

Harestanes West

Windfarm

Environmental Impact Assessment Report

Volume 4

Technical Appendix 12.1: Outline
Construction Traffic Management Plan

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1. Introduction

1.1. Proposed Development

1. ScottishPower Renewables (SPR) (hereafter 'the Applicant') is proposing to construct Harestanes West Windfarm (the 'proposed Development'). The proposed Development comprises up to 12 three-bladed horizontal axis turbines, six with a maximum height of 220 m and six with a maximum height of 200 m. The Site is located north-west of the village of Ae, approximately 13 km north of Dumfries.
2. The proposed Development includes associated infrastructure:
 - 12 wind turbines, six with a maximum height of 220 m and six with a maximum height of 200 m to blade tip, including foundations and aviation lighting;
 - hardstanding areas at the base of each turbine, with an approximate total area of 3856 m²;
 - transformer/switchgear housings located adjacent to turbines;
 - site entrance from the A701, and 25.99 km of access track with associated watercourse crossings – of which 9.38 km are new access tracks and 16.61 km are upgrades to existing tracks;
 - underground cabling linking the turbines with the substation;
 - a permanent power performance assessment (PPA) anemometry mast and associated hardstanding area;
 - an operations control building with parking and welfare facilities;
 - a substation compound;
 - a bellmouth and parking area adjacent to the A701;
 - construction compound areas;
 - extraction of material from up to three existing quarries owned and operated by Forestry and Land Scotland to provide suitable rock for access tracks, turbine bases and hardstanding; and
 - health & safety and other directional site signage.

1.2. Purpose and Scope

3. This Outline Construction Traffic Management Plan (CTMP) provides information to the Dumfries and Galloway Council (D&GC) and Transport Scotland (TS) in regard to the management of all the construction traffic related to the proposed Development, with particular reference to environmental safeguards and mitigation required to address impacts identified in the Environmental Impact Assessment (EIA) Report. **Chapter 12: Access, Traffic and Transport** of the EIA Report has been referenced where relevant.
4. The purpose of the Outline CTMP is to set out the areas for consideration when preparing the programme of works and when undertaking the Site construction. It would be used during the construction phase of the development and updated as necessary, acting as a



'live' document to ensure it is always current. Where the document is updated it will clearly be noted as a variation.

1.3. Key Considerations

5. This CTMP is the first stage of the requirement to manage and control all related traffic activity during the construction phase of the proposed Development. This CTMP contains the following information outlined in **Table 1.1**.

Table 1.1: Key CTMP Topics

Section	Topic
1	Introduction
2	Construction
3	Mitigation Measures
4	Complaints and Enquiries Procedure
5	Summary and Closure

6. The principal mitigation measures that the CTMP will cover may be summarised as follows:
 - methods for accessing the Site;
 - site access improvements;
 - contractor responsibilities;
 - abnormal load management;
 - on-site management;
 - adverse weather conditions; and
 - driving and speed restrictions.

2. Site Construction

2.1. Programme

7. It is anticipated that the proposed Development would be constructed over a period of approximately 24 months, summarised in **Table 2.1**.
8. It is anticipated that construction is likely to begin in 2028, The main construction works will be undertaken during months 2 – 16. Construction activities will include:
 - site establishment (construction compounds);
 - forestry felling and export;
 - construction of access tracks and crane pads;
 - turbine and solar foundation construction;
 - substation, civil and electrical works;
 - cable delivery and installation;



- turbine delivery and erection; and
- reinstatement / restoration.

Table 2.1: Construction Programme

Activity	Months																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Site establishment	500	500	500																					
Forestry felling		0	0	0	0	0	0																	
Access road upgrades		2234	2234	2234	2234	2234	2234	2234	2234	2234	2234													
Construction of new access tracks and crane hardstanding			3193	3193	3193	3193	3193	3193	3193	3193	3193	3193	3193	3193	3193									
Turbine foundation construction						353	353	353	353	353	353	353	353											
Substation civil and electrical works					83	83	83	83	83	83	83	83	83											
Cable trenching and installation														226	226	226	226	226						
Crane delivery																		12						
Turbine delivery, erection and commissioning																		34	34	34	34	34	34	34
Site reinstatement and restoration works																				10	10	10	10	22
General Site Traffic (Personnel)	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100
Monthly ALL Total	1600	3834	7027	6527	6611	6963	6963	6963	6963	6963	6963	4729	4729	4519	4519	4519	1326	1372	1134	1134	1144	1144	1144	1156
Daily ALL Total	74	176	320	298	302	318	318	318	318	318	318	216	216	206	206	206	62	64	52	52	54	54	54	54
Monthly HGV Total	500	2734	5927	5427	5511	5863	5863	5863	5863	5863	5863	3629	3629	3419	3419	3419	226	272	34	34	44	44	44	56
Daily HGV Total	24	126	270	248	252	268	268	268	268	268	268	166	166	156	156	156	12	14	2	2	4	4	4	4

