

## Section 12

### TRAFFIC & TRANSPORT ASSESSMENT

#### Contents

|       |                                 |    |
|-------|---------------------------------|----|
| 12.1  | Introduction.....               | 3  |
| 12.2  | Policy Guidance – update .....  | 3  |
| 12.3  | Consultation .....              | 3  |
| 12.4  | Proposed Access to Site.....    | 4  |
| 12.5  | Vehicle Movements.....          | 5  |
| 12.6  | Operation.....                  | 8  |
| 12.7  | Decommissioning .....           | 8  |
| 12.8  | Assessment of Significance..... | 8  |
| 12.9  | Statement of Significance.....  | 9  |
| 12.10 | Traffic Management Plan .....   | 10 |
| 12.11 | Residual Effects.....           | 11 |
| 12.12 | Conclusion .....                | 11 |

#### Tables

Table 12.1 – Consultee Responses

Table 12.2 – Estimated Vehicle Movements During Construction – 0% Stone Imported (18 months)

Table 12.3 – Estimated Vehicle Movements During Construction – 25% Stone Imported (18 months)

Table 12.4 – Estimated Vehicle Movements During construction – 100% Stone Imported (10 months)

Table 12.5 – Total Vehicle Movements, comparison between 75 and 60 turbine layouts

Table 12.6 – Magnitude of Impact Criteria

Table 12.7 – Receptor Sensitivity

Table 12.8 – Baseline and estimated traffic flows along the proposed access routes if 0% of stone import was imported

Table 12.9 – Baseline and estimated traffic flows along the proposed access routes if 100% of stone was imported

Table 12.10 – Summary of Residual Effects if 0% of stone is imported into site

#### Figures

AI Figure 12.1 - Proposed Abnormal Access Along A74(M)

AI Figure 12.2 - Proposed Abnormal and Construction Access Routes

AI Figure 12.3 – Indicative Bell Mouth Entrance Design

## Glossary

| Term                                   | Definition   |
|--|--|
| Abnormal Load                          | An 'abnormal load' is a vehicle that exceeds standard vehicle dimensions and weights; and is typically the turbine towers, blades and Nacelles.  |
| Local Development Plan                 | Document produced by the Local Authority setting out how the Council wants to see their area develop over the next 20 years.   |
| Environmental Impact Assessment Report | The process of evaluating the likely environmental impacts of a proposed project or development.   |
| Swept Path Analysis                    | The calculation and analysis of the movement and path of different parts of a vehicle when that vehicle is undertaking a manoeuvre; typically carried out using dedicated Vehicle Tracking Software. |
| Transport Assessment                   | A study undertaken to assess the transport effects of a proposed development.  |

## Abbreviations

| Abbreviation | Description                            |
|--------------|--|
| ALTMP        | Abnormal Loads Traffic Management Plan |
| CTMP         | Construction Traffic Management Plan   |
| DGC          | Dumfries and Galloway Council          |
| EIA          | Environmental Impact Assessment        |
| EIAR         | Environmental Impact Assessment Report |
| AI           | Additional Information                 |
| HGV          | Heavy Goods Vehicle                    |
| LDP          | Local Development Plan                 |
| PRA          | Primary Route Assessment               |
| SPA          | Swept Path Analysis                    |
| TMP          | Traffic Management Plan                |
| TS           | Transport Scotland                     |

## Section 12: Traffic & Transport Assessment

### 12.1 Introduction

- 12.1.1 This section will consider the potential impact of the construction, operation and eventual decommissioning of the proposed Scoop Hill Community Wind Farm on the regional and local transport network. This revised section will include updated traffic movement figures due to the reduction in turbine numbers, reduction in length of access tracks and changes to other associated infrastructure.
- 12.1.2 In the original Environmental Impact Assessment Report (EIAR) an assessment was made of the magnitude of the residual impact combined with receptor sensitivity to determine the significance of the impact. This assessment has now been updated based on the revised and reduced traffic movement calculations for the reduced scheme.
- 12.1.3 This section should be read in conjunction with Section 12 of the original EIAR (November 2020) along with Figure 12.3 submitted with EIAR.
- 12.1.4 The Applicant assesses that all stone necessary for the proposed Scoop Hill Community Wind Farm can comfortably be acquired from the onsite borrow pits as detailed in Section 2. However, following a request from Dumfries and Galloway Council (DGC) during the Scoping stage, this chapter considers a scenario whereby up to 100% and 25% of the stone required to construct the Scoop Hill Community Wind Farm is imported from local quarries using the public road network. It is important to note that this assessment has been undertaken following the request by DGC and is not considered part of the application baseline.

### 12.2 Policy Guidance – update

- 12.2.1 Since the original EIAR was submitted in November 2020 there have been a number of policy changes that are relevant to this Traffic and Transport assessment.
- 12.2.2 The Onshore Wind Policy Statement, published in December 2022, recognises the challenges surrounding the transportation of wind turbine components and the Scottish Government is working with the industry to ensure components can be efficiently and effectively conveyed to site.
- 12.2.3 The Scottish Government have formed, “The Abnormal Loads Legislative Reform Sub-group” to explore potential options for legislative change in Scotland to allow abnormal loads to be moved more efficiently. Additionally, the Abnormal Loads Legislative Reform Sub-group will consider matters of landownership and oversail as part of their overall work package.
- 12.2.4 The developer will incorporate any future guidance published by “The Abnormal Loads Legislative Reform Sub-Group” during the preparation of the Construction Traffic Management Plan (CTMP) and the Abnormal Loads Traffic Management Plan (ALTMP). The Scottish Government National Planning Framework 4 (NPF4) was adopted in February 2023 and Policy 11 states that all forms of renewable, low-carbon and zero emissions technologies will be supported, including wind farms.
- 12.2.5 NPF4 guidance states that the project design and mitigation will demonstrate how the impacts on road traffic and on adjacent trunk roads, including during construction have been assessed. In considering these impacts, it also notes that significant weight will be placed on the contribution of the proposal to renewable energy generation targets and on greenhouse gas emissions reductions.

### 12.3 Consultation

- 12.3.1 Details of the consultation responses received to date are summarised below in Table 12.1, along with details of the actions undertaken by CWL in response. Relevant additional information is provided within this updated section, which should be read in conjunction with Section 12 of the original EIAR.

**Table 12.1 Consultee Responses**

| Consultee  | Consultation Comment   | CWL Response  |
|--|--|---|
| Dumfries and Galloway Roads Department<br><br>Response dated: 21 <sup>st</sup> December 2020 | <p>1. The turbines proposed for this development are substantially larger than any that have been installed in the area previously and therefore access routes will require to be re-assessed in full.</p> <p>2. Detailed proposals for all accommodation works should be submitted and supported by finalised swept path tracking. Plans should be provided detailing the full extent of proposed off-site road accommodation and mitigation works including carriageway strengthening, realignment, widening, passing places and alterations to road boundaries all along any proposed access routes necessary to permit (a) 2-way HGV construction traffic (b) the passage of component delivery (AIL) vehicles.</p> <p>All accommodation work must be designed and constructed to the satisfaction of the Planning Authority and will require appropriate permits and consents to be issued.</p> <p>3. Detailed proposals for any site access will require to be submitted and approved in writing by the planning authority prior to the commencement of any works on site.</p> <p>4. Where public road boundaries are altered either for the formation of accesses or for accommodation works, these should be reinstated in their original position at the conclusion of construction works (unless otherwise agreed with the Planning and Roads Authorities).</p> <p>5. A breakdown of vehicle movements by programme month to determine which months vehicle movements will be greatest should be provided with the TMP's.</p> <p>6. CTMP should acknowledge that co-ordination phasing may be required to mitigate against the cumulative traffic impacts of other unrelated wind farm projects.</p> <p>7. The finalised CTMP should include a complete programme of delivery types/numbers by month, details of all proposed mitigation measures to minimise the impact on local settlements, communities and businesses and details of measures that will be implemented to ensure that no stacking of delivery vehicles occur on any part of the public road network along with proposed mitigation measures for recreational paths that will be impacted by works and is to be agreed with the Police and the Roads Authority prior to any works</p> | <p>1. CWL have undertaken an assessment of access route options in relation to this scheme, and all access options presented in the EIAR/AI are viable. Notwithstanding this, the finalised access route will be subject to pre-construction detailed design which will be captured post consent in a CTMP/ALTMP which will be prepared in consultation with D&amp;G Roads and Transport Scotland (TS).</p> <p>2. Accept, this will all be covered in the CTMP/ ALTMP post consent.</p> <p>3. Agreed</p> <p>4. Agreed, subject to retention of any alternations which were required to accommodate AIL deliveries.</p> <p>5. Agreed</p> <p>6. Agreed</p> <p>7. Agreed</p> |

