APPENDIX 3

AECOM

Habitats Regulations Assessment of the Mid Sussex District Plan Review

Regulation 18

Mid Sussex District Council

Project number: 60671970

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Delivering a better world

Quality information

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1. Non-Technical Summary

Introduction

1.1 AECOM was appointed by Mid Sussex District Council (the Council) to produce a Habitats Regulations Assessment (HRA) of their Regulation 18 Local Plan. An HRA examines the effects of the Local Plan on internationally important wildlife sites. The requirement for HRA is set by the Conservation of Habitats and Species Regulations 2017 (as amended). HRA has two principal stages which are documented in the full report produced to accompany the Local Plan: an initial high-level stage (called the Likely Significant Effects Test) that examines all policies and allocations and determines whether there is any conceivable mechanism for a negative effect on internationally important wildlife sites, and a subsequent more detailed analysis, if relevant, called an Appropriate Assessment. There is no standard content for an Appropriate Assessment, it is literally whatever further assessment is appropriate to draw a conclusion regarding adverse effects on the integrity of any internationally important wildlife sites. As part of the HRA process it is essential to consider the potential for effects not only from the Local Plan in isolation, but also 'in combination' with other plans and projects (such as Local Plans of surrounding local authorities).

1.2 During the Likely Significant Effects (LSEs) Test it was determined that the only internationally important wildlife site for which Likely Significant Effects (i.e., the potential for a significant effect) could not be dismissed, and which therefore required further analysis, was Ashdown Forest Special Area of Conservation and Special Protection Area. Ashdown Forest is designated as a Special Area of Conservation for its heathland and its population of great crested newt. It is designated as a Special Protection Area for its population of two bird species: nightjar and Dartford warbler. Impacts arising from growth in Mid Sussex that required further investigation through Appropriate Assessment concerned two impact pathways: atmospheric pollution from vehicle exhaust emissions associated with traffic traversing the forest, and recreational pressure. Each impact pathway and the conclusions of the Appropriate Assessment are summarised in turn below. The assessment below will need to be updated for the Regulation 19 HRA.

Appropriate Assessment (AA)

1.3 In preparing the Mid Sussex District Plan (MSDP) two different Housing Scenarios (4 and 4b) were explored, differing in the allocation of one Significant Site at Ansty for 1,600 dwellings and 1,000m^2 of employment floorspace. The HRA appraised both housing options. With regard to recreational pressure on Ashdown Forest SAC/SPA there was no difference between the two scenarios because the Ansty site lies well outside the core catchment of the SAC/SPA. With regard to air quality there was only a very slight difference in forecast impacts with Scenario 4b (including the Ansty site) having the greatest impact by a very slight margin.

Atmospheric Pollution

1.4 Traffic and air quality modelling was undertaken for five different model scenarios, comprising the Baseline (current emission rates based on traffic count data and other sources of atmospheric pollution), Future Baseline (current vehicle emissions extrapolated to the end of the Plan period, accounting for improvements to vehicle emission factors), Do Minimum (future emission rates accounting for growth in adjoining authorities, but excluding the MSDP Review) and two Do Something scenarios (future emission rates accounting for growth in adjoining authorities and the two growth scenarios proposed for Mid Sussex District). Air quality modelling was undertaken along 13 road links and 23 transects up to 200m from the roadside, in increments of 10m perpendicular to relevant roads.

1.5 Air quality modelling data show that an in-combination increase in nitrogen deposition and ammonia concentrations at three transects (T6, T10 and T11) is mathematically perceptible; however, the contribution of the MSDP is only marginally above zero[1] except at the roadside

[1] In the UK air quality data are generally not reported to more than 2 decimal places to avoid false precision. If the results due to the Mid Sussex District Plan were much smaller they would be reported as effectively zero i.e. 'less than 0.01'.

where no SAC habitat is present. In accordance with legal precedent, plans and projects that have no appreciable effect on a site can be concluded not to result in adverse effects and legally excluded from in-combination assessment. Three other transects (T5, T7 and T9) were assessed in more detail. At transects T5 (New Road), T7 (A22) and T9 (A275), in-combination nitrogen doses at the nearest areas of heathland (since in all cases there is road verge and dense gorse scrub at the closest points to the road where pollution is highest) are forecast to be mathematically perceptible (being 3%, 2% and 6% of the Critical Load for nitrogen, respectively). However, the contribution of the MSDP at all transects is only marginally above zero[2] / mathematically imperceptible, meaning that the increase in nitrogen deposition that is forecast is primarily attributable to growth outside Mid Sussex District. Furthermore, the forecast nitrogen deposition rates at transects T5 and T9 in 2039 are still 1.6 and 0.8 kg N/ha/yr better than the 2019 baseline due to the effect of vehicles with improved emissions technology (i.e. compliant with the Euro6 emissions standard) making up an increasing component of the vehicle fleet. The total ammonia concentrations beyond 10m from the roadside were either below the Critical Level (T5, T9) or were concluded to be negligible compared to seasonal and annual fluctuations (for all other transects).

