# 4.0 POTENTIAL IMPACTS AND MITIGATIONS MEASURES

## 4.1 CLIMATE

The Greenstar Ltd. facility has no significant impacts on the micro-climate of the area or on the global climate and no future impacts are predicted. There may be a minor benefit to global climate by promoting the recycling and recovery of materials and thereby replacing the need for use or production of raw materials. No mitigation measures are proposed regarding climate.

## 4.2 AIR QUALITY

### 4.2.1 General

As stated in Section 2.2 there are no aerosol emissions from the facility. Potential impacts of gas emissions, odour emissions and dust emissions are discussed individually below and mitigation, where required, is proposed.

### 4.2.2 Decomposition Gases

As stated in Section 2.2 decomposition gases do not and will not accumulate at the facility due to the following reasons:

- The domestic, commercial and industrial waste is generally non-putrescible in nature
- Any putrescible waste that does arrive on site is, and will be, transferred off-site to a landfill or composting facility as soon as practical after its arrival. This type of waste will normally be processed within 24 hours and within a maximum of 48 hours.
- For these reasons no impacts from gas are expected and no mitigation measures for gas are proposed.



### 4.2.3 Odours

As stated in Section 2.2 the facility currently handles very little putrescible waste and odours are not considered a problem at the site. All putrescible waste will be processed within 24 hours and within a maximum of 48 hours. For this reason the potential impact from odours is considered low. At the upgraded facility all wastes will be processed internally and, as with similar existing facilities in other parts of the country, odours are expected to be generally mild or imperceptible at the site boundaries. The proposed dust suppression system utilizing a sprinkler mist system for the processing building will have the capability of using odour masking products which will only be used if necessary. Should it be necessary to utilise these they will be used to break down the odour producing agents and mask any odours that may develop at the site. However, it is expected that odours will not be generated in any significant quantities at the site or for any significant time period. Thereefore it is considered that there will be no significant impact from odours at the proposed facility. It is planned that a register of complaints will be maintained at the site to record any odour complaints from local residents, employees or the public at large. Any complaints will be investigated immediately and the sources eliminated. The complaints register will be available to the public and will be reported to the EPA as part of the Annual Environmental report (AER).

### 4.2.4 Dust Deposition

The dust deposition results presented in Table 2.2.1 indicate that the dust deposition levels at the site were elevated when compared to the EPA guideline limit. The site was however located adjacent to earth movement works, which during the summer of 2003, generated large amounts of dust. The elevated levels are likely to be attributable to these works which were undertaken by third parties external to the Greenstar facility boundary. The area, which is almost exclusively industrial, is not particularly sensitive to dust soiling and the impact of dust deposition is considered low to moderate.

It is planned to install a dust suppression system within the proposed new waste processing building. This will consist of a water based sprinkler system which will be used to keep dust down within the building. The floor of the building will be swept on a regular basis to ensure no build up of dust or mud on the floor surface.

It is proposed to install a wheelwash near the entrance to the facility. This will ensure that trucks exiting the site will not bring any dust or mud out from the facility onto public roads.

It is considered that these measures will ensure no significant impact on the local environment from dust emissions from the facility.

## 4.3 NOISE ENVIRONMENT

### 4.3.1 Specific Characteristics of the Proposal

The proposed development involves the up-grading of an existing waste transfer station to increase the tonnage of material handled and recycled. The following features are relevant to potential noise impacts from the facility:

- Waste delivery trucks reversing into the bays to unload their waste.
- Operation of site plant and machinery
- Traffic noise

All waste handling activities will be undertaken within the waste processing building. External activities will include truck movements and delivery/collection of skips.



### 4.3.2 Noise Emissions from the Facility

#### 4.3.2.1 Noise Emissions from the Transfer Building

Plant machinery presently used at the facility to process/handle existing waste quantities accepted at the facility are as follows:

- 1 No. CAT 938G Front End Loader
- 1 No. Sumitons Excavator with Grab
- 1 No. CAT 320 Excavator
- 40 No. Skips (approx)
- 1 No. cardboard baler
- 1 No. shredder
- 1 No. vehicle washer
- Vehicles include:
- 1 No. Forklift
- 1 No. Volvo Rear End Loader (REL)
- 1 No. Man Skip Loader
- 5 No. Iveco Skip Loaders

Proposed plant includes:

- 1 No. Weighbridge
- 1 No. Baler
- 1 No. Trommel

**Additional vehicles**

All of the plant vehicles listed above have interchangeable fixtures therefore allowing the plant to handle all processing/segregation required. As the waste quantities accepted at the facility increase with time the Company are aware that additional plant may be required to continue to function on a full duty and standby basis (50%), therefore additional plant will be purchased/leased as required. Details of any additional plant purchased/leased to process/handle waste at the facility will be forwarded to and agreed with the EPA.

