

### 3. DESCRIPTION OF PROPOSED DEVELOPMENT

#### 3.1 General

This part of the Environmental Impact Statement contains a description of the development specifically the physical attributes of the site and the nature and extent of the facilities. Other non-physical attributes such as employment and hours of opening are also addressed.

##### 3.1.1 Current Position

Greenstar Ltd. operates a waste Recycling Centre at Ramstown, Gorey Co. Wexford. The company operates a collection service for commercial, domestic and construction and demolition waste which services the South East region by the collection of skip waste by skip lorries. Greenstar Ltd. provides a progressive service in terms of waste management to the population of the South East area. The business operates from the Company's Recycling Centre at Ramstown, Gorey, Co. Wexford. The company (previously owned by Seamus Kelly & Sons) has provided a waste collection service in the South East since 1982 and has been operating at the Gorey facility since 1996. The facility currently handles an estimated 16,500 tonnes per annum of non-hazardous waste. The waste is delivered to the facility where recyclables such as steel and wood are segregated with the residual non-recyclable waste being bulked and transferred to landfill.

The Company is optimistic that it can expand its business and operations and is now applying to the Environmental Protection Agency (EPA) for a Waste licence to handle 30,000 tonnes/annum of waste at the Ramstown facility.

The existing facility contains the following infrastructure:

- Recycling building including maintenance garage,
- Waste storage bays,
- Site offices,
- Toilets,
- Canteen,
- Locker Room,
- Concrete yard,
- Fuel storage area,
- Underground Storage Tank,
- Car parking area.

Site operations are primarily concerned with segregation of materials for recycling. Recyclables are manually removed from commercial, industrial, institutional and skip waste and the residual fraction bulked and sent to landfill for disposal.

The main features of the expanded facility are as follows:

- New Recycling Building to cover entire yard
- Ancillary features including roads and surface water drainage

The Company is currently handling approximately 16,500 tonnes of non-hazardous waste comprising commercial, industrial, construction and demolition waste. Currently, the main focus of operations on site is on waste segregation and recycling. The waste is delivered to the facility in the following streams:

- Skip waste – collected from commercial, industrial and institutional premises as well as private individuals.
- Construction & Demolition Waste – from building sites and domestic dwellings
- Domestic Waste – collected as part of the domestic waste collection rounds
- Compactor waste – collected from commercial, industrial and institutional premises.

### 3.1.2 Proposed Development

Greenstar propose to upgrade the existing facility in order to provide a fully integrated waste management and recycling centre for the South East region. This proposed expansion involves an application for planning permission and for an EPA Waste Licence. The main features of the proposed facility are as follows:

- New Waste recycling Building
- Increased tonnage to 30,000 tonnes per annum.

The plan for the proposed facility is to cover in the entire site so that all operations will take place indoors, thereby containing the operations and reducing any potential environmental impacts.

### **3.2 Infrastructure**

The layout for these sections is designed for ease of cross-reference with the EPA Waste Licence Application Form.

#### **3.2.1 Site Security**

The following security measures have been introduced by the company:

- Access to the site is via a double gate comprising steel sheeting which is locked outside operational hours.
- The site is surrounded by a 1.5m concrete wall above which steel cladding has been erected to give a barrier of approximately 2.5m in height.
- Security lighting is located around the perimeter of the main yard.
- All doors and entrances are locked outside opening hours.
- At night steel shutters are pulled down on the ground floor office windows.
- At the upgraded facility it is proposed to install a Close Circuit Television (CCTV) system onsite.
- Access to the upgraded facility will be via a 5m high roller shutter door close to where the existing site entrance is located.

#### **3.2.2 Specifications for access roads**

The primary access to the site is from the road that services the Gorey Business Park. Currently this roadway comprises hardcore. All internal surfaces within the site are covered with concrete. All access roads adjoining the Business Park are surfaced with asphalt.

#### **3.2.3 Specifications for Hardstanding Areas**

All hardstanding areas comprise concrete slabs. Drainage is directed towards stormwater drains.

#### **3.2.4 Weighbridges**

There is 1 (No.) weighbridge to the west of the entrance. The weighbridge is an Avery Berkel model. All loads entering and leaving the facility will be electronically weighed and documented. Computerised records will be kept in the weighbridge office.

#### **3.2.5 Wheelwash**

It is proposed to install a wheelwash at the site and all trucks entering or leaving the site will be required to pass through the wheelwash.

### 3.2.6 Laboratory Facilities

There are no laboratory facilities on-site. All analytical work is carried out by independent third parties such as consultancies and laboratories.

### 3.2.7 Fuel Storage

Fuel is stored in three 1,000 litre Plastic tanks which are located inside a steel containment structure located close the south western corner of the site. The steel bund structure has a steel floor, roof and walls on three sides and is fully integrated and sealed. There is a low steel wall on the northern side which allows for oils to be loaded/unloaded. The structure has a minimum capacity of 110% of the largest tank contained within the bund i.e. minimum capacity of 1,100 litres. All valves and taps are located within the structure and will be easily accessible. The area adjacent to the structure where oil trucks will load/unload oils will be contained by a reinforced concrete floor and low concrete ramps in the unlikely event of any spillages occurring during filling operations.

### 3.2.8 Waste Quarantine Area

Currently, unacceptable wastes are quarantined in a 20 cubic yard open-topped skip located in the Recycling Building. It is proposed to erect a purpose built waste quarantine area in this building. The quarantine area will comprise a 12m<sup>2</sup> concrete area surrounded on three sides by 0.5m high concrete walls. The access point will be contained by a 30cm ramp.

### 3.2.9 Waste Inspection Area

All waste brought to the facility, other than non-recyclable waste, is and will be tipped on to the floor of the recycling building. All waste will be inspected on arrival by a site operative. Any suspect waste loads will be removed to the waste quarantine area for detailed inspection and quarantine if required.

### 3.2.10 Traffic Control

The main site entrance is approximately 7 metres wide. Vehicles entering and exiting the site have ample room and sight distances. Traffic inside the gate is controlled by the yard supervisor. On-site traffic is restricted to 5mph and signs are posted to this effect. All vehicles entering the site will report to the weighbridge office. Speed limits will be posted around the site.

### 3.2.11 All Services

The site is serviced with electricity, telecommunications. Water is supplied by a private well on-site.

### **3.2.12 Sewerage and surface water drainage infrastructure**

#### **Surface Water - Existing Situation**

Surface water discharges are generated by precipitation falling on the roof of the Recycling Buildings and the hardstanding areas of the site. None of the precipitation comes into contact with putrescible waste as this material is handled under cover in the recycling building. Precipitation falling onto the existing storage bays in the western section of the yard may be contaminated by minor quantities of timber, soil and metals.

Surface water from the existing roofed area is currently collected and discharged via a downpipe in the south western corner of the building to a surface water drain at the site entrance. Surface water from the yard area is currently collected in a surface water drain which bisects the yard in a north south direction. Surface water collected from the yard area passes through 2 (no.) three chamber petrol interceptors prior to discharge to the percolation area just outside the south western corner of the site.

