

Co-operative Wind Turbine at Shafton Two Gates

TOPIC	MITIGATION/ IMPROVEMENT MEASURES PROPOSED	RESIDUAL IMPACTS ANTICIPATED POST MITIGATION
Ecology and Ornithology	As mitigation the turbine position has been positioned to ensure the turbine blade tip is buffered by 50m from the nearest vegetative linear feature thus complying with the separation distance as set out in the Natural England guidance TIN051. Any required vegetation clearance works to be undertaken outwith the bird nesting season (March to August inclusive), unless a checking survey by an appropriately qualified ornithologist confirms that active nests are absent. Any excavations that are left overnight will include a ramp of 45° or less on one face to allow badgers and other wildlife to climb out should they fall into the excavation. No further survey work or mitigation measures are considered appropriate for Great Crested Newt.	Construction works will cause short-term disturbance of the development area and this is likely to have a minor short-term impact on wildlife using the site and adjacent land. Given the nature of the site, this is concluded likely to be limited to the following: • Loss of a limited area of habitat of parish ecological value. • Disturbance and displacement/ harm of very small numbers of nesting, foraging and/or loafing birds, species typical of semi improved grassland in a semi urban setting. However, given the limited construction footprint and extent of similar habitat in the surrounding landscape, it is not considered that the above disturbance and displacement would have a significant impact on local populations. The potential impacts on local bird populations through collisions are limited by the scale of the development. As such, no impacts significant at a population level are predicted from the operational turbine. The risk assessment tool suggests that the development will not result in impacts of significance to Great Crested Newt at the local population level and therefore would not require a licence.

APPLICATION DOCUMENTATION AND ENVIRONMENTAL REPORT

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Ecology Continued	Habitat Creation and Enhancement: It is recommended that a swale be created along the length of the proposed access track with sections dammed to create areas that are wet for reasonably long periods of time during wet years, but which dry out to minimise the risk of sticklebacks colonising them. Such swales will benefit local amphibian populations as well as invertebrates. The swale will have a variable depth, ranging from 0.5 to 1m in places and as previously stated, will be dammed in sections, such that it does not act as a drainage feature unless full. Hibernacula will be provided on site using the spoil from the excavations. Such features will be created to the south of the turbine location, towards the location of the existing population. No post development monitoring works are proposed.	A series of precautionary recommendations have been made to ensure that potential impacts are either avoided. No significant ecological impacts are perceived.
Noise	-	Lower limits of the ETSU-R-97 guidance, as referred to in National Policy Statement for Renewable Energy Infrastructure (EN-3), are met. This means that the most stringent minimal levels in ETSU can be applied of 35dB(A) during amenity hours and 43dB(A) at night.

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Archaeology and Cultural Heritage	This assessment has identified that there will be no direct impacts on any designated heritage assets. The effect on the settings and significance of designated assets within the surroundings of the site has been assessed. This has established that there will be no more than a minor adverse impact on these assets. Therefore, mitigation measures are not considered to be required in relation to designated heritage assets.	In this case, the wind turbine will not result in substantial harm to any designated heritage assets within the surroundings of the site. Consequently, the test outlined in paragraph 132 of the NPPF does not apply (i.e. substantial harm) and instead, the test outlined in paragraph 134 (i.e. less than substantial harm) applies in this case. That is, where there is less than substantial harm, the harm should be weighed against the public benefits of the proposed development. Consequently, as there is less than substantial harm to the significance of heritage assets, the economic and public benefits of the planning application submission will need to be weighed against the limited harm to designated heritage assets.

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Landscape and Visual	-	<u>Landscape Fabric:</u> The principal physical effect that the proposed development will have on the landscape fabric of the site is the removal of small areas of reclaimed recreational land. The proposed development will result in a small removal of grass ground cover, but this is assessed as not significant because it is a relatively small area, which could be reinstated relatively easily following the decommissioning of the proposed development. <u>Landscape Character:</u> The changes to the character of the landscape resulting from the proposed development are assessed as being of medium to low magnitude within the east, southeast and south facing slopes of the Cudworth/Shafton/ Brierley/Grimethorpe ridge line encircling the Lower Dearne valley, and a low to negligible magnitude in the wider LCA. There are no significant effects on landscape character. <u>Visual Effects:</u> The assessment found that the proposed development will have no significant effects on the majority of settlements (towns and villages) in the study area with the exception of the settlements immediately surrounding the proposed development at Cudworth and Grimethorpe. Significant effects will be experienced by a relatively small number of properties along the edges of the settlements facing the proposed development at Cudworth, with views possible on elevated ground from Grimethorpe.

