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Destination Hillend

# Introduction to Project

Destination Hillend is a planned expansion of the facilities at the current Hillend snow sports centre. Currently Hillend is a snow sports leisure centre that hosts artificial ski slopes that run down the mountain face. In addition to this there is also a café on the site. Along with these facilities, Hillend currently also facilitates conference rooms. Hillend predominately focuses on snow sports, they provide skiing lessons; these can be private or in groups. Furthermore, they also provide skiing lessons to groups of school children. Lessons for school children can be arranged with Hillend to be done during their academic time. As well as ski instruction and skiing facilities Hillend also has a ski shop that is located near the bottom of the slope (Midlothian.gov, 2019).

Destination Hillend is a project that aims to rejuvenate the old snow sports facility. The project aims to develop new outdoors facilities for the site. New zip lines will be constructed as well as a new alpine coaster. Additionally, there will also be a new free style jump slope added to the ski runs. Other outdoor developments for Destination Hillend include development for a new hotel to be built on the site’s grounds. An activity dome is also planned to be constructed as part of the project. “Glamping” tourist accommodation is also planned to be built as part of a diversifying the outdoor experience on the site. Further diversification of the experience at Hillend will see the development of an outdoor retail park as part of the project. The current infrastructure on site has also been planned to be upgraded to better cope with the predicted larger numbers of visitors. Along with the outdoor developments, there will also be investment inside the already existing facility. A new food court is planned for construction, along with a new reception are within the current main building. Lastly, there are also plans for the development of new function rooms. Destination Hillend aims to change the mostly seasonal attraction of Hillend to a more multi-seasonal attraction with the integration of other sports facilities.

# Evaluation of the Processes used to Assess Impacts: Chapter 6 Air Quality

## Policy and Guidance

The Sweco EIA used local air pollution legislation as there basis for the investigation, while also mentioning the important of understanding further reaching air quality issues. Sweco base their investigation on the Environment Act 1993 (part 4 of the act). This act places a responsibility of the Scottish government to ensure the levels of air pollution are managed and reduced where possible. This reduction and management of air quality is done by local authorities (Simpson, & Padkin, 2019). Furthermore, the EIA also used the Air Quality Strategy for England, Scotland, Northern Ireland and Wales as a frame from which to derive their air quality standards. This legislation limits the amount of pollutants allow in the local air, this is done by looking at international and national emissions targets. Lastly, the EIA also brings in reference from the Air Quality Standards (Scotland) Regulations 2010. This act seeks to increase air quality so to help reduce the health risks of polluted air in the population (Simpson, & Padkin, 2019).

This part of the EIA conducted by Sweco follows the EIA guidelines. It ensures that the new development will cause minimal risk to the public’s health. Furthermore, it also ensures that the development of Destination Hillend will meet the national targets for emissions (Gov.uk, 2019).

## Baseline Data

The baseline for this section of the EIA performed for the Destination Hillend was taken from the 2017 baseline data. This was taken as it was the most up to date air quality data for the site. Baseline data that is most up to date is the most accurate, this will much more accurately reflect current air quality and condition. Traffic data for use in the EIA report’s baseline section was also from the 2017 as it was most recent and accurate. The 2017 air quality and traffic data were used as a cross verification for the baseline section of Sweco’s EIA. The report identified the nearest air quality management area (AQMA) as Edinburgh. The AQMA area of Edinburgh was chosen as Hillend resides just north of there, around 6km away. Using the most recent air quality data is good practice for the baseline section of the EIA process. This will allow the examiners of the EIA process to assess the potential impact of additional air pollution that may be the result of the pending construction and development. This also applies to the 2017 baseline traffic data (Simpson, & Padkin, 2019).

The EIA consultants from Sweco looked at the NOx gases, PM 2.5 and PM10 data from the AQMA. Although this information is crucial to gauging the pollution caused by the development, the investigation should also cover all aspects of air quality. This should be expanded to cover other common pollutants that can be generated by the new development; this also applies to the increase traffic in the area. This could be expanded to cover other gaseous pollutants; carbon monoxide levels should also be considered. Furthermore, the testing of the baseline air quality was not done on the site. The data was taken from 17 different sites that surround where Destination Hillend is going to be constructed. There are only 2 of the diffusion tubes used in the 2017 AQMA study that are near the site; they are within 3km of the site (Simpson, & Padkin, 2019). This method of collecting baseline data is good, however on-site air quality data would have been better to verify the baseline data on.

## Methodology

The EIA conducted by Sweco sets out air quality concerns for the construction process. It mentions that during the construction process, PM 10 will be an air pollutant due to the dust created. The creation of the PM 10 air pollution has been outlined in the methodologies section of the EIA. Within the methodology the EIA has a dust risk assessment. This is where the risk of dust generation of the construction works is predicted and set against the baseline national averages for PM 10. By comparing this data Sweco have been able to see how potential dust generation will affect local air quality. By understanding the risk of PM 10 generation, it will make it easier to keep within the national and local targets of air pollution. Sweco also used the most recent version of the Atmospheric Dispersion Modelling System (ADMS) to work out operational road traffic emissions. This considered the current baseline (2017 data), the predicted future (2022) baseline data (Simpson, & Padkin, 2019). Furthermore, the methodology section of the EIA highlights other areas from which air pollution will be created due to the development. It also mentions potential air pollution sources to be the excavation and demolition processes that will take place on the site during the construction of the new developments. Additionally, it also mentions potential sources of air pollution to be earthworks, passing traffic, the transfer of construction materials around the site and wind from the moving of vehicles on the site. The EIA sets these areas as key sources of air pollution. This is a very in-depth and well thought out assessment of the potential key pollution sources (Simpson, & Padkin, 2019).

