

EIA/SEA EVALUATION

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Contents

1.0 - Introduction	3
2.0 - What is EIA	3
2.1 - When is an EIA Required?	3
2.2 - Stages of EIA	4
2.3 - Legislation in the UK	4
3.0 - The Proposal	5
3.1 - Why is the Project Required?	5
3.2 - How Does it Impact the Local Community?	5
3.3 - Potential Risks and Health Factors	6
4.0 - Evaluation of the EIA	7
4.1 - Strengths	7
4.2 - Weaknesses	7
5.0 - Recommendations	8
6.0 - Conclusion	9
7.0 - References	10

1.0 - Introduction

The aim of the report is to explore what an Environmental Impact Assessment (EIA) is and how they accompany planning applications to Local Authorities. It will also be highlighted when an EIA will be required and the stages of an assessment, prior and among planning applications. A case study will also be used to assess the effectiveness of the EIA and whether the EIA has covered all potential environmental impacts which the project could cause, as well as critiquing the assessment and where improvements can be made. A full evaluation will be completed to identify whether the Environmental Impact Assessment was a good, thorough assessment, or whether it was ineffective and lacking information. Once the case study has been assessed, recommendations will be made on the EIA and how improvements can be made.

2.0 - What is an EIA

An Environmental Impact Assessment (EIA), is the procedure of judging the impacts a planned development or project will have on the environment. This will consider the potential negative health impact on humans or wildlife within an area, as well as the economic and social impact which can however provide a positive impact. It will assist with the decision making of a project and aims to foresee potential environmental impacts prior to the project taking place, which can allow negative aspects to be possibly be designed out, adjust plans and result in a reduced harmful impact on the surrounding environment.

The Ministry of Housing, Communities and Local Government defines the purpose and aim of an Environmental Impact Assessment to “*protect the environment by ensuring that a local planning authority when deciding whether to grant planning permission for a project, which is likely to have significant effects on the environment*”, and “*is also to ensure that the public are given early and effective opportunities to participate in the decision making procedures*” (Ministry of Housing, Communities and Local Government, 2014).

The EIA will also encourage projects to be designed around the local environment, integrating the possible wildlife or potential for an economic or social advantage as a result of the project. An example of an economic advantage would be the reduced costs of a project, as well as the time to reach completion. Within the assessment, this will be reflected in a lessened disturbance to the locality, clean-up costs and potential health and safety risks which are open to the public.

2.1 - When is an EIA Required?

To understand whether an Environment Impact Assessment would be required, the project will be categorised in to either Schedule 1, or Schedule 2. Schedule 1 developments or projects would “*tend to be larger developments or those with potentially the most significant environmental effects, such as airports, oil refineries, or motorways*” (East Lothian Council, 2021). This category of developments would always need an EIA completed and without doing so, the project would not be granted planning permission. Other examples of a Schedule 1 development would be a nuclear power station, waste disposal, dams, overhead power lines and any road which would have four or more lanes.

Schedule 2 developments will not always require an EIA and will depend on aspects such as the projects size and location. “*Schedule 2 development can include things such as wind turbines, certain industrial developments, golf courses, larger housing proposals, and a wide range of other types of development*” (East Lothian Council, 2021). Other examples will include ski-runs, holiday villages and other tourism items. If your project falls in to the Schedule 2 of developments, it is advised that it undergoes screening for opinion and whether an EIA is required. This would be carried out by the Local Authority and is stage one of the five stages to completing an Environmental Impact Assessment.

2.2 - Stages of EIA

The Government outline five stages which must be undergone to complete an Environmental Impact Assessment. The first stage would be Screening, which as mentioned in section 2.1, if a development meets the conditions of Schedule 2, requires a member of the Local Authority to assess the likelihood of the project creating a significant impact on the environment and if so, would require an EIA. Screening would take place at the beginning of the design stages of a project, to avoid the project being submitted for planning permission and the possibility of it being rejected due to the impact on the environment, thus saving time and providing the ability to make design amendments to lessen the potential negative impact.