### 4.3.2.2 External Noise Sources

The main external noise source at the facility will be traffic related. Traffic is detailed separately in section 4.3.2.3 below. Other intermittent noise sources will include the following items:

- 1 (No.) power washer for cleaning skips / plant
- Loading / unloading of skips within the facility
- Manual segregation of wood and scrap metal in the transfer building
- Vehicles entering and exiting the site and moving around the facility



### 4.3.2.3 Traffic Noise

The predicted traffic flows as a result of the proposed facility are detailed in section 4.10. Traffic noise from the site will consist mostly of the arrival / departure of waste haulage vehicles. The baseline survey for the EIS calculated that there were a total of 37 movements to and from the site during the period of 07.15 hrs. to 09.45 hrs. It is predicted that traffic movements to and from the site will double (i.e. 74 movements during the peak hours) due to the proposed increase in waste tonnage. In general a doubling of traffic movements will result in a 3 dB(A) increase in noise levels assuming traffic flows are similar. Additional traffic related noise sources will include a small number of employee car movements and reversing alarms as vehicles reverse into the transfer building and as trucks load / unload skips.

The survey involved measuring the noise levels adjacent to the entrance of Gorey Business Park, the junction of the N11 and the LS507801 Roads. This is comparable with the existing traffic movements at the site. The L(A)eq 30 minute recorded due to these movements was 55.7dB(A) with an L(A)10 of 78.2dB(A). A worst case scenario assumes that there will be a doubling in traffic numbers due to the proposed facility, the resulting noise levels due to traffic movements along the access road will be approximately 58.7dB(A).

### 4.3.3 Mitigation Measures

Noise emissions from the proposed site will be significantly reduced due to a number of mitigation measures detailed below.

Recycling Centre Building Design

The structure of the waste recycling centre comprises a steel portal frame with reinforced concrete retaining walls to 5.5m. The upper section of the walls will consist of Kingspan single cladding. This will have the effect of enclosing noise sources within the building and significantly reducing noise emissions off site.

Boundary Walls

The site is bounded by walls on the southern, western and eastern boundaries. The northern boundary of the site is marked by a low concrete wall (approximately 0.35m in height). A wooden fence and planting mark the north western boundary of the site. Although the transfer building itself will considerably reduce noise levels the boundary fencing offers additional screening from on-site noise emissions. Addition of metal screening to the existing pallisade fencing will improve the acoustic performance of the boundary features. It is generally accepted that if there is a barrier or other topographic feature between the source and the noise sensitive receptor that an approximate attenuation of 5 dB can be assumed when the top of the plant is just visible to the receptor over the noise barrier. A reduction of 10 dB can be achieved when the noise screen completely hides the noise sources from the receiver.



General Measures

All vehicles and mechanical plant used for the purpose of works shall be fitted with effective exhaust silencers and shall be maintained in good and efficient order as per EC regulations. Also, all plant used must comply with the noise levels set down in SI No 320 of 1988 European Communities (Construction Plant and Equipment) (Permissible Noise Levels) Regulations, 1988.

Machines in intermittent use shall be shut down in the intervening period between works or throttled down to a minimum. The use of BB tech alarms will be investigated in order to reduce the noise from reversing alarms from on site plant.

### 4.3.4 Likely Significant Effects

The EPA recommend that ideally, on sites of industrial nature or similar, if the total noise level from all sources is taken into account, the noise level at sensitive locations should be kept below an L(A)eq value of 55dB(A) by daytime (0800 to 2200) and a value of 45 dB(A) by night-time (2200 to 0800).

