

9 AIR QUALITY

9.1 INTRODUCTION

9.1.1 This chapter of the ES assesses the likely significant air quality effects associated with the construction phase of the Proposed Development.

9.1.2 The Scoping Direction (**Appendix 2.1**) requires air quality to be scoped into the ES. The Scoping Direction confirms that:

“information provided to date does not consider whether there are nature conservation designated sites along the proposed construction traffic route which could be affected by the emissions generated by construction traffic, in particular HGVs. Additional information is required regarding construction traffic emissions and location of any ecological sensitive receptors before this aspect could be scoped out.”

9.1.3 The operation of the Proposed Development will not result in any direct emissions to air. However, the construction works have the potential to generate additional vehicles on the local road network, which may impact on any ecological habitats adjacent to the roads used by construction vehicles.

9.2 ASSESSMENT APPROACH

9.2.1 This chapter is supported by the following appendix which sets out the detailed approach, methodology and relevant policies:

- **Appendix 9.1** - Air Quality Technical Note (Air Quality Consultants, July 2020).

9.3 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

9.3.1 The nearest internationally-designated site is Liverpool Bay Special Protection Area (SPA) which is located 6.6km northwest of the application site. The nearest locally-designated site, an unnamed Ancient Woodland (AW) is located 300m east of the application site. Rhuddlan Pond Local Nature Reserve (LNR) and an unnamed Ancient Woodland are within 200m of the main roads used by construction vehicles.

9.3.2 The Construction Traffic Management Plan (CTMP) confirms that the construction period will last up to 27 weeks. On this basis, any effect from construction traffic on designated ecological sites will be transient, any changes to ambient air quality conditions will re-equilibrate within a short period of time following completion of the construction phase, and there will be no long-term deterioration in conditions.

9.3.3 The construction works will generate 2,055 one-way Heavy Duty Vehicle (HDV) trips and 4,698 one-way Light Duty Vehicle (LDV) trips.

9.3.4 The construction phase will, therefore, generate Annual Average Daily Traffic (AADT) flows of 11 HDVs and 26 LDVs on the main identified construction route. Beyond this route, vehicles will distribute across the local highways network, such that flows on other roads will be lower.

9.3.5 The Air Quality Technical Note has identified that the Rhuddlan Pond Local Nature Reserve (LNR) and an unnamed Ancient Woodland lie within 200 m of roads included in the CTMP. The construction phase will generate AADT flows of 11 HDVs and 26 LDVs; these are well below the screening criteria of 200 HDVs and 1,000 LDVs presented in the Design Manual for Roads and Bridges (DMRB) guidance. Further, as the construction phase will only last for 27 weeks, any air quality effects on designated sites will be temporary in nature.

9.3.6 Beyond the network identified in the CTMP, traffic will distribute across the local highways network, such that site-related flows on other roads will be even lower.

9.3.7 Natural Resources Wales has previously indicated that it accepts the use of these criteria for the protection of designated ecological habitats in Wales. On this basis, the impact of the construction of the proposed solar farm can be considered to be neutral in terms of local air quality and no further work is needed.

9.4 MITIGATION AND ENHANCEMENT

9.4.1 No mitigation or enhancement measures are required in terms of air quality.

9.5 CUMULATIVE AND IN-COMBINATION EFFECTS

9.5.1 No significant cumulative or in-combination effects are considered likely.

9.6 SUMMARY

9.6.1 The construction phase will generate additional vehicles on the local road network; however, these have been shown to be well below the DMRB screening criteria and for a temporary period of up to 27 weeks only.

9.6.2 Based on DMRB guidance, the impact of the construction of the Proposed Development on air quality is considered to be neutral, and no further assessment is required.