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Landscape and Visual (continued)		The assessment found that the proposed development will have a significant effect on the A6195 for a short section where views are channelled along the road as the viewer travels towards the proposed development from the southeast and as the viewer travels in close proximity to the proposed development around Ferrymoor Roundabout. There are no significant effects on other transport routes, including railway lines within the study area, the M1, A828, A635 and the B6273 road corridors. The assessment of effects on views indicates that the proposed development will only have significant effects on views and visual receptors at relatively close range, within the immediate locality of the proposed development. Significant effects on views were assessed at Viewpoints 1 (Ferrymoor Way), 2 (Grimethorpe, Taylor Crescent), 5 (Cudworth, Tippet Lane), 7 (A6195, Engine Lane) and 8 (A6195, Ferrymoor Flash) which are representative of the significant effect on views experienced locally by residents, walkers and road users in the areas immediately surrounding the proposed development to the west, north and east. Significant effects have been assessed on a number of properties within 1 km of the proposed development - predominantly along the western edge of the settlement of Cudworth, where the properties have elevations facing towards the proposed development.

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Landscape and Visual (continued)	-	In some cases, garden boundary planting and outbuildings within these properties will provide some screening in views from ground level. There will be no effect on the visual amenity of these properties. <u>Cumulative Effects:</u> There are no operational or application stage wind energy developments within the study area, and one consented, small scale wind turbine development at Royd Moor to the northeast of the proposed development. The proposed development is the only wind turbine identified in the assessment within the North East Barnsley Settled Arable Slopes LCA and will be perceived as an individual development that will have no significant effect on the character or features of the LCA at either a local or wider scale. Cumulative ZTV analysis showed that most of the theoretical cumulative effects were restricted to a narrow area along the ridge line at Brierley, with further, more distant potential cumulative effects along slopes to the western half of the study area where mainly Royd Moor blades are theoretically visible above intervening landform. Actual views of the proposed development in conjunction, combination or succession with the Royd Moor turbines were assessed as being restricted by landform, vegetation and surrounding built development.
Aviation	-	None anticipated.

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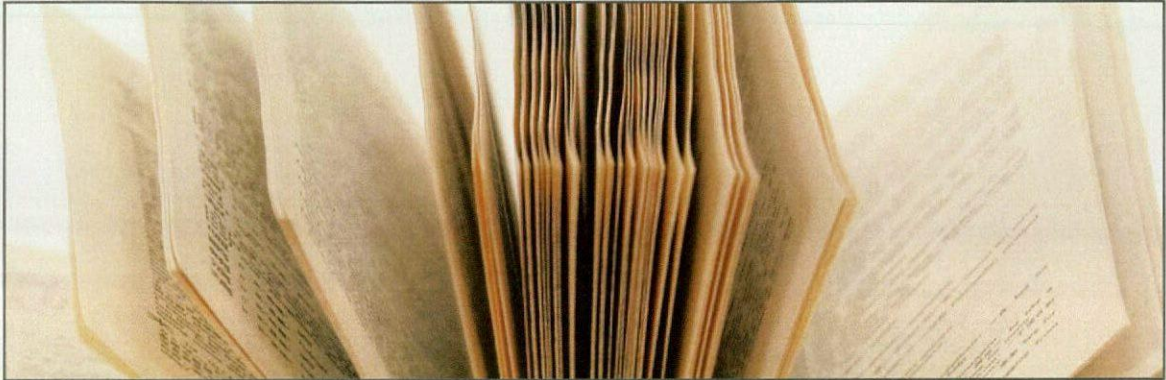
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Shadow Flicker	If effects are observed by the residents of Moorland Terrace, to protect their amenity, control of the turbine would be used to turn the machine off during the brief periods identified when conditions are such that the effect may occur. Using a sensor to detect sunlight in combination with a reading of wind direction, the wind turbine control system can be programmed to switch off the turbine during the times of potential effect whenever the conditions for shadow flicker exist. Under such circumstances; and if the sun is detected to be shining during the period that there is potential for a flicker to be observed; and the wind is blowing; the turbine controller would be programmed to bring the rotor to a stop in advance of the commencement of the potential shadow event. Once the period of potential affect has passed, the turbine controller would pitch the blades back in to the wind and the turbine will resume turning.	None anticipated.
Telecoms and Utilities	No mitigation measures are proposed for telecoms, as no such infrastructure is anticipated to be impacted by the proposed development.	None anticipated.