A noise sensitive location is described as "*any dwelling house, hotel, health building, educational establishment, places of worship or entertainment, or any other facility or area of high amenity, which for its proper enjoyment requires the absence of noise at nuisance levels*"

A noise level of 64.1dB(A) was recorded at the nearest NSR. Noise sources at this location were predominantly due to traffic noise and other industrial noise sources. The construction of additional buildings will decrease the noise breakout from the facility. It is possible that the additional traffic movements will increase the noise level at the nearest NSR by 2-3dB(A).

Construction Phase

There are currently no set limits for construction noise in Ireland. However, noise limits set in the north of Ireland and the UK currently stipulate an L(A)eq 12-hour level of between 70 and 75dB(A) at the nearest noise sensitive receptor. It is recommended that 'Best Practicable Means' should be employed to minimise construction impacts including for example:-

- Employ best practices and follow the guidance of British Standard 5228 (Parts 1 & 2) 1997;
  Part 1: Code of practice for basic information and procedures for noise and vibration control.
  Part 2: Guide to noise and vibration control legislation for construction and demolition, including road construction and maintenance.
- Careful selection of working methods and programme;
- Selection of the quietest working equipment available e.g. electric/battery powered equipment, which is generally quieter than petrol/diesel powered equipment;
- All vehicles and mechanical plant used for the purpose of works shall be fitted with effective exhaust silencers and shall be maintained in good and efficient order as per EC regulations. Also, all plant used during excavation must comply with the noise levels set down in SI No 320 of 1988 European Communities (Construction Plant and Equipment) (Permissible Noise Levels) Regulations, 1988.
- Siting equipment behind physical barriers, i.e. existing features, hoarding etc. or provision of lined and sealed acoustic covers for equipment that could potentially contribute to a noise nuisance;
- Directing noise emissions from plant including exhausts or engines away from sensitive location;
- Ensuring that regularly maintained and appropriately silenced equipment is used;
- Shutting down equipment when not in use i.e. maintain a 'no idling policy';
- Restricting hours of site operation, construction activities will only be undertaken during day-time.

Operations Phase

The operations of the facility are not changing in any significant manner. A noise survey was undertaken at the facility on the 8th of December 2003 at the site boundaries and at the nearest

noise sensitive locations. The noise levels measured on site are detailed in Section 2 of this EIS.

Future Operations

Further waste handling plant may be added to the facility in due course. Waste Licence compliance monitoring will indicate whether additions to the plant are likely to increase the measured noise levels at adjacent noise sensitive receptors.

### 4.3.5 Monitoring

It is recommended that noise monitoring is undertaken at the site boundaries and at the nearest noise sensitive receptors on an annual basis. Proposed noise monitoring locations are outlined in figure 4.3.5.1.

It is considered that the mitigation measures planned for the proposed facility, in particular the carrying out of all activities inside the main processing buildings will reduce noise emissions from the site and that there will be no significant impact from the facility on the local noise environment.

## 4.4 SOILS AND GEOLOGY

### 4.4.1 Potential Impacts

There are no geological features of scientific interest within the confines of the site. The development of the existing facility may involve some excavation of the subsoil for facility foundations and drainage infrastructure. Excavation of these relatively small volumes is not considered to be a significant impact on the overburden geology of the area.

The overburden deposits and the underlying bedrock are both physically stable geological materials. No impact on their structure is expected as a result of the development of the existing facility. The concrete floors and drainage system proposed for the development will prevent any contaminants from the waste materials migrating into the underlying overburden and therefore, no impact on soil quality in the area is predicted.

### 4.4.2 Mitigation Measures

To mitigate against the possibility of contamination of soil from a hydrocarbon spill, the Company propose to locate all fuel tanks within bunds. The bunds will have the capacity of at least 110% the volume of the largest tank. All inlets, outlets, vents and pipes will be contained within the bunded area.

Spill kits will be maintained on site during the construction and the operational phases. These will be used in the unlikely event of an oil spill. The kits comprise oil absorbent mats and booms and will be used to contain any oil spills should they occur on site. In this event specialist contractors and consultants will be employed to deal with any significant spills/leakages.



### 4.4.3 Likely Significant Effects

With the proposed mitigation measures there will be no likely significant effects on the soils and geology of the area.

