

Environmental Impact Assessment Scoping Report Summary for LanzaTech's proposed Alcohol-to-Jet facility



What is **Project Dragon**?

LanzaTech is planning to build pioneering carbon recycling facilities in and around Port Talbot to convert industrial emissions into sustainable aviation fuel. 'Project Dragon' will reduce emissions from industry and flying. LanzaTech is seeking planning permission to build an industrial plant to convert ethanol into Sustainable Aviation Fuel in Port Talbot that will replace 1% of the fossil fuels used in planes in the UK today.

What is this summary for?

This summary outlines the possible environmental effects for the proposed Alcohol-to-Jet facility that will be assessed in the Environmental Statement (ES) submitted with the planning application. Further detail is included in an Environmental Impact Assessment (EIA) Scoping Report. This summary is not a formal document and does not form part of the planning application. It has been produced to provide a high-level overview of the findings of the EIA Scoping Report – including links and references for further detail to help those who would like to find out more. This summary has been produced in a way to avoid, as much as is possible, technical terms to assist understanding on: what work has been done to date, what has been found, and what are the next steps in the planning application.

What is an Environmental Impact Assessment?

Building and running any large industrial site can lead to environmental effects – even if it produces an environmentally friendly product like Sustainable Aviation Fuel (SAF). It is important to identify the range of possible effects and ensure these are minimised. To do this, LanzaTech has commissioned an Environmental Impact Assessment (EIA) as part of the formal planning application process.

EIA involves a range of investigations to determine the ‘likely significant effects’ of the project. It considers a wide range of different environmental effects. In total 145 different environmental effects have been examined and a full list of the issues investigated are shown in the tables.

The first stage of an EIA is to produce a ‘Scoping Report’. This considers what topics and effects have the potential to be ‘likely significant’ and therefore should be assessed in the Environmental Statement. This summary outlines the results of the Scoping Report.

What is an EIA Scoping Report?

The EIA Scoping Report identifies which environmental effects have the potential to be ‘likely significant’ and how these will be assessed further through the planning process in the EIA (these are ‘scoped in’ for assessment in the Environmental Statement). The EIA Scoping Report also identifies effects which are not considered to be significant. For example, where there are no relevant sensitive receptors or the effects can be controlled by good construction and operating practices that will be followed (these are proposed to be ‘scoped out’ of further assessment in the Environmental Statement).

A range of investigations have been carried out as part of the EIA Scoping Report. The approach to investigations has been discussed with Neath Port Talbot Council and Natural Resources Wales. This includes but is not limited to:

- Ecology surveys to understand any existing habitats or species on the site
- Ground investigations to identify any areas of contamination
- Noise and air quality investigations to assess any potential impacts
- Transport surveys to assess any potential impact on road traffic safety or delays
- Heritage and archaeology desk research to understand any sites that could be affected by the development

The EIA Scoping Report and supporting documents provide extensive details of all the preliminary activities that have been carried out. The results of all these activities have now been compiled in the EIA Scoping Report along with recommendations from the expert consultants whether the topic should be investigated further, or not.

What happens after the EIA Scoping Report has been prepared?

The EIA Scoping Report has now been submitted to Neath Port Talbot Council. It will be publicly available to view on the Council's website. We will share a link to the report once this is live and a PDF version of the report is available to view / download on our website. The Council will consider the EIA Scoping Report and comments they receive from organisations they must consult with such as Natural Resources Wales. Based upon this the Council will produce an EIA 'Scoping Opinion' identifying what they agree is proposed for assessment in the Environmental Statement and any changes to the proposed scope of assessment that may be required.

The EIA Scoping Report is the first step of the EIA process, in advance of submitting the planning application to secure permission to build the Alcohol-to-Jet facility on the site. To support the planning process, LanzaTech is also holding a series of public events to help the community understand more about the project, ask any questions and share their feedback.

Once the EIA Scoping Opinion has been received, more detailed investigations will be undertaken through the planning process for any additional issues the Council consider are necessary. The results of these studies will be reported in a future "Environmental Statement" that will be submitted as part of the final planning application. LanzaTech expects to submit a planning application in Autumn 2023.

What has the EIA Scoping report found?

The EIA Scoping report identifies 7 environmental topics (and associated effects) that are not considered to be significant and for which further assessment in the Environmental Statement is not considered necessary (the EIA Scoping Opinion will provide the Council's view on whether they agree with this). These topics are therefore 'scoped out' of the EIA at this stage and will be considered through other technical aspects of the planning process – such as waste management plans. The EIA scoping report has identified 8 environmental topics (and associated effects) which require further investigation as part of the Environmental Statement (as they have the potential to be significant). Summaries for those topics 'scoped in' and 'scoped out' are provided below.



