

Section 4-8-1

Operational Report

This section includes:

The Operational Report should describe the plant, methods, processes, ancillary processes, abatement, recovery and treatment systems, and operating procedures for the activity, to include a copy of such plans, drawings or maps, process flow diagrams, and such other particulars, reports and supporting documentation as are necessary to describe all aspects of the activity.

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1. Overview of the Waste Activity

Sancom Ltd propose on establishing and operating a Material Recovery Facility at a former quarry site situated in Graney West, Co. Kildare.

The principal activity will involve the use of imported, uncontaminated soil and stone, sourced from construction sites, to backfill and restore the worked out quarry.

Sancom Ltd intend on accepting a maximum of approximately 1.8 million tonnes of soil and stone material on-site for backfilling over the course of years, depending on market demand for disposal services. This equates to a maximum of 72,000 tonnes of soil and stone material per annum over 25 years in the ideal scenario for the applicant.

In addition to the principal waste activity described above, it is proposed to carry out the following secondary waste recovery activities:

- Intake of top-soil, screening at existing screening plant and resale of such material,
- Intake of gravel and sands, washing at existing washing plant and resale of such materials,
- Intake of concrete, concrete crushing using concrete crushing equipment, mixing with sand and gravel before being fed to the washing plant to form aggregate, and resale of such material, and;
- Intake of garden waste, shredding and composting of this waste within a silage pit over an underground effluent storage tank, for use for agricultural land spreading.

The total maximum amount of waste to be accepted on-site will be 99,500 tonnes per annum. Only non-hazardous materials will be accepted on-site. The table overleaf summarizes the waste activity detailing: the types of waste to be accepted at the facility, processing methods, the destination of recovered materials, the classes of activity under the fourth schedule of the Waste Management Act which will be undertaken on-site, and proposed maximum intake tonnages per annum.

A Waste Licence is required from the EPA to undertake the proposed waste activities.

Table 1: Overview of the Proposed Waste Activity - Waste types proposed

List of Waste (LoW) Code	LoW Description	Waste Type (Ordinary description)	Processing Method	Destination	Waste Management Act Recovery/Disposal Code	Amount of waste proposed to be accepted at the facility per annum (tonnes)
17 05 04	Soil and stones other than those mentioned in 17 05 03	Sub-soil and overburden	Backfilling	Infilled on-site	R10 /R13	72,000
		Top-soil	Screening at soil screener	Recovery and resale	R5 /R13	1,500
		Sand and Gravel	Washing / Screening at washing plant	Recovery and resale	R5 /R13	12,500
17 01 01	Concrete	Various types of concrete and cement	Concrete crushing at crushing plant	Recovery and resale	R5 /R13	12,500
20 02 01	Biodegradable waste	Garden waste	Shredding and composting	Recovery and landspreading	R3	1,000
Total						99,500

2. Description of the Waste Activity and Processing Methods

2.1 General

Site Layout Plans adjoining this location application (Attachments 3-2-13 to 3-2-27) depict the existing and proposed layout of the site and the proposed waste activity.

Waste materials will be brought on-site on HGVs via the proposed site access road which links the L4501 road to the site. Waste Acceptance Procedures will be in place to ensure unauthorized wastes are not accepted on-site. Waste materials will be brought via an internal haul road to a stockpiling and sorting area situated to the east of the site. Here, waste materials will be inspected and separated into the following waste streams using mobile machinery:

Sub-soil and overburden (List of Waste (LoW) Code 17 05 04)

- Topsoil (LoW Code 17 05 04)
- Sand and Gravel (LoW Code 17 05 04)
- Concrete (LoW Code 17 01 01)
- Biodegradable garden waste (LoW Code 20 02 01)

Sub-soil and overburden material will then be brought via internal haul routes to the proposed fill area for backfilling.

Sand and Gravel will be brought to an adjacent sand and gravel stockpiling area for storage prior to processing at an adjacent, pre-existing sand and gravel wash plant.

Topsoil will be directed to the soil screening plant situated adjacent to the stockpiling and sorting area for processing.

Concrete will be directed to the concrete jaw crusher plant situated adjacent to the stockpiling and sorting area for processing prior to being mixed with sand and gravel before being fed to the washing plant to form aggregate.

Biodegradable garden waste will be directed to a hard standing concrete area to the north of the site where it will await processing in a green waste shredder proposed to be situated in this area, prior to being dispatched for storage and decomposition at a hardstanding, impervious, hard-standing composting area situated adjacent to the shredder.