|  |  |  |
|--|--|--|
| <p>commencing on site. Agreed access and excluded routes should be identified and agreed for all types of vehicles and a system of visible tagging / badging employed to ensure compliance with (a) agreed routes and (b) driver behaviour standards supported by a driver code of conduct.</p> <p>8. Consultation with nearby forest manager and timber haulers through the office of the South of Scotland Timber Transport Officer. All extracted timber must only travel agreed haulage routes as creation of wind farm access tracks will likely generate accelerated timber extraction.</p> <p>9. The developer will be held responsible for the immediate execution of any repairs and will be required to meet the cost of above average maintenance to the public road network arising from the concentration of heavy traffic associated with this development. This to be secured by Legal Agreement to ensure the integrity of the public road network both during construction and after construction is complete. It is suggested that contact is made with Dumfries and Galloway Council – Legal Services for approval at an early stage.</p> <p>10. Where an access route crosses bridges and culverts, the applicant will require to get approvals (in respect of those structures) from the Council's Engineering Services Unit.</p> <p>11. It would therefore be appropriate that contact is made with the Council's Bridges and Structures team to confirm which structures require individual load assessment or reinspection and to agree proposed axle load configurations. Developer will be required to meet the cost of structural inspection, reassessment or accommodation works to affected structures and any above average maintenance structures arising from the concentration of heavy traffic. Any proposal or requirement to carry out alterations or amendments to any bridge are to be addressed via an AIP.</p> | <p>8. CWL are currently in contact with the South of Scotland Timber Transport Officer regarding the proposed development..</p> <p>9. A section 96 Agreement and associated 'Road Bond', will be entered into with the Local Authority as part of the planning approval process. This will include a condition survey before works commence, to identify any existing damage, and a further survey upon conclusion of the construction activities. This will ensure that any exceptional damage to the Local Authority Road network due to the development will be covered, and the cost of repairs required would be covered by the Developer.</p> <p>10. Accepted</p> <p>11. This would be carried out Post consent. The preferred access route will be discussed with the Council's Bridges and Structures team, and the necessary surveys undertaken. This can be covered in a Planning Condition.</p> | <p>8. CWL are currently in contact with the South of Scotland Timber Transport Officer regarding the proposed development..</p> <p>9. A section 96 Agreement and associated 'Road Bond', will be entered into with the Local Authority as part of the planning approval process. This will include a condition survey before works commence, to identify any existing damage, and a further survey upon conclusion of the construction activities. This will ensure that any exceptional damage to the Local Authority Road network due to the development will be covered, and the cost of repairs required would be covered by the Developer.</p> <p>10. Accepted</p> <p>11. This would be carried out Post consent. The preferred access route will be discussed with the Council's Bridges and Structures team, and the necessary surveys undertaken. This can be covered in a Planning Condition.</p> |
| <p>Recommendations:</p> <p>1. Prior to the commencement of any work on site, the applicant will submit detailed construction plans identifying all proposed off site accommodation works on access routes to be approved in writing by the planning authority in consultation with the Roads Authority.</p> <p>2. All necessary work identified in condition above, shall be completed at the applicant's expense to the specification and satisfaction of the planning authority in consultation with the Roads Authority, prior to commencement of any haulage operations.</p> <p>3. That prior to the commencement of work on site, finalised TMPs (CTMP and ALTMP) for whole life construction phase shall be agreed in writing with the Planning Authority in consultation with the Roads Authorities and Police Scotland.</p>  | <p>1. Agreed</p> <p>2. Agreed, subject to the proviso that general construction works shall not be prevented pending completion of works required only for AIL deliveries.</p> <p>3. Agreed</p>  | <p>1. Agreed</p> <p>2. Agreed, subject to the proviso that general construction works shall not be prevented pending completion of works required only for AIL deliveries.</p> <p>3. Agreed</p>  |

|  |   |  |
|--|---|--|
|  | <p>4. Detailed construction plans for all site accesses are to be submitted to and approved in writing by, the Planning Authority in consultation with the Roads Authority, prior to commencement of works on site.</p> <p>5. Prior to any AIL deliveries, a test run of the route is undertaken in conjunction with the Roads Authority and the Police in order to demonstrate the suitability of the accommodation works and route.</p> <p>6. Extent and detail of 'post construction' carriageway, verge and public road boundary restoration works within the public road boundary are agreed in writing with the Planning Authority in consultation with the Roads Authority.</p> <p>7. That within 3 months of the completion of construction work; the works identified in condition above are implemented to the satisfaction of the Planning Authority in consultation with the Roads Authority.</p>   | <p>4. Agreed</p> <p>5. Agreed</p> <p>6. Agreed, subject to any operational requirements for AIL deliveries.</p> <p>7. Agreed subject to the proviso at (6) above but would request that the 3-month timeline commences once the wind farm is fully operational; as turbine deliveries etc, may occur 3 months after construction.</p>  |
| <p>Dumfries and Galloway Council</p> <p>Response dated: 19th November 2021</p> | <p>1. Paragraph 12.7.1 in Section 12 of the EIA states "initial swept path analysis using a candidate turbine has been undertaken to confirm that the access options are available". It does not appear that any swept path has been submitted with the application and it is requested that this information is submitted so that the likely extent of works on these roads can be considered, which includes consideration on landscape and visual effects.</p> <p>2. It is also requested that initial details of a bell mouth entrance to site is submitted for the same reason.</p>  | <p>1. SPA drawings will be formally submitted post consent as part of the ALTMP/CTMP. These will need to be prepared in conjunction with the appointed turbine supplier. Section 12.9 sets out planning conditions that will ensure detailed SPA's are prepared at the appropriate time. The ALTMP/CTMP will include an assessment relating to any perceived impacts and mitigation required.</p> <p>2. See AI Figure 12.3 included with this AI and paragraph 12.4.3 below.</p> |
| <p>Transport Scotland</p> <p>Response dated: 17th December 2020</p>            | <p>1. Subject to the swept path analysis of the trunk road being agreed, Transport Scotland is satisfied with the submitted EIAR and has no objection to the development in terms of environmental impacts on the trunk road network.</p> <p>2. No later than six months prior to commencement of the development, submit a CTMP in writing, to Scottish Ministers for Approval. CTMP must include (a) A mitigation strategy for abnormal loads on the trunk road network, including accommodation measures required (b) Any additional signing or temporary traffic control measures deemed necessary due to the size or length of loads being delivered as a result of the development.</p> <p>3. During the delivery period of wind turbine construction materials, any additional signing or temporary traffic control measures deemed necessary due to the size or length of any loads being delivered or removed must be undertaken by a recognised QA traffic management consultant, to be approved by Transport Scotland before delivery commences.</p> | <p>1. Agreed, as mentioned above CWL will carry out a full SPA of the full access route post consent.</p> <p>2. CWL are proposing to provide an ALTMP and a CTMP.</p> <p>3. Agreed</p>   |

### 12.4 Proposed Access to Site

12.4.1 The original EIAR outlines three main route options: 1, 2 and 3, for HGV and abnormal loads to gain access to the site during construction. After further consideration of these options, Junction 18 is now to be used for

egress off the A74M. The route options are summarised below to include this change. All 3 routes are available for abnormal loads.

12.4.2 Option 1 (For Abnormal loads and Construction related traffic) will exit the A74M using the northbound exit slip road at Junction 18:

- Turn right onto B723;
- At the next two roundabout, take the 2<sup>nd</sup> exit, continuing on the B7076;
- Turn right towards Breckenry Road;
- Turn right onto Breckenry Road;
- Continue onto B723; and
- Turn left onto C102A before Boreland.

