Environmental Statement/Environmental Assessment (ES/ER) Destination Hillend: Multi-activity centre

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Introduction

Destination Hillend is a project by Midlothian Council that has been granted £13.4 million of capital funding that potentially will involve developing the pre-existing Midlothian Snowsports Centre, Hillend which is on the outskirts of the capital Edinburgh (Midlothian, 2020). The public voted in favour of the developments during a public consultation which more than 200 people attended (Midlothian, 2020). The proposal includes potential development of; the highest zipline in the UK; the longest alpine coaster in the UK; a new reception building; a food court and venue area; space for related retail; tourist accommodation including glamping; an activity dome with a soft play; an upgrade to the funslope and even a hotel (Midlothian, (2020). However, it is not confirmed whether all of these features will be included in the final development.

The money was granted on the basis that investment in the project would help generate income in the area and create over 30 full-time or equivalent jobs and 50 third party jobs (Midlothian, 2020). The development project will contribute to regional and national tourism and is supported within the Midlothian Local Development Plan of 2017 according to Sweco, an engineering and environmental consultant company that has been heavily involved in the Environmental Impact Assessment (EIA) and the design of the proposed development (Sweco, 2020). Large developments such as this one often require an EIA to assess significant environmental impacts, specifically on human health and safety, fauna and flora, air, water, soil, climate and landscape as well as on material assets and the interactions between all of the above. The EIA system in the UK and Scotland is based off of The European EIA Directive (85/337/EEC) (Jha-Thakur, U. & Fischer, T. B., 2016). In 2014 an updated directive was published named Directive 2014/52/2014 (Jha-Thakur, U. & Fischer, T. B., 2016).

The proposed development would be classed as a Schedule 2 development in relation to the Town and Country Planning (EIA) (Scotland) Regulations 2017 which describes developments such as tourist developments, urban and industrial developments, breweries and tanneries. The EIA must make suggestions that will enable decision makers to comply with policy and legislation throughout the planning, construction and use of the proposed development. The proposed development must comply with the Council Directive 92/43/EEC which aims to conserve natural habitat and wild fauna and flora and Directive 2009/147/EC which aims to conserve wild bird species (Legislation, 2017). This essay will critically evaluate Chapter 4 of the EIA which assesses the impacts from noise and vibration emissions by comparing the predicted noise levels of the proposed developments and the construction of such with already existing background noise in the area and with related policy, legislation and regulations (Doherty, D., 2019).

Strengths of Sweco’s EIA

Sweco was successful to an extent in following guidance and policy in relation to reporting the impacts of noise and vibration emissions and whether or not noise and vibration emission levels will contribute to noise pollution that adversely affects receptors in the surrounding environment. Sweco followed the Planning Advice Notes (PANs) 1/2011, ‘Planning & Noise’ 2011 and the Technical Advice Note (TAN), ‘Assessment of Noise’ 2011 (Doherty, D., 2019). It is suggested in the PANs that strategic noise mapping should be carried out to identify noise levels from the proposed development in relation to possible receptors. It is also suggested that Noise Action Plans are produced which include noise management methods. Although Sweco did not present a graphical noise map, Sweco considered and discussed many possible receptors that could be impacted in the surrounding area. Sweco stated that no mitigation measures beyond standard best practicable measures (BPM) will be proposed (Doherty, D., 2019). The PANs suggest that topics relevant to the noise and vibration section of an EIA are the avoidance of significant adverse noise impacts from new developments, implementing noise barriers where necessary, mitigation measures, the protection of Quiet Areas and Noise Management Areas (Gov, 2020). It is suggested in the TANs that factors such as the averaging time period, time of day, the nature of the sound source, frequency of occurrence, spectral characteristics, absolute level and influence of noise indicator should be considered (Gov, 2011). Sweco presented predicted measurements, in decibels, of noise and vibration levels. Sweco took into consideration the noise level at several positions in relation to noise emitting features, long-term and short-term noise, the phases of development including construction and operational, the traffic that will be produced during construction and operation, the construction and operation of each proposed feature and even the screams that may be emitted from users of such features (Doherty, D., 2019). It was found that there would be no significant adverse noise impacts from the proposed development overall (Doherty, D., 2019).