It is expected that material outputs will equate to waste material inputs for each of the above processing activities. It is expected there will be a negligible quantity of residual waste generated when carrying out any of the above waste activities.

Haulage routes for goods in, goods processed, and goods out are displayed in Site Layout Plans (Attachments 3-2-13 to 3-2-27)).

A depiction of the proposed waste activities is shown in a process flow diagram in Figure 1.

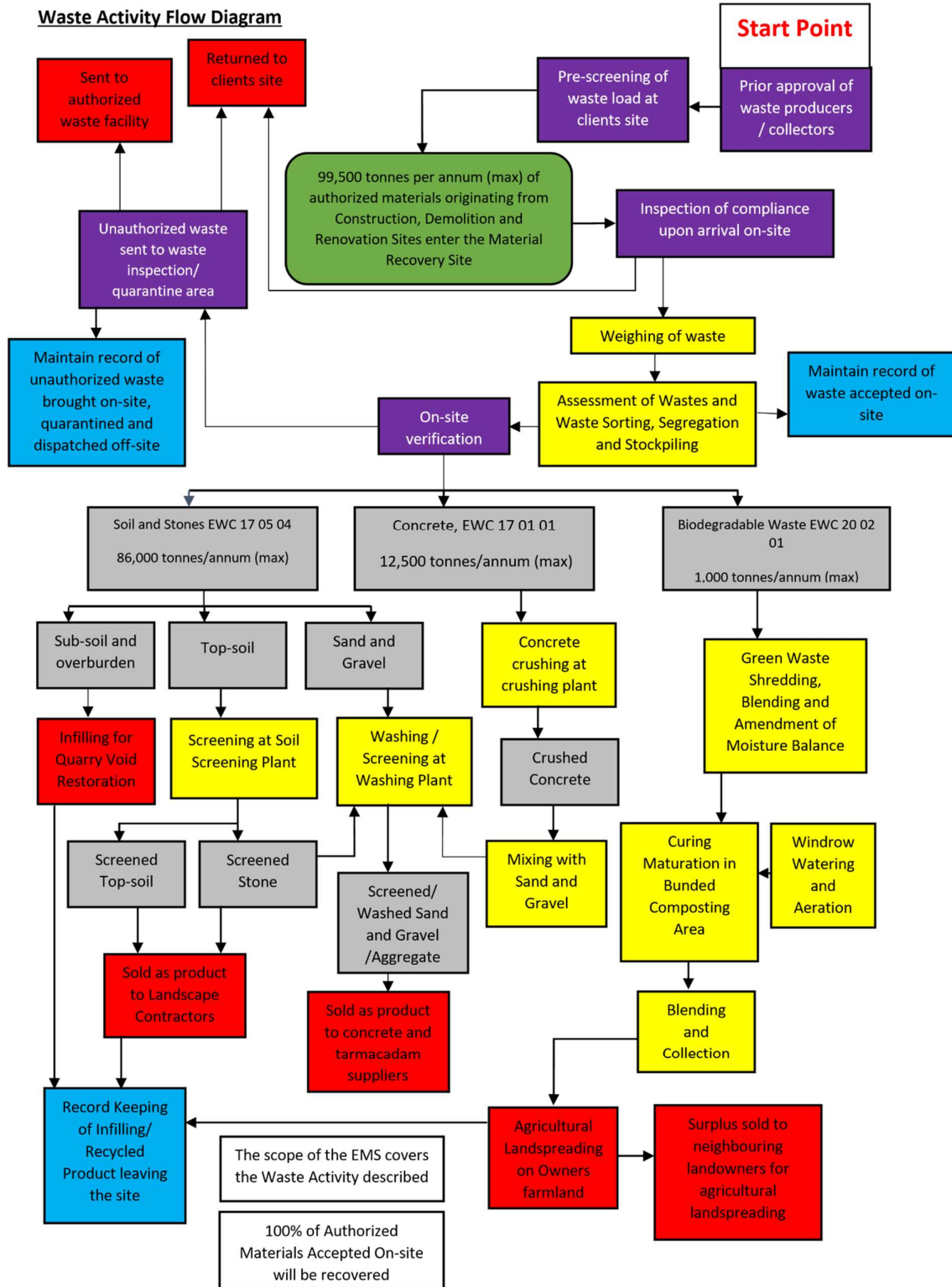


Figure 1: Waste Acceptance and Handling Process Flow

2.2 Infilling Sub-soil and overburden

Sancom Ltd intend on reinstating the designated fill area through infilling. The boundary of the fill area is defined in existing contours drawings (Attachments 3-2-13 to 3-2-27). The footprint of proposed area to backfill is 13.65 hectares in size. The reinstated area will be covered with topsoil and reseeded. The restored area will be subsequently used for agricultural purposes, with some evergreen planting along site boundaries. The final reclaimed contours of the fill area are shown in a proposed contours drawing adjoining the application (Attachment 3-2-25 & 3-2-26)