#### **Surface Water - Proposed Drainage**

Under the proposed expansion, it is proposed to construct a building which will cover the entire yard area. This will mean that the entire surface of the site will be covered-in and no precipitation will fall on yard surfaces. All rainwater will be collected in downpipes and discharged as clean water to the surface water drain at the site entrance.

#### **Foul Water**

It is planned that there will be 12 permanent staff on site to operate the facility. It is estimated that at 60 litres/head/day that some 720 litres/day effluent will be generated and directed to the proposed wastewater treatment plant to be located in the southwestern corner of the site and from there to the percolation area. The treatment plant will be designed to cater for up to 20 permanent staff per day and therefore will be oversized and will allow for optimum treatment of the effluent. The percolation area was designed in accordance with SR6:1991 and is adequate to cater for the treated effluent.

Floor wash down generated at the site is estimated at approximately 1.6 m<sup>3</sup> per month. The wheelwash will be a modern type that allows for maximum recycling of water and it is estimated that it will generate some 4m<sup>3</sup> per month. Floor washdown and effluent from the wheel wash will be directed through the two oil interceptors (located in series) and from there to the four underground storage tanks. There are four 1,000 gallon tanks on site with a cumulative capacity of 4,000 gallons or 18,000 litres. Effluent will be collected from the sealed storage tanks and tankered from there to the wastewater treatment plant at Enniscorthy for treatment and disposal.

### 3.2.13 Plant sheds, garages and equipment compound

For site layout see Figure 3.2.1 and Engineering Drawings attached to this section.

The Recycling Building (Building 1) contains all of the existing plant and machinery. The building comprise a steel portal frame of approximately 1,000m<sup>2</sup>. The building also contains a ramped area up to a JCB platform where waste is fed into the adjoining loading pit. This building also houses a baler and a shredder. The trommel and picking line is located to the front (west) of this building. The generator is housed to the south of the trommel and conveyor. The southernmost portion of the building contains a storage area.

It is proposed to extend this building to cover the entire yard area. The new building plus the existing building will have a total area of some 3,254m<sup>2</sup>. The highest point of the new building will be 12m in height and will be finished in metal cladding.

### 3.2.14 Site Accommodation

To the north of the Recycling Building are 2 (No.) site offices, 1 (No.) locker room and the canteen area. The toilets are located in a 6m<sup>2</sup> building in the south western corner of the yard. The weighbridge office is housed in a temporary structure between the oil tank container and the toilet area.

### 3.2.15 Fire control system including supply

Fire extinguishers are located at strategic points throughout the Recycling Building and the site offices. The emergency telephone numbers for the fire brigade are clearly posted adjacent to all site telephones. The proposed building will also be fitted with appropriate fire fighting equipment.

In the unlikely event of a fire the following procedure will be employed:

- All staff will be evacuated from the site buildings.
- The fire brigade will be notified immediately.
- The site manager or assistant manager will be informed immediately.
- All incoming vehicles will be directed to an alternative facility and the site entrance kept clear of traffic and machinery.
- The EPA, Wexford County Council and the South Eastern Fisheries Board will be notified at the earliest opportunity.

It may be possible for site staff to extinguish small fires using the fire extinguishers and fire hoses. This procedure will be restricted to small fires only and the decision will be made by the site manager/assistant manager. Staff will be trained in the use of this fire fighting equipment.

All other emergencies will be notified to the site manager/assistant manager and dealt with as speedily and efficiently as possible.

### 3.2.16 Plant and Machinery

Waste recovery plant and machinery available on site include:

#### Existing:

- 1 (No) Gradeal Baler
- 1(No) Boss Forklift
- 1 (No) JCB Front end Loader
- 1 (No) JCB Rubber Duck
- 1 (No) Untha Shredder (C&D)
- 1(No) JCB Rubber Loader
- 1(No) Baughan Screener (Trommel)
- 1 (No) Avery Berkel Weighbridge
- 4 (No) Refuse Trucks Rear End Loaders – Hino
- 4 (No) Skip Lorries (Volvos & Hinos)

#### Proposed

- 1 (No.) New Holland Telehandler (fitted with crushing claw) for offloading of skips
- 1 (No.) Summitons Excavator for segregation of recyclable materials.

### 3.2.17 Open Yard Areas - Existing

The main yard is the central area into which waste is received through the weighbridge at the gate of the facility. This area is used by Skip lorries arriving / reversing in the middle of the main yard which is also used for overnight parking of heavy vehicles which are not in use. The yard is covered in concrete paving and includes the toilets, fuelling area, weighbridge, construction and demolition waste bays, skip storage area, baled cardboard storage area, site offices, and canteen

### 3.3 Facility Operation

#### 3.3.1 Introduction

The site serves as both a transfer station for bulking waste prior to transport to landfill and as a recycling centre. The facility has been in operation since 1995 and handles domestic, commercial and construction and demolition wastes, all of which are solid and non-hazardous. Both on-site infrastructure and equipment have been expanded to allow for increased waste handling capacity.

The inflows, facility processes and subsequent outflows are depicted in the flow chart on Figure 3.3.1.

It is likely that Greenstar will continually be adding and changing equipment, systems, processes and procedures within the facility. The company would like to have the option in its waste licence to reorganise and/or relocate various operational processes within the facility. Any reorganisation/relocation of operational processes would be proposed to the EPA in advance and only carried out with the agreement of the EPA.

#### 3.3.2 Waste Inflows

Two main waste streams are handled on site:

- domestic, commercial and industrial wastes, and
- construction and demolition wastes.

Both of these waste streams are solid and non-hazardous. These wastes are delivered to the facility by either Greenstar vehicles or other waste hauliers.

No hazardous waste is accepted at the facility.

##### Domestic Waste:

This waste is delivered to the facility by both Greenstar and third party trucks. After preliminary inspection, the waste is tipped on the floor of the Recycling Building for inspection. Non-recyclable domestic waste is loaded into large trailers and transported off-site.

Greenstar have recently started providing a dry recyclable bin collection service for approximately 1,200 households in the region. Dry recyclables include paper, cardboard, plastic and tins. It is proposed to increase this service to the approximately 3,500 households that have wheelie bins. Dry-recyclables and general waste is collected on alternate weeks from householders.

##### Commercial Waste:

Commercial waste arrives on site in Greenstar and independent contractor trucks. Cardboard-rich waste and waste with low levels of contamination is tipped on the floor of the Recycling Building where it is inspected. Cardboard is loaded into the cardboard baler adjacent to the JCB ramp. Baled



cardboard is stored in the yard just inside the site entrance. When the site is upgraded, cardboard will be stored within the upgraded building. Cardboard is loaded into 40 foot curtain-sided trucks for delivery to markets in the UK. The remaining material is placed onto the conveyor, which feeds into large trailers for disposal to landfill or for recovery in Northern Ireland.