1.6 The potential ecological impacts of the worst-case in-combination nitrogen dose to heathland (0.56 kg N/ha/yr at 10m from the A275, T9) were also discussed. Published data in the peer-reviewed literature indicate that such deposition (if it constituted a net increase) could result in a small (0.1%) increase in grass cover or a reduction in species richness of 0.2 species in a situation where there were no other over-riding factors exerting a greater influence on botanical composition of the sward. Any ecological impacts would reduce at greater distances from roads. The ecological context was then considered as it is key to interpretation; modelling of all transects illustrates that the vast majority of nitrogen due to traffic growth will be deposited within 1m-10m of the modelled roads, within the road verge and belts of dense gorse, bracken and trees that line the relevant parts of the A22, A275 and other roads. These areas have low sensitivity to nitrogen deposition and contain lower value habitats due to the general presence of the road and its associated salt spray, dust, runoff, and altered drainage or soils. In addition, the belts of dense gorse and trees close to the road may be preserved in the long-term to protect SPA birds using the heathland more broadly from exposure to the disturbing (visual and noise) effects of the road and to reduce the risk of livestock straying into the carriageway. Moreover, localised dense gorse can be of direct value for one of the SPA birds (Dartford warbler) as nesting and foraging habitat, as cited in the Supplementary Advice on the Conservation Objectives for the SAC. Even at roadside locations the additional nitrogen deposition due to traffic growth would not prevent heathland restoration if Natural England ever did decide to undertake it, particularly within the context of the forecast net reduction in total nitrogen deposition due to improved vehicle emissions technology.

1.7 Moreover, Natural England have confirmed in previous discussions over the Wealden, Tunbridge Wells and South Downs Local Plans that nitrogen deposition from traffic is not preventing the SAC heathland from achieving favourable conservation status, but that the primary issue is lack of management which is ultimately a land stewardship issue for the site owners and managers rather than something associated with the implementation of Local Plans. For example, a review of Natural England's SSSI condition assessment clearly indicates that historic (and in many cases current) inadequate management is the reason why only 20% of Ashdown Forest SAC is currently in a favourable condition. That is not to say that there is no objective to address nitrogen deposition at the SAC. The Shared Nitrogen Action Plan (SNAP) is the primary mechanism by which Natural England aim to reduce nitrogen deposition. It is targeted at agriculture rather than traffic because almost three times more nitrogen deposited in the SAC stems from agriculture (fertiliser and livestock) than traffic. Overall, agricultural emissions affect a much greater area of the SAC, whereas the effect of the roads is localised. The forecast 'in combination' nitrogen doses due to traffic growth will have a negligible effect on the land managers' ability to restore good quality heathland through improved management and the implementation of the SNAP.

[2] In the UK air quality data are generally not reported to more than 2 decimal places to avoid false precision. If the results due to the Mid Sussex Local Plan were much smaller they would be reported as effectively zero i.e. 'less than 0.01'.

1.8 For all these reasons it is considered that the ability of the SAC and SPA to achieve its Conservation Objectives would not be significantly compromised by the MSDP growth either alone or in combination with other plans or projects.

Recreational Pressure

1.9 For the AA, the visitor surveys undertaken in the Ashdown Forest SPA / SAC in 2008, 2016 and 2021 were reviewed and recreation patterns assessed. The data from the 2008 and 2016 surveys indicate that Mid Sussex residents, particularly those from East Grinstead, along with residents from other local authority areas are frequent visitors to the site. Based on the initial survey results and subsequent data analysis, a 7km zone of influence surrounding the SPA / SAC was established, in which mitigation requirements in the form of Suitable Alternative Natural Greenspace (SANG) and Strategic Access Management and Monitoring (SAMM) apply to residential developments.

