

17 AMENITY

17.1 Introduction

17.1.1 An assessment of the potential impacts from the proposed development of the Barr Killoch Energy Recovery Park on the amenity value of the surrounding area has been carried out.

17.1.2 A detailed description of the development proposals is given in Chapter 4 of this Environmental Statement.

17.1.3 Four key potential sources of nuisance have been identified:

- Noise
- Air quality, including; odour and dust
- Pests and vermin
- Litter

17.2 Baseline Conditions

Current Site Use

17.2.1 The proposed development is located in Killoch within a predominately industrial area. The proposal site currently incorporates a number of office and storage buildings, asphalt plant and associated infrastructure (operated by Breedon Aggregates), Killoch Training Centre and bare ground used as a laydown area for equipment and storage of materials. In addition, there is a visitor/employee car park and a weighbridge which will be retained as part of the proposed development.

17.2.2 The potential impacts of Air Quality and Odour have been fully assessed in Chapter 10, Air Quality and Human Health, and Appendix 10.1 of this ES. The potential impacts of Noise have been fully assessed in Chapter 11, Noise, and Appendix 11.1.

Baseline Noise Levels

17.2.3 The existing sensitive receptors currently experience levels of industrial type noise from the existing Barr premises and nearby farms. These sources of sound were observed during the noise monitoring period to contain Tonal and Impulsive characteristics.

Baseline Air Quality

17.2.4 No air quality management areas have been declared in either East Ayrshire or South Ayrshire. A detailed evaluation of baseline air quality data was carried out, and representative baseline air quality levels for each substance of potential concern are summarised within Appendix 10.1.

17.3 Proposed Development

17.3.1 The ERP will accept and process residual household waste. The nature of this waste has the potential to attract pests, as it contains a putrescible organic element. It also has the potential to affect the air quality and odour impacts of the development. The ERP is housed within a fully enclosed building that has been designed to ensure that the potential of pests and odour is minimised. In addition, the ERP will have a negative pressure ventilation system capable of drawing air and odour through the facility. This is discussed further in section 17.4.

17.3.2 The potential of the development to have a significant impact upon local amenity is dependent upon the proximity of sensitive receptors, and upon the current baseline levels of noise, odour, and air quality within the industrial area setting.

17.4 Air Quality

17.4.1 The term 'emissions to air' can refer to various different types of emissions that can have an adverse impact on air quality and amenity. These include the release of substances from the energy recovery facility, road traffic emissions, dust and odour. Each of these elements are discussed below.

Road traffic emissions

17.4.2 The proposed development is forecast to result in an increase of 43 HGV vehicles accessing the site per day, which equates to 86 HGV movements (in and out) per day. The proposed facility is also forecast to result in an increase in staff and visitor vehicles trips (in and out) of 72 per day. This increase in road traffic does not exceed the guideline values set out in the Design Manual for Roads and Bridges, Section 3: Environmental Assessment Techniques, Part 1: Air Quality. On this basis, the Barr Killoch Energy Recovery Park is not forecast to have any significant effect on air quality due to traffic emissions in the vicinity of the site.

Dust

17.4.3 The risk of dust arising during the construction phase is determined by assessing the

scale and nature of the works (i.e. the magnitude of potential dust emissions) and the proximity of receptors (i.e. the potential for effects). The site is classified as a 'high risk site' with regard to the need for control of dust during construction. This is due to the building volume of the facility (i.e. greater than 100,000m³) and the proximity of the closest sensitive receptor (i.e. approximately 25m from the nearest site boundary). For further information, please refer to Appendix 10.1.

17.4.4 Taking into consideration the low sensitivity of the surrounding area of the application site (reasons for this categorisation are explained in Appendix 10.1) and the high risk classification, as outlined above; the risk of impacts on air quality due to construction is predicted to be slight adverse prior to the implementation of mitigation measures. However with the implementation of mitigation, the impact can be reduced to negligible. The development of a construction and dust management plan is recommended to facilitate the implementation of mitigation measures. This is likely to include measures that address the following; site planning e.g. erect solid barriers to site boundary, construction traffic e.g. all loads entering and leaving site to be covered, and site activities e.g. use water as dust suppressant where applicable.

Odour

17.4.5 Input waste is likely to be the main source of odour due to the nature of some of the waste to be accepted at the site may contain a putrescible organic element. However the implementation of mitigation measures and their incorporation into the design of the process building will help to minimise the odour impacts. Airflows will be maximised in areas used for the storage of input waste and odorous substances will be contained within the facility and treated in the gasification process; the air extracted from the building will be used to provide combustion air to the gasifier and odorous compounds in this combustion air will be destroyed as part of the gasification/oxidation process.

17.4.6 Odour abatement measures are outlined in Appendix 10.1 of this ES. Good practice techniques will also be implemented in order to further minimise the potential for odour emissions. Such measures include sufficient staff training, good housekeeping, maintaining the integrity of process buildings, maintaining fugitive release points and ensuring waste materials are appropriately stored.

17.4.7 A site odour, dust and bioaerosol management plan will be developed in accordance with SEPA's 2010 Odour Guidance, which will set out the controls to be applied for

avoiding adverse impacts due to any such fugitive emissions.

17.4.8 No significant odour issues are expected to arise outside the site boundary under foreseeable operating conditions. This is principally because all waste handling operations will take place inside the process building. The design of the process building, ventilation and the abatement that is provided via the gasification process all play a role in the effective control of odour.

Summary

17.4.1 The Air Quality Impact Assessment (Appendix 10.1) concluded that the proposed facility will have no significant adverse effects on air quality.