Why was it decided that 8 topics needed further investigations?

The table below describes what investigations were undertaken as part of the EIA Scoping Report. It also shows what topics require further investigations and how these will be assessed further through the planning and Environmental Statement submission to establish what can be done in the future to mitigate any environmental effects. Further information regarding mitigation will be available in the planning submission once these investigations have taken place. The below summary explains why these topics have been included in the planned Environmental Statement.

Summary of topics proposed to be ‘scoped in’ for further investigations

Topic EIA Scoping Report reference	What investigations have been completed and are ongoing to support the Environmental Statement, and what the Statement will consider.
Major accidents and / or disasters This relates to the potential effects of a serious issue at the site, such as an operational failure at the facility or a fire on board a ship transporting materials. <i>Further detail is included at Chapter 6 the Scoping Report</i>	For this site LanzaTech will need to complete a Control of Major Accident Hazards (COMAH) assessment that will be approved by the Health and Safety Executive. This will require LanzaTech to take all necessary measures to prevent major accidents involving dangerous substances and limit the consequences to people and the environment of any major accidents which do occur. The ES assessment will be informed by such requirements when determining any such effects.
Terrestrial ecology This means the effect on land-based wildlife through possible loss of habitat and disturbance of protected species (such as through habitat loss, lighting and noise). <i>Further detail is included at Chapter 7 of the Scoping Report</i>	Extensive on-site habitat and species surveys (i.e. bats, badgers, reptiles, etc.) have been undertaken to establish the type and extent of habitat present, and identifying any protected or notable species that are present within the Site. The ES will principally focus on the impacts of construction of the Proposed Scheme on habitat and species within the Site, but will also consider the impacts of operational activities on species (i.e. from noise disturbance).
Landscape and visual amenity This is how the site looks from the surrounding area. <i>Further detail is included at Chapter 8 of the Scoping Report</i>	Baseline information about the Site, including its visual exposure and any key landscaping characteristics, has been informed by desktop research, site walkover and photography from the surrounding area. Visual impacts of the Proposed Scheme, in terms of its appearance from views in the surrounding area, will be assessed with the aid of computer modelling to determine the extent to which the scheme is visible (based on massing) and ‘representative’ photomontage / series of photos showing the Proposed Scheme in place in the context of existing photography. Using these a judgement will be reached on impacts.

Summary of topics proposed to be ‘scoped in’ for further investigations continued

Topic EIA Scoping Report reference	What investigations have been completed and are ongoing to support the Environmental Statement, and what the Statement will consider.
<p>Socio-economics and human health</p> <p>Includes the numbers of jobs that will be created through the construction and operation of the facility.</p> <p><i>Further detail is included at Chapter 9 of the Scoping Report</i></p>	<p>LanzaTech has work ongoing to assess the number and type of jobs that will be created on the site and indirect employment created in the local area because of the site. The assessment will also consider employment generated by the construction of the Proposed Scheme.</p>
<p>Climate change</p> <p>Includes effects such as construction and operational greenhouse gas emission for the facility.</p> <p><i>Further detail is included at Chapter 10 of the Scoping Report</i></p>	<p>The assessment will calculate the level of greenhouse gas emissions associated with the Proposed Scheme. This will include considering emissions associated with the construction, as well as the full life-cycle of the operational of the Proposed Scheme. The estimated emissions will be considered in the context of local and national carbon budgets and targets.</p>
<p>Air quality</p> <p>This is focused on the effects from emissions to air, including during the operation of the facility and the shipping of materials.</p> <p><i>Further detail is included at Chapter 11 of the Scoping Report</i></p>	<p>Assessment work will be focused on the potential effects from emissions associated with the Proposed Scheme on local air quality and pollutant concentrations. This will consider all aspects of operation, including emissions from transportation (i.e. vehicles), as well as those arising from the on-site processes/activities. Calculated emissions will be considered in the context of nationally established objective levels (i.e. threshold) that are in place to limit impacts to human health from air pollution.</p>
<p>Noise and vibration</p> <p>This will consider the noise associated with the construction of the facility and any possible noise impacts when it is operational.</p> <p><i>Further detail is included at Chapter 12 of the Scoping Report</i></p>	<p>Baseline noise surveys have been undertaken to establish the existing levels of noise experienced in the surrounding area, specifically at nearby residential properties. Computer modelling will be used to determine the extent of noise pollution arising from the construction (including traffic) and operation of the Proposed Scheme and how this will compare to existing noise levels.</p>
<p>Marine ecology</p> <p>This refers to wildlife in the sea that could be affected by matters such as construction noise or the movement of ships.</p> <p><i>Further detail is included at Chapter 13 of the Scoping Report</i></p>	<p>Preliminary marine ecology surveys within Phoenix Wharf have taken place to understand the existing ecological conditions and specific marine habitat/species present. Impacts to the marine environment will be determined using established methodology.</p>

Why was it decided that 7 topics could be ‘scoped out’ and therefore do not need further investigations?

