Chapter 12
Access, Traffic and Transport
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Chapter 12
Access, Traffic and Transport

12.1 Introduction

This chapter considers the likely significant effects on receptors along the transport routes resulting from vehicle movements associated with the construction and operation of the proposed Development. The specific objectives of the chapter are to:

- Review the relevant policy and legislative framework;
- Describe the baseline transport conditions;
- Describe the assessment methodology and significance criteria used in undertaking the assessment;
- Describe the potential effects, including direct, indirect and cumulative effects;
- Describe the mitigation measures proposed to address likely significant effects; and
- Assess the residual effects remaining following the implementation of mitigation.

A high-level overview of the effects of the traffic movements has been considered in accordance with Institute of Environmental Assessment (now Institute of Environmental Management and Assessment (IEMA)) Guidelines for the Environmental Assessment of Road Traffic. The document is referred to as the IEMA Guidelines in this chapter.

The chapter should be read in conjunction with Technical Appendix 12.1: Transport Assessment.

12.2 Legislation, Policy and Guidelines

12.2.1 National Policy Guidance

Scotland’s National Planning Framework (NPF3) sets the context for development planning in Scotland and provides a framework for the spatial development of Scotland as a whole. It sets out the Government’s development priorities over the next 20-30 years and identifies national developments which support the development strategy.

5. PAN 75 – Planning for Transport (17 August 2005) aims to create greater awareness of how linkages between planning and transport can be managed. It provides good practice guidance which planning authorities, developers and others should carry out in their policy development, proposal assessment and project delivery.

6. Offshore Wind Turbines – Online Renewables Planning Advice (May 2014) - The Scottish Government introduced online renewables advice in February 2011 which has been updated several times since then. The most recent specific advice note regarding onshore wind turbines was published in May 2014. The advice note identifies the typical planning considerations in determining applications for onshore wind turbines road traffic impacts and cumulative impacts. In terms of road traffic impacts, the guidance notes that in siting wind turbines close to major roads, pre-application discussions are advisable. This is particularly important for the movement of large components (abnormal load routing) during the construction period and periodic maintenance.

7. Transport Assessment Guidance (July 2012) published by Transport Scotland also provides information relevant to the preparation of Transport Assessments for development proposals in Scotland. The guidance is intended to ensure that mechanisms are in place to specify, assess, revise, implement, monitor and review the impacts that development will have on the transport system.

12.2.2 Local Policy

a. Dumfries and Galloway Council (DGC) Local Development Plan - The Local Development Plan (LDP) was adopted by the Council on 3rd October 2019 and replaces the previously adopted 2014 LDP and is the established planning policy for Dumfries and Galloway. It sets out the planning framework and guides the future use and development of the area.

b. The LDP does not contain any specific policy guidance for windfarm developments, however it does reference a draft Supplementary Guidance ‘Part 1 Wind Energy Development: Development Management Considerations’ (2018). The relevant transport elements from this policy are:

1. "Where wind energy developments will involve abnormal load impact on public roads, developers and their contractors will be required, in consultation with the Council as roads authority, to produce an appropriate Traffic Management Plan. Development will also be required to enter into a Section 75 or other legal agreement requiring any damage to the public roads to be made good at the developer's expense (the said agreement will require a 'before' and 'after' photographic survey of all public roads to be used by the developer and their contractors). Developers should also demonstrate how they have taken into consideration the impact on amenity for residents in close proximity to the transport routes used during the construction phase";

2. "Developers should also carry out early consultation with the local roads and/or trunk roads officials and the Police in respect of abnormal load deliveries to the application site. Due to the size of the components being transported there can be issues in relation to the capacity of rural roads to cope with these loads"; and

3. "The route of new access roads/tracks should be carefully selected and be as sensitive to the existing contours as is practical in relation to the use it will receive".

12.3 Consultation

10. A request for a Scoping Opinion has been issued to the various transport agencies that have an interest in the surrounding road network, namely Transport Scotland as trunk road agency and DGC as local roads agency.

