

- Phase 1 Processing Operations
 - The acceptance, processing and onward transfer of C&D / C&I skip waste.
 - The acceptance, bulk loading and onward transfer of MSW.
- Operations occurring during both Phases 1 and 2
 - The acceptance, bulk loading and onward transfer of DMR.
 - The acceptance, shredding and onward transfer of timber waste.



- Phase 2 Processing Operations
 - The acceptance, processing and onward transfer of C&D / C&I skip wastes.
 - The acceptance, processing / pre-treatment, and onward transfer of MSW.

A description of each waste processing operation that will be undertaken on-site during each operational phase is provided below.

Acceptance, Processing and Onward Transfer of C&D / C&I Skip Waste – Phase 1

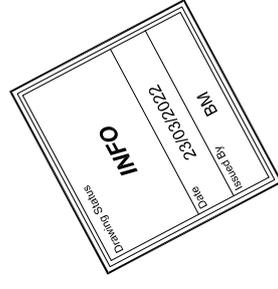
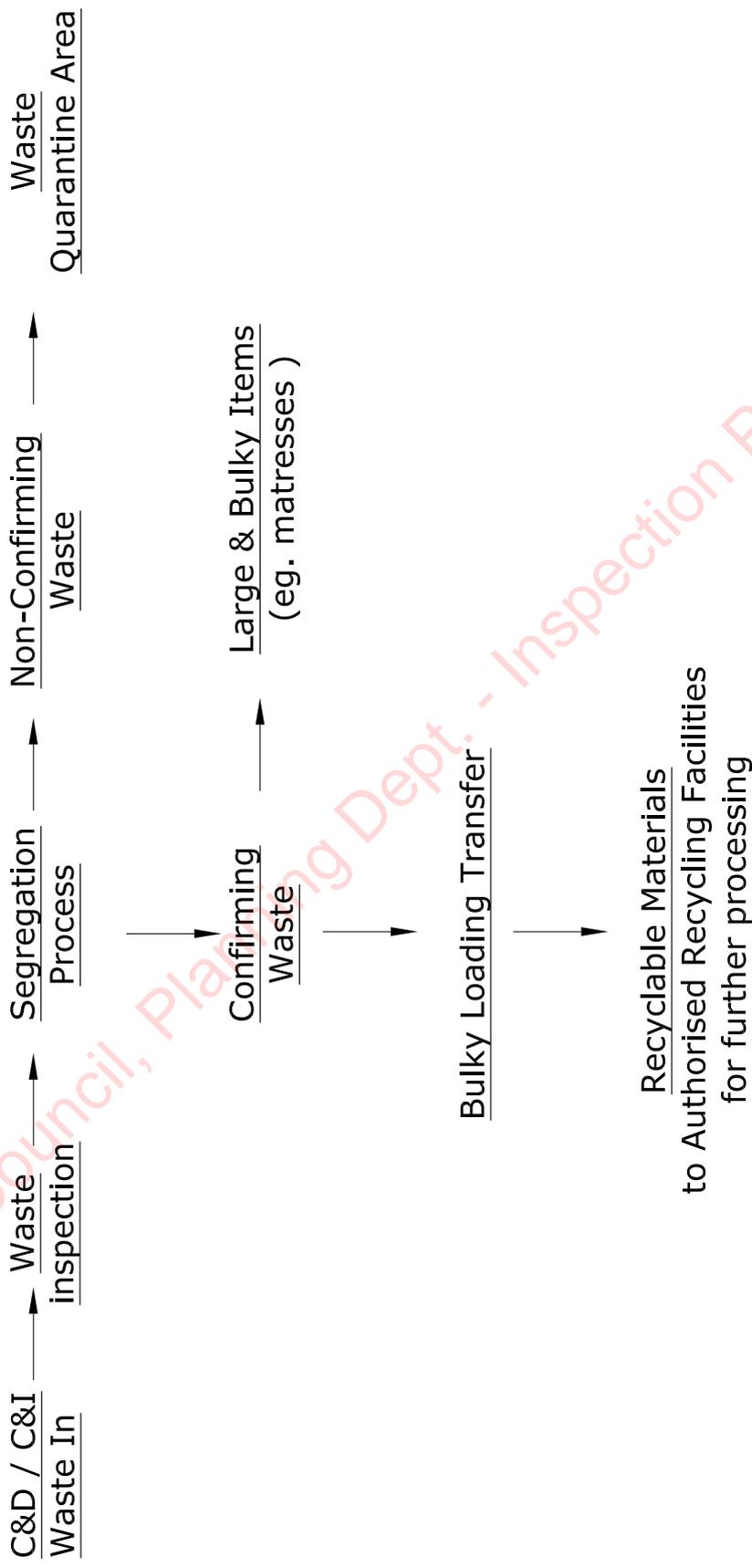
Construction and Demolition and Commercial and Industrial skip waste arriving on-site will be brought to and deposited in the C&D and C&I Waste Reception Area in the Materials Recovery Facility building. Here, this waste will undergo inspection and manual segregation. Non-conforming wastes identified at this stage will be brought to the Waste Quarantine Area in accordance with Waste Acceptance Procedures.

Conforming waste will then be passed through a recovery process consisting of trommel and fines screening, an overband magnet and a picking line. Processed materials will be bulk loaded at the recessed loading bay on-site and transferred off-site via HGV to a third-party waste management facility for recovery/recycling.

A process flow diagram describing the process is shown in Figure 4-1 below.

DERRYARKIN MATERIALS RECOVERY FACILITY C&D / C&I PROCESS FLOW DIAGRAM

PHASE - 1



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Acceptance, Bulk Loading and Onward Transfer of MSW – Phase 1

Municipal Solid Waste arriving on-site will be brought to and deposited in the MSW Waste Reception Area in the Materials Recovery Facility building. Here, this waste will undergo inspection and manual sorting. Bulky objects will be removed from the process at this stage. Non-conforming wastes identified at this stage will be brought to the Waste Quarantine Area in accordance with Waste Acceptance Procedures.

Conforming waste will then be bulk loaded at the recessed loading bay on-site and transferred off-site via HGV to a third-party waste management facility.

A process flow diagram describing the process is shown in Figure 4-2 below.