## 4.5. GROUNDWATER

### 4.5.1 Sources of Contamination

Potential sources of groundwater contamination at the proposed site are as follows:

- Leachate
- Spills from the oil and fuel storage tanks,
- Washdown from the floor of the building,
- Contaminated firewater.
- Sewage Management



### 4.5.2 Mitigation Measures

All waste processed at the site will consist of solid, dry, non-hazardous waste and will be handled inside the main waste processing building. The building will be fully contained with reinforced concrete floors, pre-cast concrete walls up to 5.5 m and cladded upper walls and roof. A low concrete ramp will be constructed at the entrance/exit to the building. As the waste is dry there is little or no leachate brought on site. Treating the waste indoors eliminates the potential generation of leachate from rainfall. In this case there is little or no leachate generation on site.

The floor of the building will be power swept and washed down as and when required. This may provide an occasional source of soiled water which will be contained within the building.

A contained drainage system will be installed within the building which is connected to the underground storage tanks located near the southwestern corner of the site. Therefore, in the unlikely event of any leachate generation within the building or if soiled water is generated from occasional floor washdown all liquids will be collected in the drainage system and contained in the underground storage tanks. Any such liquid will be pumped to a road tanker and exported off site to an authorised waste water treatment plant for treatment and disposal. This indicates that there will be no impact on groundwater from leachate generation at the site.

The main oil storage tanks (3 no. 1000 litre tanks) located in the southwestern corner of the site are contained in a fully contained steel bund. The bund has a minimum capacity of 110% (1,100 litres).

Oil absorbent mats and oil booms will be maintained on site in spill kits. In the unlikely event of any oil spills the mats and booms will be employed to contain and soak up the oil. Staff will be trained in the use of this equipment.

This indicates that there will be no impact on groundwater from the storage and usage of oils at the proposed development.

In the unlikely event of a fire in the main processing buildings the water used to put out the fire will be deemed to be contaminated and will have the potential to impact on groundwater. It is planned that the bulk of the fire fighting water will be contained inside the building by the reinforced concrete floor, lower precast concrete walls and by the installation of a low concrete ramp at the entrance/exit to the building. This water can be analytically tested and exported off site by road tanker to an authorised waste water treatment plant.



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 llitres/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 located just outside the southwestern boundary of the site. 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.

The relatively low volume of sewage treated in the wastewater treatment plant and discharged to the percolation area designed in accordance with the aforementioned standards will ensure that there will be no significant impact on groundwater from sewage generated on site.

The proposed development site is underlain by low permeability glacial tills that provide a 'moderate' vulnerability rating to the underlying regionally important aquifer. It is reported that all dwellings and businesses within 500m of the site are served by mains public water supply.

The fully contained nature of the facility is engineered to eliminate the potential for leachate generation and for its escape into the ground and therefore it is predicted that there will be no significant impact on groundwater from the proposed development.

## 4.6 SURFACE WATER

### 4.6.1 Potential impacts

Potential sources of contamination at the Greenstar Waste Disposal site include:

- Storage and processing of domestic, commercial and industrial wastes
- the fuel tanks
- Foul water management system
- Site vehicles
- rainfall run-off

### 4.6.2 Potential Surface Water Receptors

The storm water drainage system on the site is sufficient in its capacity to efficiently collect precipitation falling on the site during flood events. The receptor for all drainage from the site is the tributary of the Banoge River.



### 4.6.3 Mitigation

In order to mitigate for the potential impacts all waste activities will be carried out inside the processing building. This will eliminate the potential for any rainwater or run-off to come in contact with the waste.

All wastes brought to the facility are processed inside a roofed building with a concrete floor. Experience of similar operations at other waste transfer stations has found that the paper fraction of the commercial waste absorbs any liquid and as long as rainwater is prevented from wetting the waste there will be no run-off. All waste will be handled and contained within the proposed waste recycling building. The internal floors will drain to a designated internal drain which will flow to existing underground storage tanks. The tanks will be checked regularly and emptied as required. Any liquid in the tanks will be exported off site by road tanker to an appropriate wastewater treatment plant for treatment and disposal.

All hydrocarbon tanks will be bunded to 110% of their capacity. This will significantly reduce the risk of oil emissions to surface water.

Oil spill kits will be maintained on site and employed in the unlikely event of an oil spill. Staff will be trained in the use of the spill kits.