1.10 The Local Plan Review allocates a net increase of 444 dwellings within or just beyond 7km of the Ashdown Forest SPA / SAC. According to average housing occupancy figures (2.4 residents per dwelling) and Natural England SANG standards (8ha per 1,000 population increase), delivery of the 444 dwellings would require approx. 8.5ha of functional SANG to be provided. The Council already has a SANG inventory in place, which provides bespoke and strategic mitigation for recreational pressure. This is comprised of operational SANG (e.g. East Court & Ashplats Wood) and SANGs that are to be delivered as part of emerging development proposals and allocations (e.g. Imberhorne Farm) or are shortly to become operational (e.g. Hill Place Farm). Provided that these are delivered as planned, it is considered that sufficient residual capacity is available to accommodate the additional growth coming forward under the review of the MSDP. For example, the proposed strategic Imberhorne Farm SANG in East Grinstead is likely to provide around 40Ha of SANG. Overall, AECOM concludes that an adequate framework regarding SANG provision is in place, but work will need to be undertaken to ensure that functional SANG is available prior to dwellings becoming occupied (see Conclusions and Recommendations).

1.11 Work on the SAMM strategy for the Ashdown Forest SPA / SAC has been ongoing between the local authorities of Wealden, Mid Sussex, Lewes, Tunbridge Wells, Tandridge and Sevenoaks in partnership with the Conservators of Ashdown Forest and Natural England since 2012. Key SAMM projects that are being undertaken in the site include a Code of Conduct that is focused on dog walkers, provision of adequate signage and interpretation boards, deployment of volunteer dog rangers and an Access Management Lead Officer, and protected bird surveys. The working group has published a SAMM tariff guidance document that currently sets out a per-dwelling tariff of £1,170 (subject to annual review), to be paid into an inter-authority monetary pot that funds the SAMM initiatives. All residential dwellings within the 7km mitigation zone are subject to this tariff, such that the integrity of the SPA / SAC is protected.

Conclusions and Recommendations

Atmospheric Pollution

1.12 Air quality modelling data at key road links highlight that there will be no adverse effect on the integrity of the Ashdown Forest SPA / SAC, both alone and in-combination. The contribution of the MSDP to nitrogen deposition and ammonia concentrations is mathematically imperceptible at the closest areas of heathland and in many cases only marginally above zero. In-combination atmospheric pollution impacts are typically below 1% of the Critical Load or, where this is exceeded, would not prevent nitrogen deposition from significantly improving in the period to 2039 and would not prevent heathland restoration at the SAC through improved management (since the main issue with heathland quality and establishment at this SAC is long-term under-management) or interfere with broader initiatives to reduce nitrogen deposition rates across the SAC through the Shared Nitrogen Action Plan.

Recreational Pressure

1.13 Mid Sussex District Council is a member of the Ashdown Forest SAMM Partnership and acknowledges the 7km mitigation zone surrounding the Ashdown Forest SPA / SAC, which

requires the delivery of SANG and SAMM measures. There is a policy in the Local Plan that supports the strategic solution for recreational pressure on Ashdown Forest. An adequate SANG approach has already been adopted by the Council and the existing / future SANGs are projected to have sufficient capacity to accommodate the new residential growth proposed to be allocated in the MSDP. The Council would have to ensure that sufficient SANG capacity is or will be available prior to giving planning consent for any proposed residential allocations that lie within the 7km zone of influence. Contributions to SAMM are governed by the published SAMM guidance document and will be collected accordingly. Provided that the process of SANG identification and delivery is progressed in agreement with Natural England and contributions towards the SAMM Strategy are collected, any potential adverse effects of the MSDP on the Ashdown Forest SPA / SAC regarding recreational pressure can be excluded.

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2. Introduction

Background

2.1 AECOM has been appointed by Mid Sussex District Council (the Council) to undertake a Habitats Regulations Assessment (HRA) of the Regulation 18 Mid Sussex District Plan (MSDP) Review. The objective of an HRA is to identify any aspects of a Plan that may result in Likely Significant Effects (LSEs) and, where relevant, adverse effects on the integrity of the National Site Network (NSN), either in isolation or in combination with other plans and projects. The NSN is comprised of European sites (Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and, as a matter of Government policy, Ramsar sites). Furthermore, the HRA is also to advise on appropriate policy mechanisms for delivering mitigation where adverse effects on integrity are identified. Under the Conservation of Habitats and Species Regulations 2017 (as amended), an Appropriate Assessment of impact pathways is required, where a plan or project is likely to result in Likely Significant Effects (LSEs) upon a European Site, either individually or in combination.

2.2 A review of the currently adopted MSDP 2014-2031 has commenced. The new MSDP will cover the years between 2021 and 2039. It is understood that the MSDP Review will update and revise some Plan policies, while others remain unchanged, and include several new policies. However, this HRA examines all Local Plan policies.