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TV Reception	It is understood that due to the robustness of the digital television platform, mitigation measures may not be necessary since the area has already undergone the 2011 Digital Switchover. However, for completeness, the following measures are proposed. It is proposed that the applicant undertake a pre-construction terrestrial television survey to determine the quality of the terrestrial television service prior to construction commencing, in the areas predicted to be affected. Following erection of the turbine, those dwellings that experience terrestrial television interference as a result of the wind turbine will then be visited by a qualified engineer to resolve the issue. The solution to any signal degradation will either involve the redirection of aerials or the supply of an alternative digital service. This will be undertaken at the cost of the applicant. The applicant will agree a timetable of works with the Local Planning Authority in advance of construction commencing.	None anticipated.

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Socio-economic	-	In providing a source of diversification this proposal will provide a means to maintain the current and develop the future business practices. Production of 1 370 000 kWh (net) of electricity per annum (to 3 s.f.). Equivalent to 370 Doncaster households. Offsetting 589 tonnes (to 3 s.f.) of CO₂ per annum (assuming 430gCO₂/kWh), as well as other pollutants associated with fossil fuel power generation. This also equates to the equivalent CO₂ emissions of 256 Barnsley Borough residents. Materials and services for the proposal will be sourced, where practical, from suitably qualified local and regional contractors.



