
**THREE OAKS RENEWABLE
ENERGY PARK
EXTENSION**

**Environmental
Statement Chapter 2: Project
and Site Description**

MAY 2026



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2 Project and Site Description

Introduction

- 2.1 Three Oaks REP Extension Ltd (the Applicant) is applying to East Riding of Yorkshire Council (the Council) to construct, operate, maintain and decommission a wind farm development (along with associated development), to be known as the Three Oaks Renewable Energy Park Extension (hereafter referred to as the 'Proposed Development'). It would have an export capacity of 25.2 megawatts (MW) with a proposed operating lifetime of 40 years.
- 2.2 This chapter provides a description of the Site and its surroundings, a description of the Proposed Development, the main construction, operation and maintenance, and decommissioning processes, and an indication of the outline construction programme.
- 2.3 A Site Location Plan is shown in Figure 2.1 – Volume 3, an Indicative Site Layout Plan is shown in Figure 2.2 – Volume 3 and an indicative Contextual Site Layout Plan showing the Proposed Development in context with the consented Three Oaks Renewable Energy Park is shown in Figure 2.3 – Volume 3.

The Site and Surrounding Area

The Site

- 2.4 The Site is located on a network of regular sized, mixed arable farmland comprising large and medium sized fields across an undulating and sloped terrain, defined by linear hedgerows with occasional trees. Two restricted byways follow a north-south orientation through the Site, bordered by hedgerows on both sides. The area taken by the development (that is, the wind turbines, site access and maintenance tracks and crane hardstandings) would be in the order of 5.34 hectares (13.19 acres), and would be 6.09 ha (15.04 acres) when including the Temporary Construction Compounds. The Application Boundary comprises the proposed infrastructure, blade swept area and land required to accommodate a proposed micro-siting allowance (see Paragraph 2.50 & 2.51 below), amounting to an area of 23.83 ha (58.86 acres).
- 2.5 The Proposed Development is accessed off the public lane (Unique Street Reference Number (USRN) 45908633), which itself is accessed from the highway (A614). The Site would contain the wind turbines and foundations, along with crane hardstandings, met mast, site access and maintenance tracks, transformers, cabling and temporary construction compounds.
- 2.6 The wind turbines would be connected via a section of internal tracks, which would be new or required to be upgraded.
- 2.7 The Site is located partly within, and immediately north-west of the consented Three Oaks Renewable Energy Park (planning reference 22/02777/STPLF).
- 2.8 No intrusive soil testing has taken place for the Proposed Development. However, such an assessment was undertaken for the adjacent Three Oaks Renewable Energy Park, which confirmed that the site comprised a mix of Grade 2 (10.6%), 3a (19.8%) and 3b (69.6%) land

(Baird, D., 2021). To provide a proportionate worst case assumption, it is assumed that land at the Site is Grade 2, and thus would be considered Best and Most Versatile (BMV) land.

The Surrounding Area

- 2.9 The Proposed Development is located approximately 1.6 km to the north-east of Burton Agnes, 1.8 km south of Rudston, 1.2 km north of Thornholme and 0.9 km north-west of Haisthorpe. The Site lies within Burton Agnes Parish Council. The town of Bridlington lies approximately 4.7 km to the east, and the city of Hull lies approximately 27.5 km to the south of the Site. North York Moors National Park lies approximately 22 km north of the Site at its closest point.
- 2.10 Other than the restricted byways within the Site, Public Rights of Way are located in the wider area. The Blackpool to Bridlington (Aerospace Way) long distance route follows the Woldgate Roman Road to the north of the Site, the Way of the Roses and National Cycle Route 1 are aligned to the west and north of the Site, the East Riding Heritage Way is aligned along the western restricted byway within the Site and other routes with public access lie to the east.
- 2.11 There are a number of existing features in the landscape around the Site, including two existing 66 Kilovolt (kV) overhead electricity cables running east-west through and to the south of the Site, a lattice telecommunications tower situated immediately north of the Site on Woldgate, the Carnaby industrial estate, and longer distance views to the south towards existing wind farms (Fraisthorpe and Lisset Airfield).

