Access, Traffic and Transport

Background

Pre-application advice for the proposed Development was requested from the Highland Council (THC) and a response provided in March 2019. Key aspects relating to traffic and transport are summarised here.

THC identified that their Transport Planning team's interest will relate largely to the impact of development traffic during the construction phase of the project, which may include the impact on road carriageway, verges and associated structures, and impact on road users and adjacent communities. A Transport Assessment (TA) or a section on traffic and transport within the EIA for the project will be required. This should identify all roads likely to be affected by the various stages and consider in detail the impact of development traffic on these roads. Where necessary, the TA should consider and propose measures to mitigate the impact of the development e.g. the use of onsite borrow pits, concrete batching plant, new or improved infrastructure, road safety measures and traffic management including a framework Construction Traffic Management Plan, and Section 96 'wear and tear' agreement. Justification for the Port of Entry and the preferred route for AIL's shall be clearly demonstrated, including details of alternative routes, swept path assessment and consideration of road structures along the route (which was echoed by Transport Scotland who contributed to the pre-application consultation response). Lastly, the cumulative impact with any other developments in progress or committed should also be considered in the TA.

Consultant Experience and Expertise

The technical lead for Access, Traffic and Transport will be Jon Hassel from RSK. Jon is an associate director at RSK responsible for transport planning. Jon graduated with Bachelor of Engineering degree with Honours in Civil & Transportation Engineering. He has 27 years of experience in development transport and transportation engineering, working for both private and public sector clients. Jon has particular expertise in the preparation of transport related input to EIA for planning and Section 36 applications, preparing development transport statements/assessments, providing assistance in negotiation of planning agreements, carrying out junction and road network assessment and design, access appraisals, and providing master plan advice.

Jon will be supported by a team of specialists with experience in the preparation of transport related input to EIA for Section 36 applications within Scotland and the wider UK.

Baseline

The Site (area within the application boundary) is located approximately 8 km south west of John o' Groats and 16 km east of Thurso. The predominant land use on the Site is forestry with some agricultural use and Stroupster and Lochend operational windfarms are located within the vicinity of the Site.

Access to the Site is by way of a mixture of trunk, principal local and minor roads. While most of the potential routes to the Site will have been subject to assessments for delivery of abnormal loads for windfarms in the relatively recent past, none have been considered for the transport of blades greater than 55 m in length

A route access study will be undertaken using the Ports of Scrabster and Wick, developing on an initial route options study that has been undertaken.

Potentially Significant Effects

The main potential sources of impact are likely to relate to the transportation of abnormal loads and the impact of construction traffic on residential areas and other amenities along the network. The construction phase of the proposed Development is likely to create the greatest environmental impact. This is because of the number of heavy goods vehicles (HGVs), light goods vehicles (LGVs) and abnormal load deliveries required to transport the materials onto site.

It is anticipated that any effects predicted to result during the operation of the proposed Development would be limited, and certainly lower than the effects expected during the construction phase. During operation the proposed Development would generate a negligible number of vehicle movements. These would predominantly be for maintenance visits by technicians. Abnormal load vehicle access is unlikely but may be needed if a turbine component requires replacement.

Proposed Assessment Methodology and Approach

A traffic, transport and access assessment will be undertaken as part of the EIA for the proposed Development. The assessment will be carried out in accordance with the relevant policy and guidance documents as detailed at the end of this scoping chapter.

The study area for the assessment will focus on the routes to be used for access by construction vehicles and abnormal loads. A full assessment of the access route within the study area will be included within the EIA Transport Chapter, including identification of key pinch points along the route and assessment using swept path analysis. Due to known existing pinch points being found along the public road network, a Blade Lift Adapter vehicle will likely be required to transport blades through these pinch points. Further information will be provided within the EIA Report regarding the logistics and safety protections in relations to this method on the public highway.

It is anticipated that any effects predicted to result during the operation of the proposed Development would be limited, and certainly lower than the effects expected during the construction phase, and therefore scoped out of the access, traffic and transport assessment.

Desk Study

A desk-based review of the impacts arising from the construction of the proposed Development will be undertaken, including the following:

- Collection and analysis of available road traffic accident data over the study area;
- The use of a blade lift adapter will be considered for the transport of the turbine blades on any particularly constrained section of the routes to the Site. Any predicted impacts associated with this type of transport will be included in the access and traffic assessment and within other environmental and technical assessments as required;
- Determination of a construction phase programme and quantification of construction phase trips based on the quantity of material required for the proposed Development and the duration of the construction phase;
- Determination of a traffic baseline, taking account of measured existing traffic flow and other developments that have been identified for inclusion within the cumulative assessment; and
- Quantification of material increases in traffic resulting from the construction phase of the proposed Development.

Field Surveys

A visual inspection of the study area will be completed to ensure a full understanding of the local area and to identify all sensitive receptors, especially regarding abnormal loads. 24-hour automatic traffic counts (ATCs) data will be obtained from the Department for Transport, Transport Scotland or The Highland Council. This data will be supplemented by additional ATC surveys to fill any gaps in the information gleaned from the Roads Authorities.

