

Tees CCPP Examination – Issue Specific Hearing on Environmental Matters (13 June 2018) – follow up items on Air Quality

Introduction

Three items were raised by the Examiner ('ExA') which require follow up. These are:

- identify the locations of the 'moderate' 1 hour NO₂ concentrations identified from the dispersion modelling;
- verify that sampling equipment is commercially available to undertake sampling from the centre of an 8 m diameter stack; and
- provide detailed results of the HRA (Habitats Regulations Assessment), as Excel files.

The responses to these items are provided below.

Locations of the 'moderate' 1 hour NO₂ concentrations

In the air quality impact assessment, a Moderate impact for the 1 hour NO₂ is defined as when the PC is between 20% and 50% of the air quality standard, irrespective of the baseline. The 1 hour NO₂ air quality standard is 200µg/m³, as the 19th highest 1 hour value. Therefore, Moderate impacts arise where the PC is between 40µg/m³ and 100µg/m³.

Figure 1 overleaf illustrates where the 1 hour NO₂ PC is greater than 40µg/m³. As illustrated, this is confined to two small areas on a steeply sloping wooded hillside. There are no sensitive human receptors in this location. **Figure 2** overleaf illustrates a zoomed in view of this small area. The buildings some distance to the south on **Figure 2**, are associated with communications towers in this location and are not residential properties.

The point of maximum impact for the 1 hour NO₂ is at OS Grid reference: 457726E, 518514N.

Figure 1 Location of Moderate Impact – Large Scale

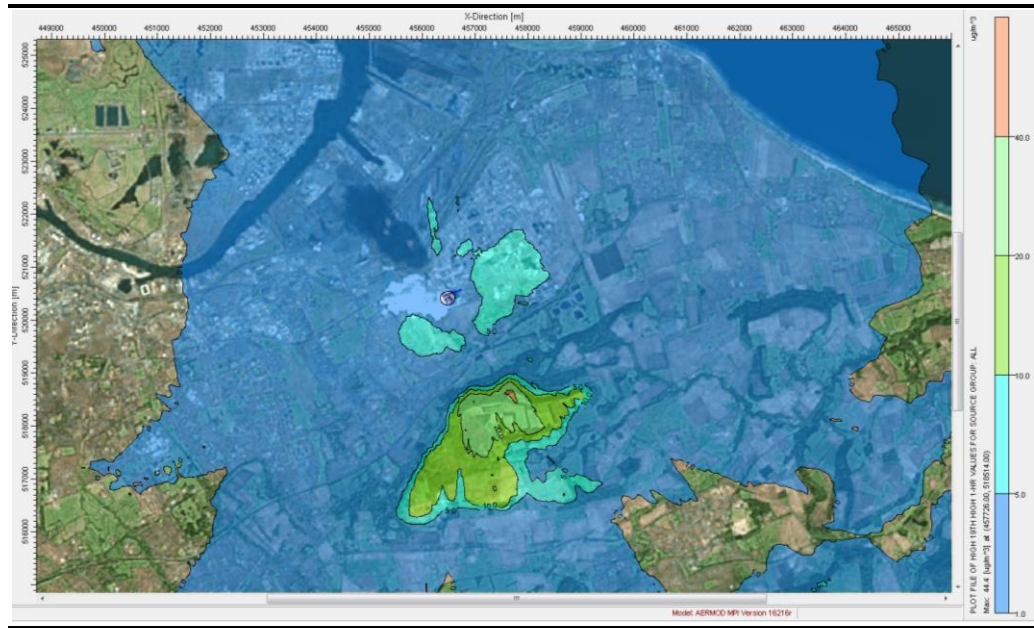
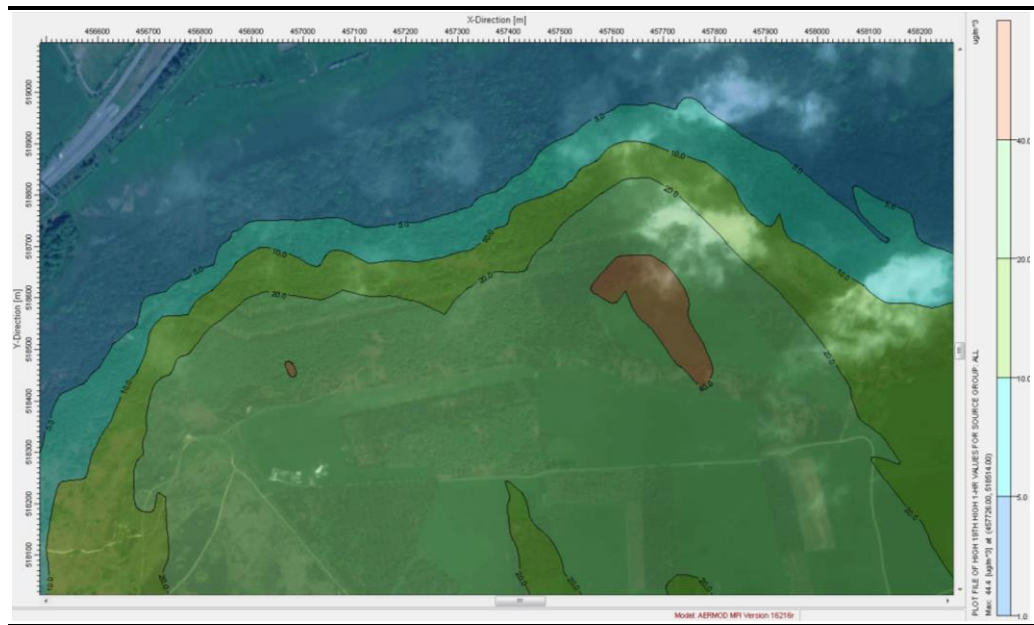