Description of the Proposed Development

- 2.12 The component parts of the Proposed Development (with an export capacity of 25.2 MW) are as follows:
- Wind turbines;
 - Wind turbine foundations;
 - Crane hardstandings;
 - Met mast;
 - Site access and maintenance tracks;
 - Transformers;
 - Cabling;
 - Temporary construction compounds;
 - Mitigation and Enhancement; and
 - The substation and access tracks from the adjacent consented (yet to be built) Three Oaks Renewable Energy Park.

Wind turbines

- 2.13 The six proposed wind turbines would be three-bladed horizontal axis wind turbines with a maximum height from base to blade tip (in their upright position) that would not exceed 149.9 m above ground level (AGL). A typical candidate turbine cross section is shown on Figure 2.4 (Indicative Turbine) – Volume 3. The blades would likely be made of fiberglass reinforced epoxy and would be mounted on a tapered tubular steel tower. The turbines would be light grey in colour, and the finish of the tower and blades would be semi-gloss and semi-matt, respectively.

- 2.14 The candidate model, as proposed to be used to inform assessments, would be the Vestas V117 – 4.2 MW, with a hub height of 91.4 m and rotor diameter of 117 m. Electrical and telecommunication cables pass down the centre of the tower to a transformer housed either within the tower of the wind turbines or externally at the base. Each turbine would have a steel reinforced concrete foundation of piled, slab or hybrid design. Together, the six wind turbines would have an installed capacity of 25.2 MW.
- 2.15 Wind turbines are typically of a variable speed type, with the rotor speed varying in response to the windspeed, with an operational windspeed range of between 3 and 25 m/s (for the candidate turbine). The turbines would be monitored and controlled by computer, to allow the wind turbine to face directly into the wind. All six wind turbines would rotate in the same direction.
- 2.16 The final wind turbine model would be chosen in due course following planning consent and subject to market availability. However, the chosen turbines will be in compliance with the assessed dimensions as presented in the ES.
- 2.17 During the construction phase, two cranes are typically required to install the turbines which would consist of a larger 800 – 1000 tonne main crane and a secondary 400 – 500 tonne tailing crane. A potentially smaller ancillary crane (typically 120 tonne), and / or telehandlers for general offloading and turbine component preparation would also be required. The turbine supplier would determine the size, number and type of cranes to be used following the turbine procurement process, together with the exact programme and number of teams on-site.
- 2.18 The method for erecting each turbine would depend on the turbine supplier and site conditions. Turbine components would either be lifted directly off transportation units for erection or more typically stored adjacent to the crane hardstandings. The tower sections are initially erected, followed by the nacelle and then the hub. The turbine blades would then be lifted individually and attached to the hub. The overall assembly process for each turbine takes approximately two to four days, depending on weather conditions.
- 2.19 Table 2.1 below outlines the proposed wind turbine coordinates and their approximate elevation AGL.

Table 2.1 – Turbine coordinates and elevations

Turbine number	Grid Reference		Approximate Elevation (m - AGL)
1	510534	465648	149.9 m
2	511084	465710	149.9 m
3	511722	465975	149.9 m
4	510772	464846	149.9 m
5	511340	465110	149.9 m
6	511771	465303	149.9 m

Wind turbine foundations

- 2.20 Each foundation would comprise of a conventional, circular, high yield, steel reinforced concrete structure, anticipated to be a gravity foundation type, typically of 25 m in diameter requiring 720 cubic metres of concrete with 100 T of steel reinforcement. Whilst not anticipated, the possibility of using a piled foundation design is included within this ES. An indicative turbine foundation is shown in Figure 2.5 a and b (Indicative Turbine Foundations) – Volume 3.
- 2.21 The detailed design for the foundation would be dependent on the geotechnical site investigations undertaken during the enabling works to establish the nature of the subsoil condition at each turbine location. Each foundation would be designed separately according to the chosen turbine type, manufacturer specification and ground conditions. Various cable ducts and other ancillaries will be installed within the foundations and under the access track crossing points.
- 2.22 The ground excavation methods would vary depending on the local ground conditions and the nature of the surface vegetation. Topsoil / turf would first be stripped and stored in order to be reused in restoration of the turbine construction area. Subsoil (if present) would then be stripped and stored, keeping this material separate from the topsoil / turf.
- 2.23 Following this, excavation of turbine foundations down to an approved load bearing strata would take place with the installation of a binding layer of concrete upon which the steel reinforcement will be fixed thereafter. Ducts and holding down bolts would be installed, followed by the shuttering and casting of concrete.
- 2.24 After the foundation has been poured, the concrete suitably cured and a copper earthing installed, the area would be backfilled using selected back fill from the excavation and compacted to provide a suitable platform to accommodate the turbine erection, pending turbine installation.
- 2.25 Once the turbines have been installed, the immediate construction areas around the turbine bases (other than crane hardstandings) would be restored using the retained top soil or turf to within approximately 1 m of the tower basis. Material won from foundation excavation would, if suitable, be used in the landscaping areas of cut and fill, forming the access tracks, crane bases, reinstatement areas and other site infrastructure. If not suitable, it would be disposed of off-site by a suitably licenced carrier to an appropriate facility.