11. The results of these Scoping Opinions are summarised in Table 12.3.1.
Guidelines for Environmental Impact Assessment Report

12.4 Assessment Methodology and Significance Criteria

12. The baseline review focused on the nature of the surrounding road infrastructure and the current level of traffic use and was informed by desktop studies and field surveys.

12.4.1 Desk Study

13. The desk study included reviews and identification of the following:

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Summary/Concerns Raised</th>
<th>Action Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport Scotland (TS)</td>
<td>TS will require to be satisfied that the size of turbines proposed can negotiate the selected route(s) and that transportation will not have any detrimental effect on structures within the trunk road route path.</td>
<td>Noted.</td>
</tr>
<tr>
<td>EIA Report</td>
<td>This is included in the Transport Assessment.</td>
<td>Agreed.</td>
</tr>
<tr>
<td>Consultation</td>
<td>Noted, this consultation would be best undertaken following determination of the project.</td>
<td></td>
</tr>
<tr>
<td>Desk Study</td>
<td>A detailed Route Survey Report has been produced and is appended to the Transport Assessment.</td>
<td>Noted.</td>
</tr>
<tr>
<td>New traffic count data has been collected.</td>
<td>New traffic count data has been collected.</td>
<td></td>
</tr>
<tr>
<td>TS considers it appropriate to scope out operational effects from the EIA Report.</td>
<td>These have been scoped out from the assessment.</td>
<td></td>
</tr>
</tbody>
</table>

12.4.2 Impact Assessment Methodology

15. The methodology adopted in this assessment involved the following key stages:

- Determine baseline;
- Review development for impacts;
- Evaluate significance of effects on receptors;
- Identify mitigation; and
- Assess residual effects.

12.4.3 Sensitivity/Importance/Value

16. The Institution of Environmental Management and Assessment (IEMA) ‘Guidelines for the Environmental Assessment of Road Traffic’ (2005) notes that the separate ‘Guidelines for the Environmental Assessment of Road Traffic’ (1993) document should be used to characterise the environmental traffic and transport effects (offsite effects) and the assessment of significance of major new developments. The guidelines intend to complement professional judgement and the experience of trained assessors.

17. In terms of traffic and transport impacts, the receptors are the users of the roads within the study area and the locations through which those roads pass.

18. The IEMA Guidelines includes guidance on how the sensitivity of receptors should be assessed. Using that as a base, professional judgement was used to develop a classification of sensitivity for users based on the characteristics of roads and locations. This is summarised in Table 12.4.1.

<table>
<thead>
<tr>
<th>Receptor</th>
<th>High</th>
<th>Medium</th>
<th>Sensitivity</th>
<th>Low</th>
<th>Negligible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Users of Roads</td>
<td>Where the road is a minor rural road, not constructed to accommodate frequent use by HGVs. Includes roads with traffic control signals, waiting and loading restrictions, traffic calming measures.</td>
<td>Where the road is a local A or B class road, capable of regular use by HGV traffic. Includes roads where there is some traffic calming or traffic management measures.</td>
<td>Where the road is a trunk or A-class, constructed to accommodate significant HGV composition. Includes roads with little or no traffic calming or traffic management measures.</td>
<td>Where roads have no adjacent settlements. Includes new strategic trunk roads that would be little affected by additional traffic and suitable for Abnormal Loads and new strategic trunk road junctions capable of accommodating Abnormal Loads.</td>
<td></td>
</tr>
</tbody>
</table>
The DMRB defines the potential changes in effect as follows:

- **Large**: These effects are considered to be material in the decision-making process.
- **Moderate**: These effects may be important but are not likely to be material factors in decision making. The cumulative effects of such factors may influence decision-making if they lead to an increase in the overall adverse effect on a receptor.
- **Slight**: These effects may be regarded as local factors. They are unlikely to be critical in the decision-making process, but are important in improving the subsequent design of the project.
- **Neutral**: No effects or those that are imperceptible.