2.2. Construction Staff

9. The number of people employed during the construction period vary depending on the stage of construction and the activities ongoing on Site.
10. It is anticipated that the peak workforce requirement would be 25 construction staff.

2.3. Hours of Working

11. The construction working hours for the proposed Development would be 07:00 to 19:00 Monday to Friday and 08:00 to 13:00 on Saturdays. It should be noted that out of necessity some activity, for example abnormal load deliveries, during large concrete pours and also during the lifting of the turbine rotors, may need to occur outside the specific hours stated, although they would not be undertaken without prior approval from D&GC, TS and Police Scotland.

2.4. Construction Access

12. The Site would be accessed via the existing access junction on the A701 used for the existing Harestanes Windfarm. It is proposed that all vehicular traffic would use this access, including Abnormal Indivisible Loads (AILs). No heavy goods vehicle access is anticipated to be taken through the village of Ae. The existing onsite track network will be reused where possible, with upgraded sections of tracks required to access certain infrastructure locations.
13. Modification will be required to the existing junction layout to allow abnormal load vehicles to access and egress safely / unobstructed. A preliminary junction layout has been prepared. The proposed indicative Wind Farm Access Junction Modifications is illustrated in **Figure 12.6** of the EIA Report.
14. The internal access tracks require several watercourse crossings, which are set out in **Chapter 3: Proposed Development** of the EIA Report.

2.5. Construction Movements

2.5.1. Heavy Goods Vehicle Movements

15. The maximum level of two-way trip generation would likely occur in month 3 of the 24-month programme, with a maximum of 270 Heavy Goods Vehicle (HGV) movements when materials would be imported for site establishment, internal access track constructions and crane hardstandings and forestry felling would also be taking place. The case presented is a worst-case scenario and an unlikely one as it is expected that suitable aggregate would be extracted from existing Forestry and Land Scotland (FLS) quarries within the site.

2.5.2. Abnormal Load Movements

16. Abnormal Indivisible Loads (AILs) associated with the wind turbines will be delivered from the Port of Entry (PoE) at King George V Dock and will access the site via the M8, M74 / A74(M), M6 Junction 44 (Greymoorhill Interchange) Carlisle, A74(M) Junction 22 Gretna, A75(T), joining the A701 at the A75(T) Bloomfield Roundabout Dumfries, then the A701 via



Heathhall and Locharbriggs on towards the existing site entrance 14.5 km northeast near Burrance Bridge. This route is shown in **Figure 12.3a** and **Figure 12.3b** of the EIA Report. It should be noted that alteration of the route to use an alternative return point on the M6 may be required following detailed assessment (post planning application) in consultation with the relevant authorities, other stakeholders and police.

2.5.3. Light Goods Vehicle Movements

17. Light vehicle trip generation would be a maximum of 50 two-way movements per day at the peak of construction, which will be distributed between the north and south of the A701, although likely to be much less with construction staff car sharing, as single car occupancy was assumed for the assessment.

3. Mitigation Measures

3.1. Contractors

18. Contractors with experience of the nature of the construction works proposed and of this type of renewable development would be appointed following a tendering process. The Applicant would appoint an independent Environmental Clerks of Works (EnvCoW) who would liaise with the Contractor to ensure that all activities on site comply with appropriate construction methods, relevant planning conditions and protection of the environment. The EnvCoW would act as the first point of contact for any concerns.
19. All Contractors would be required to supply detailed method statements which would incorporate all planned mitigation methods. All sub-Contractors are required to read, understand and adopt all procedures outlines within the final CTMP.
20. Sub-Contractors who formulate a CTMP for their work activity must issue it to the Principal Contractor for approval and acceptance prior to site issue. Any traffic management procedures required to secure a work area or safeguard Sub-Contractor operatives must be co-ordinated with the Principal Contractor (e.g. use of banksmen, operatives carrying out works roadside).
21. The Principal Contractor's Site Management must be informed of any planned site activity and movement of site traffic; the issue of this information must be received within a suitable and agreed timescale to allow co-ordination of other site activities.