Construction & Demolition Waste:

Construction and demolition waste is delivered to the facility in skips of various sizes, generally originating from small-scale construction operations. On arrival waste is tipped in the Recycling Building where it is inspected. Large items such as timber and metals are removed by a grab machine for recycling and placed in the holding bays along the western boundary of the yard. The smaller fractions are placed onto the conveyor (in the western part of the building) which feeds the trommel where fines are removed. Operators on the picking line segregate the waste into dedicated containers below the picking line. The picking line can also be used to segregate other types of waste such as household dry recyclables.

For inspection purposes only.  
Consent of copyright owner required for any other use.

### 3.4 Materials Management

#### 3.4.1 Quantities of Materials

The facility currently handles approximately 16,500 tonnes of waste per annum. Of this, commercial and industrial waste accounted for 4,000 tonnes; construction and demolition waste made up 1,500 tonnes; household waste amounted to 11,000 tonnes

Greenstar hopes to increase its business in the future and has applied to handle up to 30,000 tonnes of waste per annum by year 5 of its waste licence. For both environmental and economic reasons the company will endeavour to increase the percentage of material recycled at the facility and subsequently decrease the percentage of material transferred to landfill.

The main process streams classified according to the European Waste Catalogue (EWC) Codes are outlined in Table 3.4.1 below.

**Table 3.4.1 Waste Categories – EWC Codes**

EWC Code	Waste Classification	Description of Waste	Method of Recovery or Disposal
15 01 01 to 15 01 09	Packaging (various)	Paper, card, plastic, wooden, metallic, composite, mixed, glass and textile packaging	Recovery in Building 2
17 01	Concrete, bricks, tiles and ceramics	Masonry, Stones, Bricks, Soil	Bricks recycled. Residue sent to C&D recovery facility.
17 06 02	Other insulation materials	Non-hazardous Insulation from C&D waste	As above
17 02	Wood, glass, plastic	Wood, glass, plastic	Wood, metal, plastic segregated
17 04 01 to 17 04 07	Metals	Mixed & individual metal types	Segregated & sent to metal recycler
17 05 04	Soil	Non-hazardous soil & stones	Landfill cover
17 06 04	Insulation materials	No-hazardous insulation	Landfill
17 08 02	Gypsum Based Construction Material	Plaster Board	Landfill
17 09 04	Other C&D Waste	Mixed C&D waste	Segregated for recovery, Residual to landfill.
20 01 00	Municipal Waste	Commercial & household waste	Recyclables removed, residual to landfill
20 01 01	Paper & Cardboard	Mixed paper and cardboard	Baled for recycling
20 01 02	Glass	Glass from household waste	Recovered
20 01 03	Small Plastics	Plastic bottles, bags	Baled for recycling
20 01 08	Kitchen & Canteen Waste	Food waste	Composting or landfill

20 01 10	Clothes	Clothes	Segregated for recycling
20 01 11	Textiles	Textiles	Segregated for recycling
20 01 38	Wood	General wood waste	Segregated for wood chipping
20 01 21*	Fluorescent tubes <sup>1</sup>	Fluorescent tubes	Segregated for recovery
20 01 28	Paint, inks, adhesives	Paint, inks, adhesives	Segregated for recovery
20 01 35/36	Discarded electrical equipment <sup>1</sup>	TVs, radios, household goods	Segregated for recovery
20 01 38	Wood other than that mentioned in 20 01 37	Wood	Segregated for recovery & shredding
20 01 39	Plastics	Plastics	Segregated for recovery
20 01 99	Other fractions not specified	Other waste	Segregated or landfill
20 02 01 to 20 02 03	Garden and park waste	Biodegradable waste, stones & soil and other non-biodegradable waste.	Composted, recovered or landfilled
20 03 00	Other Municipal Wastes	Mixed municipal waste	Recovered where possible. Residue landfilled.
20 03 01	Mixed Municipal Waste	Mixed commercial and household waste	Recovered where possible. Residue landfilled.
20 03 02	Waste from Food Markets	Fruit and veg	Composting
20 03 07	Bulky Waste	Mattresses, furniture	Recovered where possible. Residue landfilled.
20 03 99	Municipal Wastes not otherwise specified	Municipal Wastes not otherwise specified	Recovered or landfilled

<sup>1</sup> Such wastes may arrive at facility inadvertently and will be placed in waste quarantine area for storage until they are transported to appropriate treatment/disposal facility.

### 3.4.2 Commercial Waste

The commercial waste arriving on site is generally in two forms; mixed commercial waste and cardboard-rich commercial waste. Commercial waste generally consists of packaging waste. Some organic matter may be present in some waste loads.

### 3.4.3 Cardboard Waste

Cardboard waste generally arrives from commercial outlets. Cardboard is usually delivered in compactor bins. The majority of cardboard is corrugated packaging. Clean cardboard is segregated for baling and transferred to markets in the UK.

#### **3.4.4 Construction and Demolition Waste (C&D) Waste**

Construction and Demolition Waste is generally delivered to the facility in small open-topped skips. The mixed waste is currently tipped onto the floor of the Recycling Building where it is segregated. C&D waste comprises masonry, bricks, stone, metal and wood. Some electrical goods may also appear in C&D waste. Metal is stored in a metal recycling bay in the yard for collection by metal recyclers. Wood is chipped off-site. The Recycling Building houses a purpose-built C&D picking line fitted with a Baughan trommel which removes the fines.

#### **3.4.5 Plastics**

Plastics are recovered from industrial waste where possible. Currently the only plastics being recycled are clean pre-segregated loads for which market outlets are available. It is also proposed that post consumer plastic will be recovered from municipal waste for recycling if markets are available.

#### **3.4.6 Ferrous and Non-ferrous Metals**

Both ferrous and non-ferrous metals are segregated and stored in the metal bay prior to collection by a scrap metal merchant. It is also planned to introduce aluminium can recycling at the facility at some time in the future. Segregated cans will be sent for recycling to a scrap merchant.

#### **3.4.7 Lumber and Wood**

Lumber and wood are extracted from commercial, industrial and C&D waste. The wood is segregated using a grab and stored for chipping prior to distribution for use on horse paths.

### 3.5 Waste Acceptance & Handling

#### 3.5.1 Existing Waste Types and Quantities

The volume of each waste stream passing through the site is dependent on contracts and is therefore highly variable from year to year. The maximum volume of waste handled at the site will be controlled by the size of the site and the capacity of the plant and machinery. The estimated quantities of waste currently handled at the site are presented in Table 3.4.1.

<b>WASTE TYPE</b>	<b>TONNES PER ANNUM</b>
Household	11,000
Commercial	2,000
Sewage Sludge	0
Construction & Demolition	1,500
Industrial Non-Hazardous Liquids	0
Industrial Non-Hazardous Sludges	0
Industrial Non-Hazardous Solids	2,000
Hazardous	0

Table 3.5.1. Existing Waste Types and Quantities

#### 3.5.2 Proposed Wastes Types and Quantities

The following tables outline the proposed waste types and quantities to be admitted to the Greenstar facility after 5 years with an approximate growth rate of 16% per annum in the amount of waste handled. It is proposed to handle 30,000 tonnes per annum after five years.