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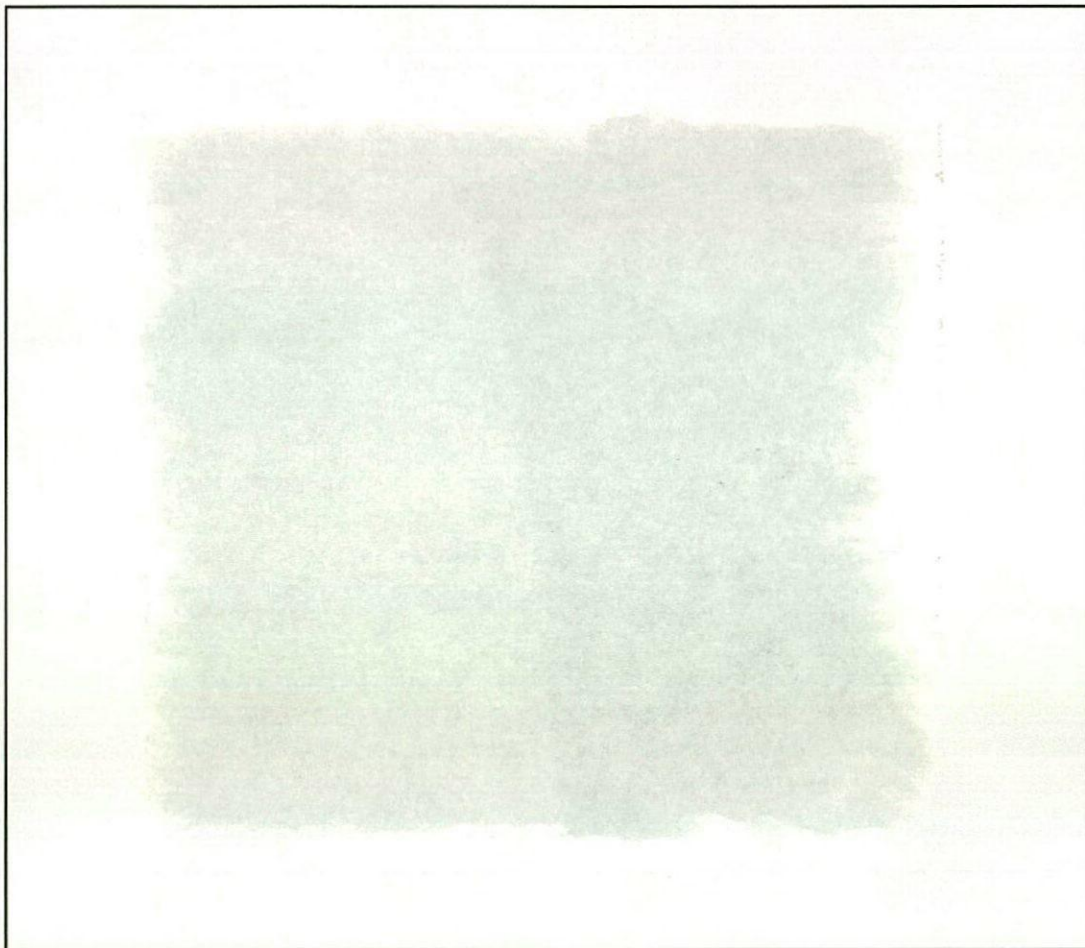
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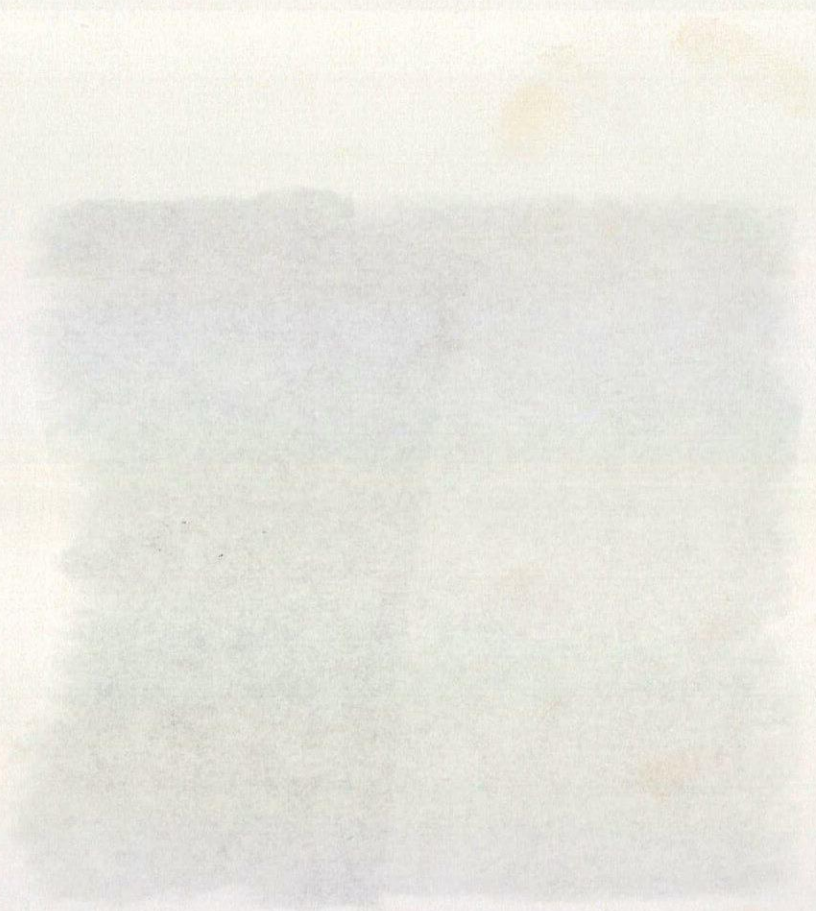