3.2. Road Signs

22. Any signage required on the public highway would be erected and positioned in accordance with the requirements of the Traffic Signs Manual and Safety at Street Works and Road Works – A Code of Practice, and in consultation with D&GC and Transport Scotland.



23. Any permanent signs and street furniture which are required to be relocated to allow abnormal loads to pass shall be identified in consultation with Transport Scotland and D&GC and through the trial run.
24. Warning signage on the Site must always be complied with. The two most important signs are “no entry” and “no unauthorised vehicles”. In order to proceed beyond these signs, vehicle drivers must stop and contact the ganger / foreman in control of the area to be escorted through the local area.

3.3. Abnormal Indivisible Load Management

25. An Abnormal Loads Assessment would set out the key points and issues associated with the selected route for the abnormal loads, to verify that the route is feasible for the selected turbine delivery, subject to physical and operational mitigation works.
26. Detailed abnormal load delivery traffic management measures would need to be identified and included in the final CTMP (or provided as stand-alone report) setting out the mitigation required to address the potential issues the Abnormal Loads Assessment might identify.
27. Prior to the movement of abnormal loads, extensive public awareness is required to allow residents to plan and time their journeys to avoid disruption. The haulage Contractor shall remain responsible for obtaining all necessary permits from the relevant road and bridge authorities along the access route.
28. The movement of abnormal loads will be timed to avoid periods of heavy traffic flow to minimise disruption to the public. Specific timing restrictions imposed by the police or local authority have not been determined at this stage.
29. Through urban areas temporary parking restrictions may be necessary to guarantee a clear route for the abnormal loads, and these need to be arranged in advance through the appropriate local authority. The parking restrictions would need to be locally enforced.
30. Due to the size of vehicles required to transport these loads, escorts would be required for the entire route to control oncoming and conflicting traffic.

3.4. Adverse Weather Conditions

31. All works would be forward planned wherever practicable considering the forecast weather conditions. At the start of the day, the Site foreman would assess the weather conditions prior to permitting their operatives to access the Site.
32. Due to the location and topography of the Site the weather can be severe, resulting in an adverse effect on visibility, and will be constantly monitored and if necessary, all plant / vehicle movements would be stopped / suspended by the Site foreman if they deem it is unsafe for work to continue.
33. Contractors should contact the Principal Contractors general foreman to find out the situation at the Site prior to arrival to the Site, if required.



34. An example of how the day-to-day track conditions would be advised to all visitors is via a display board situated at the Site compound and the track condition would be rated as either:
- **Condition Red:** The access track is closed to all vehicular traffic;
 - **Condition Amber:** The access track is open to 4x4 vehicles only (operating in full 4x4) and is not suitable for delivery vehicles; or
 - **Condition Green:** The main Site access track is considered open to all permitted vehicles.
35. All Contractors would be required to make their own assessment of track conditions during access or egress from the Site and take appropriate action determined during their assessment. Over the course of the day, and in the event of weather conditions deteriorating, the Principal Contractor would notify the nominated personnel from the Contractors on site to the present condition.
36. Contractors would be reminded that they have a duty to consider the weather and track conditions throughout the day and take appropriate action to ensure their safety.

3.5. Public Road Wear and Tear

37. It shall be agreed with the relevant Road Authorities if a pre-commencement survey is required and whether a maintenance schedule is required during the construction phase.
38. A Section 96 Agreement to cover 'wear and tear' will be discussed with the relevant Road Authorities. If required, this agreement could include the posting of a financial bond to cover the initial construction or when undertaking repairs during the operation phase or at decommissioning.

3.6. On-Site Management

3.6.1. On-Site Safety

39. All personnel entering the working area would wear hi-visibility vests or jackets, head protection and safety footwear at all times when out with the vehicle.
40. Everyone required to work within the Site would be made aware that they have a responsibility for the safety of themselves and others. All site operatives and visitors have a 'duty of care' to themselves and others and need to be conscious of the surroundings and ongoing activities locally. In the event of an emergency, right of way to all emergency services would always be given. Emergency services and control of access would be carried out in compliance with the site emergency procedures.