The proposed foul water management system entails the collection of foul water from the washrooms and canteen and directing it to a proprietary ewastewater treatment plantr to be located in the southwestern corner of the site. The treated effluent ewill be discharged to the percolation area located outside the southwestern corner of the site. The percolation area was desoigned in accordance with SR6:1990 guidelines and will ensure no direct or indirect impact on local surface water courses.

All rain falling at the site will run-off the roofs and will be directed via downpipes to the local surface water drains that run by the entrance to the site. This run-off will comprise clean rainfall and can be discharged directly to surface water courses without the need for any treatment.

### 4.6.4 Likely Significant Effects

When the mitigation measures described above are in place the impact from the site on the surface water environment is expected to be insignificant.

## 4.7 FLORA AND FAUNA

### 4.7.1 Potential Impacts & Mitigation Measures

The proposed development involves the up-grading of the existing Recycling Centre to increase the tonnage of material handled and recycled.

The site is not covered by any nature conservation designations.

The site is located adjacent to a business park and is surrounded by other industrial/ commercial units. There are no terrestrial habitats, flora or fauna of ecological importance on the site or it's surrounds. It is not anticipated that the development will have any significant negative impacts on the habitats in the area.

The operation of a waste recycling station on this site has the potential to impact on the water quality on adjacent watercourses. The tributary of the River Banoge, located approximately 120m west of the site, together with the Banoge, is an important salmonid river. Furthermore, the Banoge also holds populations of lampreys, protected under the EU Habitats Directive. The River Banoge merges with the Owenaverragh River a further 1km (approx.) downstream. The Owenaverragh River flows in an easterly direction for a further 5km before reaching the sea. The 1.5km stretch of river is designated a proposed Natural Heritage Area (Courtown Dunes and Glen), it's importance lying in a woodland and dune system. Mitigation measures will be put in place to avoid any negative impacts on the tributary of the Banoge and consequently the Banoge and Owenaverragh river systems.



No vermin were recorded at the site. However, it is likely, given the nature of the facility that vermin may be present. The existing and the proposed development have the potential to increase the numbers of vermin, e.g rats, in the vicinity of the site. Mitigation measures will be put in place to reduce/avoid such potential impacts.

### 4.7.2 Mitigation Measures

A number of mitigation measures will be put in place to prevent/reduce negative impacts on water quality in adjacent watercourses. These include:

- All materials will be handled indoors;
- The yard will be concreted;
- Storm water run-off from roofs will be discharged directly to the surface water drain as clean water;

- Waste water from washing of the main building and any leachate will be collected in the existing underground storage tanks and tankered off-site on a regular basis for treatment and disposal..

- Litter patrols will be put in place to prevent accumulation of litter at the site boundaries.

- The fuel/oil tanks will be located in a suitable area and will be fully bunded. The bund will have a capacity of 110% of the volume of the largest enclosed tank.

Mitigation measures, which will be put in place to control vermin in the vicinity of the site include the following:

- All waste materials will be handled indoors;

- A vermin control programme is in place and will continue to be maintained.

- Due to the invasive nature of knotweed (reynoutris sp.) recorded at the rear of the site, care should be taken if and when removing and disposing of this plant.

## 4.8 HUMAN BEINGS

### 4.8.1 Potential Impacts

As stated in section 2.8.1 there are several residential dwellings within the vicinity of the business park. The nearest residential dwelling is located approximately 120m north east of the site. A housing estate and 3 (No.) single dwellings are also located within 200m of the site. Potential impacts on these local residents and the local community in general include the following:

- Noise,
- Odours,
- Air quality dis-improvement,
- Traffic increase,
- Litter,
- Health,
- Visual intrusion,
- Increase in vermin,

Potential noise impacts are assessed in Section 4.3 of the EIS. Potential impacts from air quality and odours are assessed in section 4.2. Groundwater quality is assessed in section 4.5 and surface water quality in section 4.6. Traffic is covered in section 4.9 and visual impacts in 4.10. Impacts relating to vermin, human health and litter are discussed below.



#### 4.8.1.1 Vermin

Rats, flies and scavenging birds could be a potential problem at the site. Measures designated to mitigate against these species include the following:

- It is not envisaged that there will be any major problems from flies or insects. However, if there is a noticeable increase in insect populations at the site then insectide will be used to control fly infestation.