The proposed quantity of such material to be imported and infilled would be a maximum of 72,000 tonnes per annum, depending on market demand, and overall is expected to be approximately 1.8 million tonnes over the life-time of the facility, (Considering a fill area volume of ca. 1,054,949 m³ and assuming an average imported soil density of 1.8 t/m³.), throughout the operational phase of the proposed infilling activity (25 years).

For more information regarding the infilling activity and volume and dimensions of material to be infilled refer to the aforementioned existing and proposed contour plans and the cross-referenced longitudinal sections (Attachment 3-2-27 & 3-2-44).

Inert waste in the form of sub-soil and overburden brought on-site will be directed for infilling in the proposed fill area. Sub-soil and overburden will firstly be inspected then sorted and stockpiled in the stockpiling and sorting area to the east of the site before being transferred to the fill area and unloaded from trucks at the backfilling face. A Komatsu Bulldozer will be used for spreading and compaction of filled material.

2.3 Screening of Topsoil

Topsoil taken from client's sites will be brought on-site, inspected and unloaded in the stockpiling and sorting area to the east of the site. Topsoil will be directed to designated unprocessed material stockpiles nearby to await processing in adjacent proposed soil screening plant (Soil and Stone Powerscreen mkii).

Unprocessed topsoil will be unloaded in a controlled and commensurate manner into the plant feed hopper by a loader and then directed to screening equipment by way of a conveyor. Material will be separated through screening into stone and soil which will in turn be transferred to temporary, small, processed material stockpiles. Processed topsoil will be sold as product to local landscape contractors as per demand. Stone from the process will be directed toward the washing plant for processing prior to being sold to concrete and tarmac suppliers as per demand. Soil and stone material being sold to third parties will be loaded into HGV's using mobile loading machinery before being taken off-site and brought to customer premises.

2.4 Sand and Gravel Washing

Sand and Gravel originating from clients sites will be brought on-site, inspected and then unloaded and segregated as necessary in the stockpiling and sorting area to the east of the

site, before being transferred to the sand and gravel stockpiling area situated adjacent to the pre-existing sand and gravel washing plant on-site.

A conveyor belt draws materials from a stockpile built up next to the plant and conveys it to the plant, where it is firstly washed to remove unwanted clay. The sand/gravel is then passed over a series of screens that sieve the materials into different sizes. The material that comes off the coarsest screen is washed in a log washer before it is further screened. The larger gravel particles are separated out and screened into different sizes. Sometimes crushed concrete is mixed with sands and gravels prior to being fed through the washing plant to form aggregate. Processed materials will be sold to concrete and tarmacadam suppliers as per demand. Aggregate material being sold to third parties will be loaded into HGV's using mobile loading machinery before being taken off-site and brought to customer premises.

The washing of the gravel during processing generates wash water that is directed to a series of three settlement lagoons to settle particulates. Clean water from lagoons are then recycled back to the washing processes using a pumping station.

2.5 Concrete Crushing

Concrete waste material in the form of building rubble, cement products, concrete blocks and concrete floor tiles will be brought on-site from client's sites. Concrete material coming on-site will firstly be inspected then unloaded and segregated in the stockpiling and sorting area to the east of the site.

Concrete will then be hauled and deposited at unprocessed material stockpiles nearby to await processing in an adjacent proposed concrete jaw crusher. Concrete will be unloaded into the concrete jaw crusher using a front-end loader for processing. Crushed concrete will then be temporarily stored in a small, processed material stockpile. Processed, crushed concrete will then be mixed with sand and gravel before being fed to the washing plant to form aggregate which will be sold to concrete and tarmacadam suppliers as per demand.

2.6 Composting of Biodegradable Garden waste

Composting is defined as the autothermic and thermophilic biological decomposition of separately collected biowaste, including organic sludges of biological origin, in the presence of oxygen and under controlled conditions in order to produce compost.

The physical composting process proposed is relatively simple with limited engineering infrastructure. It is proposed to undertake composting on-site in accordance with the EPA BAT Guidance Note and in particular having regard to the Scottish EPA's Technical Guidance BAT for Composting (Note: there is no specific Irish EPA BAT Guidance Note for Composting).