12.4.3 Option 2 (For Abnormal loads and Construction related traffic) will exit the A74M using the northbound exit slip road at Junction 18:

- Turn right onto B723;
- At the next two roundabout, take the 2<sup>nd</sup> exit, continuing on the B7076; and
- Continue along the B7076 until either;
  - Turn right after Cogrieburn Farm, towards Cogrie Farm and Cottages, over the existing A74(M) bridge;
    - After Cogrie Cottages, turn left along a stone track toward the existing old quarry road and over the existing railway bridge heading to Murthat Bank (old Quarry);
    - Cross the River Annan with a new bridge; and
    - Cross the B707 at the site entrance; or
  - Turn right along the old quarry road, which travels under the A74(M);
    - Continue along this private track, over the existing railway bridge heading towards Murthat Bank (old Quarry);
    - Cross the River Annan with a new bridge; and
    - Cross the B707 at the site entrance; or
  - Turn right towards Mid Murthat Farm, over the existing A74(M) bridge;
    - Before the railway turn right, along an existing stone track heading south alongside the railway;
    - Swing left on to the existing old quarry road and over the existing railway bridge heading to Murthat Bank (old Quarry)
    - Cross the River Annan with a new bridge; and
    - Cross the B707 at the site entrance.

12.4.4 Option 3 (For Abnormal loads and Construction related traffic) will exit the A74M using the northbound exit slip road at Junction 18:

- Turn right onto B723;
- At the next two roundabout, take the 2<sup>nd</sup> exit, continuing on the B7076;
- Turn right towards Breckenry Road;
- Turn right onto Breckenry Road;
- Continue onto B723; and
- Turn left before Sandyford Water treatment plant, at the entrance to Silton Forestry.

12.4.5 Access on to the Scoop Hill development site from the public highway will be via a new bell mouth entrance at option 1 and 2. Option 3 already has a bell mouth entrance, although this would require to be enhanced and upgraded to minimise migration of material and surface water on to the public highway; details of which will be provided to the Planning Authority prior to work commencing.

12.4.6 These access point options are shown in AI Figure 12.1 and 12.2. From these points the Applicant will use a combination of existing tracks, upgraded existing tracks and new track construction to connect to the existing forest access tracks further into the site and on to the individual turbine locations proposed.

12.4.7 AI Figure 12.3 shows an indicative bell mouth entrance that would be constructed for access onto site if access option 3 were to be used. The 1:250 scale drawing confirms how the site access junction would be constructed and that it accords with the Design Manual for Roads and Bridges with visibility splays shown. Access to site through options 1 and 2 would also require the construction of a bell mouth entrance, this would be similar to the indicative design provided in AI Figure 12.3 and more information would be provided as part of the ALTMP.

## 12.5 Vehicle Movements

12.5.1 The predicted vehicle movements generated from the construction of the wind farm were outlined in section 12.10 of the original EIAR. Due to a reduction in the number of turbines (from 75 to 60), and the reduction in proposed new access tracks, vehicle movement calculations to and from site have been updated in the AI. The revised number of deliveries has been recalculated based on the expected quantities of material and equipment required. The vehicle movement figures used in this section, fully replace the figures presented in Section 12 of the original EIAR.

12.5.2 As per the tables in the original EIAR, the tables in this AI include a worst-case scenario which assumes that 100% of the stone required for the construction of the tracks, hardstands, foundations and onsite concrete production (via the batching plant) needs to be transported onto site. Similarly, a scenario of 25% of stone to be imported has also been included. Both these scenarios have been completed as this methodology was requested by Dumfries and Galloway Roads department prior to the EIAR submission. However, we are confident, following review of existing borrow pits and the excavated material within the site area, that all stone for the access tracks, hardstands, foundations, substation compound, battery storage foundation and onsite concrete production will be won from both the existing and proposed new borrow pits onsite, thereby negating any need for vehicle movements associated with the importation of stone and aggregate from offsite sources.

12.5.3 Furthermore, due to the location and size of the development area, it is assumed that all concrete batching will be undertaken on site, which reduces the number of vehicle movements needed during the construction process. Further details of the projected vehicle movements are presented below in Tables 12.2, 12.3 and 12.4.

### Preliminaries

12.5.4 As part of the pre-construction enabling works, a small number of HGVs will access the site, transporting construction equipment and on-site accommodation. It is estimated that this would consist of approximately 40 deliveries transporting excavators, dumpers, compactors and site offices, welfare facilities and supplies. These deliveries are envisaged to be no greater than typical deliveries already taking place in the area and would therefore not significantly increase traffic flow in the area.

### Track Construction/Upgrade

- 12.5.5 New site access tracks and widening of existing tracks will be constructed using stone sourced from the borrow pits located on site. Associated equipment such as dumpers, excavators and a stone crusher/ grader would be required. It is estimated that this would result in approximately 120 deliveries in the first few months of construction.
- 12.5.6 Following the removal of 15 turbines there has been a reduction in the length of new and existing tracks required as part of the proposed development. Tracks will be constructed typically 5m in width and constructed using 1.0m depth of stone make-up. From site visits and survey work, CWL believe that only 50% of the existing track will need upgrading to accommodate wind farm traffic. Some of the existing tracks are currently used to move timber wagons and are therefore expected to be suitable for construction of the wind farm without further upgrades.
- 12.5.7 For this exercise, and as requested by D&G Roads, the Applicant has assumed that 100% of the stone required will have to be imported, however this is a 'worst case' assessment scenario. In reality, it is anticipated that all stone required for access track construction will be sourced from on-site borrow pits which can (if required) be expanded to negate the need for any stone importation.
- 12.5.8 Based on this theoretical assumption (the 'worst case'), the total amount of stone required to be imported would be c. 317,000 m<sup>3</sup> (100% of the total stone required), whereas in the original EIA it was estimated that 350,000m<sup>3</sup> of stone would need to be imported. Due to the reduction in number of turbines and tracks, the worst-case scenario for imported stone has been reduced by 33,000m<sup>3</sup>. Any stone imports would likely be brought to site in 20T and 30T tippers (equalling 23,775 vehicle movements in a worst-case scenario). The anticipated construction programme is expected to be 18 months long, equating to 1,321 vehicle movements a month, or 330 HGV's a week, or 66 per day (assuming a 5-day working week).

### Turbine Foundation Construction

- 12.5.9 As described in Section 2 of the EIA, each of the turbines will have a concrete foundation. Turbine foundations typically consist of either a square, circular or octagonal reinforced concrete base usually around 18m in diameter and founded approximately 3.5 m below the ground surface.
- 12.5.10 Concrete deliveries represent the largest volume of traffic generated during the construction stage. To mitigate against this, on-site ready-mix batching options will be explored and will help reduce the potential impact on the local road network. This would need to be agreed with the appointed civil contractor prior to the commencement of construction. However, for the purpose of the EIA and the AI, as requested by D&G Roads, a worst-case scenario has been presented that assumes all concrete material would be brought onto site.
- 12.5.11 Concrete will be required for each turbine foundation. It is expected that there will be 1890 concrete deliveries to site during the construction period. This is likely to be in the first 9 months of construction.
- 12.5.12 Steel reinforcement will also be required for each turbine foundation. Each foundation will require roughly three deliveries of reinforcement. Therefore 180 deliveries of steel will be required during the construction period; these are likely to be in the first 9 months of construction.
- 12.5.13 Foundation bolts will also be required, along with steel sections which are cast into the concrete foundation and used for connecting the foundation to the wind turbine tower. 30 vehicle journeys are likely to be generated by this.

### Turbine Component Delivery

- 12.5.14 Each turbine tower will be delivered in sections and assembled on site. It is anticipated that each tower will consist of between 4 and 7 sections (depending on the hub height of the turbine) that will need to be transported to site and therefore will generate approximately 342 deliveries. Tower section design will be finalised post consent once a turbine manufacturer has been appointed.
- 12.5.15 The nacelles are delivered as 2 units, requiring 120 deliveries. It is anticipated that the turbine blades will be transported one at a time, and therefore 180 deliveries will be generated.
- 12.5.16 One delivery of cables, switchgear, transformers, spare equipment, and controllers would be required per turbine, totalling 60 deliveries.
- 12.5.17 For the turbines to be erected, three cranes will be required on site: a primary sized crane capable of lifting the main turbine components and two secondary sized cranes, for primary crane assembly and assisting in main component lifting. It is anticipated this will generate 30 deliveries to site.
- 12.5.18 The turbine hubs will require 60 deliveries.
- 12.5.19 Of these deliveries, only the turbine towers, blades, hubs and nacelles would be classed as abnormal loads (longer than 17 m and/or wider than 4 m) and all other loads would be classed as normal loads.
- 12.5.20 A police escort, or other escort approved by Police Scotland, will accompany the abnormal vehicle movements. It is estimated that in total, 708 escort vehicles will be required and a number of police vehicles for the convoys.
- 12.5.21 All abnormal load deliveries will take place at times dictated by Police Scotland and will aim to avoid disruption to other road users. However, as these timings are dictated by Police Scotland themselves, if a serious incident was to occur elsewhere abnormal deliveries would be postponed. All components will be off-loaded within the site boundary.