- Greenstar have employed a pest control company to control any potential vermin problems. Experience at other facilities of theis nature and in particular at fully enclosed facilities indicates that there will be no impact from scavenging birds.

#### 4.8.1.2 Human Health

The Greenstar site is used for the transfer of commercial and industrial waste to landfill and waste recyclers. All waste dealt with at the site is solid and non-hazardous. The potential emissions from the site include dust, odour and noise. These potential impacts are addressed

in detail in other sections of the EIS. Other potential impacts on human health include the possibility of injury or illness. The greatest risk of this nature will be to site staff. A safety statement is in place at the facility and applies to all staff. This will ensure that site operatives are sufficiently trained in terms of health and safety matters and are correctly equipped with personal and protection equipment.

#### 4.8.1.3 Litter Control

Wind-blown litter can potentially cause a problem on the site and the surrounding environment. The measures incorporated to control the mitigation of wind-blown litter include the following:

There is a daily litter patrol on-site and procedures are in place to ensure that all litter is collected and disposed of properly. This involves a designated litter patrol to walk the perimeter of the site daily to ensure that litter is collected and disposed. By enclosing all operations inside the proposed building it is envisaged that there will be minor amounts of litter emissions from the site. However, while incoming and outgoing waste loads will be covered with tarpaulin or nets there is a small possibility of minor litter emissions from these. Any such litter will be identified by the litter patrol and cleared away.

### 4.8.2 Likely Significant Effects

The likely significant effects on human beings from environmental emissions and nuisances such as noise, air quality, odours, water pollution, traffic and visual intrusion are assessed elsewhere in this EIS. With the mitigation measures described above, the likely effects of the proposed development on the local population in relation to vermin, litter and human health are expected to be insignificant.

A positive impact will be the creation of extra employment to the local populace to staff the facility.

## 4.9 ROADS AND TRAFFIC

### 4.9.1 Proposed Development

It is proposed to almost double the tonnage of waste handled at the Greenstar facility from 16,500 to 30,000 tonnes over five years. It is expected that there will be continual advances in the machinery and vehicles used at this facility which will allow for greater efficiencies. In general, material is brought to the site in relatively small vehicles including skips, trailers, hook loaders etc. It is also proposed that waste will be generally exported from the site in the most economically feasible quantities in large vehicles capable of carrying 20 tonnes per vehicle

Given that the quantity of waste is expected to almost double it is estimated, as a worst case scenario that traffic associated with the site will also double. It is therefore expected that the proposed facility will generate 74 vehicle trips during the morning and evening peak hours. On this basis this would increase the heavy goods flow in and out of the industrial estate by 10%. It should be noted however, that the Business Park is still being developed. As more units are developed there will be increased traffic thereby reducing Greenstar's contribution to overall traffic levels in the vicinity of the Business Park.

Given the relatively low proposed traffic volumes associated with the facility and the ample capacity on the existing access routes it is considered that there will be no significant impact on traffic, road infrastructure or road users from the proposed facility.

## 4.10 LANDSCAPE AND VISUAL AMENITIES

### 4.10.1 Specific Characteristics of the Proposal

The proposed development involves the up-grading of an existing Recycling Centre to increase the tonnage of material handled and recycled. The construction of a new recycling building to cover the entire yard area is relevant to the potential landscape and visual impacts from the facility:

### 4.10.2 Potential Impacts

#### 4.10.2.1 Landscape Character

The site is located adjacent to Gorey Business Park which comprises commercial, retail and light industrial units. Outside the business park, surrounding area consists of agricultural land and individual residential properties and a residential estate. The existing site does not detract from the visual character of the surrounding landscape. The proposed developments on the site will not be significantly obtrusive and will not be negatively distracting.

The site is in an area zoned in the local development plan for Industry. The proposed development is in agreement with the provision *"To Provide for Industrial Uses".*

The proposed development will not impact on any tree preservation orders or protected structures in the area.



#### 4.10.2.2 Visual Impacts

The development will not obstruct or impinge on the scenic route, sensitive area or vulnerable area, as identified in the Wexford Development Plan.