### Table 12.4.2: Significance of Effects

<table>
<thead>
<tr>
<th>Receptor Sensitivity</th>
<th>Magnitude of Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major</td>
<td>Moderate</td>
</tr>
<tr>
<td>High</td>
<td>Large/Moderate</td>
</tr>
<tr>
<td>Medium</td>
<td>Large/Moderate</td>
</tr>
<tr>
<td>Low</td>
<td>Moderate/Slight</td>
</tr>
<tr>
<td>Negligible</td>
<td>Slight</td>
</tr>
</tbody>
</table>

In terms of the EIA Regulations, effects would be considered to be significant where they are assessed to be large or moderate. Where an effect could be one of Large/Moderate or Moderate/Slight, professional judgement would be used to determine which option should be applicable.

### 12.5 Baseline Conditions

The proposed Development would be accessed directly from the existing Operational Kilgallioch Windfarm access junction off the A714 at Wheeb Bridge. The existing access junction would be widened to accommodate the proposed larger turbine components.

Discussions with ScottishPower Renewables (SPR) were held to review the transport experiences of the Operational Kilgallioch Windfarm site. These discussions centred around likely points of origin for materials to assist in developing a suitable study area.

Strategic access to the A714 is available from the A75 trunk road network to the south. Access between the A75 is made either through the town of Newton Stewart or via a bypass of the town to the west. Recent experience has diverted all construction traffic along this bypass to reduce the impact on the local population as far as possible.

The study area for this assessment is therefore as follows:

- The A75 trunk road (east and west of Newton Stewart);
- The bypass of Newton Stewart (US2W); and
- The A714 between Newton Stewart and Barrhill to the north.

In order to assess the impact of construction traffic on the study area, a series of Automatic Traffic Count (ATC) sites were established in September 2019. These were deployed during a neutral period to record average traffic flows. The count sites used were as follows:

- The A75 (between the Newton Stewart Bypass and A714 junction);
- The Newton Stewart Bypass;
- The A714 to the north of Bargrennan Bridge); and
- The A714 to the east of the Site Access Junction; and
- The A714 in Barrhill village centre.
The traffic counters allowed the traffic flows to be split into vehicle classes. The data was summarised into Cars/LGVs and HGVs (all goods vehicles >3.5 tonnes gross maximum weight). A summary of the results for the average 24 hour weekday period is provided in Table 12.5.1 with percentage mark up of each class provided.

<table>
<thead>
<tr>
<th>Survey Location</th>
<th>Cars &amp; LGV</th>
<th>HGV</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A75</td>
<td>4469 (87.9%)</td>
<td>614 (12.1%)</td>
<td>5083</td>
</tr>
<tr>
<td>Newton Stewart Bypass</td>
<td>746 (93.9%)</td>
<td>48 (6.1%)</td>
<td>794</td>
</tr>
<tr>
<td>A714 Bargrennan</td>
<td>868 (95.5%)</td>
<td>40 (4.5%)</td>
<td>908</td>
</tr>
<tr>
<td>A714 Site Access</td>
<td>581 (94.8%)</td>
<td>32 (5.2%)</td>
<td>613</td>
</tr>
<tr>
<td>A714 Barrhill</td>
<td>809 (96.4%)</td>
<td>30 (3.6%)</td>
<td>839</td>
</tr>
</tbody>
</table>

Table 12.5.1: Existing Traffic Conditions (Weekday Average Two Way Flows)

12.5.1 Speed Data

The ATC sites used to provide traffic volume data were also used to collect speed statistics. The two-way five-day average and 85th percentile speeds observed at the count locations are summarised below in Table 12.5.2.