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DERRYARKIN MATERIALS RECOVERY FACILITY

MSW PROCESS FLOW DIAGRAM

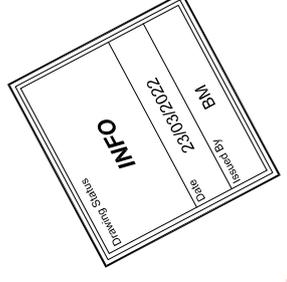
PHASE - 1

MSW IN
EWC Code 20 03 01

Inspection and Sorting → Non-Confirming Waste → Waste Quarantine Area

Bulky Loading Transfer

WtE Recovery
Landfill Diversion



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The Acceptance, Bulk Loading and Onward Transfer of DMR – Phase 1 and 2

Dry Mixed Recyclable (DMR) waste arriving on-site will be brought to and deposited in either the DMR or Cardboard Reception Areas in the Materials Recovery Building. Here, this waste will undergo inspection. Non-conforming wastes identified at this stage will be brought to the Waste Quarantine Area in accordance with Waste Acceptance Procedures.

Conforming waste will then be bulk loaded at the recessed loading bay on-site and transferred off-site via HGV to a third-party waste management facility.

The Acceptance, Shredding and Onward Transfer of Timber Waste – Phase 1 and 2

Timber waste processing will be carried out at on-site during both Phases 1 and 2 of operations. Timber waste shredding will take place at the external waste storage bays on-site.

Timber waste arriving on-site will either be source segregated or contained in mixed C&D and C&I skip waste loads. Timber waste arriving on-site will be weighed, and inspected/segregated as appropriate, before being deposited in an external waste storage bay repurposed for storing unprocessed timber.

This unprocessed timber waste will be deposited in a timber shredder (Doppstadt AK 635 Timber Shredder) for shredding. An inline magnet built into the shredder will be used to remove metals prior to shredding. Shredded timber will be stored temporarily in an adjoining storage bay before being bulked and dispatched off-site to an appropriate recycling facility.

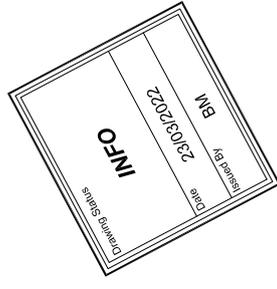
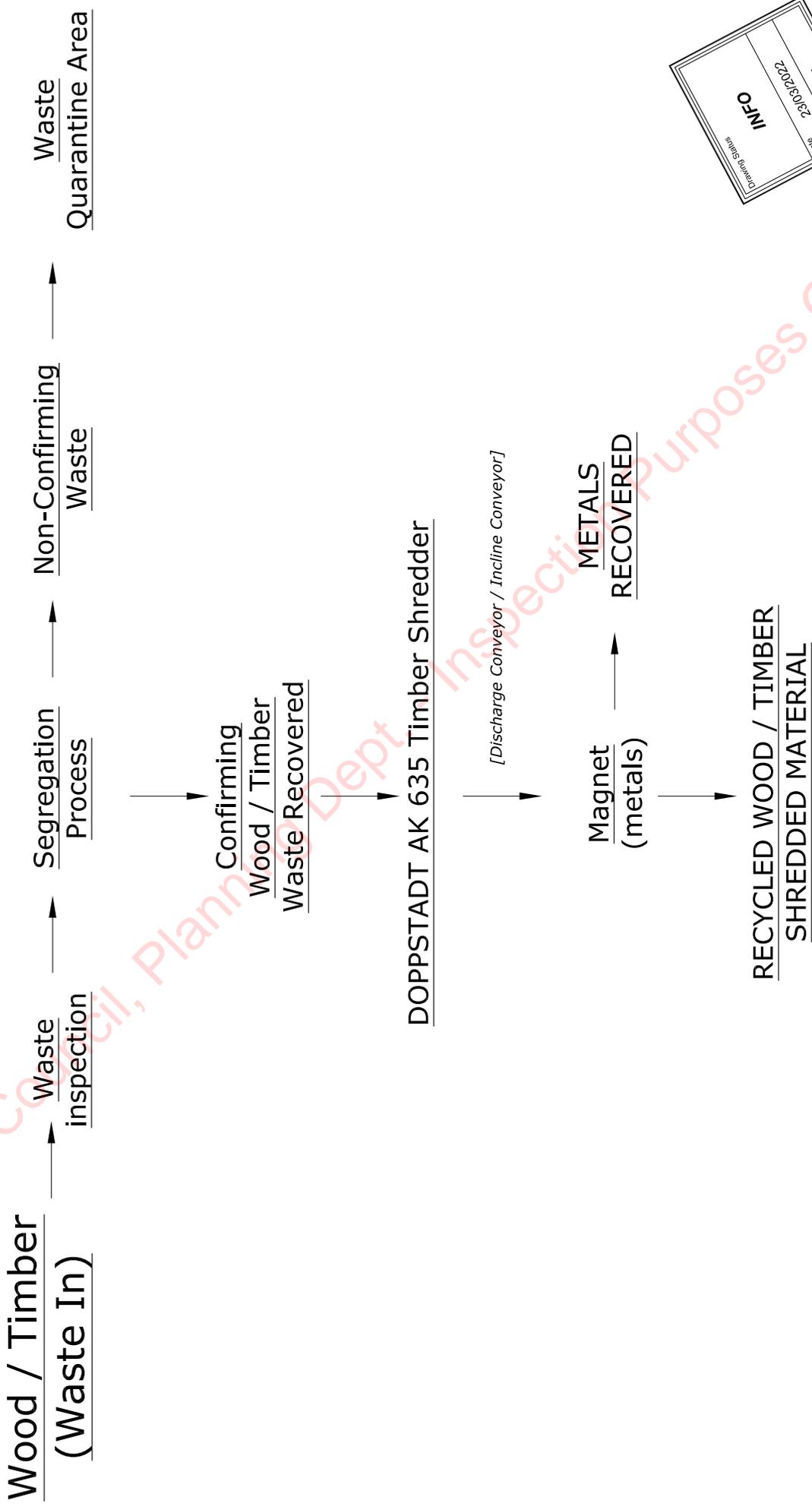
An indicative drawing showing the layout of this timber processing operation is shown in Volume 4 of this EIA (Drawing Ref: P2344-0101-0004)

A process flow diagram describing the process is shown in Figure 4-3 below.

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DERRYARKIN MATERIALS RECOVERY FACILITY WOOD / TIMBER PROCESS FLOW DIAGRAM

PHASE - 1 & 2



Officy County Council, Planning Dept. Inspectio Purposes Only



Acceptance, Processing and Onward Transfer of Construction and Demolition / Commercial and Industrial Skip Wastes – Phase 2

Construction and Demolition and Commercial and Industrial skip waste arriving on-site will be brought to and deposited in the C&D and C&I Waste Reception Area in the Materials Recovery Building. Here, this waste will undergo inspection and manual segregation. Non-conforming wastes identified at this stage will be brought to the Waste Quarantine Area in accordance with Waste Acceptance Procedures. Large and Bulky Waste Items will also be removed from the process at this stage.

Discrete waste loads arriving on-site will be bulk loaded and sent off-site to third party waste management facilities.