<b>WASTE TYPE</b>	<b>TONNES at 5 Years</b>
Household	20,000
Commercial	3,600
Sewage Sludge	0
Construction & Demolition	2,800
Industrial Non-Hazardous Liquids	0
Industrial Non-Hazardous Sludges	0
Industrial Non-Hazardous Solids	3,600
Hazardous	0

Table 3.5.2. Proposed Waste Types and Quantities

As previously outlined, the maximum volume of waste handled at the site will be controlled by the size and the capacity of the plant and machinery. Due to the non-disposal nature of the proposed facility the life of the site is not limited to a certain period of time.

### 3.5.3 Hours of Operation

Currently the Greenstar is open from 8:00 am to 5:00 pm Monday to Friday and 8:00 am to 12:30 pm on Saturdays. It is proposed to extend the opening hours from 7:30am to 6:30pm Monday to Friday and from 8:00am to 2:00pm on Saturdays. The proposed extension of the Recycling Building to cover the main yard will also help reduce noise levels as all operations will be conducted internally.

### 3.5.4 Waste Acceptance Procedure

All vehicles using the facility enter by the main gate and, in future, will pass through the wheelwash and then be directed towards the weighbridge. At this point the waste load is given a preliminary visual inspection by the weighbridge operator who, once satisfied that the load can be accepted, directs the vehicle to the appropriate location on-site. The weighbridge operator will record the following details on computer:

- a) the name of the carrier
- b) the vehicle registration number
- c) the name of the producer(s)/collector(s) of the waste and their waste permit number(s) as appropriate
- d) a description of the waste including the appropriate EWC
- e) the quantity of the waste accepted at, or departing from, the facility, as appropriate recorded in tonnes
- f) where loads of waste are removed or rejected: details of the date of occurrence, the types of waste and the facility to which they were removed
- g) the destination of the load (for departing loads - facility name and waste licence/permit number as appropriate)
- h) the time and date of departure/arrival

The weighbridge operator will have the powers necessary to reject those waste loads deemed unacceptable.

Closed containers, such as compactors or closed rear-end loaders, can only be checked at the tipping point. Any documentation accompanying the load is checked at the site entrance or tipping point to verify that the waste description is correct.

Because of the nature of the business it is not yet possible to carry out any characterisation tests at the facility prior to accepting waste. Such characterisation tests can only be carried out on the customer's premises, prior to the waste being delivered to the facility. Industrial waste has to be classified in accordance with the European Waste Catalogue when it is accepted at the facility.

Generally, in the case of industrial waste, the client or the haulier contacts the facility before the waste is collected.

#### Unacceptable Waste

If a waste load enters the facility and is found to be unacceptable it is immediately removed from the disposal/recovery routes and sent to the waste quarantine area. If possible the waste will be returned to the producer. If this is not possible it will be held in the waste quarantine area. To date the quarantine area consisted of a 20 cubic yard open topped skip located inside the Recycling Building. Greenstar proposes to construct a bunded waste quarantine area inside the expanded Recycling Building. A record of the unacceptable waste will be made on arrival. All such wastes will be transferred from the quarantine area to a licensed facility for treatment as soon as possible.

### **3.5.5 Current Waste Handling Procedures**

Waste delivered to the facility is unloaded in the Recycling Building and segregated for recycling. It is then reloaded and sent to various outlets depending on the type and quality of material. Materials not suitable for recycling are bulked and transferred directly to landfill.

Waste is segregated both manually and by machine. Where practical, materials for recycling are placed by machine on a conveyor which feeds the picking line where they are then picked off by the operatives.

#### **3.5.5.1 Cardboard**

Clean cardboard is picked from incoming commercial waste. The cardboard-rich waste is tipped on the floor of the Recycling Building by the incoming vehicles. It is then loaded into the cardboard baler. The cardboard is then removed from the baler and stored in the yard area until there is sufficient cardboard to warrant a shipment off-site. Cardboard bales are loaded onto curtain sided trailers by a forklift.

#### **3.5.5.2 Timber**

Timber arrives at the facility in mixed C&D loads. Timber is picked out of the C&D waste by machine and by operatives and then segregated for chipping off-site. Smaller pieces of wood are picked off by hand on the picking line and diverted to the appropriate bay for further recycling.

#### **3.5.5.3 Construction and Demolition Waste**

Currently C&D waste is tipped onto the floor of the Recycling Building. Large pieces of metal and wood are removed by machine and placed in the segregation bays in the yard for collection by a metal recycling company.

When the larger materials such as metals and wood have been picked out by machine, the remaining C&D material is placed on the conveyor, after which it will pass through the trommel to sift out the fine material. The remaining larger pieces pass along a conveyor onto the picking line. Segregation can be by two methods. Firstly, the individual materials such as masonry, wood, metals etc can be picked off and placed in appropriate bays while the non-recyclables and contaminants will be left on the conveyor and collected at the end of the picking line. The second method involves picking out the contaminants leaving the recyclables such as wood, metals and heavy masonry on the conveyor which will be collected at the end of the picking line.

#### **3.5.5.4 Plastics**

In future it is planned to expand the plastic recycling operation. If pre-segregated post-consumer waste is delivered on site and markets exist, then segregation can take place on the existing picking line.

#### **3.5.5.5 Gas Bottles**

Empty gas bottles are segregated from mixed incoming waste loads. The bottles are stored in a dedicated area inside the Recycling Building.

#### **3.5.5.6 Batteries**

From time to time used batteries are found in the incoming waste streams. These are stored in sealed plastic units provided by Returnbatt Ltd who also provide a collection and recycling service for used batteries.

#### **3.5.6 Proposed Waste Handling Procedures**

It is proposed that in the upgraded facility waste handling procedures will continue to be the same as previously described in Section 3.4.5. In the event of any new equipment being purchased or any new waste stream coming on-line, details of all such developments will be agreed in advance with the EPA.

#### **3.5.7 Raw Materials and Energy**

Estimates of fuels and other products presently used on site 2003 are as follows:

- 5,000 litres of diesel for on-site vehicle use
- 8,000 litres of road diesel
- 400 litres of hydraulic oil
- 50 litres of engine oil
- Approximately 26,500 units of electricity were used in this period.



### **3.6 Environmental Nuisances**

#### **3.6.1 Aerosol Control**

Liquid wastes are not currently accepted at the site, nor is there any treatment of on-site waste waters other than storage in tanks. For this reason aerosol control is not considered to be an issue at the site.

#### **3.6.2 Bird Control**

The domestic and commercial wastes are brought to the site in covered vehicles and tipped inside the Recycling Building. To date birds have not presented a problem on-site. The construction and demolition waste stream does not, by its nature, contain food waste. For these reasons birds are not a concern at the site and bird control is not necessary. The upgraded facility will be entirely covered-in thereby preventing any nuisance from birds at the facility.