Biodegradable garden waste arising at construction, renovation and demolition sites will be accepted on-site, inspected, segregated and promptly transferred directly to a bunded, impervious concrete area to the north of the site designated for composting. Here, biodegradable waste will be shredded in a green waste shredder.

Following this, shredded biodegradable materials will be blended and the amendment of the materials moisture balance will take place, as needed. The material will then be transferred to

a composting stockpile directly adjacent to the shredder. This stockpile will be situated over a bunded area.

The hardstanding, impervious, bunded composting area will drain to an underlying 180,000 litre effluent storage tank. As such there will be no discharges to the environment from the composting area.

The next stage of the process is the curing/maturation stage. Source material deposited in the windrows in the composting area will be mixed and formed into narrow piles. Windrow watering and aeration will take place periodically to ensure compostable materials have appropriate levels of moisture and aeration.

Following the curing/maturation period, finished compost will then be blended and collected prior to being applied to agricultural land in ownership of the site operator to improve soil quality. Any surplus compost will be resold to local farm owners. This compost material will be loaded into HGVs using mobile loading machinery before being transferred to third party sites.

Only biodegradable garden waste will be accepted on-site for composting. No malodorous waste such as manure, slurries, sludges or food waste will be accepted on-site for composting.

Upstream auditing of clients' sites will take place to verify the nature and types of waste to be accepted at the facility, and to ensure such malodorous waste is not accepted on-site. In addition, Waste Acceptance Procedures will be in place to prevent unauthorized wastes being accepted on-site.

3. Site Infrastructure

3.1 Site Access

An existing access road to the east of the site connects the site with a local tertiary road. It is not proposed to use this route as a haul route. This route will only be used for staff and visitors driving to and from the site. No HGV traffic in connection with the materials recovery facility will use this route – some agricultural traffic will still have access via this route.

It is proposed to construct a new site access road to the south of the site connecting the site directly to the L4015 (Castledermot to Baltinglass regional road). Details on the design of the new site access road and junction, as well as proposed upgrades to the public road at the proposed entrance location are shown in drawings adjoining this application.

Aside from the access roads discussed above, the property boundary is closed off by post and wire fencing and/or hedgerow. Security gates will be present at both site access roads. There is no other access into the quarry complex.

3.2 Traffic Management Infrastructure

It is proposed to erect direction signs, warning notices and speed restriction signs internally on-site along the site access roads and internal circulation routes.

The existing site access road will only be used by staff and visitors. No HGV traffic in connection with the materials recovery facility will use this access road. It is proposed to construct a passing point along the existing access road to the east of the site for staff and visitors to utilize where necessary.

The proposed site access road to the south of the site will be used by HGV's entering and leaving the site. The site access junction here will be splayed, with good sight distance in both directions allowing for the safe ingress and exiting of vehicles to and from the site. The site entrance gate will be set back from the public road edge to avoid queuing on the local road network. The splayed access will allow for safe passing of vehicles with ease. Proposed sightlines are sufficient in both directions for vehicles approaching the site access junction from the L4015, and for vehicles exiting the site. The first 100 metres of the site access road from the L4015 and the junction between the site access road and the L4015 will have a road pavement overlay of either tarmac, asphalt, or concrete (to be decided). The rest of the road will be gravelled. It is proposed to have a wheel wash with an integrated silt tank, rattle bars and oil interceptor 100 metres in from the site entrance. A passing point will be developed 100 metres back from the site entrance adjoining the proposed wheel wash. The site access road will be 7 metres in width.

It is proposed to install a stop sign at the junction between the new site access road and the L4015. It is proposed to have proposed warning markings (M106) on the L4015 on approach to the junction. It is proposed to have the new site access road slightly elevated and graded in such a manner that surface water run-off will drain naturally into surrounding drainage ditches bordering adjacent fields.

No pedestrians will be allowed in working areas on-site. Pedestrian movements will only take place around the garage area. If staff are engaged in processing operations, they will be in mobile plant.

3.3 Site Roads, Parking and Hardstanding Areas

Internal circulation routes for goods in, goods being processed internally, goods out and personnel access have been designed and are delineated in Site Layout Plans Adjoining this application (P13-16). Internal circulation routes will comprise gravel roads. Access roads and internal haul routes will be inspected and swept periodically to prevent the build-up of litter, debris and mud. These routes will be re-gravelled where there is evidence of deterioration or the excessive building up of mud or moisture.