Scoping is the next stage, which is *“Determining the extent of issues to be considered in the assessment and reported in the Environmental Statement. The applicant can ask the local planning authority for its opinion on what information needs to be included (which is called a ‘scoping opinion’), “The applicant is responsible for the preparation of the Environmental Statement. In order to ensure the completeness and quality of the Environmental Statement, the applicant must ensure that it is prepared by competent experts and that it is accompanied by a statement from the developer outlining the relevant expertise, or qualifications of such experts, sufficient to demonstrate that this is the case”* (Ministry of Housing, Communities and Local Government, 2017). Under the Town and Country Planning Regulations 2017, it is required to make copies of a projects EIA scoping opinions available for public inspection. This will allow the local public to raise concerns regarding a development and to inspect the assessment which has been carried out by the Local Authorities and their final opinion to whether an EIA will be completed.

If it is decided by the Local Authorities that an EIA must be completed, the next stage would be to submit an Environmental Statement. *“The Environmental Statement must include at least the information reasonably required to assess the likely significant environmental effects of the development”* (Ministry of Housing, Communities and Local Government, 2017). The statement should include detailed and genuine descriptions of the development and the main environmental effects should be discussed. This will be to present data, knowledge and the potential science behind the environmental impact the project will create. Within the statement, if there are possible amendments which can be made to differ the impact and effect of the project, these should be compared and discussed within the statement.

Once the previous stages have been completed, the developer can then make an application, which must be publicly accessible. This allows stakeholders to raise issues on the development with potential disagreements of opinions. This will accompany the planning application sent to the Local Authority. The application must include the Environmental Statement, location of the project, where further documents and information is available, as well as date stamps. *“The Environmental Statement must be placed on Part I of the planning register, as should any related screening or scoping opinion or direction as soon as possible after publication”* (Ministry of Housing, Communities and Local Housing, 2017).

The fifth stage is the decision making stage. This is where the Local Authority or Secretary of State (for major developments) will assess the information provided from the Environmental Impact Assessment and Statement, along with the planning application. After reviewing the package, it will be decided whether the project has been granted permission to proceed and the decision will need to be publicised. Although this is not the topic of the report, it is important to highlight this process to show the significance an EIA and how it influences the final decision making. *“The local planning authority must take into account the information in the Environmental Statement, the responses to consultation and any other relevant information when determining a planning application.”* (Ministry of Housing, Communities and Local Government, 2017).

2.3 - Legislation in the UK

A significant law is the Town and Country Planning Act 1990, “An Act to consolidate certain enactments relating to town and country planning (excluding special controls in respect of buildings and areas of special architectural or historic interest and in respect of hazardous substances) with amendments to give effect to recommendations of the Law Commission” (Town

and Country Planning Act, 1990). This Act states policies for development and altering the use of land in an area, which will take in to account the appearance within the surrounding area, physicality and environmental impact as a result. The Act provides guidelines for providing local planning and granting permission to construct or develop for all different natured projects. From this Act, further revisions have been implemented to ensure the legislation is up to date and provide framework for new usage which can have an environmental impact. Although there is a substantial amount of framework around the Town and Country Planning Act 1990, the decision making process is highly variable with location, nature of the project, predicted environmental impact, opinion of stakeholders and the Local Authority, which can be significantly dependant on biased and personal opinions.

3.0 - The Proposal

The proposed project is a large housing development within Trimsaran, West Wales. The development is to be consisting of 139 homes and 29 garages, ranging from two bedroom terraced houses to four bedroom detached homes. Eight of these homes will be built to be sold to housing associations or to be 'affordable' homes. The project will be constructed by a large housing developer who have previously built three other developments within this area, the one in discussion being phase four. The project has views of Ffos Las Race Course opposite, with a small stream, road and a plot of land which is between the homes and the course. Within the development, an area for open space has been designated which will include sitting benches and a small number of children's playing blocks. The build timescale is aimed for May 2019 - September 2021.

3.1 - Why is the Project Required?

