Oweninny Wind Farm Phase 3

Environmental Impact Assessment Report

Appendix 12.2 Dust Management Plan

Appendix 12.2 – Dust Management Plan

Dust control measures at the site will ensure that no nuisance occurs at nearby sensitive receptors (including ecological receptors). In order to develop a workable and transparent dust control strategy, the following management plan has been formulated by drawing on best practice guidance from Ireland, the UK (IAQM (2014), BRE (2003), The Scottish Office (1996), UK ODPM (2002)) and the USA (USEPA, 1997). The following measures have been incorporated into the Construction and Environmental Management Plan (CEMP) prepared for the site.

Site Management

Good site management will be ensured by avoiding dust becoming airborne at source through good design and effective control strategies.

At the construction planning stage, the siting of activities and storage piles will take note of the location of sensitive receptors and prevailing wind directions in order to minimise the potential for significant dust nuisance. As the prevailing wind is predominantly westerly to south-westerly, locating construction compounds and storage piles downwind of sensitive receptors where possible will minimise the potential for dust nuisance to occur at sensitive receptors.

Good site management will include the ability to respond to adverse weather conditions by either restricting operations on-site or quickly implementing effective control measures before the potential for nuisance occurs. When rainfall is greater than 0.2mm/day, dust generation is generally suppressed (IAQM, 2014; UK ODPM, 2002). The potential for significant dust generation is also reliant on threshold wind speeds of greater than 10 m/s (19.4 knots) (at 7m above ground) to release loose material from storage piles and other exposed materials (USEPA, 1986). Particular care should be taken during periods of high winds (gales) as these are periods where the potential for significant dust emissions are highest. The prevailing meteorological conditions in the vicinity of the site are favourable in general for the suppression of dust for a significant period of the year. Nevertheless, there will be infrequent periods where care will be needed to ensure that dust nuisance does not occur. The following measures shall be taken in order to avoid dust nuisance occurring under unfavourable meteorological conditions:

- The Principal Contractor or equivalent must monitor the contractors' performance to ensure that the proposed mitigation measures are implemented and that dust impacts and nuisance are minimised;
- During working hours, dust control methods will be monitored as appropriate, depending on the prevailing meteorological conditions;
- The name and contact details of a person to contact regarding air quality and dust issues shall be displayed at the site entrances, this notice board should also include head/regional office contact details;
- Community engagement be undertaken with residents in proximity to the grid connection, and more general engagement with local residents and businesses before works commence on site explaining the nature and duration of the works to local residents and businesses;
- A complaints register will be kept on site detailing all telephone calls and letters of complaint received in connection with dust nuisance or air quality concerns, together with details of any remedial actions carried out;
- It is the responsibility of the contractor at all times to demonstrate full compliance with the dust control conditions herein;
- At all times, the procedures put in place will be strictly monitored and assessed.

The dust minimisation measures shall be reviewed on a weekly basis, as appropriate with the works being undertaken on site, to ensure the effectiveness of the procedures in place and to maintain the goal of minimisation of dust through the use of best practice and procedures. In the event of dust nuisance

occurring outside the site boundary, site activities will be reviewed and satisfactory procedures implemented to rectify the problem. Specific dust control measures to be employed are described below.

Site Roads / Haulage Routes

Movement of construction trucks along site roads (particularly unpaved roads) can be a significant source of fugitive dust if control measures are not in place. The most effective means of suppressing dust emissions from unpaved roads is to apply speed restrictions. Studies show that these measures can have a control efficiency ranging from 25 to 80% (UK ODPM, 2002), the remaining dust emissions are unlikely to cause significant impacts.

- A speed restriction of 20 km/hr will be applied as an effective control measure for dust for on-site vehicles using unpaved site roads. In addition, roads will be paved as soon as correct site contours have been achieved in order to minimise production of dust;
- Access gates to the site shall be located at least 10m from sensitive receptors where possible. Except in the case of the site which is itself a sensitive receptor;
- Bowsers or other suitable watering equipment will be available during periods of dry weather throughout the construction period. Research has found that watering can reduce dust emissions by 50% (USEPA, 1997). Watering shall be conducted during sustained dry periods to ensure that unpaved areas are kept moist. The required application frequency will vary according to soil type, weather conditions and vehicular use;
- Any hard surface roads will be swept with a street sweeping vehicle to remove mud, dust and aggregate materials from their surface while any unsurfaced roads shall be restricted to essential site traffic only.

Land Clearing / Earth Moving

Land clearing / peat/ earth-moving works during periods of high winds and dry weather conditions can be a significant source of dust.

- During dry and windy periods, and when there is a likelihood of dust nuisance, watering shall be conducted to ensure moisture content of materials being moved is high enough to ensure the stability of the soil and suppress dust;
- When gales are forecast activities likely to generate significant dust emissions will be postponed until the gale has subsided.

Storage Piles

The location and moisture content of storage piles are important factors which determine their potential for dust emissions.

- Overburden material will be protected from exposure to wind by storing the material in sheltered regions of the site. Storage piles will be located at least 10m from the nature park site and The Strand development, and will be located in the eastern half of the site to ensure they are downwind of sensitive receptors;
- Regular watering will take place to ensure the moisture content is high enough to ensure the stability of the soil and thus suppress dust. The regular watering of stockpiles has been found to have an 80% control efficiency (UK ODPM, 2002), the remaining 20% of emissions are unlikely to be significant.
- Where feasible, hoarding will be erected around site boundaries to reduce visual impact. This will also have an added benefit of preventing larger particles from impacting on nearby sensitive receptors.

Site Traffic on Public Roads

Spillage and blow-off of debris, aggregates and fine material onto public roads should be reduced to a minimum by employing the following measures:

- Vehicles delivering or collecting material with potential for dust emissions, in particular vehicles delivering stone and sand. Vehicles with the potential for dust emissions shall be enclosed or covered with tarpaulin at all times to restrict the escape of dust;
- At the main site traffic exits, a wheel wash facility shall be installed. All trucks leaving the site must pass through the wheel wash. In addition, public roads outside the site shall be regularly inspected for cleanliness, as a minimum on a daily basis, and cleaned whenever mud, dust or clay from the development site is present using a road sweeping vehicle.

Summary of Dust Mitigation Measures

The main contractor will keep a register of all dust control measures, and a daily record of all dust inspections, and cleaning actions. This will be available on-site for inspection by the Council during working hours. The site manager will appoint a staff member to oversee implementation of these measures and will review implementation once a week to verify their effectiveness and ensure compliance. The pro-active control of fugitive dust will ensure that the prevention of significant emissions, rather than an inefficient attempt to control them once they have been released, will contribute towards the satisfactory performance of the contractor. The key features with respect to control of dust will be:

- The specification of a site policy on dust and the identification of the site management responsibilities for dust issues;
- The development of a documented system for managing site practices with regard to dust control;
- The development of a means by which the performance of the dust minimisation plan can be regularly monitored and assessed; and
- The specification of effective measures to deal with any complaints received.