<table>
<thead>
<tr>
<th>Survey Location</th>
<th>Mean Speed</th>
<th>85th Percentile Speed</th>
<th>Speed Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>A75</td>
<td>48.65</td>
<td>57.65</td>
<td>60</td>
</tr>
<tr>
<td>Newton Stewart Bypass</td>
<td>44.75</td>
<td>53.50</td>
<td>60</td>
</tr>
<tr>
<td>A714 Bargrennan</td>
<td>33.10</td>
<td>38.80</td>
<td>60</td>
</tr>
<tr>
<td>A714 Site Access</td>
<td>55.65</td>
<td>63.45</td>
<td>60</td>
</tr>
<tr>
<td>A714 Barrhill</td>
<td>24.45</td>
<td>29.50</td>
<td>30</td>
</tr>
</tbody>
</table>

Table 12.5.2: Speed Summary (Weekday Average Two Flows) MPH

The speed survey data indicates that there is compliance with current speed limits on the study area with the exception of the area of the site access junction. This indicates that traffic management measures will be required at this location and that Police Scotland may wish to consider enforcement spot check in this very rural area.

12.5.2 Accident Review

Road traffic accident data for the three year period commencing 01 January 2016 through to the 31 December 2018 was obtained from the online resource crashmap.co.uk which uses data collected by the police about road traffic crashes occurring on British roads where someone is injured.

Accident data for the A75 in the vicinity of Newton Stewart, the Newton Stewart bypass and The A714 between Newton Stewart and Barrhill was reviewed. The summary statistics indicate that:

- There were a total of 11 accidents within the study area over the three year period. Of those, eight were classified as "Slight", two "Serious" and one as "Fatal";
- In the three year period, two recorded accidents were noted as being "Slight", one as "Serious" and one fatality was recorded;
- The fatal accident occurred on the A714 between Bargrennan and Newton Stewart. The "Serious" accidents were noted on the A75 to the east of Newton Stewart;
- Three "Slight" accidents were noted in the vicinity, one at Bargrennan and the rest occurring on the A75. No accidents were recorded at the A75 / Newton Stewart bypass road junction;
- There are three recorded accidents involving HGV traffic, all on the A75. Two were "Slight", with one noted as being "Serious";
- There was one "Serious" accident involving a motorcyclist on the A75;
- There were no bus, cyclist or pedestrian accidents noted and no children were recorded as casualties; and
- Young drivers were involved in two slight accidents (at Bargrennan and on the A75) and one "Serious" accident on the A75.

33. The statistics indicate that the majority of accidents are “Slight” in nature and that there are a limited number of HGV incidents that occurred on the strategic A75 trunk road. With the exception of the one fatal accident, there has been a significant reduction in accidents in the study area over the last three years.

12.5.3 Cycle and Pedestrian Network

34. There are no Core Paths recorded by Dumfries and Galloway Council within close proximity to the proposed site access.

35. The A714 does not have any pedestrian or cyclist infrastructure near the site access junction and as such, active travel activity is considered to be very low at this location.

36. Pedestrian facilities throughout the study area are limited and reflect the rural nature of the road network within the study area.

37. A review of the Sustrans cycle network plan of the United Kingdom indicates that the there are no National Cycle Routes on the A714 or within the vicinity of the site. The Dumfries and Galloway Cycle map indicates that the nearest cycle network interaction with the proposed delivery route is located at the junction between the A75 and Newton Stewart bypass.

12.5.4 Future Year Baseline

38. Construction of the project could commence during 2022 if consent is granted and is anticipated to take up to 18 months.

39. To assess the likely effects during the construction phase, base year traffic flows were determined by applying a National Road Traffic Forecast (NRTF) low growth factor to the surveyed traffic flows.

40. The NRTF low growth factor for 2019 to 2022 is 1.022. These factors were applied to the 2019 survey data to estimate the 2022 Base traffic flows shown in Table 12.5.3.

<table>
<thead>
<tr>
<th>Survey Location</th>
<th>Cars &amp; LGV</th>
<th>HGV</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A75</td>
<td>4568</td>
<td>627</td>
<td>5195</td>
</tr>
<tr>
<td>Newton Stewart Bypass</td>
<td>762</td>
<td>49</td>
<td>811</td>
</tr>
<tr>
<td>A714 Bargrennan</td>
<td>887</td>
<td>41</td>
<td>928</td>
</tr>
<tr>
<td>A714 Site Access</td>
<td>594</td>
<td>33</td>
<td>627</td>
</tr>
<tr>
<td>A714 Barrhill</td>
<td>827</td>
<td>31</td>
<td>858</td>
</tr>
</tbody>
</table>