Housing projects are required to be constructed to keep up with the housing demand in the UK. According to the UK Parliament "*Estimates have put the number of new homes needed in England at up to 345,000 per year, accounting for new household formation and a backlog of existing need for suitable housing.*", "*The White Paper identified a threefold problem of "not enough local authorities planning for the homes they need; housebuilding that is simply too slow; and a construction industry that is too reliant on a small number of big players"*" (Barton and Wilson, 2021). Due to the nature of the developer, it is likely that the project will be completed relatively quickly to ensure the availability of the homes. The location of the development is also not heavily built, with no surrounding shops, garages and not many homes. The homes are affordable for the surrounding areas, with short commutes to the M4 and city centre which is desirable for first time buyers, young families and commuters. These requirements are sought after within this area, emphasising the need for the project. The area is overseen by Carmarthenshire County Council, who have issued an Affordable Homes Delivery Plan by 2020. "*The purpose of this plan is to provide the detail on how and where we will deliver more affordable homes. The initial programme will deliver over 1000 additional affordable homes over the next five years, with a total investment exceeding £60m. The plan will also explain how we could deliver an ambitious new build programme by looking at the delivery options. This will further increase the number of homes delivered and provide additional investment*" (Carmarthenshire County Council, 2016). It would be in the local councils interest to grant permission to the housing developer to help achieve their plan in action, adding to the local requirements for the project.

3.2 - How Does it Impact the Local Community?

The project will impact the local community in many positive and negative ways. Some negative impacts would be the increased traffic resulting in more carbon monoxide fumes, noise, lack of parking with newly built homes resulting in many cars on roads, and in some peoples opinions, the homes allocated to social housing. Where the area was once a smaller 'village type' community, will begin to grow in to a loud and busier location. With the development of more homes, it will attract more construction of shops and other attractions which will further increase the footfall in the area. During the construction process it will also impact the community due to the noise of building, deliveries, logistics and lack of privacy with the quantities of trades peoples

around homes. Many of these negative examples are of social impact, which are still an important feature to the Environmental Impact Assessment.

The local community can also benefit from the project in this area, with positive impacts such as creating much needed homes, homes which are affordable, ability to commute, Section 106 works which will improve items such as roads, kerbs and planting of trees and attraction to the area which can create result in jobs in local shops.

In the short term, the community will experience some disturbance due to construction and increased traffic, however the project will be providing much needed homes in the area and affordable rates. It creates a positive social impact in the long run for the purchaser, as well as additional open space allocated for the whole local community.

“Those affected by a specific development have a right to comment and to have their concerns about the development’s impact taken into account. Importantly the issues that can be taken into account do not include the possibility that local house prices may be adversely affected, although it is often argued that this possibility lies behind many of the objections which are put in terms of negative externalities” (Whitehead et al, 2015). This is why it is important that the Environmental Impact Assessment is available for public access, as many people will be effected differently by a new housing development in their area.

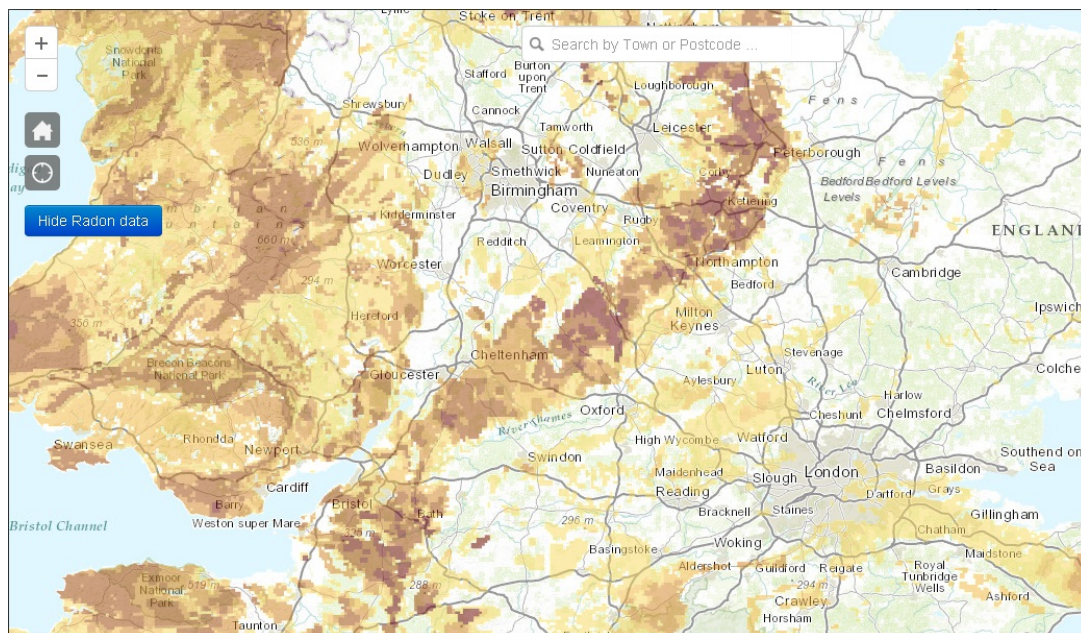
3.3 - Potential Risks and Health Factors