3.6.2. Vehicle Parking

41. Vehicle parking areas located at the site construction compound would have safe secure barriers to segregate all personnel from site plant and vehicle routes. All signage within



designated car parking areas must be followed, with no vehicles parked in a way which restricts either vision or access. No parking whatsoever would be allowed on public roads; all cars that are directed to the site car park would be required to reverse park to comply with the Applicant and the Principal Contractor's requirements.

42. A small parking area has been provided for close to the entrance to the Site at National Grid Reference (NGR) 304207, 590154. This would allow for AILs to park up after coming off the A701 public road before access to the turbine area.
43. The parking area allows the main access road to be free for the use of emergency vehicles if required.

3.6.3. On-Site Tracks

44. Access tracks would be monitored daily to identify any deterioration of the track condition. Non-emergency remedial works to the track would be carried out at times outside peak times of usage and significant emergency repairs would be undertaken immediately and adjacent track sections would be restricted from use as required to safely accommodate works.
45. All routes would be monitored for dust, and control or suppression methods would be deployed as appropriate using dust suppression systems.

3.6.4. Site Traffic

46. All traffic visiting the Site would be required to report to site security where they would obtain clear instructions, before further movement is acceptable. If applicable an induction would be completed, vehicle permits would be issued, and the site rules & emergency procedure would be explained.
47. All traffic would use the site passing places and all drivers would accommodate other track users in a courteous manner. Reversing (other than to park) within the compound areas would not be permitted.
48. Full time site traffic (vehicles/plant situated on-site for majority of construction phase) that requires re-fuelling would follow the instructions supplied at their induction and also the guidelines within their method statement for the works.
49. Heavy site traffic would be equipped with audible reversing warning with additional visual aids e.g. reversing cameras, mirrors utilised on all plant. All safety features must be inspected daily with faults immediately reported to the Foreman Fitter who would assess and repair any damage to the plant. Management would ensure that all loads are covered fully to limit the loss of material in transit.

3.6.5. Vehicle Cleaning

50. Given the length of the access track to and from the A837, it is likely that most loose materials will not be deposited onto the highway. Should there be evidence of this



following the commencement of construction, suitable measures would be implemented within the Site to ensure materials are not transferred onto the highway, and road cleaning would take place if required to remove any deposits that are carried from the Site.

3.6.6. Driving and Speed Restrictions

51. All vehicles (cars, LGVs, HGVs and AILs) shall always be driven in a safe but defensive driving manner, within posted speed limits. A 3-strikes policy shall be adopted by all Contractors unless any breach is deemed to be of such a serious nature that warrants immediate dismissal from the Site.
52. All cars and drivers of site operative vehicles used for commuting to and from site must be road worthy and legally compliant. All commercial vehicles and drivers must be road worthy and legally compliant.

4. Complaints and Enquiries

4.1. General

53. It is important that members of the public or interested parties can make valid complaints or enquiries about the transport elements of the construction works. Such complaints and enquiries can provide a valuable feedback mechanism which helps reduce potential impacts on sensitive features and would also allow the construction techniques to be refined and improved.
54. It is anticipated that the complaints and enquiries procedure can be made either directly to the Site Contractor or via D&GC and Transport Scotland as applicable, who in turn would provide feedback to the Site Contractor.
55. All complaints and enquiries would be logged promptly by the Site Contractor and kept on-site for review by D&GC upon request.

4.2. Checking and Corrective Action

56. As outlined above, it is intended for the CTMP to be a 'living document' which is updated periodically as and when required.
57. The Contractor would be responsible for establishing a programme of monitoring, the results of which shall be fed back for inclusion within the CTMP, if necessary.
58. Any checking or corrective action required would also be monitored. This methodology would ensure that the construction activities are being undertaken in accordance with the CTMP and the Contractors are held to account.
59. A procedure for addressing non-conformance / compliance and ensuring that corrective actions are undertaken is outlined below:



- completion of a Non-Conformance Report – this would record any traffic related incident and work that has not been carried out in accordance with the CTMP or Method Statement;
 - completion of a Corrective Action Report – this would record any identified deficiency as a result of monitoring, inspection, surveillance and valid compliant; and
 - action – any necessary actions identified as a result of the above would be allocated to a responsible person, along with a timescale for the action to be undertaken.
60. Records of the above would be retained by the Contractor throughout the construction process. The records would be maintained either in hard copy or electronically in such a manner that they are readily identifiable, retrievable and protected against damage, deterioration or loss.