2.3 An initial appraisal of the designated sites surrounding Mid Sussex District, and the impact pathways linking to the proposed growth, indicates that two European sites require consideration, the Ashdown Forest SPA / SAC and Castle Hill SAC. HRA implications are particularly relevant to the Ashdown Forest SPA / SAC, designated for ground-nesting birds and sensitive heathland, which has been under intense pressure from development. Recreational disturbance and atmospheric pollution are the main growth-related impact pathways that apply to these designations.

2.4 In preparing the Mid Sussex District Plan (MSDP) two different Housing Scenarios (4 and 4b) were explored, differing in the allocation of one Significant Site at Ansty for 1,600 dwellings and 1,000m^2 of employment floorspace. The HRA appraised both housing options. With regard to recreational pressure on Ashdown Forest SAC/SPA there was no difference between the two scenarios because the Ansty site lies well outside the core catchment of the SAC/SPA. With regard to air quality there was only a very slight difference in forecast impacts with Scenario 4b (including the Ansty site) having the greatest impact by a very slight margin. Since Scenario 4 is the one ultimately selected for the Regulation 18 District Plan, the focus of the discussion in the report is on that scenario (i.e. without the Ansty site), although the air quality data for both scenarios are presented in Appendix C.

Legislation

2.5 The UK left the European Union (EU) on 31 January 2020 under the terms set out in the European Union (Withdrawal Agreement) Act 2020 (“the Withdrawal Act”). While the UK is no longer a member of the EU, a requirement for Habitats Regulations Assessment will continue as set out in the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019[3].

2.6 The HRA process applies the ‘Precautionary Principle’[4] to European sites. Plans and projects can only be permitted having ascertained that there will be no adverse effect on the integrity of the European site(s) in question. To ascertain whether or not site integrity will be affected, an Appropriate Assessment should be undertaken of the Plan or project in question. Figure 1 below sets out the legislative basis for Appropriate Assessment.

[3] These don’t replace the 2017 Regulations but are just another set of amendments.

[4] The Precautionary Principle, which is referenced in Article 191 of the Treaty on the Functioning of the European Union, has been defined by the United Nations Educational, Scientific and Cultural Organisation (UNESCO, 2005) as: *“When human activities may lead to morally unacceptable harm* [to the environment] *that is scientifically plausible but uncertain, actions shall be taken to avoid or diminish that harm. The judgement of plausibility should be grounded in scientific analysis”.*

2.7 Plans and projects that are associated with potential adverse impacts on European sites may still be permitted if there are no reasonable alternatives and there are Imperative Reasons of Overriding Public Interest (IROPI) as to why they should go ahead. In such cases, compensation would be necessary to ensure the overall integrity of the site network.

Conservation of Habitats and Species Regulations 2017 (as amended)

The Regulations state that:

"*A competent authority, before deciding to … give any consent for a plan or project which is likely to have a significant effect on a European site … shall make an appropriate assessment of the implications for the site in view of that sites conservation objectives… The authority shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site*".

Figure 1: The legislative basis for Appropriate Assessment

2.8 Over time the phrase 'Habitats Regulations Assessment' (HRA) has come into wide currency to describe the overall process set out in the Regulations from screening through to IROPI. This has arisen in order to distinguish the process from the individual stage described in the law as an 'Appropriate Assessment'.

2.9 In spring 2018 the 'Sweetman' European Court of Justice ruling[5] clarified that 'mitigation' (i.e. measures that are specifically introduced to avoid or reduce a harmful effect on a European site that would otherwise arise) should **not** be taken into account when forming a view on Likely Significant Effects. Mitigation should instead only be considered at the Appropriate Assessment stage. This HRA is cognisant of that ruling.

Scope of the Project

2.10 There is no pre-defined guidance that dictates the physical scope of an HRA of a Plan document. Current guidance suggests that the following European sites should be included in the scope of an HRA assessment:

- All European sites within the boundary of Mid Sussex District; and,
- Other European sites shown to be linked to development in Mid Sussex through a known 'pathway' (discussed below).

2.11 Generally, it is uncommon for development plans to be deemed to have significant impacts on European sites situated more than 10km from areas of growth. For example, most core recreational catchments (except for some coastal sites) are under 10km in size and the average vehicle commuting distance of a UK resident is approx. 10km. It should be noted that the presence of a conceivable impact pathway linking a Plan to a European site does not mean that Likely Significant Effects (LSEs) will occur.

2.12 In some cases, development impacts can extend beyond 10km, particularly where hydrological pathways are involved, which is why the source-pathway-receptor concept is also used to help determine whether there are potential pathways connecting development to European sites. This takes site-specific sensitivities into account, including issues such as nutrient neutrality or water levels, quantity and flow.

