

18 CUMULATIVE IMPACTS

18.1 Introduction

18.1.1 Schedule 4, Section 4 of the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011 states that an Environmental Statement must include a description of the likely significant effects of the development, including reference to possible cumulative effects.

18.2 Cumulative Impacts with Other Developments

18.2.1 It has been identified that that there are no other committed developments in the local area that need to be taken into account in terms of potential cumulative impacts. In addition, the Scoping Opinion from East Ayrshire Council did not specify any cumulative sites or developments for consideration in the ES. However, where appropriate, cumulative impacts were considered as explained below.

18.2.2 The Air Quality Impact Assessment (see Appendix 10.1) found that impacts arising due to the cumulative emission of particulates from the adjacent asphalt plant (operated by Breedon Aggregates) and the proposed ERP were not forecast to be significant. The maximum combined concentrations of both PM₁₀ and PM_{2.5}, under all averaging periods, would not result in an exceedance of the relevant air quality standard/guideline.

18.2.3 The schemes outlined below have been identified as having the potential to provide cumulative landscape and visual effects:

- Existing asphalt plant located at Killoch and operated by Breedon Aggregates (21m high) and railhead within the application boundary of the proposed development;
- Egger Barony chipboard plant (48m high stack & 21m high silos) approximately 5.5km to the north-east of the proposed stack;
- Barony A-frame, original pithead winding gear (approximately 36m high) approximately 5.2km to the north-east of the proposed stack;
- Electricity sub stations on the A70, approximately 1250m to the west of the site boundary; and
- Consented wind turbine (11/0703/PP) at Crofthead Farm north of Catrine, 75m to tip. 8.8km to the north-east of the proposed stack.

18.2.4 Of the above schemes, all are existing developments with the exception of the approved turbine at Crofthead, Catrine and as such have formed part of the baseline against which the proposed development was assessed.

18.2.5 In summary, the cumulative landscape and visual impacts of the addition of the proposed development to the existing similar developments and tall structures is largely considered to not be significant. However significant cumulative effects are assessed for the properties at Lessnessock Bungalows, Woodhead of Lessnessock and Killoch.

18.3 Cumulative Impacts on Receptors

18.3.1 The cumulative impact assessment has a second aspect, which is to look at the cumulative impacts upon potential receptors. The paragraphs below summarise the residual impacts likely to be experienced for each type of receptor and assesses the significance of these cumulative effects. The receptors considered include:

- humans;
- flora/fauna;
- air/climate;
- water;
- transport infrastructure; and
- socio-economic assets.

18.3.2 The paragraphs below explain the significance of the overall cumulative impact that each receptor is expected to experience.

Humans

18.3.3 The overall visual impacts on human receptors as a result of the proposed development would be very limited in number. These comprise impacts on the visual amenity of a small number of residential properties within a limited area and in close proximity to the proposed ERP which would have some open views and experience some skyline effects.

18.3.4 The noise impact on human receptors during the construction phase may have a short-term, adverse impact but it is considered unlikely that the construction activities will generate noise levels in excess of the threshold values as defined in BS5228-1. However this may occur at Killoch Farm due to its proximity to the site.



To minimise the potential levels of noise generated by the construction works best working practice will be put in place.

- 18.3.5 The noise impact on human receptors during the operation phase is considered to be Negligible to Moderate during both day and night-time periods with the facility operating fully. Nevertheless this is a worst case scenario as for the majority of the year the MRF would shut down during the night-time period. Mitigation measures will be incorporated into the site design to reduce noise emissions where feasible, Best Available Technology (BAT) will be adopted as will best working practices. It is also recommended that further assessment of noise breakout from the proposed buildings be undertaken prior to full commencement of operations to confirm the frequency and sound level of noise breakout with the design of the building envelope and any other additional mitigation measures implemented as appropriate to protect the amenity of the nearest sensitive receptors as far as is practicable.
- 18.3.6 The potential amenity impacts of the proposed development are considered to be not significant. The enclosed and integrated nature of the facility and odour control measures incorporated into the design suggest that the impacts upon odour 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.
- 18.3.7 Contaminated material and dusts could impact upon workers on site and isolated farms and residential properties within 1km of the site. Mitigation measures will be implemented to minimise these potential impacts upon human receptors.
- 18.3.8 The proposed development would result in a large portion of land being covered with hardstanding and the potential for ground contamination such as dusts, liquids, contaminated soils (should they be present) to reach highly sensitive receptors (humans occupying properties on site and adjacent to the site) would be reduced, thereby being a long-term beneficial impact. Nevertheless, without mitigation, contaminants could be released and pathways could be created to other environmental and/or human receptors. However, appropriate mitigation measures will be implemented and full site investigations will be undertaken to ascertain whether ground materials are contaminated and remediation is required. Current



investigations indicate that it is unlikely that ground materials are significantly contaminated.

18.3.9 It is not expected that motorists will experience any significant adverse impacts as a result of the proposed development. The increase in lorry movements on the A70 will be a negligible increase and would make no noticeable difference to other road users. The predicted increase in total traffic would lie well within normal daily variations in traffic flows, and would be indiscernible to road users. The potential increase in vehicular movements will result in a network increase of 1% which constitutes no material impact on the highway network.