Conforming mixed C&D / C&I skip waste will be deposited in a Feed Hopper which will feed the waste to a Trommel Screen. This Trommel Screen will separate material into two size fractions; fractions sized 0 – 40 mm, and fractions sized greater than 40 mm.

0 – 40 mm size fractions will be transferred to a Fines Discharge Conveyor. These materials will be passed through an Overband Magnet which will result in the extraction and recovery of Metals from the process. Residual fines will then be deposited in a designated waste storage area before being transferred off-site for use as Landfill Cover.

Fractions greater than 40 mm will be transferred to an Oversize Discharge Conveyor. These materials will pass through an Overband Magnet which will result in the extraction and recovery of Metals from the process. The Oversize Material will then be transferred to a Picking Line Conveyor where Timber, Rubble and Metal materials will be recovered. Residual Oversize Material coming over the process line will be deposited in a designated waste storage area. This material constitutes Refuse Derived Fuel (RDF).

Processed material will then be bulk loaded at the recessed loading bay on-site and transferred off-site via HGV to a third-party waste management facility for treatment.

The proposed facility will accept hazardous C&D wastes in relatively small volumes on an occasional basis (such as Asbestos material or contaminated soil and stone material arising in a construction and/or demolition setting). The applicant will be notified by customers when such hazardous wastes are dispatched to the proposed facility. These hazardous wastes will arrive pre-packaged. Drivers hauling such waste material will be directed to the quarantine area to deposit such waste. This pre-packed waste will be off-loaded into a designated sealable and lockable storage container and carefully inspected by staff wearing appropriate PPE to ensure that packaging integrity is maintained, and the material is sufficiently contained. When a designated storage container is full, this container will be transported to an appropriate third-party hazardous waste treatment facility. Large packaging will be supported by double pallets and tension wrapped before loading, stacked and evenly distributed over the length of the container. The acceptance, storage and onward transfer of hazardous waste arriving on-site will be carried out in accordance with a dedicated Hazardous Waste Acceptance Procedure.

An indicative drawing showing the layout of these processing operations is contained Volume 4 of this EIA (Drawing Ref: P2344-0101-0002).

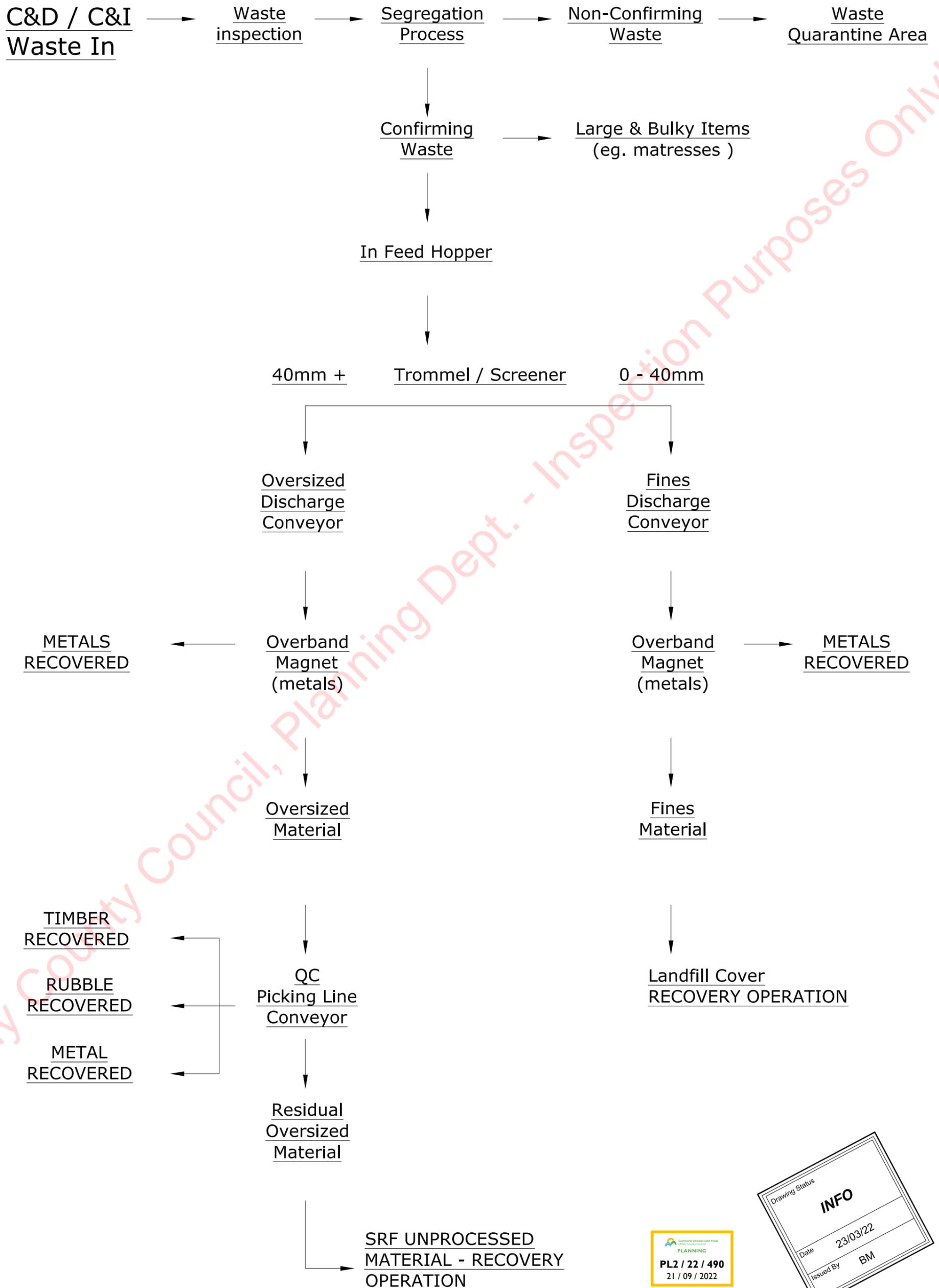
A process flow diagram describing the process is shown in Figure 4-4 below.



DERRYARKIN MATERIALS RECOVERY FACILITY

C&D / C&I PROCESS FLOW DIAGRAM

PHASE - 2



Offaly County Council, Planning Dept. - Inspection Purposes Only!

PLANNING
 PL2 / 22 / 490
 21 / 09 / 2022

Drawing Status
INFO
 Date 23/03/22
 Issued By BM



Acceptance, Processing / Pre-treatment and Onward Transfer of Municipal Solid Waste – Phase 2

Municipal Solid Waste arriving on-site will be brought to and deposited in the MSW Waste Reception Area in the Materials Recovery Facility building. Here, this waste will undergo inspection and manual sorting. Bulky objects will be removed from the process at this stage. Non-conforming wastes identified at this stage will be brought to the Waste Quarantine Area in accordance with Waste Acceptance Procedures.