In relation to development management, it is suggested that the type of development and likelihood of significant noise impacts,level of sensitivity of area, noise level change, character of noise and the absolute level and potential dose-response relationships are discussed and considered within the EIA (Gov, 2020). Sweco compared predicted measurements with current noise level measurements in order to determine whether there is a significant difference in noise levels with or without the construction of the proposed development (Doherty, D., 2019). Sweco mentions that significance levels are awarded based on the level of change in relation to noise from the features during operation, the absolute level of construction noise and vibrations and the sensitivity of receptors to the change or level (Doherty, D., 2019). Within this chapter of the EIA, Sweco discusses the potential development features during construction and operation and confirm that residential, school and hospital areas are considered high-sensitivity receptors (Doherty, D., 2019). The PANs suggest including specific mitigation measures. Sweco states that construction noise will be limited to the hours of 08:00 to 19:00 Monday to Friday and 08:00 to 13:00 Saturday and to 75 dB LAeq,T (Doherty, D., 2019). Overall, Sweco was successful to an extent in complying with EIA planning and noise PANs and TANs by undertaking extensive research into the effects that the noise and vibration emissions from the proposed development will have on surrounding residential areas.

Suggested Improvements to Sweco’s EIA

However, Sweco did not take into consideration biodiversity in the surrounding area of the proposed development within this chapter. Within the planning and noise PANs, it is suggested that the effect of noise can impact on other issues which could potentially be considered within a strategic environmental assessment (SEA) of a strategic or local development plan or other guidance and that mitigation measures should be included in the EIA (Gov, 2020). Other issues include biodiversity and fauna. Sweco could potentially have investigated and mentioned impacts of noise and vibration emissions on sensitive wildlife species such as the common bat (*Pipistrellus Pipistrellus*) and the soprano pipistrelle bat (*Pipistrellus pygmaeus*), birds of prey such as red kites (*Milvus milvus*), hen harriers (*Circus cyaneus*) and short eared owls (*Asio flammeus*), moth species that bird and bat species feed on or lowland deer (Pentland Beacon, 2019). Sweco could have done this by measuring the noise and vibration levels within habitat of these species around the surrounding area alongside undertaking research into what noise and vibration level has been known to affect each species and using information from both of these processes to draw conclusions. Sweco could have investigated and mentioned the impacts of noise and vibration levels on fauna species in the surrounding area. For example a study by the European Commission suggests that noise pollution can affect pollination and seed germination (EC, 2012). This, in turn, would lead to a decline in fauna species that depend on pollination. As this is an Environmental Impact Assessment, it is expected that biodiversity, wildlife, fauna or species in relation to fauna or flora would be mentioned throughout this chapter, however none of these topics were mentioned at all. It is also noted that these topics are not specifically asked to be mentioned within the PANs or TANs which is a criticism of the EIA guidelines. Sweco could have created a graphical noise map using Geographical Information System (GIS) software to map and present noise and vibration levels at each sensitive receptor in relation to the proposed development features and presented how far noise and vibration emissions travel and at what intensity. Receptors in this case would include those at residential areas and those at the breeding and nesting grounds of species, general species food source areas and habitat space of species. This would also allow Sweco to determine where mitigation measures may be necessary.