Crane hardstandings

- 2.26 Each wind turbine requires an area of hardstanding adjacent to the foundation to provide a stable base on which to site the turbine components and cranes for the erection of the turbine.

The main working area at each hardstanding area would be composed of compacted crushed stone with a main crane base area of up to 2,171 m². For the purposes of assessments reported in this ES, likely crane hardstanding dimensions would be 62.5 m x 25 m, with two smaller ancillary crane areas of 12 m x 12 m each for the assembly of the main lift crane boom and a further two 4 m x 20 m strips of hard standing for the storage of the turbine blades prior to erection. These two 4 m x 20 m strips would be located within a temporary area of 20 m x 66.5 m, which will revert to modified grassland (moderate condition) following completion of the

construction phase. An indicative crane hardstanding is shown in Figure 2.6 (Indicative Crane Hardstanding) – Volume 3.

- 2.27 The final arrangement of the hardstanding will depend on the method of erection and exact specification of the cranes chosen by the turbine erection contractor. The hardstandings will be sufficiently level and with a suitable load-bearing capacity to ensure the safe storage of turbine components and operation of the cranes.
- 2.28 Surface water drainage design requirements have been considered and a surface water drainage strategy has been prepared to meet these requirements, see Appendix 8.6 (Surface Water Drainage Strategy) – Volume 4 for further information.
- 2.29 The crane hardstanding would be left in place following construction in order to allow for the use of similar plant should major components need replacing during the operation of the Proposed Development. These would also be utilised during decommissioning.

Met mast

- 2.30 A permanent mast is proposed to be located at approximately NGR 510941, 464790 which would be a free-standing lattice tower up to hub height of the candidate turbine and would house anemometers and wind vanes to measure wind speed and direction at various heights.
- 2.31 Figure 2.7 (Indicative Met Mast) – Volume 3, shows a typical arrangement for the type of Met mast proposed.

Site access and maintenance tracks

- 2.32 The Proposed Development would require the upgrading of 2.0 km of existing track between the junction with the A614 and 'off shoot' tracks into adjacent fields, and 2.98 km of new track to be constructed to facilitate access to wind turbines. Tracks would be retained to allow access to equipment and for maintenance during the operational period.
- 2.33 New tracks would take the appearance of typical farm tracks, which would be permeable and have a likely finish of crushed stone which would be allowed to grass over with time. An indicative width of new track is approximately 5.5 m, as shown in Figure 2.8 (Indicative Access Track Cross Section) – Volume 3. The upgraded access track off the A614 would have a minimum width of c.4 m.
- 2.34 Access tracks would include drainage channels running adjacent to the tracks on one or both sides. The tracks would be designed with a crossfall towards the drainage channels to prevent a build-up of surface water.
- 2.35 The site entrance will require improvement works in order to accommodate the large turning radius of abnormal load vehicles associated with the turbine component delivery vehicles. This will include the removal of 67.2 m of hedgerow to facilitate a widened point of egress off the A614, whilst retaining the adjacent layby to remain open for public use. Appendix 8.4 (outline Construction Traffic Management Plan) – Volume 4 provides further design and detail of this junction.