## Significant Effects

The EIA done by Sweco has a significant effects section where is draws from the impacts section done in the air quality impact assessment. This section of the EIA assessed the construction phase’s ability to create air pollution. The assessment was to work out how the air pollution would be created and where would be affected by the increase in pollution. Dust and vehicle emissions were examined to determine if they would have a significant impact to the surrounding area. Results from the testing were conclusive as it was found that the dust risk is low. Furthermore, Sweco recommend that the development follow IAQM dust mitigation measures as to keep the impact to “insignificant” (Simpson, & Padkin, 2019).

The baseline data for 2017 has been used to assess traffic emissions. Also, the 2022 development scenario baseline data for emissions has been used along with the 2022 future baseline data. Using this information Sweco was able to model the increase in air pollution. The results show that the development will not impact the air quality targets of Scotland and keep the NO2 levels at 40 µg/m3 for that year. Therefore, development will pose little impact to annual NO2 gas levels (Simpson, & Padkin, 2019). Furthermore, Sweco also looked at PM 10 levels on site. It was found that no areas that was measured would be above the annual targets of 18.0 µg/m3; the impact of development on PM 10 levels will not be significant (Simpson, & Padkin, 2019). This assessment of both these pollutants fits the national guidelines due to the development being a schedule 2 (Gov.uk, 2019).

## Combined and Cumulative Effects

The data has shown that for both PM10 and NO2, there is no significant impact to the air quality. At the tested sites it was modelled that the development would not put the amount of those pollutants over the national annual targets (Simpson, & Padkin, 2019)

## Summary of Residual Effects

The development has been cleared for significant effects. Only good practice measures have been implemented for the development process (Simpson & Padkin, 2019).

# The EIA Process and Its Efficacy at Addressing Environmental Issues

The Environmental Impact Assessment (EIA) process must encompass the whole development and think about every aspect. This also must be done to the potential impacts of the development at every stage in the EIA. All possible receptors must be thought of and investigated for significant impacts. The EIA must be able to list all possible environmental impacts that the development may have. Furthermore, it must also grade the impacts with a severity rating (low risk to high risk). (Anon., 2019).

The EIA is a process that has many layers to it. It is a process that requires knowledge of many different sectors. The EIA’s purpose is to provide guidance to the managers of new development projects, also to the public as well. The EIA will highlight the environmental impacts that the development will have, and it will go into detail about the severity of the impact; detailing what will be affected, where and by how much. Furthermore, the EIA will be used by the developers as a tool to see environmental impacts, cultural impacts and impacts to human health (Anon., 2019). Any potential impacts that the new development may pose on any of the categories mentioned previously will have mitigation processes listed in the EIA. Although the EIA provides developers will in-depth advice, the advice given in the EIA does not have to be taken.

Benefits of conducting an EIA are far reaching and cover all the points to make development more sustainable. The EIA can act as an investigation that looks over the whole project and by doing this any methods of development that are environmentally damaging can be removed (or changed). This can be done by creating alternative designs or development methods that help reduce the environmental impact of the develop, while still allowing the development to go ahead. Additionally, the investigation period of the EIA allows for more sustainable development methods to be found as the EIA is includes every aspect of the development project. The EIA also allows the developers to see the negative impacts that the development will cause. Furthermore, the EIA will provide ways in which to reduce, prevent or balance the effects of the major impacts. People and communities of people that may be affected by the development will be informed of the risk via the EIA process. IT will let them know of the dangers and it will explain what is being done to minimise the additional risks. Lastly, a benefit of EIA is that it allows for specialists to inform the managers of new development. This will allow for professional opinions on matters like wildlife habitat conservation reach the heads of new development. This can be pivotal in ensuring development does not have undue environmental damage (Anon., 2019).

Although the EIA process has untold environmental benefits, and it helps development stay sustainable, it also has some negatives that are associated with the EIA process. Firstly, the EIA must be done by a third party that is not affiliated with the developers. Due to the nature of the EIA being the scrutiny of a new development, the EIA should be done by a neutral third party as to make sure they are impartial. There’s always the risk of collusion between the developers who want the development to be done, and the EIA team that want to make money. Another negative about the EIA process is that it is often done by the company or team that will charge the least for the service. An issue of competence can be brought up if the EIA is being done for a low amount of money. This will make the whole exercise pointless as it may provide bad feedback to the developers who then might do undue environmental damage during the development. Furthermore, another possible issue with an EIA might be that it will be rushed. A rushed EIA will inherently provide less detailed feedback in the report. The collected information may not be representative of the current situation, or it may just be incorrect. An incorrect EIA would be disastrous for the environment and would not be a sustainable way of developing. EIA’s usually just use data from the previous EIA that was carried out. This is another example of a negative practice in EIA. By using the same data and not collecting the most up to date version of it, it makes it more likely that the EIA will be useless and incorrect. When looking at the environment, the company carrying out the EIA will often only focus on the most lethal of impacts resulting from the development. This will mean that the still important and dangerous impacts will be glossed over, but not mentioned or investigated to an enough of a degree. This isn’t sustainable (Wight, et al., 2013).

The EIA process is good at making new development projects sustainable and less environmentally impactful. However, this is only true if the process is done by qualified non-affiliated professionals that are not involved in the development at all. Furthermore, EIA should only be done by third parties and not by government agencies that have a vested interest in the development’s completion deadlines. Additionally, the EIA should be more of a fixed price. By ensuring that the price cant vary to large amount it can be ensured that the most serious company gets the EIA contract.

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