### Other Activities

- 12.5.22 For the substation/control room building and compound, it is estimated that there will be 100 deliveries of various materials and components associated with the construction of this element of the wind farm.

### Construction Personnel Transit

- 12.5.23 The number of construction personnel working on site at any one time will be approximately 100 (although numbers will vary throughout the construction phase). Site personnel will be transported to and from the site by private, light vehicles. It is estimated that this will average 20 journeys per day as staff usually meet and travel together to site in vans.

### Construction Programme

- 12.5.24 The traffic movements will be over an 18-month construction period with the majority of the abnormal loads occurring in months 9 to 18 of the construction period.
- 12.5.25 The anticipated number of vehicle movements during the wind farm construction are summarised in Tables 12.2, 12.3 and 12.4. Inevitably the precise number of vehicle movements will be determined by the amount of aggregate that can be sourced from within the site, as this would reduce the need for aggregate deliveries

via the public highway. Based on the assessment of the existing borrow pits, within the site boundary, the Applicant is confident that all aggregate can be sourced from within the site.

- 12.5.26 Table 12.2 therefore shows the overall vehicle movements associated with the scheme if 0% of stone is to be imported to site.
- 12.5.27 Table 12.3 shows the overall vehicle movements if 25% of stone is to be imported to site, this would be the case if the onsite borrow pits could not provide the full amount of stone required.
- 12.5.28 Table 12.4 shows the overall vehicle movements if, in the unlikely event that all the required stone had to be imported to site. This is the worst-case scenario and is included at the request of D&G Roads.
- 12.5.29 Table 12.5 shows the reduction in total movements when comparing the original 75 turbine wind farm with the revised 60 turbine wind farm. The number of movements has reduced due to the decrease in turbine components required and the decrease in track length now proposed.

**Table 12.2 – Estimated Vehicle Movements During Construction – 0% Stone Imported (18 months)**

| Construction Element     |                                | Vehicle Movements (2 –way) – 60 turbines |
|--------------------------|--------------------------------|--|
| Building Materials       | Concrete                       | 1890                                     |
|                          | Cables                         | 140                                      |
|                          | Sub Station                    | 100                                      |
|                          | Reinforcement                  | 180                                      |
|                          | Preliminaries                  | 70                                       |
|                          | Consumables                    | 720                                      |
|                          | Containers & tools etc.        | 180                                      |
|                          | Stone Import                   | 0  |
| Turbine Components       | Foundation Insert              | 30                                       |
|                          | Tower Sections                 | 342                                      |
|                          | Nacelle                        | 120                                      |
|                          | Hub                            | 60                                       |
|                          | Blades                         | 180                                      |
|                          | Crane                          | 30                                       |
|                          | Switchgear etc.                | 60                                       |
|                          | Abnormal load escorts          | 708                                      |
| Light vehicles           | Site Personnel etc.            | 5400                                     |
| <b>Total Estimate</b>    | <b>over an 18-month period</b> | <b>10,210</b>                            |
| <b>of which HGVs</b>     |                                | 3,394                                    |
| <b>of which Abnormal</b> |                                | 708                                      |
| <b>of which Light</b>    |                                | 6,108                                    |

**Table 12.3 – Estimated Vehicle Movements During Construction – 25% Stone Imported (18 months)**

| Construction Element |          | Vehicle Movements (2 –way) – 60 Turbines |
|----------------------|----------|--|
| Building Materials   | Concrete | 1890                                     |

|                          |                                |               |
|--------------------------|--------------------------------|---------------|
|                          | Cables                         | 140           |
|                          | Sub Station                    | 100           |
|                          | Reinforcement                  | 180           |
|                          | Preliminaries                  | 70            |
|                          | Consumables                    | 720           |
|                          | Containers & tools etc.        | 180           |
|                          | Stone Import                   | 5944          |
| Turbine Components       | Foundation Insert              | 30            |
|                          | Tower Sections                 | 342           |
|                          | Nacelle                        | 120           |
|                          | Hub                            | 60            |
|                          | Blades                         | 180           |
|                          | Crane                          | 30            |
|                          | Switchgear etc.                | 60            |
|                          | Abnormal load escorts          | 708           |
| Light vehicles           | Site Personnel etc.            | 5400          |
| <b>Total Estimate</b>    | <b>over an 18-month period</b> | <b>16,154</b> |
| <b>of which HGVs</b>     |                                | 9,338         |
| <b>of which Abnormal</b> |                                | 708           |
| <b>of which Light</b>    |                                | 6,108         |

**Table 12.4 – Estimated Vehicle Movements During Construction – 100% Stone Imported (18 months)**

| Construction Element     |                                | Vehicle Movements (2 –way) – 60 turbines |
|--------------------------|--------------------------------|--|
| Building Materials       | Concrete                       | 1890                                     |
|                          | Cables                         | 140                                      |
|                          | Sub Station                    | 100                                      |
|                          | Reinforcement                  | 180                                      |
|                          | Preliminaries                  | 70                                       |
|                          | Consumables                    | 720                                      |
|                          | Containers & tools etc.        | 180                                      |
|                          | Stone Import                   | 23,775                                   |
| Turbine Components       | Foundation Insert              | 30                                       |
|                          | Tower Sections                 | 342                                      |
|                          | Nacelle                        | 120                                      |
|                          | Hub                            | 60                                       |
|                          | Blades                         | 180                                      |
|                          | Crane                          | 30                                       |
|                          | Switchgear etc.                | 60                                       |
|                          | Abnormal load escorts          | 708                                      |
| Light vehicles           | Site Personnel etc.            | 5400                                     |
| <b>Total Estimate</b>    | <b>over an 18-month period</b> | <b>33,985</b>                            |
| <b>of which HGVs</b>     |                                | 27,169                                   |
| <b>of which Abnormal</b> |                                | 708                                      |
| <b>of which Light</b>    |                                | 6,108                                    |

**Table 12.5 – Total Vehicle Movements, comparison between 75 and 60 turbine layouts**

| Estimated Vehicle Movements During Construction | Vehicle Movements (2-way) – 75 turbines | Vehicle Movements (2-way) - 60 Turbines |
|---|---|---|
| <b>0% Stone Imported</b>                        |   |   |
| Total Estimate                                  | 11,139                                  | 10,210                                  |
| Of which HGVs                                   | 3,993                                   | 3,394                                   |
| Of which Abnormal                               | 873                                     | 708                                     |
| Of which Light                                  | 6,273                                   | 6,108                                   |
| <b>25% Stone Imported</b>                       |   |   |
| Total Estimate                                  | 17,702                                  | 16,154                                  |
| Of which HGVs                                   | 10,556                                  | 9,338                                   |
| Of which Abnormal                               | 873                                     | 708                                     |
| Of which Light                                  | 6,273                                   | 6,108                                   |
| <b>100% Stone Imported</b>                      |   |   |
| Total Estimate                                  | 37,389                                  | 33,985                                  |
| Of which HGVs                                   | 30,243                                  | 27,169                                  |
| Of which Abnormal                               | 873                                     | 708                                     |
| Of which Light                                  | 6,273                                   | 6,108                                   |

## 12.6 Operation

12.6.1 Traffic to the Scoop Hill site during operation will be limited to maintenance and operational vehicles, and occasional waste collection for service items and consumables, and can therefore be considered negligible. Site engineers will be based locally and are required to make site visits to undertake routine maintenance; however, this traffic will almost entirely be limited to standard cars, pick-ups or vans. Operational vehicle movements will on average be between 3 and 10 movements a week.

## 12.7 Decommissioning

12.7.1 The wind farm will be decommissioned, and the site reinstated at the end of its 40 year operational life. Decommissioning of the wind farm will necessitate the dismantling and removal of the wind turbines from the site. This work is estimated to take up to 18 months to complete, based on today's current working practices.

12.7.2 The dismantling of the turbines will require a suitable crane to be transported to the site and removed on completion of the dismantling.