Discrete waste fractions (e.g. food waste) will be bulk loaded and sent off-site to third party waste management facility.

Conforming MSW material will then be deposited in a Shredder Plant where it will be subject to consistent bag opening and material grading before being subject to shredding.

Shredded material will then be transferred to a Trommel Screen. This Trommel Screen will separate material into two size fractions; fractions sized greater than 50 mm, and fractions sized less than 50 mm.

0 – 50 mm size fractions will pass through an Overband Magnet which will result in the extraction and recovery of Metals from the process. Residual fines will be deposited in a designated waste storage area before being transferred off-site to an appropriately authorized waste facility for Stabilization Recovery.

Size fractions greater than 50 mm will also pass through an Overband Magnet which will result in the extraction and recovery of Metals from the process.

Residual Material coming off the process will then be deposited in a designated waste storage area before being transferred off-site to an appropriately Authorized Waste to Energy Recovery Facility. This material will constitute Refuse Derived Fuel (EWC Code 19 12 12).

Processed material will then be bulk loaded at the recessed loading bay on-site and transferred off-site via HGV to a third-party waste management facility for treatment.

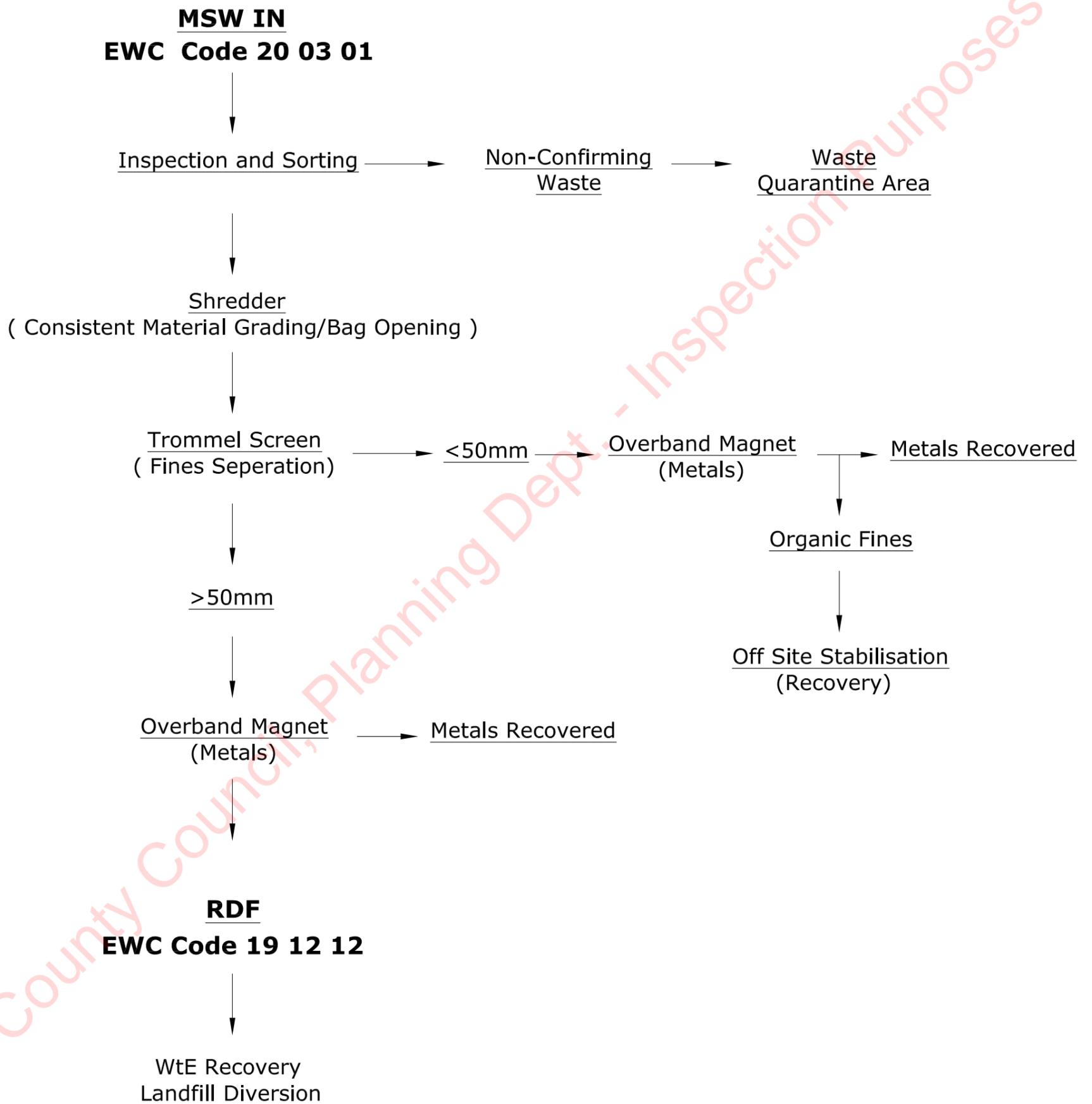
An indicative drawing showing the layout of these processing operations is contained in Volume 4 of this EIA (Drawing Ref: P2344-0101-0003).

A process flow diagram describing the process is shown in Figure 4-5 below.

DERRYARKIN MATERIALS RECOVERY FACILITY

MSW PROCESS FLOW DIAGRAM

PHASE - 2





4.3.4.3.6 Waste Processing Plant

The following Processing Plant will be utilized during waste processing operations at the facility (over the course of Phases 1 and 2:

- C&D/C&I Processing Plant, consisting of:
 - Feed Hopper
 - Trommel Screen
 - Two Off Overband Magnets
 - Picking Line Conveyor
- MSW Processing Plant, consisting of:
 - Shredder Plant
 - Trommel Screen
 - Two Off Overband Magnets
- Timber Shredding Plant
- Mobile Plant
 - One Off Wheel Front Loaders
 - One Off Grab Machine

4.3.4.3.7 Waste Storage

Waste arriving on-site and processed on-site will be stored in internal bays inside the Materials Recovery Facility building, as well as a number of external waste storage bays.

A drawing showing the Indicative Waste Storage Plan for the site is provided in Volume 4 of this EIAR (Drawing Ref: P2344-0101-0001). This drawing provides detail on the waste types and storage volumes to be stored on-site.