A potential risk which could occur is the pollution of the small stream adjacent to the development. The result of this could disrupt any wildlife living in the stream by materials being dumped in to the water. This would include items such as contaminated soil, insulation, concrete, metals, petroleum or emulsion. Another risk in the area is the ground conditions. It was known that an area on the development had severely unstable ground, with testing resulting in piled foundations and large capping layers on the roads. A potential risk to this area, which has occurred previously in the West Wales area of Machynys, is the possibility of the ground sinking around the foundations. This will damage the property and create a hazard for the home owner. If this was to happen outside the purchasers warranty, then the costs would be for them to wholly cover. The weak ground is due to the coal mining which took place in the area in the 1800’s.

Human health could also be impacted by radon in the ground, which can result in increased risk of lung cancer. Although there are radon barriers in place to protect, this is still a high risk to human health if not correctly installed. According to McColl *“If we breath in high levels of radon over long periods of time this exposure can lead to damage to the sensitive cells of our lungs which increases the risk of lung cancer. Radon causes about 1,000 lung cancer deaths in the UK every year”, “Every building contains radon but the levels are usually low. In some parts of the country homes may have higher levels, and the chances of a higher level depend on the type of ground”* (McColl, 2015). Below is an image provided by McColl showing the areas of high radon. It is noticeable that Wales in general is high for radon, however we can see that the further West you travel, the radon is higher. Homes need extra care before and post construction to ensure radon barrier are in place and further protection is provided post construction.

Image 1 - Neil McColl, 2015

According to Whitehead et al, many people believe that new residential developments reduce physical wellbeing. *“The initial response of many people to the possibility of new residential development nearby is that it will reduce their wellbeing, notably with respect to access to local services, their own immediate environment and simply because of the impact of increased population in the area.”, “More generally households can be resistant to change and uncertainty concerning their neighbourhood and neighbours. Economically, residents may be worried about whether the market might respond to development by reducing the prices of existing dwellings as a result of increased supply, or whether demand might decrease as a result of the degradation of local attributes. These issues are core to the longer-term acceptability of new development.”* (Whitehead et al, 2015). This is another risk/impact which the new housing development can have on the local community.



4.0 - Evaluation of the EIA

To evaluate the Environmental Impact Assessment, the document will be compared to the highlighted issues within section 3.2 and section 3.3, and what considerations the developer has identified prior to design of the project. The strengths and weaknesses of the EIA will be evaluated, along with recommendations on how it could be improved. It is important to evaluate the threats, risk, sustainability and social impact which the development will cause to the local community and how the developer is aiming to avoid such issues, eliminate or reduce negative impacts to the area. Strength, weakness and effectiveness can however be subjective to the stakeholder, with differing interests and opinions, values or even morals. To evaluate the Environmental Impact Assessment, remaining unbiased is key to draw clear recommendations and conclusion.

4.1 - Strengths

Upon first glance of the Environmental Impact Assessment, it is clear that many aspects have been considered at the design stage. Firstly, there is a detailed explanation of the areas history and location. This is important due to the issues with the ground conditions in the area. The EIA discusses the prior use of coal mining in the area of Trimsaran in the late 1800's to early 1900's. This includes multiple coal pits. The EIA also highlights further previous usage of brickworks and queries nearby, another possible factor in having weak ground in the area. The Environmental Impact Assessment goes in to detail regarding previous land usage and physical setting. It is noted that the area have been significantly backfilled, changing the land and valley's features.

An identified strength to the Environmental Impact Assessment is the detailed information on the stratigraphy and structural geology. ***“Stratigraphy, scientific discipline concerned with the description of rock successions and their interpretation in terms of a general time scale. It provides a basis for historical geology, and its principles and methods have found application in such fields as petroleum geology and archeology”*** (Britannica, 2021). This detailed information can assist with engineering requirements and the environmental impact the works will cause, as well as the significance of the impact.

Another strength would be the mention of radon, as previously mentioned in section 3.3. it was indicated that no radon protection would be required at the development, therefore not resulting in an environmental impact or human health risk.

The Environmental Impact Assessment also highlights the risk of flooding in the area. This is important for environmental impact as the homes will be built in the centre of a water run-off.

