

4.0 POTENTIAL IMPACTS AND MITIGATIONS MEASURES

4.1 CLIMATE

The SK&S facility has no significant impacts on the micro-climate of the area or on the global climate and no future impacts are predicted. For this reason, no mitigation measures are proposed regarding climate.

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

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
- 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, for this reason the impact 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.

4.2.4 Dust Deposition

The dust deposition results presented in Table 2.2.1 indicate that the dust deposition levels at the site are 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 SK&S 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.

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.
- Installation of a wheel wash
- Installation of a weighbridge

All waste handling activities will be undertaken within the transfer 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 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 listed above have interchangeable fixtures therefore allowing all 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 the above duty and standby basis, 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 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 in the open yard area.
- Manual segregation of wood and scrap metal in the transfer building
- Vehicles entering and exiting the site and moving around the yard

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 to 09.45. 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 in the yard area.

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.

Boundary Walls

The site is bounded by pallisade fencing on the southern, western and eastern boundaries. The western boundary comprises predominantly of pallisade fencing commencing at the access gate to the main yard. A section of the western boundary adjacent to Building. 2 is bounded by brick wall, chain link fence and razor wire. The northern boundary of the site is marked by a low concrete wall (approximately 035m 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.

The fencing will also aid in mitigating litter, dust and possible odour emissions from the facility.

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 work 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 a significant matter. 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 in plant is 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.

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

4.4 SOILS AND GEOLOGY

4.4.1 Potential Impacts

The extension to the exiting permitted development may involve some excavation of the subsoil for facility foundations. 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 extensions to 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.

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.

Consent of copyright owner required for any other use.

4.5. GROUNDWATER

4.5.1 Sources of Contamination

Potential sources of groundwater contamination on the existing site are from the fuel storage tanks, vehicles, truck wash and from the waste itself.

4.5.2 Mitigation

The soil and subsoils in this area give the underlying aquifer a "moderate" vulnerability rating with regard to groundwater contamination. However, apart from the percolation area associated with the septic tank there will be no discharge to groundwater. Hence, the potential impact to groundwater is very small.

It is likely that the water table will be encountered during construction of the deeper trenches for the percolation area. The ground will have to be raised to provide a suitable percolation area.

Additional mitigation measures include:

- Any waste handled at the facility will be dealt with within the existing and the proposed buildings. All foul water will be collected in the existing foul water holding tanks.
- All surface water runoff will be in the form of clean roof water and will be discharged directly to the surface water drain.
- All detergents and oils will be stored indoors on bunded pallets.
- Any unacceptable waste will be stored in a concrete bunded waste quarantine area inside the Recycling Building.
- Groundwater effluent discharges will be minimised in the immediate vicinity of the proposed waste transfer/recycling facility by the containment of foul water run-off.
- Spill kits will be available throughout the site.
- All concrete areas will be bunded with a concrete lip to contain any firewater.
- Shut off valves will be installed on all major outlets.

4.6 SURFACE WATER

4.6.1 Potential impacts

Potential sources of contamination at the Seamus Kelly Waste Disposal site include:

- the non-inert domestic, commercial and industrial wastes,
- the fuel tanks,
- vehicles visiting the site
- rainfall induced run-off from the hardstanding surfaces may contain inert fines which could cause minor siltation in surface water drains.

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 confined to contained buildings.

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

The covering of the entire yard by a new building will reduce the potential impacts associated with run-off from hardstanding surfaces.

All wastes brought to the facility are processed in 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 aco drains which will flow to existing foul water holding tanks.

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.

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

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 in 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 operating 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 a existing tanks and tankered off-site on a regular basis for landspreading.
- 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. Each bund will have a capacity of 110% of the volume of the 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.

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

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:

- Insecticide is used to control fly infestation.
- SK&S have employed a pest control company to control any potential vermin problems.
- As all operations of the waste transfer station will be taking place indoors this will reduce the environmental nuisance of birds. These management control measures will also be enforced in the proposed facility.

4.8.1.2 Human Health

The SK&S 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

section 4 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 deposited of properly. This involves the designated litter patrol to walk the perimeter of the site twice daily to ensure that litter is disposed of.

A daily inspection is also carried out to provide protection to the other properties. Fencing on the perimeter of the site will ensure that any wind-blown litter does not escape into adjacent properties or grounds.

Activities are carried out inside the premises at the site which minimises litter.

All waste will be delivered to the site in covered vehicles.

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.

In addition, the facility currently provides employment for approximately 35 people. It is expected that the upgraded facility will employ an additional 10 people when complete.

4.9 ROADS AND TRAFFIC

4.9.1 Proposed Development

It is proposed to almost double the tonnage of waste handled at the SK&S 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 true that waste is 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 SK&S's contribution to overall traffic levels in the Business Park.

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

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 following features are relevant to the potential landscape and visual impacts from the facility:

- Retention of the building housing the staff offices, recycling and storage.
- Retention of the skip storage area, metal storage area, baled cardboard storage area, fuel storage container and rubble and timber bays;
- Retention of all boundary features.
- Construction of a new recycling building to cover the entire yard area.

4.10.2 Potential Impacts

4.10.2.1 Landscape Character

The site is located in Gorey Business Park which contains 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 area in which the site is zoned 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 not involve the construction of any structures, which will be visible from outside the site.

There will be no visual impacts from the construction of the weighbridge and fuel tank.

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.

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

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 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.

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

4.12 MATERIAL ASSETS

4.12.1 Potential Impacts

A positive impact of the SK&S 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.

The vehicles using the facility 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.

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

4.13 Interactions

The European Communities Environmental Impact Assessment (Amendment) Regulations, 1998, demand 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 PWS 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.

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