- 2.36 The track off the A614 which leads to the proposed wind turbines, is marked as 'other route with public access' on Ordnance Survey (OS) mapping, and is maintained by the Local Highways Authority. This is more commonly known as a 'green lane' and runs south-north through the Site. This lane will require upgrade works and passing places to be implemented, and would be temporarily stopped up during the temporary construction phase. A second green lane, parallel and to the west of the site access route, will be crossed by new internal site tracks, managed by a banksman during the construction period. Further detail is provided in Chapter 8 (Traffic and Transport) – Volume 2.
- 2.37 New entrances off the green lanes into agricultural fields (facilitating access to proposed infrastructure) would be gated to prevent unwarranted access.
- 2.38 A mains water pipe, managed by Yorkshire Water, runs along the length of the site access, at the intersect between the green lane and the A614. An overhead electrical line also runs parallel to the green lane in a north-south alignment. These assets will be appropriately protected during construction of the Proposed Development.
- 2.39 Two overhead 66 kV lines and one 11kV line cross the Site and access route. These lines will be circumnavigated through consultation with Northern Powergrid, who would use their permitted development rights to either prop up the cables or bury them. This work is subject to further consultation and a separate process in the event that planning permission is granted for the Proposed Development.

Transformers

- 2.40 Depending on the final choice of turbine, transformers will either be located within the turbine tower (with internal switchgear) or externally, close to the base of the tower. For the purposes of this assessment, it has been assumed that the transformers will be located adjacent to each turbine. An external transformer will normally be placed within a Glass Reinforced Plastic (GRP) housing, the size of housing will depend on the type of transformer selected but in general it will be approximately 2 m x 2 m in plan and 2.5 m in height AGL. An indicative transformer building is shown in Figure 2.9 (Indicative Transformer) – Volume 3.
- 2.41 The transformers will be either oil-filled with a bunded footing to remove any risk of spillage or a solid cast resin type, both of which are effectively non-polluting. The transformers will increase the electrical voltage to 33 kV.

Cabling

- 2.42 Turbines will be connected by 33 kV single phase power cables which will be laid in trenches alongside the access tracks, with a depth of approximately 1 m. The excavated trenches will also include Supervisory Control and Data Acquisition (SCADA) cables or fibre optic cables. This will allow interrogation and control of individual turbines as well as remote monitoring. The cables will be laid on a sand bed, then surrounded by further sand and backfilled using suitably graded material. Clay, or equivalent low permeability barriers, will be inserted into the cable trenches at regular intervals to avoid the trenches becoming preferential drainage pathways.
- 2.43 Cabling across the Site consists of low voltage supply for monitoring and operating systems, communication, high voltage export cables and broadband telecommunication. Cabling is typically routed in underground trenches as shown in Figure 2.10 (Indicative Cable Trench) – Volume 3.

- 2.44 Electrical cables for the Proposed Development would lead to the adjacent consented (not yet built) substation for the Three Oaks Renewable Energy Park, through which electricity generated would be exported into the local distribution network. Cables from the turbines within the Proposed Development would generally be routed alongside site tracks to the substation, other than from T3 (the north-westernmost turbine), where cables could be routed south through a dedicated cable trench of 343 m (approximately 1 m wide and 1 m deep) to the consented substation, or similarly alongside site tracks (see Figure 2.3 (Indicative Contextual Site Layout Plan) – Volume 3).

Temporary Construction Compound

- 2.45 Two Temporary Construction Compounds (TCC) will be required during the construction of the Proposed Development, forming an area of hardstanding providing space for temporary welfare, parking and lay down area. Each will measure approximately 75 m x 50 m (3,750 m² each) and be located off the site access tracks within the Site.
- 2.46 A typical TCC arrangement is shown on Figure 2.11 (Indicative Construction Compound) – Volume 3. Welfare facilities for site personnel will be required during construction which would be located within the TCC, likely to include a sub-surface septic tank. There will be a water supply on-site for hygiene purposes, by way of a temporary storage tank.
- 2.47 The areas to be used for the TCC would be stripped of topsoil (which will be stored for future re-instatement) to expose a suitable formation. A geosynthetic material base or similar will then be laid followed by a layer of suitable material then a further geosynthetic material laid prior to the top surface of blended fines.
- 2.48 Appropriate bunding arrangements will be employed in all areas where fuel and oil storage tanks will be situated, in order to prevent contamination of the surrounding soils, vegetation, surface water and ground water. The fuel storage area will be above ground with secondary containment and will be situated a minimum of 50 m from watercourses to reduce the risk of pollution. Any contaminated run-off within the sealed bund will be removed by a licensed waste carrier to a licensed waste management facility.
- 2.49 Following completion of the construction phase, the components of the TCC will be removed and the area fully restored.