It is proposed to provide employee and visitor car parking at a permeable car parking area adjacent to the eastern boundary of the site and south of where the existing access road meets the site.

Separately, it is proposed to provide five parking spaces for HGV's on-site. This HGV parking area will be for Sancom vehicles only. There will be no HGV parking spaces for incoming HGV's as they will arrive on-site, deposit their load, pick up a load, if necessary, and then make their way immediately off-site. Truck queuing areas are provided within the main body of the site for truck arriving on-site waiting to deposit their load.

Rain falling across unpaved surfaces will percolate to ground or run-off towards existing settlement ponds. There are also extensive non-permeable concrete areas surrounding residential and agricultural buildings situated southwest of the existing site access road. It is proposed to extend this concrete apron northward. Rain falling across these surfaces will drain via the existing drainage network towards on-site settlement ponds. Overflow from the last of these ponds is via a 300 mm diameter concrete pipe to the Graney River.

A hard standing refuelling area will be developed adjacent to the fuel bund on-site. This area will be served by a silt trap and oil interceptor/separator. A 10,000 litre Klargestor FS Forecourt Separator will be situated on-site to serve the refuelling area. This will be required for when fuel tankers re-fill the fuel storage tanks on-site. One cell of a fuel tanker will hold 7,700 litres of fuel therefore the proposed separator will be sufficient in size and capabilities for containing any accidental fuel tanker oil spills/releases.

3.4 Weighbridge

It is proposed to install a weighbridge on-site to weigh waste accepted on-site. An unmanned surface mounted weighbridge will be installed adjacent to where the site access road to the south meets the main body of the site (Gravitation Weighbridge – Model No. E1530CLC-OG).

3.5 Wheelwash

A wheelwash facility will be installed along the proposed access road to the south of the site, to prevent the tracking of soil and mud out of the recovery facility onto the public roads. This wheel wash will have an integrated silt tank, oil interceptor and rattle bars.

The wheel wash will be situated approximately 100 metres back from the site entrance in order to allow excess water to be removed from the vehicles prior to reaching the public road, with the 100 metre stretch being hard surface. The location of the wheelwash is shown in the site layout plan (Attachment 3-2-23).

3.6 Stockpile and sorting area

Materials being accepted on-site will firstly be transferred to the stockpiling and sorting area on-site. Material will be separated out in the sorting area before being transferred to the relevant unprocessed material stockpile.

Stockpiles on-site will be managed in accordance with EPA guidance on stockpiles contained in their guidance document *Environmental Management in the Extractive Industry Guidelines* (2006) and the HSA's *Guidelines on the Management of Tips and Stockpiles* contained in Part 6 of their *Guidelines to the Safety, Health and Welfare at Work (Quarries) Regulations* (2008).

Materials will only be accepted and processed on-site when there is a market demand for the end product. Unprocessed materials will be kept at a maximum level of 7 metres in height. Processed materials will be immediately removed from the site for transfer to customer sites following processing. This will prevent the excessive built up of material stockpiles. In particular, processed material stockpiles will be small and temporary in nature.

3.7 Fuel and Oil Storage

Fuel for plant and equipment used at the facility will be stored at existing covered bunded fuel tanks situated on-site.

The bunded area has been designed in accordance with EPA Guidance *IPC Guidance Note on Storage and Transfer of Materials for Scheduled Activities*, taking into account criteria for bund requirements (e.g. 110% of the capacity of the largest tank or drum within the bunded area; or 25% of the total volume of substance which could be stored within the bunded area, whichever is greater).

Due to the current condition of the fuel bund, improvement works will take place at the bund, namely the plastering and sealing of the bund, to ensure the bund is fit for purpose and watertight. Testing of bund integrity shall be conducted upon commencement of site operations and every three years thereafter in accordance with good practice to verify the water tightness and integrity of bunds on-site. Where bund testing fails, a programme of works shall be established by a Qualified Engineer to fix the bund and ensure its water tightness and integrity.

Good hazardous material storage practices will be observed on-site. Fuel and oil tanks and containers will be labelled. Fuel pumps and attachments shall be located within bunded areas. The bunded area is covered to prevent rainwater accumulating in bunds.

Re-fuelling of mobile plant shall take place at a proposed hardstanding re-fuelling area which drains to a silt trap (proposed) and oil interceptor (proposed) (10,000 litre Klargestor FS Forecourt Separator) to protect against the spillage and run-off of hazardous substances.