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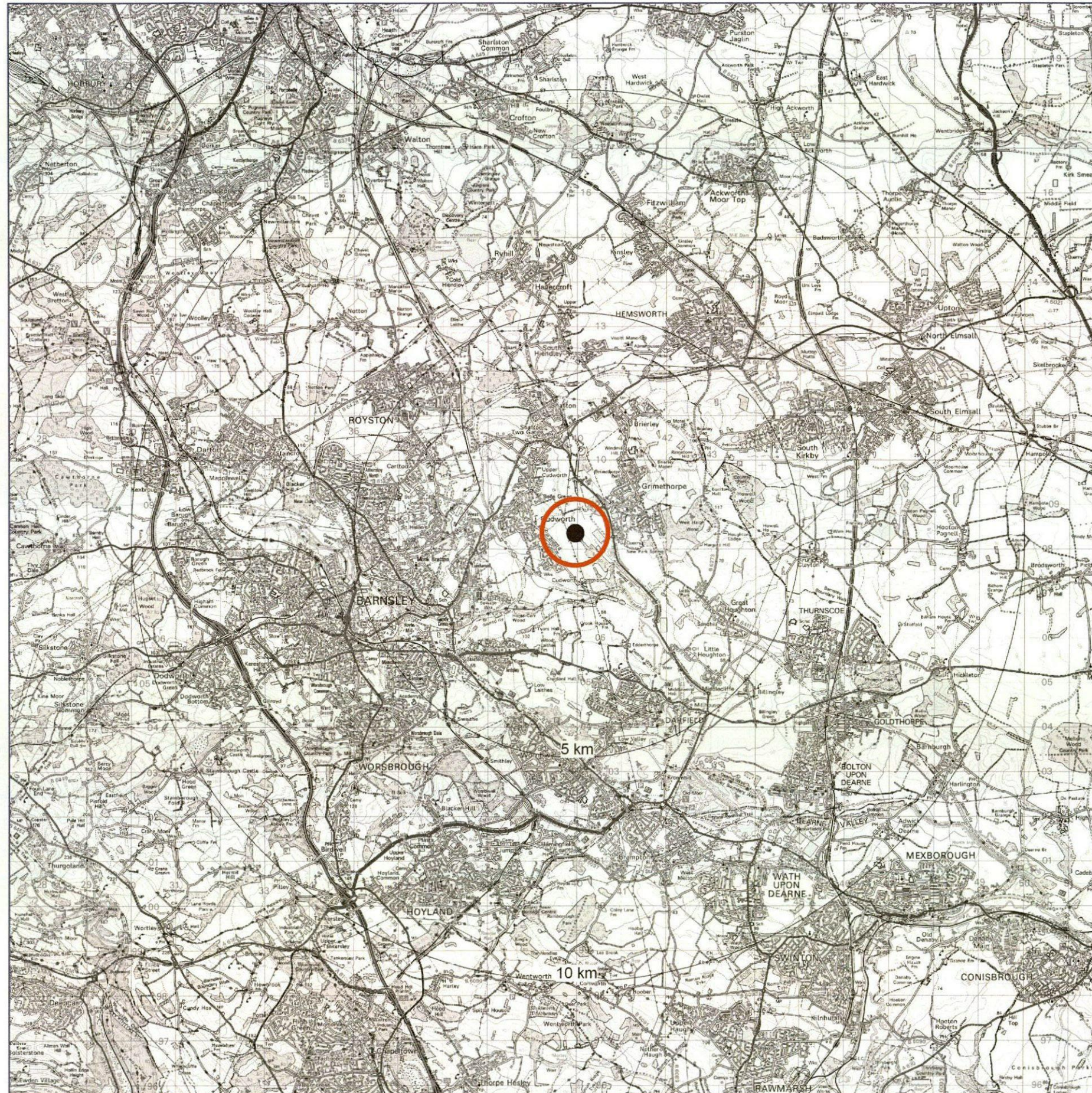
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CD APPENDICES