Micrositing

- 2.50 In the event that unsuitable ground conditions are encountered during the construction of the Development, there may be a requirement to microsite elements of infrastructure. It is proposed that a 25 m micrositing allowance in any direction for turbines 1 to 5 and all other infrastructure is applied to the Proposed Development. Within this distance, any changes will be subject to approval of the Ecological Clerk of Works (ECoW) with specialist geotechnical advice as required. Turbine 6 would be subject to a 10 m micrositing allowance due to its location within the confines of the Three Oaks Renewable Energy Park. Any micrositied turbines would be required to maintain the 50 m blade-tip buffer from bat habitat and 30 m buffer from active badger setts, unless further ecological assessment/licensing is completed.
- 2.51 The potential for micrositing was considered when the detailed survey and assessment work was undertaken. For example, the habitat surveys covered a wider area than just the footprint of the proposed turbine and infrastructure locations. Any likely significant effects arising from

micrositing have been considered in the preparation of this ES, and specific areas to be avoided have been identified in technical chapters where necessary.

Environmental Mitigation and Enhancement

2.52 Primary mitigation measures include:

- Limiting the height of each wind turbine to no more than 149.9 m AGL, limiting associated visual impact and removing the need for civil aviation lighting;
- Retaining sufficient separation distances between turbines and residential dwellings to reduce noise and visual impact;
- Using existing tracks where possible to reduce visual impact, agricultural land take and required aggregate;
- Utilising existing (yet to be built) tracks and substation from the consented adjacent Three Oaks Renewable Energy Park;
- Utilising existing hedge breaks where possible;
- Retaining appropriate distances from turbines and hedgerow to comply with bat separation guidance (NatureScot, 2021), following the project ecologist's advice;
- Retaining appropriate distances from known utilities to maintain safety and their continued use during operation of the Proposed Development;
- Selecting turbine locations (subject to the micrositing allowance) during the design process to avoid known areas of archaeology where possible; and
- Avoiding known Electromagnetic Interference (EMI) links where possible.

Construction

2.53 This section describes the construction processes of the Proposed Development.

Construction Process

2.54 The main processes involved in the construction of the Proposed Development are as follows (in order of when the works would approximately take place):

- Vegetation and utility protection measures are installed;
- Upgrading of existing site access tracks, construction of new site access tracks and works to the site entrance off the A614;
- Construction of the temporary construction compounds;
- Site fencing is erected;
- Construction of turbine foundations and bases;
- Construction of crane hardstandings;
- Construction of permanent met mast;
- Excavation of shallow cable trenches and connection of on-site electrical distribution cables;
- Delivery, erection and commissioning of wind turbines;
- Commissioning of site equipment;
- Reinstatement of temporary construction compound; and
- Landscape mitigation and biodiversity enhancements.

Construction Duration

- 2.55 The construction phase for the Proposed Development is anticipated to commence in early 2028 and would last for up to eight months as identified in Table 2.2 below.

Table 2.2 – Indicative Construction Programme

Activity	Month							
	1	2	3	4	5	6	7	8
Site set up								
Site entrance and track construction								
Turbine foundation								
Foundation curing								
Crane hardstandings								
Cabling								
Turbine delivery and erection								
Grid connection works								
Energise and commission								
Reinstatement and demobilise								
Completion								

Construction Vehicle Movements

- 2.56 A range of construction vehicles will be required to facilitate the Proposed Development. The below numbers indicate the vehicle movements (i.e. the number of vehicles which would need to both enter and exit the site):
- 2256 Heavy Goods Vehicles (HGV);
 - 1570 Cars and Vans;
 - 792 HGVs for track construction;
 - 840 HGVs for turbine foundations / concrete pours; and
 - 66 Abnormal loads associated with turbine component delivery.
- 2.57 Further detail is provided in Chapter 8 (Traffic and Transport), Volume 2. Final vehicle movements will be known at the detailed design stage, however vehicle movements assessed in this EIA are considered robust and conservative.