Oil and lubricant changes and servicing of mobile plant is undertaken at the existing farm store. Oils and lubricants will be stored within sump pallets in this store.

Table 2 overleaf outlines the hazardous liquid material stored on site and the method of storage.

Table 2: Fuel/ Oil Materials Storage on site

Fuels	Capacity (litres)	Storage facilities on site
White diesel tank	5,000	Covered, bunded storage area
Agricultural Diesel tank	5,000	Covered, bunded storage area
Hydraulic oil	20	Sump Pallet in Farm Store
Engine oil	20	Sump Pallet in Farm Store
3 x grades of oil	20 (x 3)	Sump Pallet in Farm Store

3.8 Material recovery Infrastructure

The following processing machinery will be situated on-site for use in connection with the proposed development activity:

- Mobile Loading Machinery
 - Volvo 180 E wheel loader
 - 2 x Hitachi excavators 360
 - Komatsu D65 E bulldozer (for filling)
- Soil Screening Plant – Soil and Stone Powerscreen MK II (proposed)
- Sand and Gravel Plant (existing)
 - 10 x 5 Powerscreen washing head
 - 10 x 5 Powerscreen commander
 - CDE size cyclone
 - Trident Mark 2 dewatering plant
 - Powerscreen 800 log washing
- 1175 Terex Finlay Jaw Crusher x 12 (for concrete crushing) (proposed)
- Green Waste Shredder – Untha RS30/40 Shredder (being considered).

Material recovery activities will take place in open air on-site. Mobile loading machinery will be used for material handling, transporting materials internally on-site and for the purposes of backfilling and land restoration at the fill area. Soil Screening Plant/Sand and Gravel Washing Plant and Concrete Crushing Plant will be situated in open air on permeable ground to the east of the site, south of existing residential/farm buildings and adjacent to the stockpile and sorting areas. The Green waste shredding plant will be situated on a concrete pad adjacent to the existing farm shed. Composting piles will also be located on this pad. This pad will drain to an effluent tank.

The location and spatial extent of the plant to be used in connection with the proposed development activity on-site is depicted on the Site Layout Plans adjoining this application (Attachment 3-2-13 to 3-2-26).

3.9 Waste Inspection and Quarantine Area

Any imported waste material which, it is suspected, may not comply with waste acceptance criteria for the material recovery facility will be transferred to a Waste Inspection/Quarantine Area. This area is situated to the east of the site, south of the stockpile and sorting area and on the left of the point at which the proposed site access road meets the site.

The area will consist of two bays; one for inspection and one for quarantine. These bays will be covered and separated by a retaining wall. Both the waste inspection area and waste quarantine area will be sealed by a 100 mm thick reinforced concrete slab over 150 mm of granular sub-base and shall be bunded, to prevent the release of contaminants.

3.10 Equipment Storage

Mobile Plant and Equipment shall be stored on non-permeable concrete areas at the centre of the site. Any plant or equipment that is need of servicing or repair is taken to the farm store.

3.11 Wastewater and Surface Water Management

3.11.1 Wastewater Management

There is an existing septic tank system on-site into which all-domestic effluent from the staff toilet drains. This system drains to a soak hole on-site.

In addition, existing planning approved primary and secondary settling lagoons are situated on-site for the treatment of water used in the washing plant.

It is proposed to utilize an existing effluent storage tank on-site (180,000 litres capacity) which underlies the proposed composting area to serve this area. Floor plans and Elevation drawings of this underground effluent storage tank are shown in a drawing adjoining this application (Attachment 3-2-8 DWG 001E).

3.11.2 Surface Water Management

The majority of surface water which arises on-site leaves the site by percolation through gravels to ground and underlying groundwater.

In the event of substantial rainfall and the build-up of surface water run-off, most surface water runoff from the site will be directed to the existing settling lagoons currently present in at the quarry site by the natural topography of the site.

The settlement lagoons present on-site allow for the settlement of all settleable solids contained in surface water run-off. Where necessary, the water in the last of the lagoons located at the centre of the site is pumped back to the washing plant via a pump house and recycled within the process. Overflow from the last of the lagoons situated to the south west of the site is via a 300 mm diameter concrete pipe to the Graney River. It is only anticipated water will overflow from the site on rare occasions during exceptional heavy rainfall periods.

Surface water run-off arising on existing and proposed non permeable areas will be directed via topography toward a drain east of the dwelling on-site which in turn will direct this water to the pond to the south east of the site.