4.3.4.3.8 Waste Destinations

During both Phase 1 and 2 of operation the vast majority of wastes leaving the site will be consigned to third party waste management facilities situated in the surrounding region and the Dublin region for onward recovery or recycling. Destination recovery/recycling facilities may include waste to energy facilities, cement kilns, composting facilities, anaerobic digestion facilities metal recovery/recycling facilities, timber recycling facilities, hazardous waste management facilities, plastic / packaging recycling facilities, furniture recycling facilities, glass recycling facilities, inert waste / C&D recovery facilities (E.g. the adjoining Kilmurray Pre-cast Concrete Ltd facility).

Intermittently, for operational reasons (e.g. in the event a waste to energy facility is experiencing downtime due to maintenance), residual MSW will be consigned off-site to the Dredid Landfill facility situated at Killinagh Upper, Carbury, Co. Kildare.



4.3.4.4 Facility Management

4.3.4.4.1 Facility Staffing

The facility will be staffed and managed by experienced and appropriate trained and qualified personnel.

The proposed number of employees at the facility are as follows:

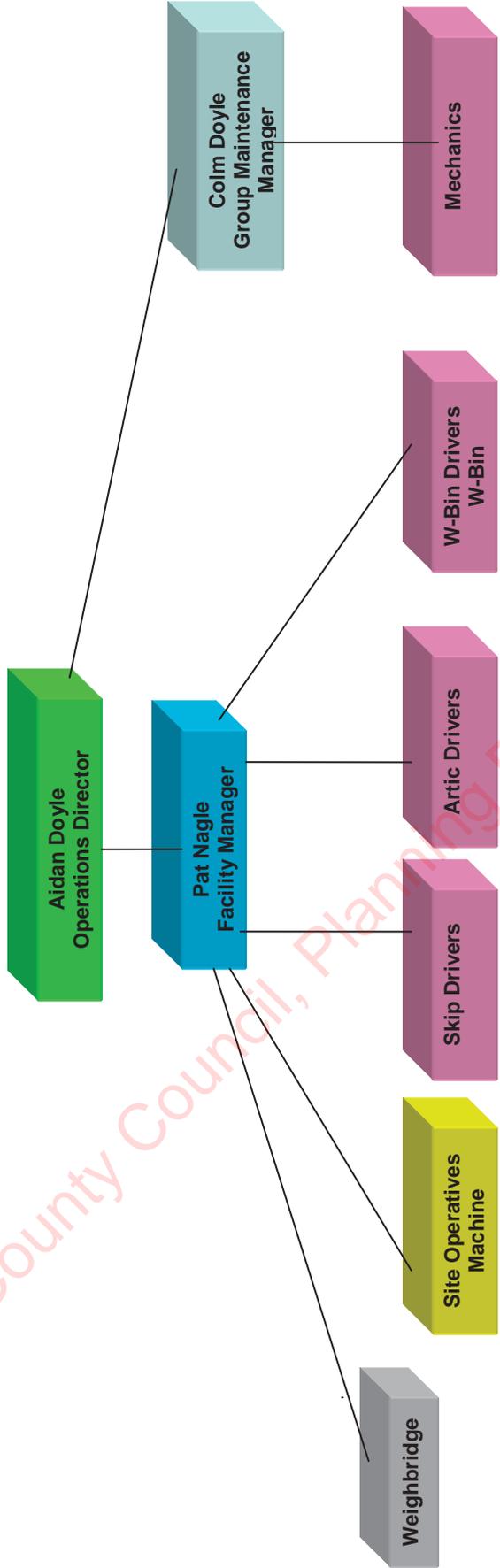
- Management / Admin Office Staff = 8
- Weighbridge / Skip Dispatch = 2
- Skip Drivers = 6
- Site Machine Driver = 2
- Mechanic / Maintenance = 1
- Yard General Operative = 1
- C&D picking line = 4

- Total = 24

4.3.4.4.2 Management Structure and Staff Responsibilities

A flowchart showing the applicant Management Structure including the roles and responsibilities of management personnel and staff at the proposed facility is shown in Figure 4-6.

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Key: Environmental Responsibilities

Overall responsibility to ensure that all operations at the facility are carried out inline with the Facility Permit, EMS Procedures and the Environmental Policy.

To ensure that waste is segregated, stored & removed appropriately and to implement procedures to keep the facility complaint at all times. To Ensure that all drivers operate in accordance with the Waste Collection Permit, Facility Permit requirements and EMP Procedures within the Facility.

Responsible for the maintenance and up keep of all vehicles and equipment. Ensure all drivers and operatives are appropriately trained and that all vehicles and trailers comply with Environmental H&S and Road Safety Regulations

To ensure that waste is handled appropriately and to ensure that all wind blown litter is picked immediately.

Responsibility to ensure that any oil/grease/diesel spills from their vehicle are cleaned up and any problems with vehicles are highlighted to manager immediately.

To ensure that only conforming waste enters the facility and to ensure that this is recorded accurately and appropriately.



All staff working at the proposed facility will be provided training in the Applicants 'Derryarkin Waste Facility Environmental Training Handbook.'

4.3.4.4.3 Site Security

Waste will only be accepted at the facility from known customers. Operating hours of the facility and other security information will be available on the Facility Notice board to be situated at the site entrance. There will be no casual public access and deposition of wastes onsite. Perimeter fencing will be installed around the site to prevent unauthorized access to the site. The entrance gate to the front of the site (southern boundary) will be locked during non-operational times to include night times, when there are no scheduled deliveries of waste to the site.

A security team will guard the site while the facility is closed, and their efforts will be supported by a sophisticated CCTV camera system. Wall mounted CCTV cameras will be installed on-site at the southern and western facades of the MRF building and on the northern and eastern entrances of the administration building. CCTV infrastructure comprising of Digital Communicator to Central Station will be monitored by both a private security company (Moran CCTV).

4.3.4.5 Environmental Management during Facility Operations

4.3.4.5.1 General Environmental Management

The operation of the proposed facility will be incorporated into the scope of the Environmental Management System for the applicant. A site-specific Environmental Management System/Plan has been developed for the site – Derryarkin Waste Facility Environmental Training Handbook. This document will be updated to reflect any environmental management conditions within the eventual WFP/IE Licence.

Operations at the proposed facility will take place in accordance with dedicated waste processing procedures for the facility. Daily inspections of the facility will take place and will focus on the following areas:

- Proper handling and storage of wastes
- Odour nuisance inspection
- Mud & Dust yard area inspection
- Litter inspection
- Vermin & Birds inspection
- Any other nuisance or overloading of waste receptacles



A record of all inspections will be maintained. Corrective and preventative action will be implemented in response to any identified non-conformances. More comprehensive EMS internal audits will be carried out on a periodic basis to identify conformance with the requirements of the EMS for the overall facility and the Waste Facility Permit/IE Licence conditions for the facility.