Construction working hours

- 2.58 It is proposed that construction activities would be limited to between 07:00 and 19:00 Monday to Saturday, with no construction work expected on Sundays or Bank Holidays. Any works outside of these times (such as when turbine component parts are delivered to site, or conducting specialist activities such as continuous concrete pours which cannot be stopped prior to completion) would need to be approved in writing by the Council, unless in an emergency situation.
- 2.59 It is proposed that a Construction Noise Management Plan (CNMP), a Construction Transport Management Plan (CTMP) and Construction Environmental Management Plan (CEMP) would be secured by way of planning condition, including a commitment to liaise with local residents and the wider community during construction. An outline CEMP is included as part of this submission at Appendix 2.1 (oCEMP) – Volume 4, and outline CTMP is included at Appendix 8.4 (oCTMP) – Volume 4.
- 2.60 If construction activities occur in winter, the short daylight hours may require some temporary lighting to be deployed during construction however, this will be avoided as far as practicable, and lights will not be used outside of core working hours with lighting management as controlled by a CEMP.

Construction Access

- 2.61 Turbine component deliveries would be classed as abnormal loads and be delivered under police supervision. It is anticipated that turbine components would take the following route:
- Port of Hull;
 - A1033;
 - Marfleet Avenue;
 - Staveley Road;
 - Diadem Grove;
 - A165;
 - A1035;

- A165;
- A165 Moor Lane;
- A614; and
- Site Access Road.

- 2.62 Standard construction vehicles are likely to utilise the UK's existing major trunk road network and would most likely travel to site via the M62 and A614.
- 2.63 The entrance point off the A614 to site (NGR: 511912, 464069) would require upgrading to facilitate turbine component delivery. This would take the form of widening the existing junction to safely accommodate abnormal delivery vehicles turning in a single manoeuvre and fully clear the A614, and has been defined by vehicle tracking analysis. The widened extent would be constructed from grasscrete and require the removal of 62.7 m of hedgerow. During periods when the widened junction is not required, temporary fencing will be erected and then removed as necessary, in accordance with the abnormal load delivery programme to manage and define the overrun area and to prevent unauthorised access, parking or fly tipping. Following completion of abnormal movements, the widened area within the highway boundary will be reinstated as verge and hedgerow removed to facilitate loads swept paths will be replanted. The widened area outside the highway boundary will remain as grasscrete.
- 2.64 The restricted byway north of the upgraded junction would be upgraded to provide a minimum carriage width of c.4 m and will be constructed to an adoptable standard capable of accommodating the proposed axel loads of abnormal delivery vehicles. The restricted byway would be temporarily stopped up during construction, and re-opened for public access thereafter. Access to T1 and T4 would cross an adjacent publicly accessible unnamed road, which would be kept open but would require management during the construction phase.
- 2.65 Further information can be found in Chapter 8 (Traffic and Transport) – Volume 2.

Construction Materials

- 2.66 The key materials which would be required for the construction of the track, turbine foundations, hardstanding areas and cable trenches are:
- Crushed stone;
 - Geotextile;
 - Cement;
 - Sand;
 - Concrete quality aggregate: high strength structural grade, which is not prone to substantial leaching of alkalis;
 - Steel reinforcement;
 - Electrical cable; and
 - Water.
- 2.67 Where possible, local suppliers would be used to source materials from.