- 1.388 The full environmental reports are provided on the following CD Appendices. Also provided are copies of relevant correspondence e.g. aviation and utilities responses, where referred to in the document.
- 1.389 A digital copy of this document, the Planning Statement and the A3 Figures are also provided.







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Site Location

Figure 1

KEY

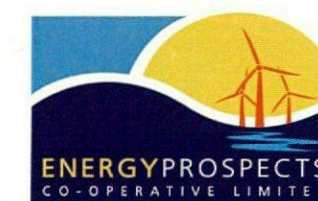


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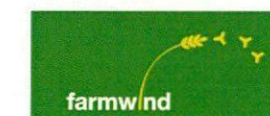


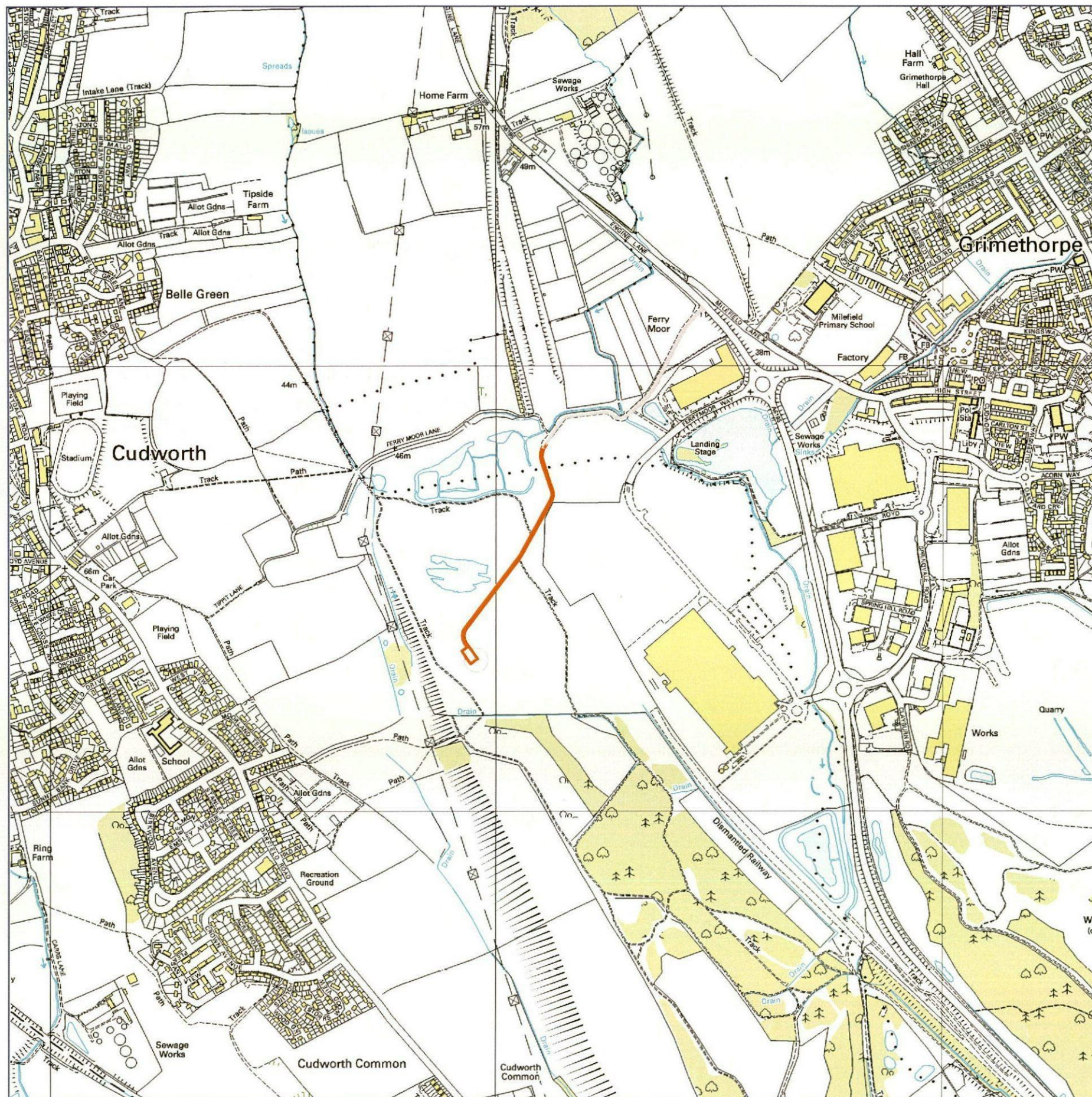
Site Location

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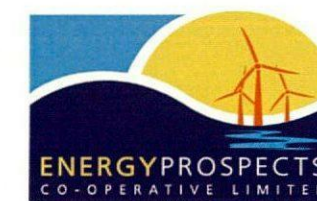
CO-OPERATIVE WIND TURBINE AT SHAFTON TWO GATES Site Layout Plan

Figure 2

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