Procedures for recording waste types and quantities and waste acceptance procedures will be in place at the proposed facility.

An Emergency Response Procedure and a Clean Up and Housekeeping procedure will be in place at the facility.



The facility will be staffed and managed by experienced professionals working within a defined management structure, with clear roles and responsibilities.

4.3.4.5.2 Surface Water Management

Surface Water Management will be carried out accordance with plans described in Section 4.3.2 of this document.

Surface Water Discharge monitoring will be carried out on-site to ensure that the surface water discharges from the site are uncontaminated. Water monitoring will also be undertaken at the receiving drainage channel to the south of the site upstream and downstream of the site surface water discharge outfall point.

4.3.4.5.3 Foul Water Management

Foul Water Management will be carried out accordance with plans described in Section 4.3.2 of this document.

The wastewater treatment system on-site will be periodically serviced in accordance with manufacturer specification to ensure its proper functionality.

4.3.4.5.4 Dust Management

It is noted that the proposed facility will be situated adjacent to an existing quarry / inert waste recovery facility which may give rise to high background levels of dust. The applicant intends on strictly controlling its operations however using to control dust generation at the subject proposed facility.

Operations at the proposed facility will be undertaken in accordance with a dust control procedure. The implementation of this procedure will reduce the potential for excessive built up of dust generating wastes and debris on-site.

The site will operate on a clean as you go basis and will be regularly swept by a forklift sweeper. The roadsweeper vehicle possesses wetting capabilities in order to collect/remove and minimise dust and mud from yard and road surfaces. There will be an end-of-day clean up at the site to ensure that all sources of dust and litter are removed and to ensure that there is no off-site nuisance outside of normal operating hours.

Daily site inspections will be undertaken to ensure site cleanliness and prevent the generation of excessive levels of dust generating waste.

Wastes will only be accepted on-site in covered or enclosed vehicles.

The main dust generating waste which will stored on-site is Construction and Demolition waste. This waste will be stored either indoors in the MRF building or within an enclosed bay outdoors. Where necessary (i.e. on dry and/or windy days, or in the case of waste presenting on-site which is particularly light and dispersive) this waste will be lightly wetted to prevent dust generation.

Circulation routes will be wetted during dry and/or windy days to prevent dust generation as a result of traffic movements on-site. A strict 15 kph speed limit will also be in force on-site to prevent the generation of dust associated with harsh HGV and vehicle movements on-site.





Dust deposition monitoring will be undertaken on-site quarterly in accordance with the terms of the WFP and subsequent IE Licence in order to demonstrate that dust does not impact upon any off-site receptors.

Where dust monitoring shows a breach of the relevant dust deposition limit or where there is a complaint made to the site relating to dust generation, a non-conformance will be raised under the company's EMS, root cause analysis will be undertaken and corrective/preventative action will be implemented to identify the source of dust, reasons why dust is being generated and control measures to cease dust generation and prevent future occurrence of dust generation. A record of the above will be maintained for future reference.

4.3.4.5.5 Noise Management

It is noted that the proposed facility will be situated adjacent to an existing quarry / inert waste recovery facility and a pig farm which may give rise to high background levels of noise. The applicant intends on strictly controlling its operations however using to control noise generation at the subject proposed facility.

The main sources of noise on-site will be as follows:

- Traffic movements
- Waste handling activities including waste loading and unloading
- Waste processing plant operations

The main measure to control noise on-site will be to carry out all waste processing operations inside the production building.

Waste handling activities will be carried out in accordance with dedicated waste processing procedures which will be designed to minimize noise associated with waste handling. Handling, loading and unloading of wastes which has the potential to generate excessive noise (e.g. metals) will be undertaken in a careful and gentle manner. Drop heights will be minimized to minimize noise and loading/unloading will be undertaken in a controlled, gradual manner.

Vehicle idling and the excessive use of reverse alarms will be discouraged on-site to prevent excessive unwarranted noise. A speed restriction of 15 kph will be applied on-site to prevent excessive noise generated by harsh traffic movements or vehicle revving. Company vehicles using the site will be fitted with low noise level reverse warning alarms consistent with site safety requirements.

Noise monitoring will be carried out for the facility in accordance with the terms of the revised waste facility permit for the proposed facility. Noise monitoring will be undertaken at the nearest noise sensitive location annually during day-time operating hours to demonstrate that noise is not impacting adversely upon this receptor. Any noise complaint will be thoroughly investigated, and corrected measures put in place to prevent reoccurrence.

4.3.4.5.6 Odour Management

It is noted that the proposed facility will be situated adjacent to a pig farm which may give rise to high background levels of odour. The applicant intends on strictly controlling its operations however using to control odour dispersion at the subject proposed facility.





Malodorous wastes present on-site will be strictly managed and controlled. All malodorous organic waste arriving on-site will be stored in indoor locations to reduce odour emanation from the site. The residence time for waste accepted on-site will strictly be kept to a minimum to prevent the build-up of degrading putrescible waste on-site. All organic waste arriving on-site will be processed promptly before being transferred off-site for treatment at a third-party facility.

The site will be subject daily inspections for the presence of odorous waste. Where inspections identify an odour issue or where a complaint is made relating to odour a non-conformance will be raised and corrective and preventative action implemented to address the issue.

Daily site inspections and clean ups will be undertaken to prevent the generation of odorous wastes outside of the designated indoor storage location for such wastes.

4.3.4.5.7 Housekeeping and Nuisance Management

Good housekeeping will be practiced at the proposed facility on the site by way of a number of measures. Wastes will be stored in an orderly and tidy fashion in dedicated storage bays situated in the MRF building and in the yard. Routine patrolling of the site will take place to ensure the site is in a clean, tidy and orderly conditions. Daily inspection for nuisance issues will be undertaken on-site. Dedicated personnel will be assigned to carry out litter removal on-site on a daily basis both within and outside (where necessary) the facility boundary. In the event of windblown litter that may pass beyond the facility boundary a selected crew of personnel for the broader facility will be assigned to remove any unwanted litter if & where identified.

The site will be subject to routine sweeping and cleaning to minimize the generation of litter. The yard areas at the site will be swept routinely by a sweeper attached to a forklift. Facility staff will also operate a clean as you go policy. All areas will be regularly swept and cleaned. All areas will be cleaned between work shifts and at the end of the day. Waste processing and storage areas will be subject to wash down daily.

The applicant will log reports or incidents of nuisances such as dust, odour or mud, as well as other parameters such as vermin and bird nuisances. If nuisances are observed or reported, then appropriate corrective and preventative measures will be undertaken taken.