12.7.3 The decommissioning of a wind farm will result in the turbines, energy storage units and substations being removed but access tracks and crane hardstands will remain in situ to be used by the landowners for agricultural purposes and forestry works. All other above ground installations will be removed from the site.

12.7.4 It is estimated that the total traffic movements associated with decommissioning will be around 30% less than the traffic movements required during the construction period. Prior to decommissioning, a revised Transport Assessment would be incorporated into an updated Traffic Management Plan (TMP), which would be produced with due regard to the local highway network, best practice, and legislation at that time.

## 12.8 Assessment of Significance

12.8.1 The *Guidelines for the Environmental Assessment of Road Traffic* (IEMA, 1993) states that two broad rules can be used as a screening process to delimit the scale and extent of the assessment.

12.8.2 The IEMA guidelines identify general thresholds for traffic flow increases of 10% and 30%. When the traffic flow change is less than 10%, IEMA guidelines state that it would not be appropriate to consider these traffic changes unless there is a significant change in the composition of the traffic. IEMA guidelines also explain that a 30% change in traffic flow represents a 'slight' impact on traffic changes in an area. Where the predicted increase in traffic flow is lower than the thresholds, the guidelines suggest that the significance of the effects can be stated to be low or insignificant and further detailed assessments are not warranted.

12.8.3 However, to ensure a relative assessment of the increase in road traffic in environmental terms, the following criteria, outlined in Tables 12.6 and 12.7, are used to determine the magnitude of impact and receptor sensitivity respectively.

**Table 12.6 – Magnitude of Impact Criteria**

| Magnitude of Impact | Change in Traffic Flow                                |
|---------------------|---|
| Large               | Change in total traffic or HGV flows over 90%         |
| Medium              | Change in total traffic or HGV flows of 60 - 90%      |
| Small               | Change in total traffic or HGV flows of 30 – 60%      |
| Negligible          | Change in total traffic or HGV flows of 10% – 30%     |
| Not considered      | Change in total traffic or HGV flows of less than 10% |

**Table 12.7 – Receptor Sensitivity**

| Receptor Sensitivity | Receptor Type   |
|----------------------|---|
| High                 | Receptors of greatest sensitivity to traffic flow: schools, colleges, playgrounds, accident blackspots, retirement homes, urban/residential roads without footways that are used by pedestrians. (Paragraph 2.5 IEMA Guidelines, 1993)      |
| Medium               | Traffic flow sensitive receptors including congested junctions, doctors' surgeries, hospitals, shopping areas with roadside frontage, roads with narrow footways, unsegregated cycle ways, community centres, parks, recreation facilities. |
| Low                  | Receptors with some sensitivity to traffic flow: places of worship, public open space, nature conservation areas, listed buildings, tourist attractions and residential areas with adequate footway provision.                              |
| Negligible           | Receptors with low sensitivity to traffic flows and those sufficiently distant from affected roads and junctions.   |

12.8.4 The magnitude of impact and the sensitivity of the receptor were then assessed. Potential effects are therefore concluded to be of Major, Moderate, Minor or Negligible significance. Major and Moderate significance represent effects considered to be significant in terms of the EIA guidance.



**12.9 Statement of Significance**

**Construction Period**

- 12.9.1 In the baseline scenario where there is no importation of stone, the construction of the proposed wind farm is estimated to lead to around 10,210 deliveries by HGV, abnormal load vehicles and other private/light vehicles. Approximately 33% of these are HGV movements, 7% are abnormal loads and 60% are light vehicles.
- 12.9.2 Since construction is likely to last for a period of typically 18 months, this would lead to an average increase in overall traffic movements of approximately 28 deliveries per working day with 9 of these deliveries being made by HGV vehicles.
- 12.9.3 Whilst it has been assessed that all stone will be won from the onsite borrow pits, at the request of DGC we have calculated movements for a scenario of 100% of stone being imported. In this case, the construction of the proposed wind farm is estimated to lead to around 33,985 deliveries by HGV, abnormal load vehicles and other private/light vehicles, whereas in the EIAR this was 37,389 deliveries. Approximately 80% of the revised traffic movements in this scenario are HGV movements, 2% are abnormal loads and 18% are light vehicles. Since construction is likely to last for a period of typically 18 months, this would lead to an average increase in overall traffic movements of approximately 94 deliveries per working day, with 75 of these deliveries being made by HGV vehicles, again, based on the 100% importation of stone scenario.
- 12.9.4 If on-site concrete batching for the turbine foundations is not employed, then the peak construction traffic flows would occur when concrete is being delivered to site. This would typically be spread over a nine-month period. A turbine foundation is generally poured in one or two days, and it is important to note that these concrete deliveries would be limited to a 60 - 120 day period out of the total construction period of 18 months. A delivery schedule would also be made available to local residents prior to the commencement of construction activities.
- 12.9.5 The traffic flows have been assessed against the baseline traffic data available from the Department for Transport. The latest data available is from 2021 and is presented in Table 12.8. However, it is important to note that traffic movements for 2021 are significantly less than those in 2019, due to the Coronavirus pandemic and associated travel restrictions.
- 12.9.6 Estimated traffic movement increase is based on data provided for the A74(M) near Junction 17. Rural roads leading to site such as the B7076 and the B723 do not have baseline traffic data from the Department for Transport. Baseline traffic data for Breckenry Road and the B7068 near Grange Quarry is also not available from the Department for Transport, however the Crossdykes Wind Farm ES (2015) and Addendum (2016) has traffic count data for those locations. Therefore, this data has been used in Table 12.8 and 12.9.

**Table 12.8 – Baseline and estimated traffic flows along the proposed access routes if 0% of Stone was imported**

| Location               | Description                                | Source   | AADF   | Average Daily Traffic Increase* | Percentage Daily Traffic Increase |
|------------------------|--|----------|--------|---------------------------------|-----------------------------------|
| A74(M)<br>(Ref. 80551) | A74(M)<br>between<br>junction 16 and<br>17 | DfT 2021 | 30,513 | 28                              | 0.09%                             |

|                    |                                |                                |     |    |       |
|--------------------|--------------------------------|--------------------------------|-----|----|-------|
| Breckenry Road     | Road running east of the B7076 | Crossdykes Wind Farm ES (2015) | 792 | 28 | 3.54% |
| B723 (Ref. 811560) | Road going through Boreland    | DfT 2019                       | 716 | 28 | 3.91% |
| B7068              | Near Grange Quarry             | Crossdykes Wind Farm ES (2015) | 385 | 28 | 7.27% |

**Notes:**  
 AADF – Average Annual Daily Traffic Flow  
 Data from Department for Transport (2021), Crossdykes Wind Farm ES (2015) and Addendum (2016)  
**Source:**  
<https://roadtraffic.dft.gov.uk/manualcountpoints/80551>  
<https://roadtraffic.dft.gov.uk/manualcountpoints/811560>  
 \*based on 0% stone imported

- 12.9.7 The results in Table 12.8 show that there would be an average increase of less than 1% in traffic movements on the A74(M) as a result of the construction of the wind farm. The potential impact on traffic and transport is so low that based on the IEMA guidance this impact does not need to be considered.
- 12.9.8 The results in Table 12.8 also show that there would be an average increase of 3.54% in traffic movements on Breckenry Road as a result of the construction of the wind farm. The potential impact on traffic and transport during the construction phase is short-term, involving negligible magnitude of effect, and low impact on sensitive receptors, and therefore the overall significance would be low.
- 12.9.9 The results in Table 12.8 also show that there would be an average increase of 3.91% in traffic movements on the B723 through Boreland as a result of the construction of the wind farm. The potential impact on traffic and transport during the construction phase is short-term, involving negligible magnitude of effect, and low impact on sensitive receptors, and therefore the overall significance would be low.
- 12.9.10 The results in Table 12.8 also show that there would be an average increase of 7.27% in traffic movements on the B7068 near Grange Quarry as a result of the construction of the wind farm. The potential impact on traffic and transport during the construction phase is short-term, involving negligible magnitude of effect, and low impact on sensitive receptors, and therefore the overall significance would be low.
- 12.9.11 The civil works contractor will be required to implement a Drivers Code of Conduct and badging system to help enforce speed and routing requirements.