Figure 2 Location of Moderate Impact – Small Scale



Sampling equipment for an 8m diameter stack

The Environment Agency raised the question as to whether monitoring probes of sufficient length are commercially available to sample an 8 m stack. In order to comply with Environment Agency guidance, the stack has to be sampled from the centre, and therefore a probe of over 4 m in length would be required. The Environment Agency noted that at the previous plant, the monitoring had been compromised by the lack of availability of a suitable probe.

APPLICATION DOCUMENT REF: 8.47

ERM has contacted vendors who manufacture and supply sample probes. The following response was received from Environmental Supply Company Ltd. based in the USA:

“We manufacture probes of many different styles and up to 6 m long, so certainly we can make a 4 m probe. Attached are several photos of the different styles. The difficulty would be shipping such a long container, however it can certainly be accomplished. Let me know the style of probe or protocol to be followed and I will be glad to provide a sales quote if you wish.”

The probes supplied by Environmental Supply Company Ltd. would be suitable for undertaking the sampling in a stack diameter of 8m. Therefore equipping the proposed plant with a stack of this diameter and with suitable sampling platform would not be an issue.

Detailed HRA Results

The full sets of detailed air quality results to support the HRA were not presented in full in the EIA, due to the considerable length of these files. The required tables have been submitted as part of the Applicant’s Deadline 4 submission (Application Document Ref: 8.47). Results are presented for the following parameters, relevant to the HRA:

- NO_x annual mean;
- NO_x 24 hour mean;
- acid deposition; and
- nutrient nitrogen deposition

In line with Environment Agency requirements, results are presented for all statutory protected ecological receptors within 15 km of the proposed plant, and non-statutory protected ecological receptors within 2 km of the proposed plant.

For statutory protected ecological receptors, pollutant contributions are considered insignificant if:

- Process Contribution (PC) is <1% of the Critical Load (CL); or
- PC is >1% of the CL, but Predicted Environmental Concentration is <70% of the CL.

For non-statutory protected ecological receptors, pollutant contributions are considered insignificant if the PC is <100% of the CL.