Sweco was less successful in following the PANs and TANs in regards to investigating mitigation options. The PANs and TANs suggest mentioning design methods of controlling noise or exposure to noise including engineering and building design, reducing noise at source, containing noise, lay-out design and management design (Gov, 2011). Sweco could have investigated potential mitigation options for in general, for if their predictions of noise and vibration emissions were wrong or for in the case that the noise and vibration emissions would be adversely affecting flora and fauna species and the health of the ecosystems they are part of. For example, in the construction noise chapter of an EIA that was conducted on the A9 dualling of Kincraig to Dalraddy by Atkins engineering and design company, Atkins went into great detail regarding mitigation and noise reduction measures that would or could potentially be taken. Atkins included details on general noise mitigation techniques, operating methods of noise reduction, noise reduction of the mobile plant, noise reduction of stationary plant tools and even the control of noise propagation on the site (Atkins, 2013). Sweco could have mentioned the use of temporary or permanent noise barriers which could utilise urban greening methods such as living-wall hedges or green roofs or gardens such as on top of the hotel. This method is suggested by the Scottish Environmental Protection Agency (SEPA) and would also contribute to mitigating any loss of habitat due to the proposed development and it would improve air quality in the area.

An evaluation of the EIA process in regards to environmental sustainability

The EIA process is not completely sufficient in addressing environmental sustainability. In relation to the environmental sustainability of noise and vibration emissions, the EIA process is not sufficient. This is because the only mention of biodiversity is in the Development Planning section of the PANs where it is stated that the effects of noise could potentially impact biodiversity and fauna, that this should be mentioned in the strategic environmental assessment (SEA) and that potential mitigation measures should be included in the environmental report. To increase the sufficiency of this section of an EIA process in producing environmentally sustainable outcomes, it is suggested that environment specific guidance is produced in regards to the impacts of noise and vibration emissions.

In the Planning Advice Note 1/2013: Environmental Impact Assessment, it is recommended that Scottish Planning Policy, National Planning Framework, Circulars, Planning Advice Notes and Design Advice Guidance should be used as guidance to carry out an EIA. These documents have a focus on planning in general, but to successfully determine whether or not a proposed development should be accepted based on the development’s environmental impacts, guidance should be environment specific. It is suggested that to increase the environmentally sustainable outcome of the EIA process, specific guidelines are written that will guide the commissioned company in carrying out an EIA in relation to specific environmental factors such the impacts of proposed developments and features of on air, water and soil quality or pollution of, factors affecting biodiversity such as land use and habitat loss and effects on climate systems. The specific guidelines would suggest that biodiversity is considered within the term of sensitive receptors. There should be an increased focus on the environment itself throughout the EIA process.

Overall, the EIA process is sufficient in addressing environmental sustainability to an extent. However, certain aspects of EIA guidelines could be reformed in order to include the effects of activities on flora, fauna and thus the health of ecosystems in the surrounding area such as the Planning Advice Note 1/2011: Planning and noise. It is suggested that environment specific planning guidelines are produced in order to increase the sufficiency of the EIA process in regards to environmental sustainability. Although there may not be adverse effects from destination Hillend, it could be the case that other proposed developments are being accepted without impacts on environmental sustainability being considered. To maintain healthy ecosystems and a healthy environment in Scotland, a stricter EIA process is necessary to aid in decision making in relation to rural developments.

Conclusion

To conclude, the Sweco’s EIA was successful in following the Planning Advice Note 1/2011: Planning and noise guidelines and the Technical Advice Note (TAN), ‘Assessment of Noise’ 2011 by undertaking extensive research into the impacts of noise and vibration emissions from the features of the proposed development on residential areas. However, Sweco was not successful in investigating the impacts of noise and vibration emissions on surrounding flora and fauna. Overall, the EIA process is sufficient in addressing environmental sustainability to an extent. Certain aspects of EIA guidelines require extensive research into the effects of a proposed developments activities on flora and fauna. However, other aspects of the EIA guidelines require no research into the effects on flora and fauna such as the Planning Advice Note 1/2011: Planning and noise. To increase the sufficiency of the EIA process in addressing environmental sustainability, it is suggested that environment specific planning guidance is produced to guide companies and organisations who carry out EIAs.

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