“About 5.5 million homes in the UK are in danger of being flooded. That’s approximately 15% of properties built near to rivers, the sea or areas of extreme surface water run-off caused by local ground conditions – the latter of which are often in places that aren’t actually near to open water” (Owen, 2018).

4.2 - Weaknesses

A weakness of the Environmental Impact Assessment is the lack of further information on the local coal mining and the position of entries or exact locations. *“The position and recorded treatment details for the mine entry will be revealed in any future coal mining report produced for prospective purchasers of the property. Consequently it is necessary for the landowner and/or developer to undertake any work precisely in accordance with the agreed scheme and provide detailed information to The Coal Authority for inclusion within its records for future reference and disclosure.”* (The Coal Authority, 2012). Within the EIA, another weakness would be the lack of location of the previous quarries and brickworks in the area.

Regarding the detail of radon within the Environmental Impact Assessment, a weakness identified would be the lack of science or data behind their conclusion. Due to the human health risk radon causes, it would be important to provide numerical information or figures from different locations at the development.

Another weakness to the Environmental Impact Assessment is the lack of information regarding social impact within the local community. The EIA or developer does not mention the positive or negative impact the project could have to the area, local people or businesses. A key aspect to the EIA is the social impact, however the main topics which are highlighted are the physical aspects and compositions which will negatively effect construction and increase costs for the developer, rather than negatively effecting the environment or people. Throughout the Environment Impact Assessment, human risk or health has not been mentioned.

Furthermore, the Environmental Impact Assessment has not discussed potential risk of contamination of the stream adjacent to the development. It would have been important to include possible negative environmental impact due to construction. This would also include the potential pollution, fumes, increased traffic and carbon monoxide. The EIA has shown a biased and one sided assessment, rather than gaining data from all aspects of an Environment Impact Assessment.

The Environmental Impact Assessment can also be criticised due to the general lack of information. The assessment was very short, one sided and biased. It was written in the view of the developer, missing regard for the local community, environment or people who would be living in the homes.

5.0 - Recommendations

It would be recommended that the Environmental Impact Assessment should increase information on the location of the coal mines and specific areas which may have been at risk. This information could reduce building risks, or even risk of injury. This would also be applicable to the location of the quarries and brickworks within the area and how it would effect construction in the local area.

It would also be recommended that the Environmental Impact Assessment should include discussion on human risk and health, as well as the social impact the development would cause as this has not been highlighted throughout the assessment. As the site is going to be built for human use, it would be necessary to discuss the end user and the impact that it will have on them and the environment. In addition to this, the EIA is recommended to note the positive impact the development can have on people, by providing homes, open space areas, additional trees, affordable homes and improved roads due to the Section 106 works in the area. This would emphasises the positive social impact which has been completely missed within the EIA.

Further recommendation would be made to include stakeholder opinion, or point of view. Due to the biased view on the assessment, the topics were surrounded around aspects which would increase costs for the developer, rather than the impact on the environment or people in the locality. To improve this, the Environmental Impact Assessment should discuss the potential risk for contamination in the stream, increased traffic, fumes and impact of increased footfall in the area and how this can attract small businesses and even provide jobs.

A final recommendation would be for the Environmental Impact Assessment to highlight the local councils aims to provide affordable housing to the area. This would bring discussion to the positive social impact the homes would bring and that the council would be backing this as part of their affordable homes plan.

6.0 - Conclusion

To conclude, if effectively carried out, an Environmental Impact Assessment can be an eye-opener to the public and stakeholders to a project. Although this would already be necessary to complete for a large housing development to accompany a planning application, it could correctly inform the community and how the developer will design out or alter aspects of the project to ensure a limited environmental impact and positive impact socially. A result of going this would also result in localities possibly being more accepting of a large residential project in their area. It was found that this particular Environmental Impact Assessment was not well rounded and lacked in diversity in regard to the environment, social and economic impact. The EIA was very biased to the developer was only discussed aspects which would result in major issues to construction or which would result in significant costs. The issues of previous coal mining would agreeably need to be discussed, but should not have been the only topic to be reviewed on the EIA. With the recommendations completed and weaknesses eliminated, the Environmental Impact Assessment would ensure a well rounded, unbiased and true view on the environmental and positive social impact of constructing this housing development in this community.

7.0 - References

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