A separate drainage system serving the proposed re-fuelling area is proposed. Surface water arising in the re-fuelling area will be captured by this drainage system and directed to a silt-trap, an oil interceptor (10,000 litre Klargestor FS Forecourt Separator) and a soakaway.

An oil interceptor serving the proposed visitor and staff car park will also be installed. This will drain to the pond to the south east of the site. This will be a Klargestor NSBP003 bypass separator.

The silt trap, oil interceptors and settlement ponds present on-site will be cleaned and serviced annually or at shorter intervals where necessary in order to ensure proper functionality.

Settlement lagoons will gradually be filled in as Land Restoration progresses. Re-contouring of the site will take place as Land Restoration progresses to ensure that any stormwater run-off generated onsite will be directed towards a drainage ditch along the western boundary of the site. Temporary settlement ponds will be used as the land restoration project progresses to protect against run-off of sediments to this ditch/the River Graney. Re-seeding of filled areas will also take place as soon as possible to minimize the run-off of sediment on-site.

The layout and operation of the site drainage system is displayed in the aforementioned Site Layout Plans adjoining this application.

The proposed site access road will be elevated at a greater height than existing land, will have soft margins and will have a down camber on one side. Drainage ditches exist either side of the proposed site access road. Run-off on this road will drain naturally on the down camber side to a drainage ditch. A heavy duty ACO Drain and 600 mm pipe will be present at the site entrance to direct run-off here to the drainage ditches either side of the site access road.

3.12 Site Offices

All administrative and management activities will be carried out in one of two portacabins used as offices. These portacabins are situated to the east of the site adjacent to residential and farm buildings.

3.13 Site Services

Electric power, lighting and heating are all currently provided via the electricity network to the site.

Site staff overseeing C&D waste recovery operations at the application site are contactable by mobile phone. Site staff are also contactable by mobile phone and email facilities available at the waste facility office.

An outside toilet is provided in this area for staff and visitors. It is anticipated that only 2 part-time staff will work at the facility.

There is no public water supply to the site. The water requirement for site activities will mainly be for the washing of sand and gravels. Water is sourced for these purposes from a lagoon present on-site.

Water for use in the sand and gravel washing plant is drawn from the recycled water pond to the south east of the site via two supply lines. A 150 mm diameter line feeds the main washing plant and a 100 mm diameter line supplies the sand cyclone; both are driven by submersible electric pumps. After use in the washing plant the water is piped by gravity to primary and secondary settling ponds west of the application site for treatment, before returning to the recycled water pond via a 225 mm diameter gravity line. The primary settling pond is large with ample space for maintenance and silt storage.

Top up water will be sourced from the groundwater abstraction point on-site for use in dust suppression and the on-site wheel wash (which will recycle water).

3.14 Lighting

The site operating hours will be between 07:00 - 18:00 Monday to Friday and 08:00 - 16:00 Saturday.

During winter, operating activities may be carried out in dark conditions during dusk. Exterior lighting will be provided on-site to ensure traffic enters and leaves the site safely and operating activities onsite are carried out safely. It is proposed to install 48 x 6 metre high lights and 12 x 16 metre high lights on-site. This exterior lighting will provide light to site entrances, site access roads and the Material Recovery Area on-site during darker conditions.

No permanent exterior lighting will be provided in fill areas around the quarry site. Operations on-site will be timed to ensure that minimal operating activities take place in the fill areas during darker conditions in Winter. Temporary lighting will be provided however whenever operating activities take place in the fill area during darker conditions.

4. Site Management

4.1 General

The facility will employ between 2 and 5 people depending on demand.

The site operating hours will be between 07:00 - 18:00 Monday to Friday and 08:00 - 16:00 Saturday. No activity will take place outside these hours.

A designated Site Manager will have responsibility for directing incoming vehicles to relevant HGV queuing areas and material deposition areas. This Site Manager will also be responsible for directing and managing on-site staff to carry out their material handling, backfilling and processing related duties.

4.2 Environmental Management

An Environmental Management System will be operated for the facility and will cover the following areas:

- Environmental Policy
- Environmental Compliance Obligations
- Environmental Objectives and Targets and Environmental Management Programmes
- Waste Acceptance Procedures
- Operational Control and Mitigation Measures
- Waste Record Keeping and Environmental Reporting
- Environmental Monitoring
- Emergency Response Procedures
- Operational and Environmental Staff Training Programme
- Environmental Register summarizing environmental incidents, complaints, nonconformances and corrective/preventative actions

The Environmental Management System will focus on continual environmental monitoring and improvement.