18.3.10 The proposed development is expected to make an overall positive contribution to the local economy and community. Furthermore, the proposed development has the potential to maximise socio-economic impacts through the regeneration of brownfield land.

18.3.11 It is therefore not expected that the combination of these potential impacts will have any significant adverse impacts upon human receptors with the exception of short term impacts e.g. noise impacts associated with construction.

Flora/Fauna

18.3.12 It is considered that the statutory designated site; Barlosh Moss SSSI, (approximately 1.7km south of the site) will not be subject to direct effects of the works. The air quality impact assessment, (Appendix 10.1) concluded that the proposed development would have no significant effects on air quality or deposition at the designated habitat site.

18.3.13 Potential cumulative impacts with regards to fauna relate to the loss of drainage ditch and bank vegetation. The ditch has the potential to support common frog and common toad which are recognised as UKBAP priority species. There is suitable amphibian habitat adjacent to site for these species. To avoid impacting upon these amphibian species, the vegetation and infilling of the drainage ditch will be completed under precautionary working methods. With precautionary measures in place, it is considered that the proposed development will not significantly impact upon the conservation status of common frog or common toad.

18.3.14 The combination of these impacts is not expected to have an overall significant adverse effect on the ecological value of the site and its immediate surroundings.



Air/Climate

18.3.15 The generation of electricity and heat from waste will play an important role in the diversion of residual waste from landfill. Energy recovery is considered higher in the waste hierarchy than landfill. One of the reasons for this is that it is understood that the energy recovery will have less of a greenhouse gas impact than landfill, thus will help to minimise the potential impact on the climate. Indeed the scheme is expected to result in significant CO₂ savings.

18.3.16 While there may be localised effects on air quality from the operation of the facility, these will all be within permitted levels and as such are not expected to have a significant adverse impact on air quality or climate.

18.3.17 The potential risk of dust arising during construction is classified as high, however the sensitivity of the surrounding area is classified as low. The implementation of the mitigating measures can help to reduce the potential impact to negligible (see Appendix 10.1).

18.3.18 The combination of these impacts is not expected to have an overall significant adverse effect on air quality and climate.

Water

18.3.19 It is possible that during the construction phase, without mitigation, contaminated materials could be brought into contact with controlled waters such as groundwater and the surface watercourses, although the latter are at such a distance from the site that this is very unlikely. Prior to development, a ground investigation will be undertaken to determine the nature and extent of the near surface deposits and to identify any contamination that may be present on the site and assess the significance of potential risks so that they can be effectively managed. Mitigation measures will be implemented to avoid and minimise any potential impacts.

18.3.20 Without mitigation the chemicals used in the dry gas flue scrubbing system have the potential to contaminate the ground and groundwater systems, and cause harm to workers. Without mitigation, the impact at worst may have a minor to moderate adverse impact. However as explained above, mitigation measures will be implemented to avoid and minimise any potential impacts.

18.3.21 The proposed development will be constructed to current standards regarding sustainable drainage (i.e. SUDS), including interceptors or filtration devices as

appropriate, and therefore it is unlikely that run-off would cause pollution to the water environment within and outside of the site. The use of SUDS for surface water drawing of the site will also act to mitigate potential flood risk. Detailed surface water management and drainage design will be completed at the next stage of planning.

18.3.22 The combination of these impacts is not expected to have an overall significant adverse impact on the water resources in the immediate surroundings of the site.

Transport Infrastructure

18.3.23 The proposed development meets all Safety and Planning Policy requirements as set out by the Institution of Highways and Transportation Guidelines and the Design Manual for Roads and Bridges, and will have no material impact on the highway network.

18.3.24 The potential traffic impact of the proposed development represents a negligible increase in the number of lorry movements on the A70, and would make no noticeable difference to other road users. The potential increase in vehicular movements will result in a network increase of 1% which constitutes no material impact on the highway network.

18.3.25 An overall significant adverse effect on transport infrastructure is not expected.

Socio-economic Assets

18.3.26 The ERP will contribute to East Ayrshire, South Ayrshire and West Dunbartonshire's unsorted municipal waste requirements for the next 25 years. This will work towards Scotland's Zero Waste targets, reducing landfill and therefore reducing the cost of processing unsorted municipal waste for the areas listed above. There is also the capacity for the development to provide heat to local commercial businesses and positively contribute to the social benefits of the development.

18.3.27 The ERP will also create a number of jobs within the area; 35 new jobs including apprentices and graduates will be generated, 50 existing jobs will be secured and an additional 200 jobs could potentially be created in the local Ayrshire supply chain in the construction and build phase of the project.

18.3.28 Overall, a significant beneficial socio-economic impact is predicted.



18.4 Conclusion

18.4.1 There are no adverse cumulative impacts of overriding significance associated with the proposed ERP at Killoch except the visual impact on a small number of residential properties within a limited area. This will be mitigated as far as practicable.