#### **3.6.3 Dust Control**

The results from the baseline dust survey were elevated, however, as discussed in Section 2, the high dust levels were due to works taking place outside the facility by a third party. This was visually observed on several site visits. It is expected that once the external (third party) earth work has been completed that dust levels will be significantly reduced. The existing measures for dust control are :

- The open yards are power swept and washed once a week. This limits the potential for mud build up on the yard and hence the generation of dust during dry conditions. It is planned to carry out the yard and road cleaning twice weekly i.e. every Saturday and Wednesday.

Proposed dust control measures are as follows:

- Greenstar proposes to construct a new building, to cover the yard area to the west of the Recycling Building, consequently roofing in the entire site. This will ensure that the tipping and handling of all C&D material takes place indoors thereby significantly reducing dust levels on site. Once constructed, the new building will house all site operations. A dust suppression sprinkler system similar to those operating in other similar waste facilities will be installed in this area.

Dust emissions from hardstanding areas, and the site in general, are expected to be low in future.

#### **3.6.4 Litter Control**

Every effort is made to minimise the scatter by wind of refuse material. The following controls ensure that litter is not an issue at the site:

- a) Commercial and domestic wastes are handled in contained buildings and all vehicles carrying these wastes are fully covered.
- b) Daily litter patrols are carried out at the site.
- c) The yard is regularly swept.
- d) The site is surrounded on all sides by a high fence. This provides adequate shelter from the prevailing winds and prevents any internal litter escaping from the facility.

When the expanded facility is constructed and the entire site is covered in there will be full containment for litter at the facility.

### **3.6.5 Odour Control**

All commercial and domestic wastes are handled within buildings and all vehicles carrying these wastes are fully covered. These wastes arrive, are handled and leave the site in a very short time-frame (several hours). The C&D waste stream contains practically zero biodegradable material therefore odours are not an issue with these wastes.

It is proposed to install a deodorising system in conjunction with the proposed misting (dust control) system. This system will be capable of dispersing a perfumed aerosol spray throughout the buildings and help mask any odour that may be present.

### **3.6.6 Vermin Control**

Greenstar has contracted I.S.S Hygiene Services to control any potential vermin problems. Bait boxes are laid in strategic locations throughout the facility. Records of site visits are kept on file.

### 3.7 Potential Emissions

The potential emissions from the existing and proposed facilities are discussed under the relevant headings in Sections 2 and 4 of the EIS. This Section is designed to summarise all the potential emissions from the facility.

#### 3.7.1 Air Emissions

The existing site handles low volumes of putrescible waste, therefore odour and decomposition gas emissions from the site are low. As the retention time of the putrescible waste on site is, and will be, short (less than 24 hours), emissions of odours and gases are expected to be low. The putrescible waste in the proposed facility will be handled under aerobic conditions and minor amounts of carbon dioxide may be produced, however, no methane production is expected. Any emissions of carbon dioxide will be rapidly dispersed within the building, which will be well vented, and further dispersed outside the building. Decomposition gases are generally undetectable outside a facility of this nature.

The proposed dust control sprinkler system will be designed with the facility to incorporate odour reducing agents should it be required.

Neither liquid waste nor sludges are currently accepted at the facility, nor will they be in the future. Therefore no aerosol emissions are expected either now or in the future.

It is expected that in future, under the upgraded facility, all waste will be processed indoors and therefore the potential for dust emissions during processing will be low. All external areas in the existing area are concreted as will all internal and external areas of the proposed site. One potential source of dust at the facility is construction and demolition waste. However, all of this material will be handled indoors which will mitigate against the escape of dust to the atmosphere.

#### 3.7.2 Emissions to Groundwater

As all surfaces on the existing and proposed site are, and will be, fully concreted it is not expected that emissions to groundwater will occur. There are no deliberate emissions to groundwater at the facility. All waste material is, and will be, processed internally on concrete floors where the risk of fugitive emissions to groundwater from facility processes are considered low. The greatest risk to groundwater is from a leak from the fuel tanks. All storage tanks will be bunded which further reduces any risk from spills to groundwater. Mitigation of the potential for a fugitive emission to groundwater is discussed in Section 4.5 which addresses the potential impacts and mitigation associated with groundwater at the facility.

Foul water generated at the facility will be treated in a proprietary wastewater treatment plant to be located in the southwestern corner of the site and discharged to the percolation area located outside the southwestern corner of the site. The percolation area was designed in accordance with SR6:1990 guidelines.

### 3.7.3 Emissions to Surface Water

The existing surface water drainage system directs all rainwater falling on roof structures towards the surface water drainage system in the industrial estate. As all putrescible material is transported in covered vehicles and sorted indoors rainfall will not impact on the waste materials. All fuel and storage tanks are bunded to retain any leaks or spills. In the upgraded facility the only emissions to surface water will be in the form of clean run-off from roofed areas.

### 3.7.4 Noise Emissions

The existing emissions from the Greenstar facility are detailed in section 2.3 of this Environmental Impact Statement. The proposed extension of works by the company will involve the acceptance of a greater tonnage of waste material over the next 5 years. This increase in tonnage will result in a greater number of waste vehicle movements to and from the site. The worst case scenario estimated entails a doubling of the traffic volumes which would result in a 3dB(A) increase in noise levels.

#### Potential Site Emissions

In order to handle an increased tonnage of waste material in the future, it is likely that more mobile plant will be required on site such as forklifts, front shovel loaders etc. However, until confirmed additional waste material is sourced, the type and number of such plant has not been confirmed at this time. Existing plant may also be operational for a higher percentage of the working day.

However, it is likely that a mobile grab will be operated on the site in the near future. Noise measurements from a MHL 340 FUCHS mobile grab at another similar waste handling facility resulted in a noise level of 82 dB(A) at a distance of approximately 5 metres from the machine.

#### Traffic Emissions

A traffic assessment has been undertaken by White Young Green for the purposes of this report and is detailed in section 2.9. The report indicates that currently, during the morning and rush hour periods, a total of 37 of the 180 vehicle movements in Gorey Business Park are associated with the Greenstar facility. It is expected that, in a worst case scenario, traffic movements associated with the facility will double over 5 years.

Other potential emissions from traffic include the on site noise during delivery of waste material. The frequency of idling vehicles and reversing vehicle alarms on site may also increase.

### **3.8 Environmental Monitoring**

#### **3.8.1 Dust Monitoring**

As described in Section 4.2, it is not expected that there will be a significant soiling nuisance from dust at the upgraded facility. Experience at other sites has indicated that most dust problems are associated with gravel/hardcore and exposed yards. In this case all yard areas will be covered. It is proposed to carry out dust monitoring at three locations on site (D1 to D3).

#### **3.8.2 Ecological Monitoring**

The site comprises buildings and concrete yards and is located in an industrialised area. Section 4.7 of the EIS suggests that the potential impact of the facility on flora and fauna of the area is low and for this reason it is not considered necessary to monitor ecology at the site.