An Environmental Policy for Sancom Ltd has been established and reads as follows:

'Sancom Ltd is committed to reducing its impact on its surrounding environment at its site in Graney West, Castledermot. The guiding principles of our environmental policy are:

- *Ensure continued compliance with all Irish and EU legislative environmental requirements, requirements prescribed in planning/environmental permits and licences the company operates under, and other requirements to which the company subscribes.*
- *Continually assess company activities and improve environmental performance with the specific goal of preventing pollution and minimising and reducing the environmental impact of backfilling and material recovery activities on-site thereby protecting the environment.*
- *Ensure that environmental policy objectives and targets are continually achieved through an implementation programme and have equality with other business interests.*

- *Ensure that its employees have the training, knowledge and resources to implement these guiding principles.*
- *Communicate the Environmental Policy to employees, suppliers, visitors and interested parties.*

Commitment to this policy involves every aspect of the company's business and employees and resources shall be made available to implement it. This environmental policy shall be publicised to all employees, external contractors and interested parties.'

4.3 Emergency Preparedness and Response

The applicant will identify and plan for potential emergency situations that may occur on-site having regard to hazards and risk present on-site.

A procedure will be developed to deal with potential emergency situations and potential accidents that can have an impact on the environment and how the company will deal with them. The procedure covers action in the event of fire and other emergency situations. The procedure will also incorporate spill response training for dealing with hazardous liquid spills that may pose a threat to the environment.

Fire drills will be carried out every 6 months. The emergency preparedness and response procedure will be reviewed at a minimum every 12 months and will be revised in light of issues arising after the occurrence of accidents or emergency situations.

A programme of inspection and preventative maintenance for equipment that poses a fire risk will be established and implemented on an ongoing basis at the facility. Flammable liquids will be stored onsite in designated bunded storage areas away from heat sources.

Training in the emergency preparedness and response procedure will be provided to all employees.

4.4 Closure Plan

Once land restoration on-site has taken place, a Closure Plan for the facility will be implemented. The Closure Plan will be reviewed prior to its implementation to verify and validate the schedule of works to be carried out. Broadly, the Closure Plan will involve the following steps:

- Stage 1: Consultation
- Stage 2: Removal of all waste on site
- Stage 3: Removal of Raw Materials
- Stage 4: Removal of all buildings, equipment and vehicles.
- Stage 5: Safety of the site
- Stage 6: Independent Closure Audit

These stages are described in further detail in the table below:

Table 3: Site Closure Plan

Site Closure Procedure	
Stage 1: Consultation	Engage with Environmental Consultants on the development and implementation of a final Closure Plan in accordance with EPA requirements.
Stage 2: Removal of all waste on site	All wastes onsite at the time of closure will be identified and classified as hazardous or non-hazardous (e.g. Empty drums. Tanks, redundant machinery). These wastes will then be managed in accordance with the Waste Framework Directive hierarchy of waste management i.e. re-used (sold to other companies), recycled, or disposed. All wastes will be removed from the site via an authorised waste contractor. Records of waste volumes/tonnages and their ultimate destination e.g. recycling/disposal will be kept with particular attention paid to hazardous wastes which require specific detailed documentation recording movement and ultimate recovery/disposal.
Stage 3: Removal of Raw Materials	An inventory of raw materials on site to be made redundant by the cessation of activities will be drawn up. All raw materials would be sold to other companies or returned to suppliers if possible. Raw materials will include redundant machinery onsite/ diesel tanks.
Stage 4: Removal of all buildings, equipment and vehicles.	All equipment /vehicles on site will be sold to other companies if possible. The working sheds will be removed or retained on site if they are required for further end uses (e.g. agricultural uses). The ultimate decision to remove sheds/buildings will depend on the proposed future use of the site. All processing equipment will be removed, and the site will be tidied to prevent adverse visual impacts.
Stage 5: Safety of the site	The primary objective of the company when activities cease is to leave the site safe and secure with No risk to human health or the environment in the area. Therefore, upon decommissioning, the on-site lagoons will be infilled and the boundary around the quarry will be fenced with appropriate barriers to ensure the safety of the public. Sloped areas will be planted with evergreen bushes. Evergreen bushes will also be planted around the site border to minimize visual impact. Any planting will be of native shrub species to encourage rehabilitation of native fauna & flora.
Stage 6: Independent Closure Audit/Licence Surrender	Engage an Environmental Consultant to carry out an Independent Closure Audit and complete licence surrender in accordance with EPA requirements