The proposed development will involve the construction of a new building which will cover the entire site yard. The size and scale of the building will be in keeping with those located in the adjacent business park. The roof and upper Kingspan walls will be finished in a colour that will blend in with the local environment including nearby industrial units. It is considered at this time that the finish will be an olive green colour.

There may be some views of the proposed new building from some vantage points on the N11 road. However, the site is reasonably well screened from the N11 by existing trees along the N11 and by existing coniferous trees located to the west of the site.

It is considered that the new building will blend in with the local industrial landscape and that there will be little impact on distant views of the facility.

A positive impact from the development will be that the entire yard will be covered in and that any existing views of site operations, storage of waste etc. will be completely screened.

### 4.10.3 Mitigation Measures

Given that there are no significant visual impacts associated with the development, it is not considered that any mitigation measures are required.

### 4.10.4 Likely Significant Effects

There will be no significant visual impacts resulting from the proposed development.

## 4.11 CULTURAL HERITAGE

### 4.11.1 Potential Impact of the Proposed Development

It is likely that if any archaeological remains were present on site they have been destroyed by pre-existing development. Therefore there will be no impact on the cultural heritage of the area by this development.

### 4.11.2 Recommended Avoidance, Remedial or Reductive Measures

The proposed development does not impact on any known archaeological sites or monuments and will not cause any ground disturbance or visual impact. The proposed development will not extend into undeveloped areas. Thus there is no discernible impact on the archaeological/historical resource and no mitigation measures are required.

## 4.12 MATERIAL ASSETS

### 4.12.1 Potential Impacts

It is not expected that the proposed development will have any negative impact on the local environment in terms of infrastructure, agriculture, tourism etc. The vehicles using the facility may have a slight impact on the roads servicing the site in terms of general wear and tear. This is addressed in Section 4.9 where the impact is considered insignificant. No other impacts on the infrastructure of the area are predicted and no mitigation measures are proposed

A positive impact of the Greenstar site is that it provides waste infrastructure and recycling capacity that is available for use by industry in the local area and industry and commerce in the wider area of the South East region and the surrounding environment.

## 4.13 Interactions

The European Communities Environmental Impact Assessment (Amendment) Regulations, 1998, require that an EIS describes the impacts and likely significant effects on the interaction between any of the following environmental media:

- human beings
- flora
- fauna
- soil
- water
- air
- climate
- the landscape

Table 4.13.1 highlights impacts and effects on interactions between these media and identifies the sections of the EIS where the interactions are addressed. It should be noted that in certain cases there are obvious interactions between environmental media, e.g. climate and flora, however, if the Greenstar site does not have the potential to impact or affect the interaction, then that interaction is not highlighted in Table 4.13.1. The identified interactions are as follows:



**Human Beings / Water**

Contamination of surface water at the site has the potential to impact on the water quality in the Banoge River. This impact could potentially affect the amenity value of the river which would affect human beings. Contamination of groundwater beneath the site would restrict any future use of the underlying strata for water supplies and would also have the potential to impact on the water quality in the Banoge River. Mitigation measures to ameliorate these potential impacts are proposed in Sections 4.5 and 4.6, after which the effects are expected to be insignificant.

**Human Beings / Air**

Dust emissions, noise emissions and odours from the facility have the potential to impact on human beings in the vicinity of the site. Impacts from dust and odours are considered low and mitigation measures are not considered necessary due to the reasons given in Sections 4.2. Some measures are proposed in Section 4.3 to mitigate against future noise emissions.

**Water / Flora and Fauna**

Contamination of surface water or shallow groundwater at the site has the potential to impact on the water quality in the streams and river downgradient of the site. This impact could

potentially affect the aquatic life in these water courses. Mitigation measures to ameliorate this potential impact are proposed in Section 4.6 and Section 4.7, after which the effects are expected to be insignificant.

**Water / Soil**

Soil beneath the site can act as a pathway for contaminants reaching both the groundwater and the surface water. Contamination of the soil can therefore lead to contamination of the water environment. Mitigation measures to ameliorate this potential impact are proposed in Section 4.4, after which the effects are expected to be insignificant.

**Human Beings / The Landscape**

The visual impact of the facility has the potential to affect human beings. Mitigation measures are proposed in Section 4.10.