Table 12.5.3: Baseline 2022 24hour Average Weekday Traffic Data

41. Based on the classifications set out in Table 12.4.1 the following receptors have been classified as being:

- Users of the A75: Low sensitivity;
- Users of and residents living alongside the Newton Stewart Bypass: Negligible sensitivity;
- Users of and residents living along the A714 at Bargrennan: Negligible sensitivity;
- Road users of the A714 at the Site access junction: Negligible sensitivity; and
- Users of and residents living alongside the A714 at Barrhill: Low / Medium sensitivity

42. These classifications are then used throughout the following assessment.
12.6 Potential Effects

12.6.1 Construction

During the 12 month construction period, the following traffic will require access to the to the Site:

- Staff transport, either cars or staff minibuses;
- Construction equipment and materials, deliveries of machinery and supplies such as cement; and
- Abnormal loads consisting of the wind turbine sections and also a heavy lift crane.

Average monthly traffic flow data were used to establish the construction trips associated with the proposed Development and are detailed in the Transport Assessment contained in Technical Appendix 12.1. The trip estimates have been based upon first principle estimates of traffic movements to and from the site, having established the likely volumes of construction materials, resources and components.

With regards to abnormal loads associated with turbine deliveries, ScottishPower Renewables have used their recent experience from Kilgallioch Windfarm to consider load routing. In line with their past experience, it is proposed that a dual port strategy is considered for the delivery of the wind turbine components. It is proposed that the primary port used or the deliveries of wind turbines components would be King George V Dock in Glasgow. This port has ample adequate facilities for accommodating the proposed loads and the access route from the dock to the A714 has been the subject of upgrade works for these loads and has been agreed by Transport Scotland already.

Access from King George V docks would be via the M8, M74, M6, A75 and A714. Loads would undertake a U-turn at Carlisle at M6 Junction 42 or Junction 44 to allow direct access onto the A75.

A secondary port option using the port of Cairnryan is also considered. This port is significantly smaller and improvement works to the road network from the port gate to the A714 access junction will be required. In addition, the Port of Cairnryan has some restrictions including limited water depth and port handling facilities/component storage and may limit the use of this facility.

Access from Cairnryan would be via the A77, A751, A75 and A714.

If consented, ScottishPower Renewables would engage in detailed discussions with the turbine suppliers, haulage contractors, Transport Scotland, Police Scotland and road authorities in regards to an agreed port of entry strategy and AIL delivery route.

The trip estimates have been assigned to the proposed construction programme to allow the identification of the peak of construction traffic to be established. The construction programme is also provided in the Transport Assessment.

The peak of construction traffic activity was identified as being Month 8 of the programme. The traffic associated with this month was then assigned to the study area using the distribution of traffic described within the Transport Assessment.

The peak traffic flows associated with the proposed Development’s construction phase results in an average of 90 movements per day (45 trips in and 45 trips out), of which 42 would be made by light vehicles (21 inbound and 21 outbound) and 48 by HGV (24 inbound and 24 outbound).

The construction traffic was compared against the future baseline traffic to estimate the increase in traffic associated with this phase of the proposed Development. Table 12.6.1 illustrates the potential traffic impact at the peak of construction activity.
Access, Traffic and Transport

### 12.7 Mitigation

#### 12.7.1 Physical Measures to Design Out Issues

The assessment has assumed the use of ready mix concrete delivered in separate cement mixer vehicles in order to assess the worst case scenario. This proposal is considered to be robust in reviewing the potential traffic impact associated with the proposed Development and could be reduced by the provision of an onsite batching plant with the construction site.

The number of HGV movements would be reduced with an onsite batching plant as bulk deliveries of cement can be made via a 20 tonne powder tanker and aggregate can be delivered via a 35 tonne tipper HGV. Water can be extracted on Site.

SPR has confirmed that it would consider the use of an onsite batching plant during the construction phase of the Site to help reduce HGV numbers on the A714.