#### **3.8.3 Groundwater Monitoring**

All waste materials are currently, and will be in the future, processed inside buildings with concrete floors. All process foul water from the existing site is discharged to the contained underground foul water holding tanks. As stated in Section 3.5.2, all fuel tanks will be bunded, thereby mitigating against groundwater pollution from this source. It is proposed that monitoring of groundwater beneath the site is only considered necessary in the event of a potential contaminant at the site (i.e. a diesel spill).

#### **3.8.4 Air Monitoring**

There are no significant direct emissions to air at the site. The type and retention time of waste at the site is not conducive to accumulation of decomposition gases. Monitoring of fugitive emissions of dust and odours are covered in Sections 3.8.1 and 3.8.8. It is not considered necessary to monitor any other aspects of air quality.

#### **3.8.5 Sewer Discharge Monitoring**

Sewage from toilet and washroom facilities on site will be directed to the proposed proprietary wastewater treatment plant. All other waste water generated on-site will be diverted to the 4 (No.) contained underground holding tanks. These tanks will be checked regularly and the effluent will be exported off site by road tanker to an appropriate waste water treatment plant for treatment and disposal. Monitoring of foul water will be conducted in agreement with the EPA and the Local Authority.

### **3.8.6 Meteorological Monitoring**

The amount of precipitation falling on the site will have no effect on the volume of effluent produced, therefore, it is not considered necessary to monitor rainfall. It is not considered necessary to monitor wind strength, frequency or direction at the site.

### **3.8.7 Noise Monitoring**

It is proposed that annual noise monitoring be undertaken at the four locations as described in Section 2.3. Additional locations may be agreed with the EPA.

### **3.8.8 Odour Monitoring**

Odours from the site are not considered to be a problem and for this reason it is not considered necessary to monitor odours at the site.

### **3.8.9 Surface Water Monitoring**

Surface water monitoring will be undertaken on a quarterly basis at the surface water discharge point located at the site entrance.

For inspection purposes only.  
Consent of copyright owner required for any other use.

### 3.9 Decommissioning and Aftercare

Operations at the facility are ongoing with an open-ended lifespan. When operations cease at the site it is expected that the bulk of the site infrastructure will be sold on to a prospective buyer as an asset. This will include the site buildings, offices, weighbridges, fencing, gates, lighting and drainage/sewage infrastructure. Other plant may also be acquired by the potential buyer. However, if not, these will be sold off to other potential buyers separately or dismantled and recycled or disposed at a licensed facility. Other plant includes a baler, picking line, site machinery, diesel storage tanks and bunds. All skips and trucks will be removed from the site and sold separately or recycled/disposed appropriately.

When operations cease at the site all waste will be removed and disposed of at appropriately licensed recovery/disposal facilities. The entire site floors and walls will be power swept and washed to clear all debris and dust. All tanks will be desludged and interceptors cleaned out. The waste from the cleaning operations will be disposed to relevant licensed facilities.

A monitoring programme of all potential emissions including surface water, foul waters and dust will be carried out after this process in order to ensure that emissions from the site have ceased. The monitoring programme will consist of 2 No. sampling rounds carried out within two months of decommissioning of the facility.

When operations have ceased, and assuming confirmation from the monitoring programme that all emissions have ceased, it is expected that there will be no need for any long-term aftercare management at the site.

For inspection purposes only.  
Consent of copyright owner required for any other use.

### 3.10 Contingency Arrangements

Contingency arrangements for the site are separated into four sections:

- Health and safety procedures
- Oil/leachate spill
- Air pollution incident
- Equipment breakdown
- Fire

#### 3.10.1 Health and Safety

In the event of any serious injury or health incidents to personnel on site the emergency number for the ambulance service is clearly posted adjacent to all telephones on site. There are telephones located at both site offices. The site manager and or assistant manager will be notified of any incidents immediately and will assume charge in order to handle the emergency as swiftly and efficiently as possible. For minor injuries the number of the local doctor who is on call will be posted beside the telephone in the site office. In addition, first aid kits are available in the site offices.

#### 3.10.2 Oil Spill/Leachate spill

All oil storage tanks are banded. However, in the unlikely event of an oil spill (or a leachate spill) the following procedure will be followed:

- The source of the spill will be closed off immediately if possible. The site manager or assistant manager will be notified immediately.
- Shut off valves on the surface and foul water sewers will be closed off.
- The liquid will be contained as far as is practicable by employing absorbent booms and mats around drainage gullies and in the spill liquid itself.
- A waste oil tanker (or tankers) will be contracted immediately to pump liquid from interceptors and/or sediment traps.
- The following Agencies will be notified by telephone at the earliest opportunity: EPA; Wexford County Council; South Eastern Fisheries Board.
- All oil will be removed from the surface by either pumping or use of absorbent mats. All waste oils and materials will be disposed to an appropriate facility.
- Absorbent booms and mats are stored on-site. All staff are informed as to the location and use of the absorbent materials.



### 3.10.3 Air Pollution

As explained in Section 3.7.1 there are no aerosol emissions from the site and decomposition gas emissions are very low and are rapidly dispersed. The highest risk of fugitive emissions to air are in the form of odours or dust. If complaints of odours are received, the Company will investigate the source of the malodorous waste and record the incident on a complaint form. The Company will remove the material from the facility immediately and will take measures to avoid the possibility of receipt of further malodorous waste.

If during the dust monitoring programme, it is noted that dust levels are increasing the Company will consider further measures to mitigate dust.

### 3.10.4 Breakdown of Equipment

In the event of breakdown of essential equipment all incoming waste destined for that piece of equipment will be diverted to an alternative recovery facility or directed to landfill. Waste already tipped will be reloaded and directed to an alternative facility or to licensed landfill. The staff fitter will be notified immediately and will effect the necessary repairs. If this is not possible then contract mechanics will be brought in at the earliest opportunity to carry out the repairs.