Assessment of Effects

It is anticipated the collated traffic flow data will confirm existing traffic levels within the study area and will include LGVs and HGVs. These traffic flows will be combined with the forecast levels of proposed Development traffic to identify the likely significant effects within the study area in relation to the IEMA Guidelines.

In accordance with the IEMA Guidelines, the method used for assessing environmental effects of the increased traffic will be based on a comparison in percentage terms between predicted traffic flows on potentially affected roads with and without the proposed Development traffic. The IEMA Guidelines express two ‘rules’ that should be followed when determining the scale and extent of the assessment, these are:

- Rule 1: include highway links where traffic flows would increase by more than 30 %(or the number of heavy goods vehicles would increase by more than 30%); and
- Rule 2: include any other specifically sensitive areas where traffic flows have increased by 10% or more.

Rules 1 and 2 will be used as a screening tool to determine if a full assessment on routes within the study area is required owing to the level of increase in traffic flows. In the case of construction traffic, where it is anticipated that

traffic volumes do not increase by more than 30% (or 10% in sensitive locations) then a detailed assessment of the effects is not deemed necessary.

Construction

In the event that these thresholds are likely to be exceeded, consideration of the environmental effects of construction traffic would typically be undertaken in relation to the following transport impacts:

- severance;
- driver delay;
- pedestrian delay and amenity
- accidents and safety; and
- hazardous loads.

Where relevant, consideration of noise effects of traffic would be included within the Noise chapter of the EIA Report.

In addition to this, the overall carrying capacity of the road in question will be considered in undertaking the assessment. A quantitative assessment of impact would be undertaken, based on the predicted rise in traffic flows against a measured baseline, considering the temporary nature of the works. The likely 'worst case' scenario will be described for the periods of peak traffic generation, with the daily numbers of vehicle movements predicted.

The assessment will identify the potential traffic and associated environmental impacts on sensitive receptors and mitigation will be proposed where necessary. Traffic flows would increase on routes used for access to the Site and stretches of the local road network may need to be closed to facilitate the delivery of abnormal loads. The construction phasing and vehicle access would be managed to ensure that flows would be controlled during periods of more significant disruption, with mitigation likely to take the form of a construction traffic management plan (CTMP).

Cumulative Effects

The anticipated cumulative effects of the potential for overlapping construction programmes for the proposed Development in addition to other development proposals will be considered. The mechanism for mitigation of any cumulative effects is the implementation of a CTMP. It should be noted that a cumulative assessment in relation to transport and traffic is reliant on the prospect of more than one major development being under construction at the same times as the proposed Development.

Mitigation

Mitigation measures will be proposed following the completion of the impact assessments, as informed by baseline assessments. The purpose of these measures is to remove, minimise or compensate any significant effects where required. These mitigation measures will be agreed with The Highland Council or Transport Scotland as appropriate. These measures will also be incorporated into the framework CTMP that will be submitted with the application.

Issues to be Scoped In or Out

It is considered that operational phase traffic impacts have no potential for significant environmental effects and can therefore be scoped out with respect to detailed assessment in the EIA:

Consultees

The consultees below will be approached for information to inform the EIA. These consultees may also be contacted by the Scottish Government regarding the scope of the EIA:

- Transport Scotland
- THC Transport Development Officer

Consultee Questions

- Do consultees agree with the proposed methodology and scope of the access, traffic and transport assessment?
- Are there any planned road works or highway improvement schemes that we need to take account of?
- Is the available Department of Transport, The Highland Council or Transport Scotland Count Data on the road network suitable for the assessment or would we need to plan to undertake traffic surveys?
- Please confirm any additional requirements that you consider should be included in this element of the EIA, that have not been covered in this scoping note.

Relevant Policy and Guidance

The access, traffic and transport assessment will be carried out in accordance with the relevant legislation, guidance and policy documentation including the following:

- The Highland Council, (2012). Highland-wide Local Development Plan (HwLDP)
- The Highland Council, (2018). Caithness and Sutherland Local Development Plan (CaSPlan)
- Institute of Environmental Management and Assessment, (1993). The Institute of Environmental Assessment's Guidelines for the Environmental Assessment of Road Traffic
- Department for Transport, (2008). Design Manual for Roads and Bridges (DMRB), Volume 11, Section 2 (Part 5, LA 104)
- Scottish Executive, (2005). Planning Advice Note (PAN) 75: Planning for Transport
- Institution of Highways and Transportation (IHT), (1994). Guidelines for Traffic Impact Assessment
- Transport Scotland, (2012). Transport Assessment Guidance (TAG)
- Scottish Government, (2010). Scottish Planning Policy (SPP)
- The Highland Council, (2013). Guidelines for New Development Roads (GNDR)
- The Highland Council, (2012). Highland-wide Local Development Plan (HwLDP)
- The Highland Council, (2018). Caithness and Sutherland Local Development Plan (CaSPlan).