Advance warning signs and clear visibility splays will be used at the Site access to help advise road users of the increased numbers of turning traffic at the Site access junction.

#### 12.7.2 General Construction Traffic

A Construction Traffic Management Plan (CTMP) would be prepared and agreed with the Council and Transport Scotland prior to construction works commencing. The CTMP will be developed using experience gathered during the construction of recent projects including Kilgallioch Windfarm:

- All materials delivery lorries (dry materials) would be sheeted to reduce dust and stop spillage on public roads;
- Specific training, audit and disciplinary measures would be established to ensure the highest standards are maintained to prevent construction vehicles from carrying mud and debris onto the carriageway;
- Appropriate traffic management measures would also be put in place at the Site access junction to advise drivers to slow down and be aware of tuning traffic;
- Directional signage could be provided to enforce delivery routes;
- Requirement for all drivers to attend an induction to include a safety briefing, the need for appropriate care and speed control, particularly in sensitive areas, identification of specific sensitive areas, identification of the specified route, and the requirement not to deviate from the specified route; and
- A Travel Plan to encourage lift sharing / crew bus access to site for construction staff.

#### 12.7.3 Abnormal Loads

The route assessment was based upon the use of Vestas V150 turbine. The worst case loads were used in the assessment, with a 74m long by 4.03m wide turbine blade and a 33.88m long by 4.5m wide turbine tower section being assessed.

The assessment reviews access to the proposed Development from King George V Docks in Glasgow via the M8, M74, M7, A75 and A714. The works to accommodate these loads comprises of adjustments to street furniture and the provision of over-run surfacing at various junctions along the A75.

A number of the necessary works identified are similar to those already in place for previous windfarm developments at various junctions along the A75.

The existing access junction for the operational Kilgallioch Windfarm will be widened to accommodate the proposed larger loads. Form this point onwards, loads will proceed to the turbine locations using existing and new access tracks.

### Table 12.6.3: Assessment of Impact Significance

<table>
<thead>
<tr>
<th>Receptor</th>
<th>Potential Effect</th>
<th>Magnitude of Impact</th>
<th>Significance of Impact</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driver Delay</td>
<td>Minor</td>
<td>Slight / Neutral</td>
<td>Slight / Neutral</td>
<td>There are no current or predicted capacity constraints on the network and as such, the impact of the increase in HGV traffic is not considered to cause a significant impact on the operation of the network.</td>
</tr>
<tr>
<td>Pedestrian Delay</td>
<td>Minor</td>
<td>Slight / Neutral</td>
<td>Total traffic volumes are not predicted to increase over 30%. Given the lack of pedestrian facilities, no significant impact is predicted.</td>
<td></td>
</tr>
<tr>
<td>Pedestrian Amenity</td>
<td>Minor</td>
<td>Slight / Neutral</td>
<td>Whilst HGV flows increase over 30%, the lack of pedestrian infrastructure indicates that any impacts will be slight at most.</td>
<td></td>
</tr>
<tr>
<td>Fear and Intimidiation</td>
<td>Minor</td>
<td>Slight / Neutral</td>
<td>Total traffic volumes are not anticipated to increase by more than 30%.</td>
<td></td>
</tr>
<tr>
<td>Accidents and Safety</td>
<td>Moderate</td>
<td>Slight</td>
<td>The increase in HGV traffic may have an impact on safety due to driver frustration and an increase turning movements on and off the A714.</td>
<td></td>
</tr>
</tbody>
</table>

Before the introduction of mitigations, it is considered that the only slight impacts would arise from the construction phase traffic.

#### 12.6.2 Operation

It is predicted that during the operation of the Site there would be up to 2 vehicle movements per week for maintenance purposes. Also, there may be occasional abnormal load movements to deliver replacement components in the unlikely event of a major failure.

#### 12.6.3 Limits to the Assessment

The assessment is based upon an assumed construction programme for the proposed Development. Alterations in this programme, may increase or decrease traffic flows per month.