**Table 12.9 – Baseline and estimated traffic flows along the proposed access routes if 100% of Stone was imported.**

| Location | Description | Source | AADF | Average Daily Traffic Increase* | Percentage Daily Traffic Increase |
|----------|-------------|--------|------|---------------------------------|-----------------------------------|
|----------|-------------|--------|------|---------------------------------|-----------------------------------|

|   |  |                                      |        |    |        |
|---|--|--------------------------------------|--------|----|--------|
| A74(M)<br>(Ref. 80551)  | A74(M)<br>between<br>junction 16 and<br>17 | DfT 2021                             | 30,513 | 94 | 0.31%  |
| Breckeny<br>Road  | Road running<br>east of the<br>B7076       | Crossdykes<br>Wind Farm<br>ES (2015) | 792    | 94 | 11.87% |
| B723 (Ref.<br>811560)   | Road going<br>through<br>Boreland          | DfT 2019                             | 716    | 94 | 13.13% |
| B7068   | Near Grange<br>Quarry                      | Crossdykes<br>Wind Farm<br>ES (2015) | 385    | 94 | 24.42% |
| <p><b>Notes:</b><br/>AADF – Average Annual Daily Traffic Flow<br/>Data from Department for Transport (2021), Crossdykes Wind Farm ES (2015) and Addendum (2016)<br/><b>Source:</b><br/><a href="https://roadtraffic.dft.gov.uk/manualcountpoints/80551">https://roadtraffic.dft.gov.uk/manualcountpoints/80551</a><br/><a href="https://roadtraffic.dft.gov.uk/manualcountpoints/811560">https://roadtraffic.dft.gov.uk/manualcountpoints/811560</a><br/>*based on 100% stone imported as a worst-case scenario</p> |  |                                      |        |    |        |

- 12.9.12 The results in Table 12.9 show that there would be an average increase of less than 1% in traffic movements on the A74(M) as a result of the construction of the wind farm. The potential impact on traffic and transport is so low that based on the IEMA guidance, this impact does not need to be considered, particularly as the 2021 AADF figure is lower than previous years.
- 12.9.13 The results in Table 12.9 also show that there would be an average increase of 11.87% in traffic movements on Breckeny Road as a result of the construction of the wind farm. The potential impact on traffic and transport during the construction phase is short-term, involving negligible magnitude of effect, and low impact on sensitive receptors, and therefore the overall significance would be low.
- 12.9.14 The results in Table 12.9 also show that there would be an average increase of 13.13% in traffic movements on the B723 through Boreland as a result of the construction of the wind farm. The potential impact on traffic and transport during the construction phase is short-term, involving negligible magnitude of effect, and low impact on sensitive receptors, and therefore the overall significance would be low.
- 12.9.15 The results in Table 12.9 also show that there would be an average increase of 24.42% in traffic movements on the B7068 near Grange Quarry as a result of the construction of the wind farm. The potential impact on traffic and transport during the construction phase is short-term, involving negligible magnitude of effect, and low impact on sensitive receptors, and therefore the overall significance would be low. As noted above, it is unlikely that 100% stone would need to be imported to the site and this is therefore the worst case scenario and very unlikely.

### Operational Period

- 12.9.16 Throughout the operational life of the wind farm, there would be infrequent traffic movements consisting almost entirely of cars/pickups or vans that would be required for the service and maintenance of the turbines and site. The magnitude of their impact is considered to be negligible, resulting in a low significance. Operational traffic is therefore not considered to be significant in terms of the EIA Regulations.

### Decommissioning Period

- 12.9.17 Baseline traffic flows on all of the affected roads may be different by the end of the 40-year operational life of the wind farm, leading to the possibility of a different impact due to traffic. However, any potential impacts would be mitigated in a similar way as for the construction phase. A decommissioning plan, incorporating an updated TMP, would be drawn up and agreed at least 12 months prior to decommissioning commencing.

## 12.10 Traffic Management Plan

- 12.10.1 As described in section 12.15 of the original EIAR submission, it is proposed that two separate TMP's will be produced. These will be split into a Construction Transport Management Plan (CTMP) and Abnormal Load Traffic Management Plan (ALTMP).
- 12.10.2 The Applicant proposes the following detailed conditions should consent for this scheme be granted. The conditions below have been discussed between Dumfries and Galloway Council and the Applicant on another one of the applicant's schemes and the applicant deems that these appropriately worded conditions should satisfy the council that all relevant and detailed information will be submitted within the CTMP and ALTMP.
- 12.10.3 Condition 3 was proposed by Transport Scotland in their response, and this is accepted by the applicant.

### Condition 1: Construction Traffic Management Plan

*(1) There shall be no Commencement of Development unless a Traffic Management Plan (TMP) in relation to general construction traffic has been submitted to and approved in writing by the Planning Authority. The TMP shall include:*

- (a) the routing of all traffic associated with the Development on the local road network and the trunk road network;*
- (b) a detailed breakdown of vehicle movements by type and month;*
- (c) measures to ensure that the specified routes are adhered to, including monitoring procedures;*
- (d) the design and layout of site accesses*
- (e) details of all signage and lining arrangements to be put in place;*
- (f) provisions for emergency vehicle access; and*
- (g) a list of contacts and identification of a nominated person to whom any road safety issues can be referred.*

*(2) The approved TMP shall thereafter be implemented in full, unless otherwise agreed in advance in writing with the Planning Authority.*

*Reason: In the interests of the safe and efficient management of local and trunk roads.*

**Condition 2: Abnormal Load Traffic Management Plan**

(1) Prior to the commencement of any abnormal load deliveries to the site, an Abnormal Loads Traffic Management Plan (ALTMP) shall be submitted to and approved in writing by the Planning Authority. The ALTMP shall include:

(a) the routeing of all abnormal load vehicles associated with the Development on the local road network and the trunk road network;

(b) a detailed breakdown of abnormal load vehicle movements by type and month;

(c) swept path analysis;

(d) measures to ensure that the specified routes are adhered to, including monitoring procedures;

(e) details of all signage and lining arrangements to be put in place;

(f) details of a test run of the route (based upon the largest expected component and transporter) to be arranged in conjunction with the Roads Authority and Police Scotland;

(g) provisions for emergency vehicle access; and

(h) a list of contacts and identification of a nominated person to whom any road safety issues can be referred.

(2) During the construction delivery period any additional signing or temporary traffic control measures deemed necessary due to the size or length of any loads being delivered or removed must be undertaken by a recognised QA traffic management consultant, to be approved by the Planning Authority and Transport Scotland.

(3) The approved ALTMP shall thereafter be implemented in full, unless otherwise agreed in advance in writing with the Planning Authority.

Reason: In the interests of the safe and efficient management of local and trunk roads.

**Condition 3:**

During the delivery period of the wind turbine construction materials, any additional signing or temporary traffic control measures deemed necessary, due to the size or length of any loads being delivered or removed, must be undertaken by a recognised QA traffic management consultant, to be approved by Transport Scotland before delivery commences.

Reason: To ensure that the transportation will not have any detrimental effect on the road and structures along the route.

**12.11 Residual Effects**

12.11.1 Residual effects from the construction traffic are considered to be of very low significance. The nature of some of the construction and delivery vehicles will make them obvious on the highway network and very minor delays, due to slow-moving traffic, may be experienced. Compared to other power generation technologies, wind turbines can be easily and economically decommissioned and removed from the site at the end of their economic life.

12.11.2 The proposed wind farm will generate a slight temporary increase in HGV and light vehicle movements using the local network of roads throughout the anticipated 18-month construction period and during decommissioning of the wind farm. Any increase in traffic along the A74(M) is likely to be unnoticeable (Table 12.10). Traffic increase along Breckenry Road and the B7068 is expected to be of low significance as minor modifications will be required along the access route and there will be an increase in traffic flows. It is expected that there will be some low to moderate impact on local residents, but this will only be temporary during the construction of the wind farm.