The table below describes what investigations were undertaken as part of the EIA Scoping report. It also shows what the investigations found and what mitigation will be done in the future.

This table explains why these topics have not been included in the planned Environmental Statement.

Summary of topics proposed to be ‘scoped out’

Topic EIA Scoping Report reference	What investigations have been completed?	What was found?	What will be done, if anything, in the future to manage any effects?
<p>Built heritage and archaeology</p> <p>This refers to any effects on historic buildings near the site or archaeological assets on or close to the site.</p> <p><i>Further detail is included at Chapter 5 of the Scoping Report</i></p>	Desktop research.	The development is unlikely to affect any heritage assets / buildings. The site is also unlikely to have any archaeological assets that will be affected by building on the site.	If required, a Written Scheme of Investigation will be prepared to allow for recording of any potential archaeology remains.
<p>Ground conditions, soils and contamination</p> <p>This refers to the assessment of existing ground contamination, soil resources and mitigation measures that may be required.</p> <p><i>Further detail is included at Chapter 5 of the Scoping Report</i></p>	Desktop research and ground investigations.	A number of potential on-site contaminants were identified, though with best practice control measures, this will be remediated, and potential further contamination avoided. Existing soil resources are perceived to be of limited value and thus not adversely impacted upon.	Actions will be taken on site to remove contamination. Best practice measures will be implemented during construction to avoid the release of any contaminants.
<p>Flood risk and hydrology</p> <p>This considers the flood levels and drainage of the site, as well as contamination.</p> <p><i>Further detail is included at Chapter 5 of the Scoping Report</i></p>	Desktop research.	The site will be higher than the tidal flood level to avoid risk of flooding, and measures put in place to avoid water contamination.	Sustainable drainage systems and pollution prevention measures will be included as part of the development.
<p>Transport</p> <p>This refers to the vehicle movements generated during the construction and operation of the facility – considering matters such as possible driver or pedestrian delay and safety.</p> <p><i>Further detail is included at Chapter 5 of the Scoping Report</i></p>	Desktop research and surveys of the traffic in the surrounding area.	The numbers of vehicles during construction and operation of the facility would be low enough that it is not expected to have a significant effect on driver and pedestrian safety or journey times.	Best practice measures will be set out during construction to guide construction traffic and deliveries.

Summary of topics proposed to be ‘scoped out’ continued

EIA Scoping Report reference	What investigations?	What was found?	What will be done?
<p>Marine Navigation and Marine Recreational Resource</p> <p>This considers potential impacts from the ship movements created by the development on marine navigation (including safety) and on other recreational marine users.</p>	Desktop research.	The development is not expected to result in such notable increase in ship movements in the context of the existing Port Talbot Docks. As such there is no perceived change to navigation risk or implications on other recreational marine users compared to the baseline situation.	All ship movements will follow standard marine navigation practices.
<p>Lighting</p> <p>This considers the lighting impact of the facility on the site’s surroundings.</p> <p><i>Further detail is included at Chapter 5 of the Scoping Report</i></p>	Desktop research.	There is an adequate distance between any sensitive residential locations and the site.	Proposed mitigation measures include designing lighting in line with good practice guidance and standards.
<p>Waste</p> <p>This refers to waste creation and waste management through the construction and operation of the facility.</p> <p><i>Further detail is included at Chapter 5 of the Scoping Report</i></p>	Desktop research.	Waste quantities generated during construction and operation is not considered to be of a level that it is significant.	Standard mitigation measures will be put in place to control waste during construction and operation, such as a Construction Environmental Management Plan.

What happens next and how can I give my opinion?

The EIA Scoping Report will be available to view in full on the Council’s website. We will share a link to the report once this is live and a PDF version of the report is available to view / download on our website. Statutory Consultees, such as the highway authority, will now review the details of the report and respond to Neath Port Talbot Council.

The public are given early and effective opportunities to participate in the decision-making through the EIA and are also able to review the full details of the Scoping Report and share any comments they may have with the Council.

Once the Council has considered the feedback from consultees and the community, they will provide their ‘EIA Scoping Opinion’ which will outline what it considers the main effects of the development are likely to be and, therefore, the aspects which the Environmental Statement should focus on. The Environmental Statement would then be prepared and submitted as part of the planning application.