This assessment is based upon average daily traffic flows within the peak month of site deliveries to provide a worst case assessment scenario. There may be localised peaks with construction days where flows can be higher for a specific hour, such as a shift change on Site.

The assessment reviewed access to the proposed Development from Cairnryan has also been considered as noted in Section 12.6.1. As with the route from Glasgow, the mitigation works are small scale in nature and do not require significant civil engineering works to deliver them.

An agreed access strategy for turbine loads will be confirmed post consent once the turbine supplier has been confirmed and the turbine details confirmed.

A police escort would be required to facilitate the delivery of the predicted loads. The police escort would be further supplemented by a civilian pilot car to assist with the escort duty. It is proposed that an advance escort would warn...
oncoming vehicles ahead of the convoy, with one escort staying with the convoy at all times. The escorts and convoy would remain in radio contact at all times where possible.

78. The abnormal loads convoys would be no more than three AILs long, or as advised by the police, to permit safe transit along the delivery route and to allow limited overtaking opportunities for following traffic where it is safe to do so.

79. The times in which the convoys would travel would be agreed with Police Scotland who have sole discretion on when loads can be moved.

80. A Traffic Management Plan detailing the operation of the convoy management would be prepared post consent. This would also include:
   - Procedures for liaising with the emergency services to ensure that police, fire and ambulance vehicles are not impeded by the loads. This is normally undertaken by informing the emergency services of delivery times and dates and agreeing communication protocols and lay over areas to allow overtaking;
   - Discussion with Transport Scotland on the potential for using the existing Variable Message Signage (VMS) network to provide additional information to users of the A75 between Stranraer and the M74. This would be helpful for ferry users along the A75 and other key trunk and distributor roads in the general area; and
   - A communication dialogue between the various stakeholders.

81. It is not yet possible to fully detail the convoy management measures required as the turbine supplier has yet to be identified and there is no haulier appointed to the project. Should the proposed Development be approved, SPR will undertake a turbine supply tender exercise and will select a suitable turbine for use on the Site. The turbine supplier will then appoint a haulier. At this later stage a detailed convoy plan can be prepared once the exact specification of the turbine is known.

82. To address any concerns expressed by the local community, it is proposed that a detailed convoy management plan is developed with Transport Scotland and DGC. This will include measures to provide hold points for convoys to ensure that inconvenience to other road users can be minimised.

83. Hold point locations along the delivery route may include the following locations where traffic can overtake loads under Police control. Please note that these are proposed areas and would use existing road space, rather than new construction:
   - An overtaking / passing area to pass convoys on the dual carriageway section of the A75 at Collin;
   - An overtaking / passing area to pass convoys on the A75 at Rhonehouse;
   - An overtaking / passing area to pass convoys on the Newton Stewart bypass road; and
   - The use of a layby area on the A714 near Knockville.

84. The potential for using these areas will be developed in detail with Police Scotland and the roads authorities and a detailed convoy management plan will be established prior to loads commencing.

### 12.7.4 Information and General Measures

85. Information on the turbine convoys would be provided to local media outlets to help assist the public. These could include:
   - Local Newspapers;
   - Community Councils; and
   - D&G Council website.

86. Information would relate to expected vehicle movements from the port of entry through to the Site access junction. This will assist residents becoming aware of the convoy movements and may help reduce any potential conflicts.

87. Advance warning signs could be installed on the approaches to the affected road network, subject to the agreement of the road authorities.

88. Site direction signage could also be provided to direct construction traffic to the proposed Development Site and to ensure that traffic remains on approved routes and would not operate on minor road links that have not been assessed. The Balance of Plant (BoP) contract would specify the routes that suppliers must take during construction activities. This will be enforced by the site agent.

89. In line with the scoping request by the Council, an agreement on wear and tear on road infrastructure caused directly by construction traffic would be established prior to construction commencing. The agreement will set out the area of review, scope and response requirement of any dilapidations that can be proven to be linked to construction traffic.

90. Any street furniture that is removed on a temporary basis to enable AIL movements would be fully reinstated following the delivery period.