12.11.3 No residual negative impact is anticipated during the operation of the wind farm.

**Table 12.10 – Summary of Residual Effects if 0% of stone is imported into site**

| Key Issues                     | Magnitude  | Receptor Sensitivity  | Significance   |
|--------------------------------|--|---|--|
| <b>During Construction</b>     |  |   |  |
| Traffic flow on the A74(M)     | Negligible<br>Increase in traffic flow out with peak times.  | Negligible<br>Increase in traffic flow is unlikely to affect residents or road users.   | Insignificant<br>No modification will be required along this part of the access route so therefore there will be minimal disruption. |
| Traffic flow on Brackenry Road | Negligible<br>Increase in traffic flow out with peak times.  | Low<br>Increase in traffic flow most likely to affect residents. This will be dependent on the stage of the construction phase. | Low<br>Minor modification to access routes may affect local residents.   |
| Traffic flow on B7068          | Negligible<br>Increase in traffic flow out with peak times.  | Negligible<br>Increase in traffic flow is unlikely to affect residents or road users.   | Low<br>Minor modification will be required on this part of the access route, but disruption will be minimal.                         |
| <b>Post Construction</b>       |  |   |  |
| Traffic flow on the A74(M)     | Negligible<br>Minimal disruption from site service vehicles. | Negligible<br>Increase in traffic flow is unlikely to affect residents or road users.   | Insignificant<br>Minimal disruption from site service vehicles.  |
| Traffic flow on Brackenry Road | Negligible<br>Increase in traffic flow out with peak times.  | Low<br>Increase in traffic flow is unlikely to be noticeable.   | Insignificant<br>Minimal disruption from site service vehicles.  |
| Traffic Flow on B7068          | Negligible<br>Minimal disruption from site service vehicles. | Negligible<br>Increase in traffic flow is unlikely to affect residents or road users.   | Insignificant<br>Minimal disruption from site service vehicles.  |

**12.12 Conclusion**

12.12.1 This Traffic and Transport Assessment has assessed the likely significance of effects of the traffic associated with the proposed wind farm during the construction, operation, and decommissioning phases. There is no

reason to believe that stone cannot be secured from the on-site borrow pits as detailed in Section 2, and Table 12.10 summarises the residual effect if 0% of stone is imported to the proposed development. At the request of DGC, calculations based on importation of 100% of the stone material required for track construction are summarised in Table 12.9.

- 12.12.2 The extensive number of existing borrow pits onsite and their historic use to supply the existing extensive network of forestry access tracks within the site boundary gives confidence that 100% of the stone requirements will be quarried on site.
- 12.12.3 The A74(M) is frequently used by heavy vehicles. It is therefore considered that the additional temporary impact of wind farm construction traffic will be minimal on this route. Breckenry Road and the B7068 are also frequently used by heavy vehicles, such as timber haulage trucks. It is therefore considered that the additional temporary impact of wind farm construction traffic will be low to medium on this route, depending on the stage of the construction phase.
- 12.12.4 The assessment concludes that the construction of the proposed wind farm would result in a temporary, negligible/low increase in traffic levels on Breckenry Road and the B7068. In accordance with the IEMA Guidelines significance criteria, these increases are not significant.
- 12.12.5 Nonetheless, the implementation of mitigation measures such as an appropriate CTMP and ALTMP in agreement with the Local Authority Roads Departments and Transport Scotland, will ensure any potential impact that may arise can be mitigated appropriately. Local residents will also be kept up to date during the entire construction process and turbine deliveries, ensuring that they know when to expect increases in traffic or the delivery of the abnormal loads at night.

## References

Crossdykes Wind Farm Environmental Statement (2015). Available at: <https://eaccess.dumgal.gov.uk/online-applications/applicationDetails.do?activeTab=summary&keyVal=ZZZW6IGBTA915>

Department for Transport (2017) Traffic Counts (Online) Available at: <https://roadtraffic.dft.gov.uk/#6/55.254/-6.053/basemap-regions-countpoints>  
[Accessed: 4<sup>th</sup> May 2023]

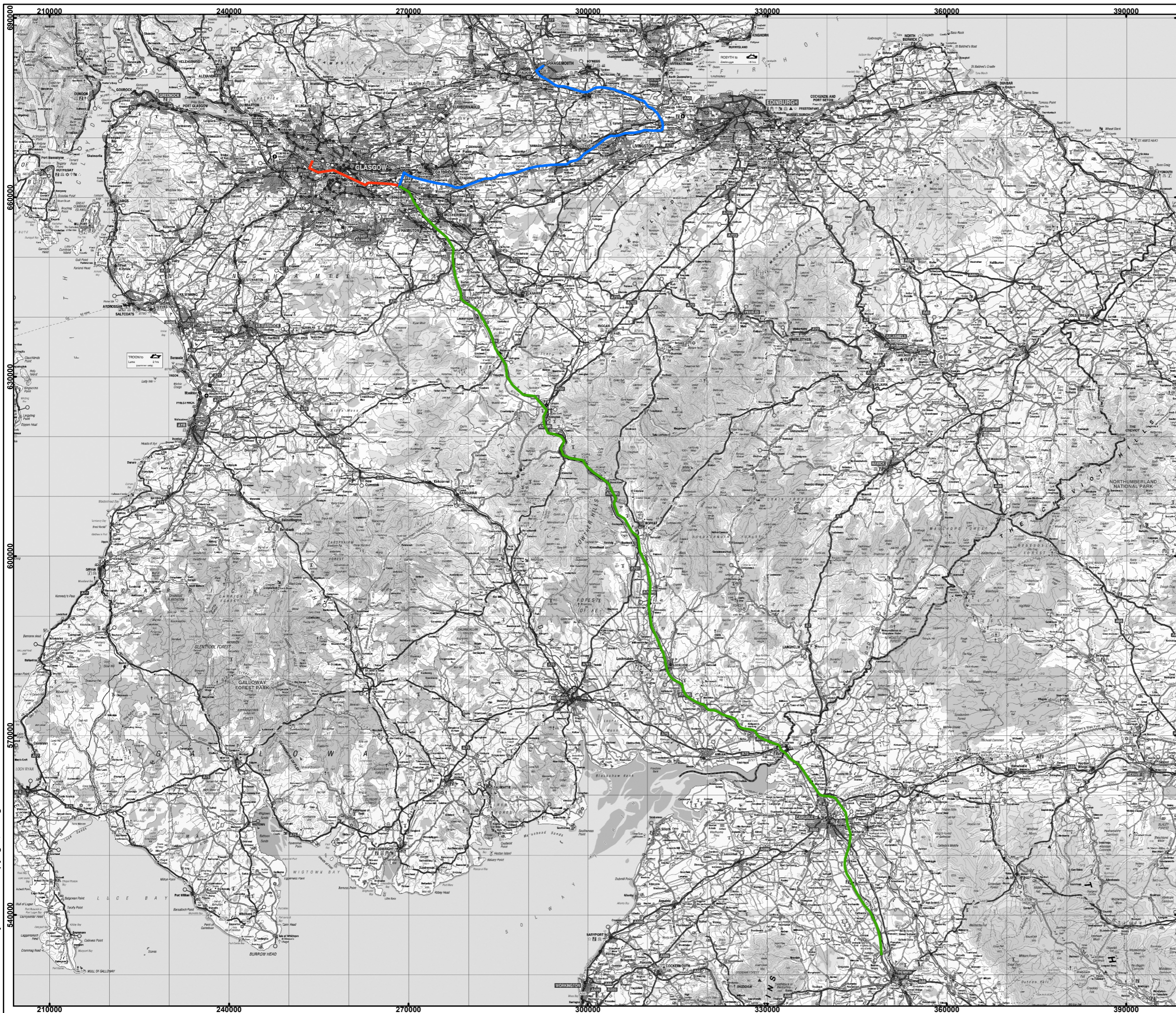
The Institute of Environmental Management & Assessment (1993) *Guidelines for the Environmental Assessment of Road Traffic*. IEMA, Lincoln.

