



TECHNICAL NOTE 2

DATE:	11 November 2021	CONFIDENTIALITY:	Confidential
SUBJECT:	Calderdale Local Plan - Air Quality HRA - Further Information for Natural England		
PROJECT:	Calderdale Local Plan	AUTHOR:	Stuart Ireland
CHECKED:	Katie Burrough	APPROVED:	Ursula Digby

Further to Natural England's (NE) response of 22 September 2021, Calderdale Council requested that WSP prepare further information to close out the comments received.

We welcome NE's comment that "For clarity Natural England does not fundamentally disagree with the conclusions reached in the Calderdale Local Plan Habitats Regulations Assessment Air Quality Assessment Report dated June 2021 however we consider that the evidence presented to justify those conclusions are incomplete." Though we note that following provision of further information to NE on 10th September 2021, NE noted that "we remain of the opinion that further evidence and justification is needed to justify the conclusions reached".

This note addresses the comments contained within the 22/09/2021 NE response.

Isopleth Mapping

A series of figures have been produced which show the Habitats of Principle Importance (HPI) contained within the South Pennine Moors SAC/SPA (Figure 1a and 1b). The HPI data was downloaded from magic.defra.gov.uk.

For each of the potential pollutants examined within the Report to Inform an Appropriate Assessment (NO_x (Drawing series 2), NH₃ (Drawing series 3) and Nitrogen Deposition (N-Dep) (Drawing series 4)) a series of isopleth figures have been produced showing the following:

- Figure a – Future Baseline
- Figure b – Local Plan Alon
- Figure c – In-combination
- Figure d – Change – Local Plan Alone
- Figure e – Change – In-combination

These figures are extracts of the model, concentrated on the areas of the SAC/SPA which will be subject to increases in the pollutants stated above. This mapping allows a clear representation of the pollutant contribution arising from the Local Plan, both alone and in-combination with other plans or projects. For clarity, those areas of the SAC/SPA not shown will not be subject to any change from a contribution arising as a result of the Local Plan.

All figures are underlain with the HPI dataset layer for clarity.

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NO_x

As can be seen from Figure 2c there are areas of the SAC/SPA which will exceed the NO_x critical limit of 30 µgm⁻³, further, small areas of this exceedance lie within sensitive blanket bog habitat. However, as can be seen from Figure 2e, the changes arising from the Local Plan in-combination with other plans or projects do not fall within these exceedance areas.

Further, as can be seen from the isopleth mapping (Figure 2e), the NO_x changes only impact upon very small areas of blanket bog directly adjacent to Rochdale Road (<5 ha), while the majority of the change falls within grass moorland which represents site fabric and not designation feature habitats.

NH₃

Figure 3c shows that there are areas of the SAC/SPA which exceed the NH₃ critical limit of 1 µgm⁻³. Small areas of the SAC/SPA will experience up to 3 µgm⁻³, within some these exceedances falling within sensitive blanket bog habitat. However, as can be seen from Figure 3e none of the changes in NH₃ fall within a single area experiencing this exceedance, directly adjacent to the A672.

As Figure 3e demonstrates, none of the NH₃ changes arising from the Local Plan in-combination with other plans or projects fall within sensitive habitats. The habitat experiencing change as a result of the Local Plan in-combination is grass moorland which is not a designation feature habitat.

N-Dep

Figure 4c demonstrates that there are areas of the SAC/SPA which are in exceedance of the lower critical load for blanket bog (5 kg/N/y) and for upland heathland (10 kg/N/y), with blanket bog and upland heathland being the only designation habitats which are present within the modelled area.

As can be seen from Figure 4e, there are two areas of blanket bog which will experience a change in N-Dep which lie within blanket bog habitat, and none which lie within upland heathland habitat. The areas which lie within blanket bog habitat total <5 ha. While the majority of N-Dep change falls on grass moorland which represents site fabric and is not a designation feature habitat.

Examination of the APIS Critical Load for Bogs tool¹ indicates that the areas of blanket bog which will experience a slight increase in N-Dep as a result of the Local Plan in-combination with other plans or projects has an expected rainfall range of 759-1285 mm of rain per year, and that this would lead to a

¹ www.apis.ac.uk/critical-load-bogs-tool

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critical load of 9 kg/N/y. However, for the avoidance of uncertainty, the lower critical load for this habitat of 5 kg/N/y was used within the assessment.

With reference to the conclusions in the original RIAA that these impacts are *de minimis*, given the consideration of the three pollutants above, and the very small areas of the sensitive habitats (equating to 0.008% of the SAC) which are selection features for the designated sites, it is entirely reasonable to conclude that, while negative impacts will arise from the Local Plan in-combination with other plans or projects, it cannot be concluded that the Local Plan will give rise to an adverse effect on site integrity, for either the SAC or SPA, either alone or in-combination with other plans or projects.

We note NE's comment in relation to our discussion of salt spray impacts on habitats adjacent to roads. We are not seeking to underplay the potential effects of air quality changes arising as a result of the Local Plan. However, it is worthy of note that habitats adjacent to roads are highly unlikely to achieve their full potential even in the absence of air quality pollutants, and thus the likelihood of minor changes in air quality being an adverse effect on site integrity are further reduced.

We note NE's comment in relation to bryophytes and lichens being highly sensitive to changes in air quality, however the critical limits and loads assigned to habitats take the presence of such lower plants into account, and therefore the assessment remains robust.

We note NE's comment in relation to the deposition velocity selected for the assessment. However, as no H9140 old sessile oak wood is present within the modelled area, we are content that the deposition velocity selected is robust.

In-combination Assessment

Further to NE's request for further detail on the in-combination assessment, including more clarity on the evidence collected by neighbouring Local Plans, we have extracted the following information from the preparatory documents from the most recent hearing on air quality:

An appropriate approach has been taken regarding the detail of growth in neighbouring areas, for informing decisions at this level. This is as set out in section 2 of Technical Note 13 (CC62b). National growth forecasts, taken from NTEM v7.2, have been used for the overall cap on growth in both districts. Added detail related to distribution of growth, rather than using an average uplift for all areas, has been achieved by modelling specific sites within 2km of Calderdale as per the adopted local plan for Kirklees and Bradford's core strategy. The NTEM forecasts align well with the planned quantum of growth in each district, as set out in section 2.6 of Technical Note 13, and this demonstrates that they are appropriate to use for assessment of the local plan.



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With regard to ‘other sources of pollution such as permitted industry and agriculture’, contributions from existing sources in these sectors are covered in the Defra background maps used in the assessment, including background projections up to 2030 (latest year provided by Defra). Any other new contributions in future from these sectors would apply equally to the ‘without’ and ‘with’ local plan scenarios, so would not have a bearing on the predicted level of impact when compared to the critical load(s).