Construction Methods and Environmental Management

- 2.68 The construction phase will be controlled via a series of detailed method statements, which will be prepared by a Contractor appointed by the Applicant. The Applicant will monitor and ensure the contractor can correctly discharge their legal and contractual obligations while working on site during construction. While these method statements will be formulated following detailed site investigation and detailed engineering design, it is possible to indicate the outline of the methods that will be used, particularly in relation to environmental management.
- 2.69 The services of specialist advisors will be retained as appropriate, such as an archaeologist and ecologist, to be called on as required to advise on specific environmental issues. The appointed Contractor will ensure construction activities are carried out in accordance with the mitigation measures outlined in this ES.
- 2.70 Prior to construction, a detailed CEMP would be prepared that collates all measures required during construction to avoid and minimise environmental harm including guidance and best practice. The CEMP would include, but not be limited to:
- Site induction and training;
 - Working hours;
 - Surface water and drainage management;
 - Waste management;
 - Oil and chemical delivery and storage;
 - Water quality monitoring;
 - Ecological Clerk of Works;
 - Construction noise management;
 - Handling of excavated materials;
 - Traffic management; and
 - Environmental incident response and reporting.
- 2.71 To ensure that the mitigation and management measures detailed within this ES are carried out, construction personnel and contractors will be required to adhere to the CEMP which will form an overarching document for all construction site management requirements.

Waste Management

- 2.72 Waste materials will be minimised as far as possible in accordance with waste management regulations current at the time of construction. All waste will be removed off-site by a licensed waste carrier for safe disposal at a suitably licensed waste management facility in accordance with current waste management regulations. Wherever possible, excavated stone or soils will be reused on-site, primarily for the restoration of disturbed ground. Any materials which cannot be re-used or restored on site will be classified as waste and removed off site by a licensed waste carrier for reuse under an appropriate waste exemption or disposal at a licensed waste facility.
- 2.73 The main items of construction waste and their sources are:
- Hardcore, stone, gravel from temporary surfaces to facilitate construction and concrete;
 - Subsoil from excavations for foundations and roads;
 - Timber from temporary supports, shuttering and product deliveries;

- Sanitary waste from chemical toilets (if used);
- Plastic packaging of material; and
- Lubricating oils, diesel – unused quantities at end of construction period.

Electricity Export Cable

- 2.74 Electricity generated from the Proposed Development would be exported through on-site cabling to the substation at the consented (but not yet built) Three Oaks Renewable Energy Park. However, the two developments would be managed via separate grid connection agreements. Cable alignments from the Proposed Development to the consented substation, as well as works at the consented substation itself are included within the Application Boundary for the Proposed Development.
- 2.75 Any hazardous substances used during the construction process would be managed responsibly and stored in accordance with manufacturer's guidelines.

Operation

- 2.76 Turbine maintenance will be carried out in accordance with the manufacturer's specification. The following routine turbine maintenance will be undertaken:
- Initial service;
 - Routine maintenance and servicing;
 - Gearbox oil changes;
 - Blade, gearbox and generator inspections; and
 - Replacement of components as required.
- 2.77 It is proposed that operational site inspections will be undertaken on a weekly basis and the servicing of turbines will be undertaken as per the turbine manufacturer requirements, usually once or twice per year.
- 2.78 Ongoing track maintenance will be undertaken to ensure safe access is maintained to all parts of the Proposed Development all year round.
- 2.79 All wastes arising as a result of servicing and maintenance (e.g., lubricating oils, cooling oils, packaging from spare parts or equipment, unused paint etc.) will be removed from the Site and reused, recycled or disposed of in accordance with best practice.

Decommissioning

- 2.80 Decommissioning would involve the following main items:
- Dismantling and removal of the wind turbines and electrical equipment; and
 - Reinstatement of the turbine areas and associated hardstanding.
- 2.81 Turbine components and electrical equipment would be dismantled and removed in a similar manner to their delivery and erection. Cranes would be used to disassemble the turbine towers

and blades. Turbine components could be broken up off-site in controlled environments ready for reuse, recycling or appropriate disposal. The export loads may not constitute abnormal loads.

- 2.82 The removal of the top 1 m of the turbine base and plinth would be undertaken, requiring an excavated trench to provide a working area. Breakout of the top part of the plinth would be undertaken using an excavator-mounted jack hammer. The cables would be cut level with the remaining concrete. Once the broken-out concrete has been removed, the area would be reinstated by backfilling with soil to an agreed method statement.
- 2.83 The access tracks will be retained in situ at decommissioning for use by the landowner, however the cables will be removed.
- 2.84 It is estimated that the decommissioning period for the Development would be similar to that of construction.
- 2.85 A decommissioning method statement would be prepared and agreed with the Council in advance of the decommissioning period. It is anticipated that such a statement would be secured by way of planning condition.

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