### 3.10.5 Fire

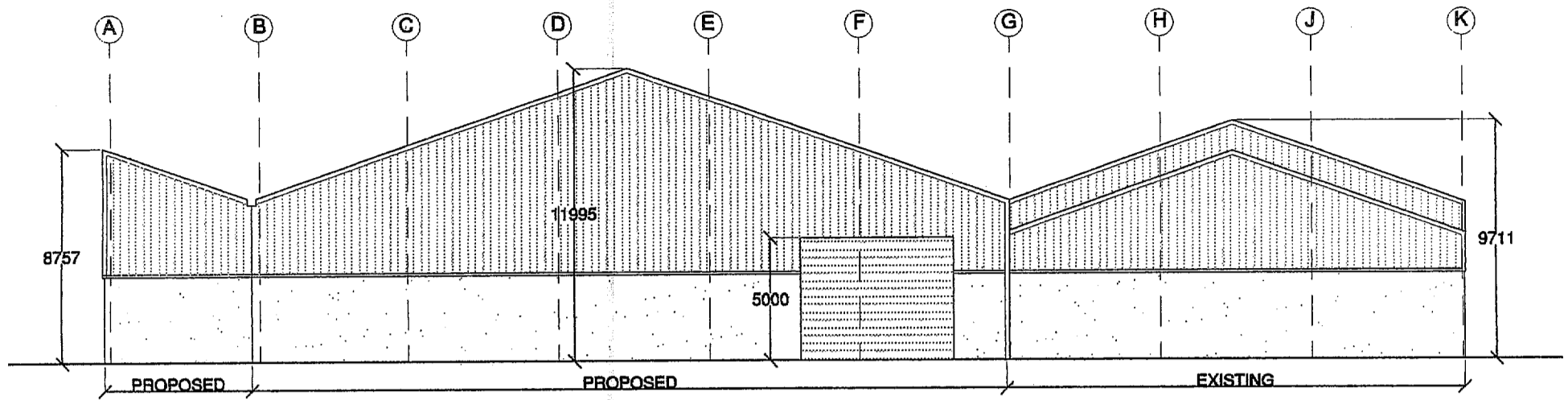
Fire extinguishers are located at strategic points throughout the Recycling Building and the site offices. The emergency telephone numbers for the fire brigade are clearly posted adjacent to all site telephones. The proposed building will also be fitted with appropriate fire fighting equipment.

In the unlikely event of a fire the following procedure will be employed:

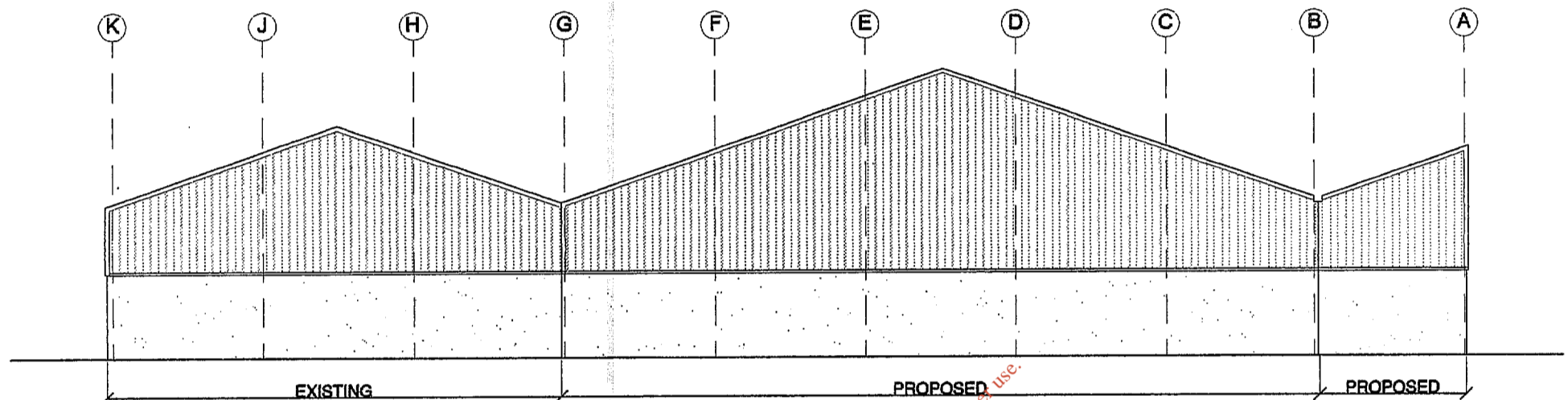
- All staff will be evacuated from the site buildings.
- The fire brigade will be notified immediately.
- The site manager or assistant manager will be informed immediately.
- All incoming vehicles will be directed to an alternative facility and the site entrance kept clear of traffic and machinery.
- The EPA, Wexford County Council and the South Eastern Fisheries Board will be notified at the earliest opportunity.

It may be possible for site staff to extinguish small fires using the fire extinguishers and fire hoses. This procedure will be restricted to small fires only and the decision will be made by the site manager/assistant manager.

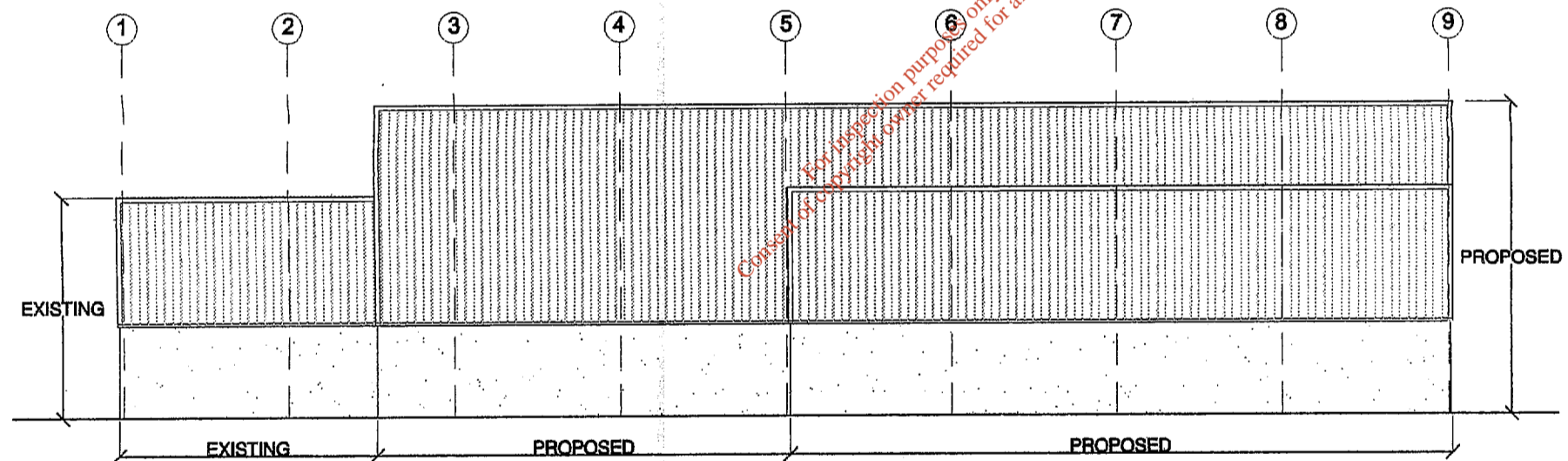
All other emergencies will be notified to the site manager/assistant manager and dealt with as speedily and efficiently as possible.