A Pest Control Contractor will provide rodent monitoring and control at the overall waste facility. This contractor will periodically visit the site and service the bait points. This pest contractor also offers an emergency callout service, in the event of rodents or other vermin being spotted.

The appointed pest control company also offers fly (spraying), bird and other vermin control services, which are available to the facility operator when they are required. During summer months the pest control company will carry out preventative measures (spraying) of all waste areas for insect/fly control, particularly areas containing biowastes. The pest control contractor will also provide an emergency call out service if in the event where required.

4.3.4.5.8 Control of Visual Impact

A perimeter wall (4 m in height) and perimeter fencing (2.1 m in height) will be installed around the site to minimize visual impacts associated with facility operations. Building facades will consist of light grey/green cladding so as to create a more decorative and aesthetically pleasing finish.





4.3.4.5.9 Traffic Management

An Internal Traffic Management System is proposed on-site to facilitate entry of traffic to the site, temporary truck set down, access to the on-site weighbridge, waste unloading and loading in each process area on-site, and the internal circulation of vehicles on-site. A number of drawings depicting traffic movements and circulation on-site are provided in Volume 4 of this EIAR. These include the following:

- Drawing P2344-0700-0002
- Drawing P2344-0700-0003
- Drawing P2344-0700-0004
- Drawing P2344-0700-0005

4.3.4.6 Environmental Monitoring

An environmental monitoring programme for the facility will be developed. This programme will involve periodic monitoring of the following:

- Surface Water Discharge Monitoring;
- Receiving Surface Water Body Monitoring (upstream and downstream);
- Groundwater Monitoring;
- Noise Monitoring;
- Dust monitoring;
- Odour Monitoring.



This programme will be revised appropriately prior to commencement of operations on-site depending on planning permission, WFP and IE Licence conditions imposed by Offaly County Council and the EPA.

4.3.5 Use of Natural Resources

4.3.5.1 Construction Phase

The type and quantity of construction materials to be used during the construction phase of the proposed development has been estimated and is shown in Table 4-3:

Table 4-3: Natural Resource usage during the Construction Phase

Natural Resources	Unit	Quantity	Note
MATERIALS RECOVERY FACILITY			
Concrete Floor			
General Excavation	m ³	2,243	Estimated Depth
Sub-Grade CI 6F1	m ³	897	Estimated Depth
Sub-Base CI 804	m ³	598	Estimated Depth



Natural Resources	Unit	Quantity	Note
Concrete	m ³	748	Estimated Depth
Reinforcement to Concrete Pavement	tonnes	112	Assumption 150kg/m ²
Concrete Push Walls			
General Excavation for Wall Foundations	m ³	292	Estimated Dimensions
Concrete Blinding	m ³	12	Estimated Depth
Concrete Foundations	m ³	280	Estimated Depth
Reinforcement to Concrete Foundations	m ³	42	Assumption 150kg/m ²
Concrete for Push up Walls	m ³	566	Assumed Wall Thickness
Reinforcement to Concrete Push up Walls	tonnes	85	Assumption 150kg/m ²
Steel Reinforcement			
Primary Steel	tonnes	105	Assumption 35kg/m ²
Secondary Steel	tonnes	6	Assumption 2kg/m ²
Metal Cladding			
Roof Metal Cladding	m ²	2,338	
Other			
Roller Doors	no.	5	
ADMINISTRATION BUILDING			
Floor			
General Excavation	m ³	54	Estimated Depth
Sub-Grade CI 6F1	m ³	65	Estimated Depth
Sub-Base CI 804	m ³	43	Estimated Depth
Concrete	m ³	54	Estimated Depth
Reinforcement to Concrete Pavement	tonnes	8	Assumption 150kg/m ²
Walls			
General Excavation for Wall Foundations	m ³	65	Estimated Dimensions
Concrete Blinding	m ³	3	Estimated Depth
Concrete Foundations	m ³	62	Estimated Depth
Reinforcement to Concrete Foundations	tonnes	9	Assumption 150kg/m ²



Natural Resources	Unit	Quantity	Note
Concrete for Walls	m ³	79	Assumed Wall Thickness
Reinforcement to Concrete Walls	tonnes	12	Assumption 150kg/m ²
Cladding			
Metal Cladding	m ²	277	
Render Finish or Forticrete Block			
Render Finish or Forticrete Block	m ²	197	
CONCRETE YARD			
General Excavation	m ³	3732	Estimated Depth
Sub-Grade CI 6F1	m ³	1,317	Estimated Depth
Sub-Base CI 804	m ³	878	Estimated Depth
Concrete	m ³	1317	Estimated Depth
Reinforcement to Concrete Pavement	tonnes	198	Assumption 150kg/m ²
SECURITY FENCE			
Palisade Fence	lin. M	145	
General Excavation for foundations	m ³	19	
Concrete Foundations	m ³	19	

4.3.5.2 Operational Phase

At maximum operational capacity it has been estimated that the facility will use 354 MWh of electricity per annum. This is broken down as follows:

- C&D Line Estimated Electricity Consumption – 92.7 MWh per annum;
- MSW Line Estimated Electricity Consumption – 255.0 MWh per annum;
- Administration Building Estimated Electricity Consumption – 6.4 MWh per annum.



At maximum operational capacity it has been estimated that mobile plant will use ca. 65,000 litres diesel per annum. This is broken down as follows:

- Timber Shredder Estimated Diesel Consumption – 80 litres per day – 12,480 litres per annum;
- Site Mobile Plant Estimated Diesel Consumption – 300 litres per day – 46,800 litres per annum;
- Electric Generator Estimated Diesel Consumption – 5 litres per day – 6,200 litres per year (*In the event that either C&D / C&I Line or MSW Line is operated by Diesel Generator instead of electricity) .



At maximum operational capacity, it has been estimated that the proposed facility will use 230 m³ of water per annum. This estimation is based on average water usage over the last three years (2019, 2020 and 2021) at the applicants facility based in Coes Road, Dundalk, which also accepts 90,000 tonne of waste per annum. Water will be used at the subject proposed facility for wash down of waste storage and process area and for drinking water and sanitation on-site.