91. An inspection of any traffic management measures and road signage around the site access junction would be undertaken by the site manager on a regular basis. During the access junction construction works, there would be a daily road inspection and the public road will be kept clear of debris and mud.

### 12.8 Residual Effects

92. This section considers the assessment of traffic impacts following the incorporation of the identified mitigation measures. An evaluation of the potential effects of the increase in traffic on the study area roads used for construction traffic was undertaken. The summary of this assessment is provided in Table 12.10.1.

93. The assessment confirms that the effects will be minor in nature and that the significance will be slight in nature. The traffic effects are transitory in nature and are confined to the construction period only. No long lasting detrimental transport or access issues are associated with the proposed Development.

### 12.9 Cumulative Assessment

94. The use of Low NRTF growth assumptions has provided a basis for general local development growth within the study area.

95. There are two further windfarm developments planned in the immediate vicinity of the Site. Both have entered the planning system but have yet to be determined. As such neither can be classified as being a committed development. The two windfarms are:
   - Arecleoch Windfarm Extension, proposed by ScottishPower Renewables; and
   - Clauchrie Windfarm, also proposed by ScottishPower Renewables.

96. A detailed cumulative assessment has not been performed as neither of the two sites are committed developments (i.e. sites that have consents / permissions secured). To inform the planning authorities of possible effects if all three sites were consented concurrently, a combined sensitivity review has been undertaken instead.

97. The peak traffic flows for both sites were obtained from their respective application documents (see Table 12.9.1) and then compared to the future baseline year in Table 12.9.2.

<table>
<thead>
<tr>
<th>Survey Location</th>
<th>Clauchrie Car &amp; LGV</th>
<th>Clauchrie HGV</th>
<th>Arecleoch Car &amp; LGV</th>
<th>Arecleoch HGV</th>
<th>Arecleoch Extension Car &amp; LGV</th>
<th>Arecleoch Extension HGV</th>
<th>Kilgallioch Extension Car &amp; LGV</th>
<th>Kilgallioch Extension HGV</th>
</tr>
</thead>
<tbody>
<tr>
<td>A75</td>
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<td>52</td>
<td>20</td>
<td>19</td>
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<td>40</td>
<td>40</td>
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<tr>
<td>Newton Stewart Bypass</td>
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<td>52</td>
<td>20</td>
<td>19</td>
<td>24</td>
<td>24</td>
<td>40</td>
<td>40</td>
</tr>
</tbody>
</table>
The combined traffic flows indicate a large increase in traffic flows on the A714 for HGV traffic, there however would be more than sufficient spare road capacity to accommodate this in the event of all three sites being constructed at the same time.

Any effects of all three sites being constructed at the same time would be mitigated through the use of an overarching Traffic Management and Monitoring Plan for all three sites and by introducing a phased delivery plan which would be agreed with the local council roads department and Police Scotland.

Furthermore, it is not predicted that the potential traffic flow increases could ever occur on the study area for the following reasons:

- It is extremely unlikely that the peak traffic conditions would occur at the same time due to differences in construction programme lengths, material supplies and developer resources; and
- Abnormal load deliveries cannot occur at three separate sites on the same day due to restrictions on the numbers of loads moving on the network at the same time set by Police Scotland.

As neither Acreloch Extension nor Clauchrie Windfarms are consented schemes, no further assessment has been undertaken of this combined sensitivity review.

### 12.10 Summary

The proposed Development will lead to increased traffic volumes on a number of roads in the vicinity of the proposed Development Site during the construction phase. These will be of a temporary timescale and transitory in nature.

An assessment of potential effect using IEMA guidelines has been undertaken. This determined that prior to the implementation of mitigation, only a moderate impact could be expected on road safety on the Newton Stewart bypass and A714 relating to the increase in HGV traffic operating on the route. All other indicators indicated a slight or not significant effect on receptors within the study area.

With the implementation of appropriate mitigation, no significant residual effects are anticipated in respect of traffic and transport issues. The residual effects are all assessed to be slight or not significant but as they will occur during the construction phase only, they are temporary and reversible.