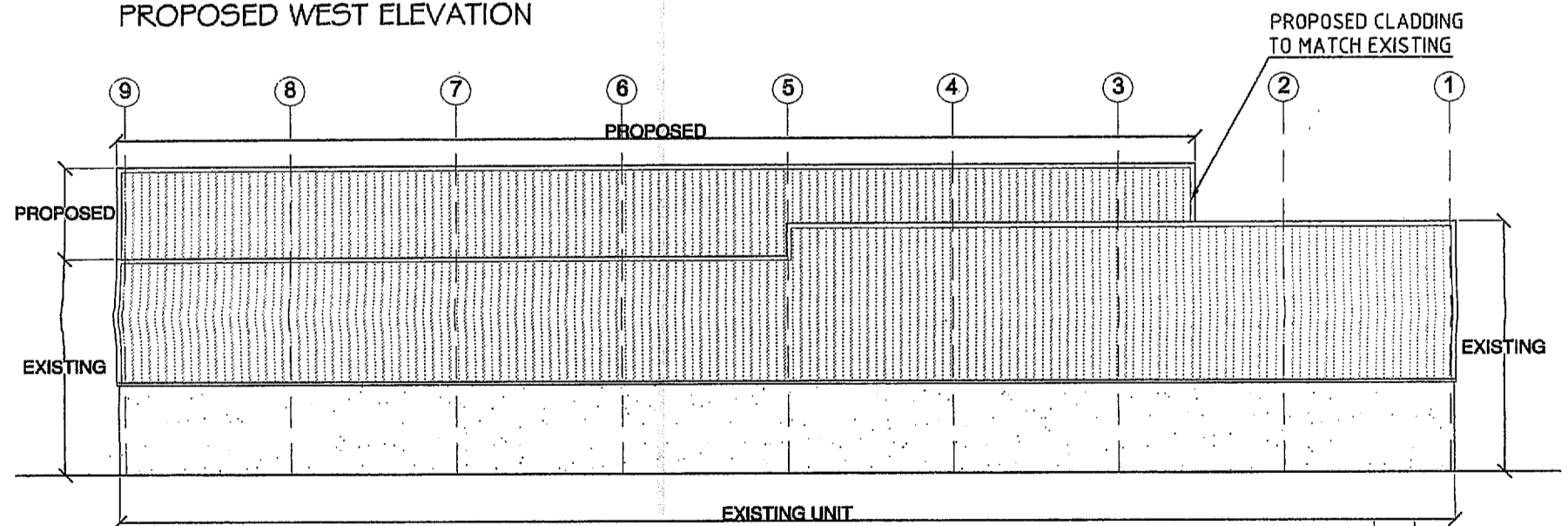
PROPOSED SOUTH ELEVATION



PROPOSED NORTH ELEVATION

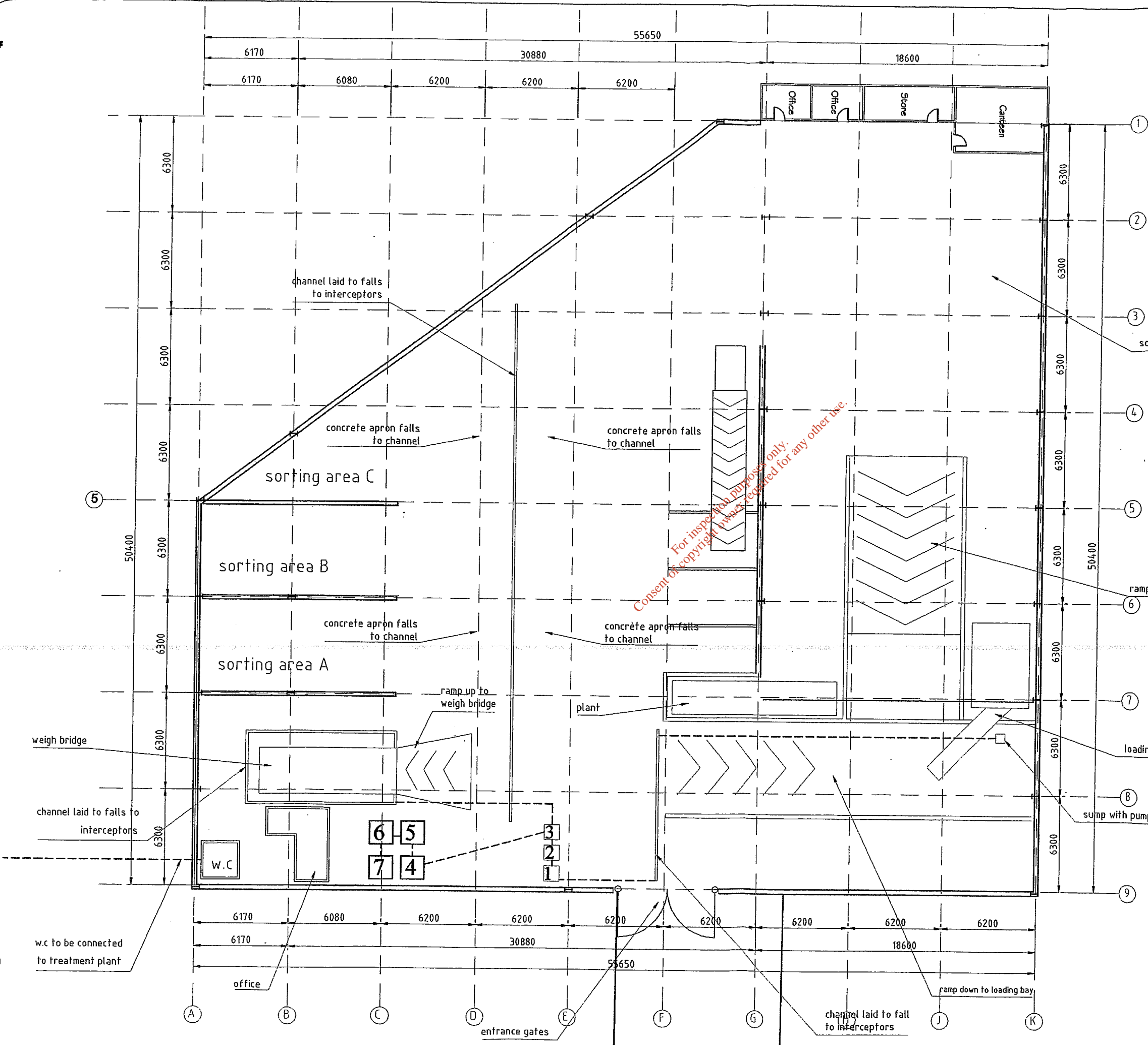


PROPOSED WEST ELEVATION



PROPOSED EAST ELEVATION

REV.	DESCRIPTION	DATE
TITLE: WASTE TRANSFER STATION GOREY BUISNESS PARK GOREY CO WEXFORD		
DWG: ELEVATIONS		
JIM KAVANAGH		No.16 Clavin Bui Ennisconrthy 087-2616 065
DATE	20/11/2003	SCALES: 1/250
DRN BY:	WG	JOB NO: 386
		CHEC BY: jim kav.



Job:  
**PROPOSED WASTE TRANSFER STATION**

Title: **SITE LAYOUT PLAN**

**ENNISCORTHY PLANNING SERVICES**  
PLANNING CONSULTANTS

ADDRESS : 16 CLUAIN BUI,  
ENNISCORTHY  
Co. WEXFORD 087 2616 065

Scale : 1 : 250  
Date : DEC. 2003  
Drg By: Jim Keenan

Revisions :  
Drawing No. :  
**03**