

EPPING FOREST DISTRICT LOCAL PLAN

EXAMINATION HEARINGS

Matter 1, Issue 5

Note circulated on 21st May 2019 by Dr. James Riley, Aecom on behalf of Epping Forest District Council

The summarised results of the 'growth plus mitigation' scenario (DS5) are as follows:

1. **Ammonia** – A net deterioration predicted at all receptor points, which is identical to the unmitigated scenario. However, this is modest in scale (a typical worst-case dose of $0.1 \mu\text{gm}^{-3}$ at the roadside), resulting in little difference in total concentrations since the baseline concentrations are relatively high. Moreover the effect is localised, with concentrations dropping to virtually baseline levels by 5-10m from the roadside on most transects. Moreover, at a site scale, according to APIS the UK vehicle fleet is responsible for less than 2% of ammonia compared to over 80% from agriculture. Even if you closed the roads through the SAC ammonia concentrations would still be over the critical level for ammonia.
2. **NOx** – At those receptor points where the critical level will be exceeded, all but 3 will be below the 2033 baseline (i.e. not only would the dose due to growth be offset but there would be an accelerated rate of improvement compared to a situation of no growth). In other words, 99.2% of receptor points would not experience any negative effect due to growth. This applies to large parts of the modelled area, extending the full extent of the modelled transect. Only 3 modelled receptor locations out of 363 would exceed the critical level for NOx and have concentrations above the 2033 baseline; even these only slightly exceed the critical level and the effect is very localised, immediately at the roadside of transect K and within 5m of the roadside on transect N.
3. **Nitrogen** - Even using the higher deposition velocity suggested by Natural England, 95% of receptor points would experience no material (i.e. 5 year or more) slowing of improvement. This rises to 98.9% using the lower deposition velocity for short vegetation. Moreover, 56% of the modelled receptor points are predicted to have nitrogen deposition rates below the 2033 baseline (i.e. not only would the dose due to growth be offset but there would be an accelerated rate of improvement compared to a situation of no growth). This applies to large parts of the modelled area, extending in many cases across the modelled transect. The 5% of receptor points that would show a material slowing of improvement using the higher velocity are mainly at a single location (transect N) and would still experience lower nitrogen deposition than in 2014/2017 except for a single receptor point immediately adjacent to the road.

Overall, it is therefore considered that:

- a) The localised deterioration in roadside ammonia will be offset by the accelerated rate of improvement in NO_x and nitrogen deposition across most of the modelled SAC; and
- b) Since 99.2% of 363 receptor points for NO_x and at least 95% of 363 receptor points for nitrogen will either be below the critical level or experience no material slowing of improvement 'in combination' (and all but one of the remaining points would still experience better nitrogen deposition than the 2014 or 2017 baseline) a conclusion of no adverse effect on integrity due to growth can be reached with Scenario DS5.