Scottish Government (2022) *National Planning Framework 4*. Available at: <https://www.gov.scot/publications/national-planning-framework-4/documents/> [Accessed: April 2023]

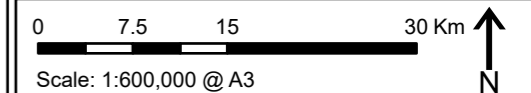
# 374 Scoop Hill

## Legend

- Access Along A74(M)
- Route from Grangemouth Port
- Route from King George V Dock



Notes: N/A  
Revisions: N/A







AI Figure 12.1 - Proposed Abnormal Access Routes (Port to A74(M))

Date: 28/06/2023 Ref: 374-200608-7312-A  
Produced: DW Reviewed: RE Approved: RT

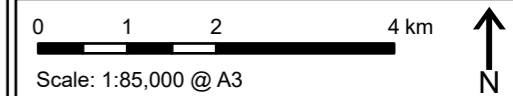
Godscroft Lane  
Frodsham - WA6 6XU  
t: 01928 734544 f: 01928 734790  
e: info@communitywindpower.co.uk w: www.communitywindpower.co.uk

# 374 Scoop Hill

## Legend

-  Site Boundary
-  Option 1
-  Option 2
-  Option 3

Notes: N/A  
Revisions: N/A



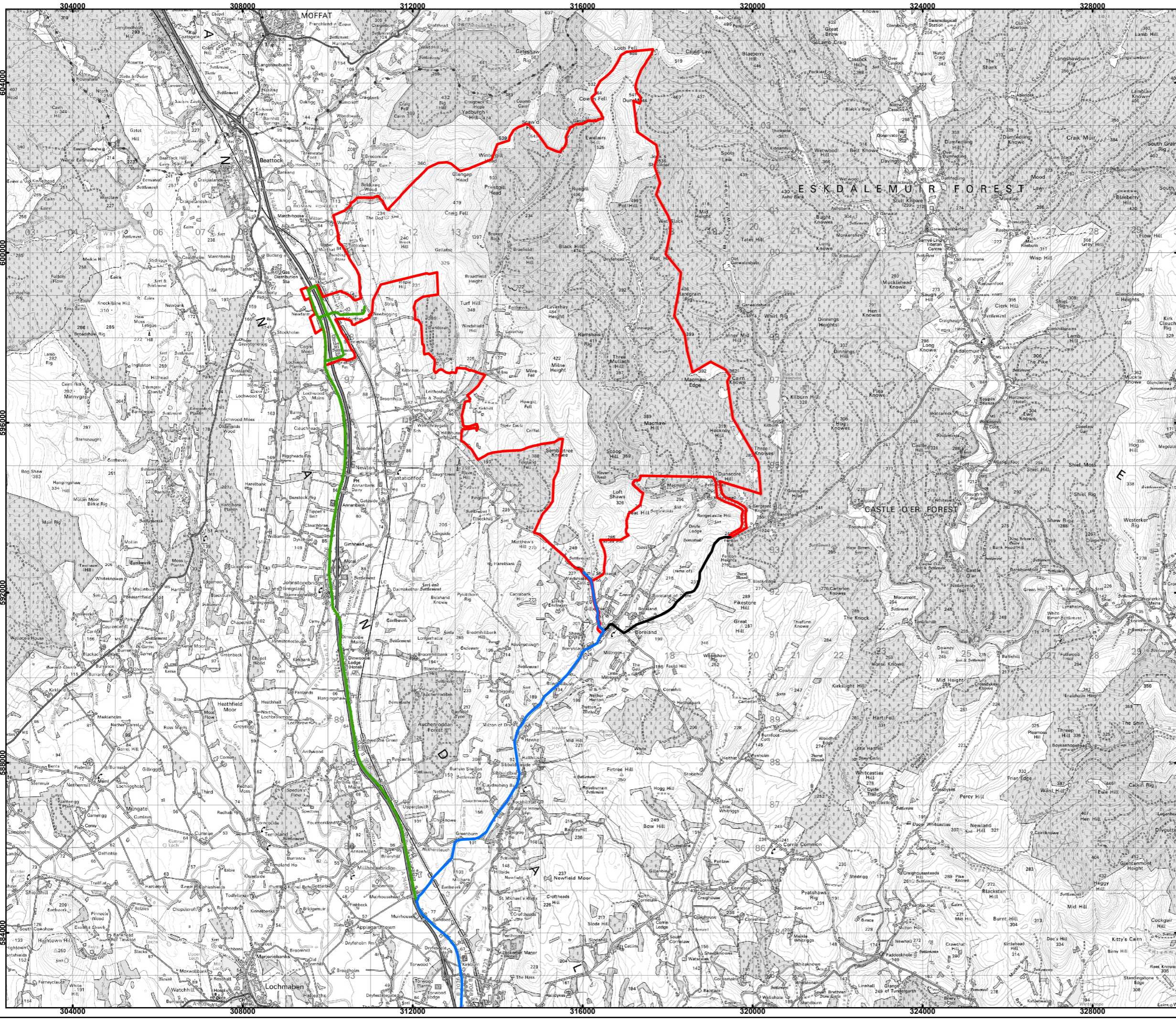
### AI Figure 12.2 - Proposed Abnormal and Construction Access Routes

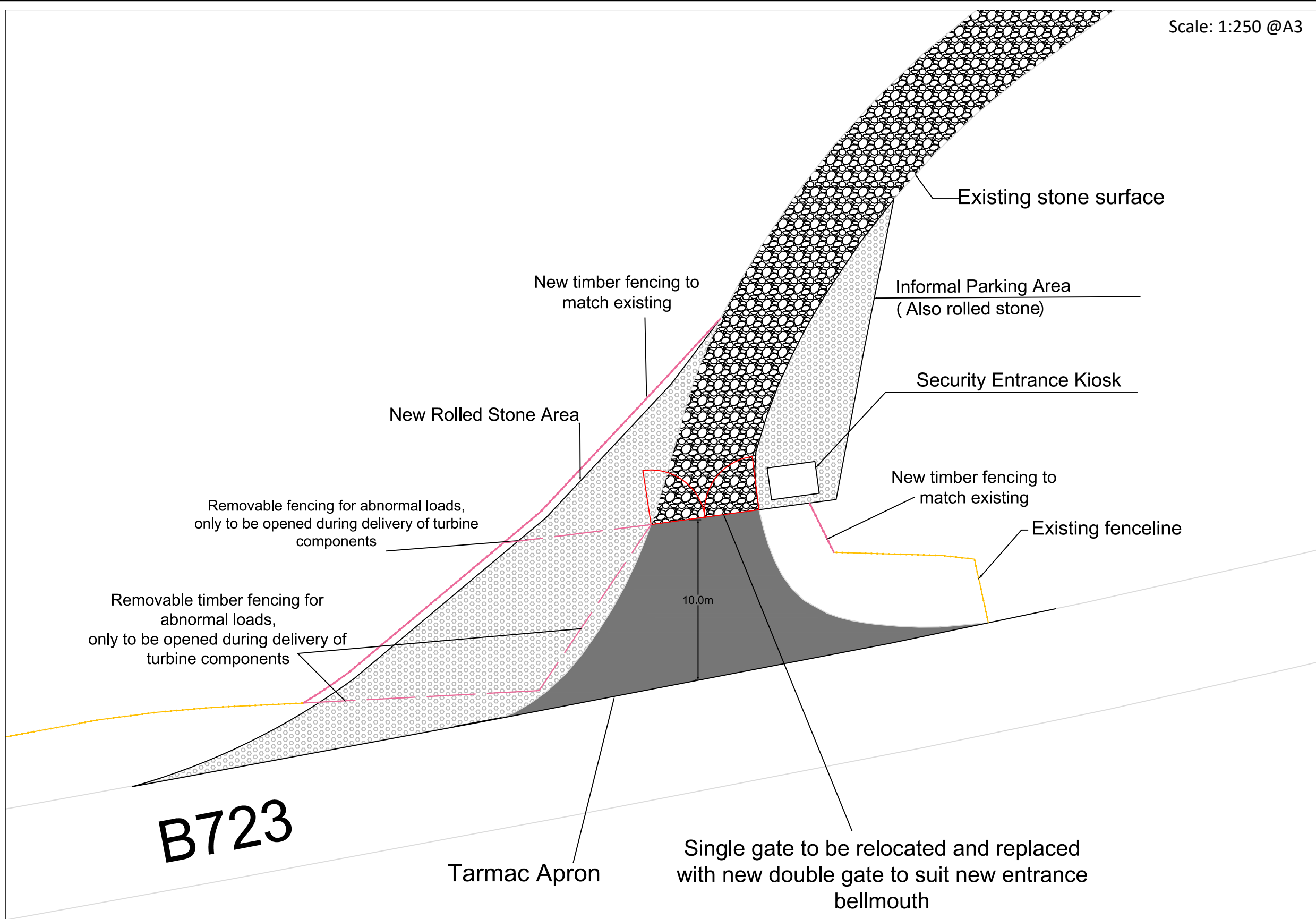
Date: 27/06/2023 Ref: 374-200608-7313-A  
Produced: DW Reviewed: RE Approved: RT



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Notes:  
Revisions:

AI Figure 12.3 - Indicative Bell Mouth Entrance Design

|                  |                                |
|------------------|--------------------------------|
| Date: 30/03/2023 | Ref: 374-230330-7755           |
| Produced: TR     | Reviewed: RE      Approved: GC |