17.5 Noise

17.5.1 The proposed development has the potential to generate noise impacts upon sensitive receptors. These sources include:

- Noise and vibration from earthworks and construction phase activities,
- Operation of the facility, including:
 - The Waste Reception Hall;
 - Material Recovery Facility (MRF);
 - Energy recovery gasification facility, associated stack and other plant;
 - Vehicles movements to and from the site;
 - External plant on site; and
 - The cumulative noise from all of the above.

17.5.2 The Noise Assessment concluded that in the absence of any mitigation, noise generated by earthworks and construction phases of the development may have a short-term, adverse impact at the existing sensitive receptor locations. To minimise the potential levels of noise generated by these phases of development, best working practice will be put in place.

17.5.3 With regards to the operation of the ERP, it is considered that prior to mitigation, there will be a negligible to moderate adverse impact during both day and night-time periods on existing sensitive receptors when the facility is fully operational. However this represents a worst-case scenario, as the MRF would shut down during the night-time period for the majority of the year. Overall, in accordance with BS4142, the predicted noise levels likely to be generated by the proposed ERP at

existing sensitive receptors are considered to be not significant in the context of the absolute sound levels and the character of residual noise. To reduce the potential impact of noise on existing sensitive receptors, mitigation measures will be incorporated into the design of the facility and Best Available Technology will be adopted. Best working practice such as regular maintenance of plant and machinery to control noise emissions and the use of broadband reversing alarms instead of tonal alarms, will be implemented. The proposed mitigation measures are outlined in Chapter 11 (Appendix 11.1).

17.5.4 In accordance with the requirements of East Ayrshire Council a site noise monitoring scheme will be implemented at the site prior to commencement of operations. It is proposed that the site noise monitoring scheme be developed through consultation with the Environmental Health Department.

17.6 Pests and Vermin

17.6.1 Due to the nature of some of the waste that would be accepted and processed at the site, there is the potential to attract pests and vermin, such as birds, flies and rodents. Good site management and the adoption of good housekeeping measures, along with pest control will greatly reduce any potential impacts from pests.

17.6.2 The likelihood of a pest or vermin problem developing at the proposed development depends on several factors, including:

- The type of waste present on the site;
- The weather;
- The locational characteristics of the site; and
- The management of wastes at the site and further up the waste stream.

17.6.3 With regards to waste type, both flies and rodents prefer domestic waste, green, food, farm and sewage sludge wastes for food/habitats. Site characteristics which favour the growth of fly and rodent populations include large areas of exposed waste and the presence of other fly/vermin sources nearby (e.g. farms, sewage works or landfill).

17.6.4 All loads delivered to the Barr Killoch ERP will be securely covered, and unloaded materials will be sorted in enclosed buildings. Therefore there will be no open areas of waste which may attract birds. As the proposal is helping to divert residual household waste from the Garlaff landfill, which is located approximately 8km from

the Killoch site, the existing risk from birds at Garlaff will therefore be removed. The proposal will therefore have a positive impact at a local level in this respect.

17.6.5 Due to the enclosed nature of the proposed waste processing at the Killoch site, the risk of nuisance caused by flies is considered to be negligible. In addition to site operations and good working practice, the development is not close to any large areas of exposed waste.

17.6.6 With any waste management process there is the risk of attracting rodents, however the nature of the site processes, the proposed layout of the development, and the construction and operation of the facility minimise this potential impact.

17.6.7 In order to further reduce the potential impact on local amenity, the following mitigation measures are proposed:

- All waste delivery loads will be securely covered;
- Unloading and sorting of waste will take place in an enclosed building;
- Working areas will be inspected regularly and kept clean and tidy;
- Ensuring that the time waste is held within the facility prior to treatment is kept to a minimum; waste will be put through the ERP within 5 days;
- The entire site will be regularly inspected for signs of pest infestation;
- Any infestations will be dealt with immediately by specialist contractors;
- Insecticide will be used where necessary to control flies; and
- The site will be regularly monitored for odour, dust and noise.

17.6.8 Mitigation measures relating to the amenity impacts from Air Quality, Dust and Odour, and from Noise, are discussed in the relevant assessments (Appendix 10.1 and 11.1 respectively).

17.7 Litter

17.7.1 The following control measures will reduce the potential amenity impacts from wind-blown litter:

- The majority of vehicles delivering waste to or removing waste from the site will be enclosed, however where loads are carried in open vehicles, they will be secured with a net or tarpaulin to prevent items falling or being blown from the load;
- All waste management operations that may be susceptible to problems from windblown litter (namely, the storage and mechanical treatment of wastes containing recyclables) will be conducted inside an enclosed building. Storage of recyclables of a similar nature will be inside the energy recovery building on the north west elevation of the MRF;
- The roller shutter doors will close immediately after the vehicle is fully within the building in order to minimise any escape of waste as well as process air from within the fully enclosed building; and
- The facility will be inspected at regular intervals throughout the operational day for litter. Any litter that escapes in transit or from the energy recovery facility will be collected at the earliest opportunity, and where possible the same day. Barr will provide litter picking resource in the unlikely event that litter gathers within the boundary of the ERP.

17.8 Summary and Conclusions

17.8.1 The main perceived risk to amenity from the proposed development is odour (as examined in detail in Appendix 10.1 of this ES) and noise (as examined in detail in Chapter 11 and its corresponding appendices). As discussed above, due to the enclosed nature and odour control measures incorporated into the design of the proposed development of the ERP, the impact of odour upon receptors will be minimal. The enclosed nature of the facility will also help to reduce the occurrence of litter and pests/vermin. Similarly, the location of machinery and plant primarily within buildings, or within acoustic enclosures, will serve to minimise the noise impacts of the development. Other identified sources of nuisance, such as pests and vermin, will be mitigated by good working practices, good housekeeping and regular inspection and monitoring of the site.