4.3.6 Waste Management

4.3.6.1 *Construction Phase Waste Management*

The type and quantity of waste materials that will be generated during the construction phase of the proposed development has been estimated and is shown in Table 4-4:

Table 4-4: Waste Materials generated during the Construction Phase

Natural Resources	Unit	Quantity	Note
Soil Bund			
Soil	m ³	430	Estimated Volume
Concrete Yard			
Concrete	m ³	711	Estimated Depth
Concrete Reinforcement	Tonnes	20	Assumption Single Layer of A393
Existing Sheds			
Wall Foundations	m ³	177	Estimated Dimensions
Reinforcement to Wall Foundations	tonnes	74	Assumption 150kg/m ²
Wall Concrete	m ³	236	Estimated Dimensions
Reinforcement to Concrete Walls	tonnes	35	Assumption 150kg/m ²
Concrete Floor	m ³	346	Estimated Depth
Concrete Floor Reinforcement	tonnes	52	Assumption 150kg/m ²
Steel Reinforcement			
Primary Steel	tonnes	48	Assumption 35kg/m ²
Secondary Steel	tonnes	3	Assumption 2kg/m ²



Natural Resources	Unit	Quantity	Note
Metal Cladding			
Wall Cladding	m ²	356	Estimated Dimensions
Roof Cladding	m ²	1,740	Estimated Dimensions
Raised Water Tanks			
Support Steel	Tonnes	1	Estimated
Concrete Tanks	no.	2	
Other			
Pump House	no.	1	
Tank	no.	1	
Trees	no.	8	
Fencing	lin. m	250	Assumed Foundation Construction
Gates	no.	2	Estimated. Depth



4.3.6.2 Operational Phase Waste Management

Minor levels of waste will be generated as a result of site operations, including MSW, DMR and food waste. These wastes will be collected in designated waste receptacles on-site before being transferred for on-site processing.

Other more occasional wastes generated on-site including, inter alia, any Hazardous Waste (E.g. Fuels or Oils), Waste Electrical and Electronic Equipment, Waste Lighting and Waste Batteries will be safely stored on-site before being dispatched off-site to an appropriate waste treatment facility.

4.3.7 Decommissioning Phase of the Proposed Development

In the event that the facility is no longer to be used for waste processing, it will be decommissioned in accordance with a Decommissioning Plan for the facility (which will be prepared as a condition of the Waste Facility Permit / IE Licence).

In accordance with the plan, on cessation of waste activities, the following broad steps will occur:

- a. All materials and wastes will be wound down gradually prior to closure and removed for disposal or recycling at an appropriately authorized waste treatment facility.
- b. All wastewater collected on-site will be collected and removed for disposal or recycling at an appropriately authorized waste treatment facility.



- c. All hard-standing areas and drainage systems including interceptors and underground tanks will be cleaned and washed down.
- d. Plant and equipment will be safely decontaminated/cleaned using standard procedures and competent contractors/staff.
- e. Environmental monitoring and assessment will be undertaken to confirm that the ground and groundwater underlying the site and receiving surface bodies are in satisfactory condition.
- f. All plant and equipment present on-site will be decommissioned and either resold, reutilized at a separate site operated by the applicant, or scrapped.
- g. Office and staff facilities will be cleaned and emptied of all documents and IT equipment previously associated with the operation of the waste facility.
- h. The buildings, concrete hardstanding, drainage systems, wastewater system and fencing will be left in-situ.
- i. All ancillary equipment such as the vehicles, skips, bins and monitoring equipment will be removed off site.
- j. Records relating to waste management, material management, and environmental management and assessment will be retained for a minimum of 7 years.

4.3.8 Health and Safety Management

The proposed facility will be designed, constructed and operated in accordance with the following regulations and guidance documents:

- Safety, Health & Welfare at Work (Construction) Regulations 2013;
- Safety, Health & Welfare at Work Act 2005;
- Safety, Health & Welfare at Work (General Application) Regulations 2007;
- Safety, Health and Welfare at Work (Biological Agents) Regulations 2013;
- Best practice Health and Safety guidelines;
- Relevant EPA BAT guidance including the EPA's Best Available Techniques for the Waste Sector: Waste Transfer and Materials Recovery.

4.3.8.1 *Design Stage Risks*

Fehily Timoney and Company (FT) are responsible for the design of the proposed development and have been appointed as Project Supervisor for the Design Process (PSDP) for the preliminary design phase of the development in accordance with the Safety, Health and Welfare at Work (Construction) Regulations 2013. As PSDP FT have carried out a risk assessment and identified health and safety risks associated with the proposed development identifiable at this design stage. A safety file for the proposed development works have been prepared in order to minimise many of the potential risks at construction stage. Health and Safety during the project construction stage will also need to be properly managed.



4.3.8.2 Health and Safety During Construction

The construction contractor will be appointed as Project Supervisor for the Construction Stage (PSCS) in accordance with the Safety, Health and Welfare at Work (Construction) Regulations 2013. The suitability and competence of the contractor to fulfil this role will be carefully assessed by the applicant. prior to the appointment.

A site-specific Health and Safety Plan for the construction phase of this project will be prepared in accordance with the Safety, Health and Welfare at Work (Construction) Regulations 2013. This will address all safety aspects of the construction project including, but not limited to:

- Site access and general induction training;
- General site safety;
- Chains, ropes and lifting gear;
- Special provisions for hoists;
- Protective clothing and footwear required;
- Lockout/tag-out procedures for safe electrical operations;
- Method statements for work procedures;
- Miscellaneous items.



4.3.8.3 Operational Health and Safety

Access to the site during the operational phase of the proposed development will be restricted to employees, waste vehicles and occasional visitors. Procedures will be in place at the facility to ensure the health and safety of all persons entering the site, including the signing in/out of all visitors. All personnel present on-site will be provided with and will be obliged to wear; personal protective equipment (PPE) appropriate for their particular functions. PPE includes facemasks, gloves, safety glasses, steel-toed footwear, overalls, reflective jackets and helmets.

Any new employees will be made familiar with the contents of the site-specific Health and Safety Plan. All health and safety practices of the applicant will be reviewed on an annual basis to ensure that they are in line with best practice in this sector and will continue to be so. Health and Safety management will be implemented on-site in accordance with the applicants certified Health and Safety Management System. Regular safety audits will be carried out on-site to ensure the safety of all personnel working there. Furthermore, suitable operation and maintenance procedures will be in place to facilitate the safe operation of the whole facility.

Vehicular traffic movements within the site are speed restricted and all traffic movements are subject to strict procedures, in full accordance with health and safety requirements.

Other operational health and safety aspects such as noise and air quality are discussed in other Chapters of this EIAR. Measures have been taken in the design of the proposed infrastructure to minimise the potential impact of these aspects on health and safety.

It is the applicants intention to carry out the following in accordance with the eventual terms of the WFP/IE Licence for the facility

- Provide full operational, health and safety, and environmental training for all employees,



- Develop an Accident Prevention Policy to enable proactive hazard identification and the prevention of accidents that may have an impact on health and safety and/or the environment.
- Develop Emergency Response procedures for responding to incidents or accidents that may have a health and safety and/or environmental impact.
- Develop a Fire Prevention and Mitigation Plan in accordance with Fire Authority requirements.

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