2.13 Briefly defined, impact pathways are routes by which the implementation of a policy within a Local Plan document can lead to an effect upon a European site. An example of this would be new residential development resulting in an increased population and thus increased recreational pressure, which could affect European sites through, for example, disturbance of ground-nesting birds. Guidance from the Ministry of Housing, Communities and Local Government (MHCLG) states that the HRA should be '*proportionate to the geographical scope of the* [plan policy]' and

[5] People Over Wind and Sweetman v Coillte Teoranta (C-323/17)

that '*an AA need not be done in any more detail, or using more resources, than is useful for its purpose*' (MHCLG, 2006, p.6).

2.14 This basic principle has also been reflected in court rulings. The Court of Appeal[6] has ruled that providing the Council (competent authority) was duly satisfied that proposed mitigation could be 'achieved in practice' to satisfy that the proposed development would have no adverse effect, then this would suffice. This ruling has since been applied to planning permissions (rather than a Plan level document)[7]. In this case the High Court ruled that for '*a multistage process, so long as there is sufficient information at any particular stage to enable the authority to be satisfied that the proposed mitigation can be achieved in practice it is not necessary for all matters concerning mitigation to be fully resolved before a decision maker is able to conclude that a development will satisfy the requirements of Reg 61 of the Habitats Regulations'*.

2.15 Given an initial assessment of the relevant European sites and the impact pathways present, and referring to the HRA work that was undertaken for the adopted Mid Sussex Local Plan, this HRA will discuss (at least as far as the LSEs stage) the following European sites:

- Ashdown Forest SPA / SAC (adjoining the Mid Sussex district boundary, situated entirely within Wealden District); and
- Castle Hill SAC (approx. 6.7km to the south-east of the Mid Sussex District boundary in the neighbouring authorities of Lewes and Brighton and Hove).

2.16 For the HRA, the views of the statutory nature conservation advisors, namely Natural England, will be sought as part of the consultation process on the scope of the European sites assessed. The distribution of the above European sites in relation to Mid Sussex District is shown in Appendix A. An introduction to, the qualifying features (species and habitats), Conservation Objectives, and threats and pressures to the integrity of these European sites are set out in Chapter 3.

2.17 In order to fully inform the screening for LSEs stage, several studies and online information databases have been consulted. These include:

- Future development proposed (and, where available, HRAs) for the adjoining authorities of Wealden, Tunbridge Wells, Sevenoaks, Tandridge, Crawley, Horsham, Adur, Brighton and Hove and Lewes;
- Road traffic statistics from the Department for Transport (https://roadtraffic.dft.gov.uk);
- Journey-to-work data from the Population Census 2011 (https://www.nomisweb.co.uk/census/2011/WU03UK);
- Visitor surveys carried out in the Ashdown Forest SPA / SAC by Footprint Ecology in 2016 and 2021 (the latter largely replicating the methodology of the 2016 survey to provide comparative data for recreational pressure);
- The HRAs produced for the adopted Mid Sussex Local Plan and those of adjoining authorities;
- Site Improvement Plans and Supplementary Conservation Advice Notes for relevant European sites published by Natural England;
- The UK Air Pollution Information System (www.apis.ac.uk); and
- Multi Agency Geographic Information for the Countryside (MAGIC) and its links to SSSI citations and the JNCC website (www.magic.gov.uk).

[6]No Adastral New Town Ltd (NANT) v Suffolk Coastal District Council Court of Appeal, 17th February 2015
[7]High Court case of R (Devon Wildlife Trust) v Teignbridge District Council, 28 July 2015

Quality Assurance

2.18 This report was undertaken in line with AECOM's Integrated Management System (IMS). Our IMS places great emphasis on professionalism, technical excellence, quality, environmental and Health and Safety management. All staff members are committed to establishing and maintaining our certification to the international standards BS EN ISO 9001:2008 and 14001:2004 and BS OHSAS 18001:2007. In addition, our IMS requires careful selection and monitoring of the performance of all sub-consultants and contractors.

2.19 All AECOM Ecologists working on this project are members (at the appropriate level) of the Chartered Institute of Ecology and Environmental Management (CIEEM) and follow their code of professional conduct (CIEEM, 2019)

3. Methodology

Introduction

3.1 The HRA has been carried out with reference to the general EC guidance on HRA[8] and general guidance on HRA published by government in July 2019[9]. AECOM has also been mindful of the implications of European case law in 2018, notably the Holohan ruling and the People over Wind ruling, both discussed below.

3.2 Figure 2 below outlines the stages of HRA according to current EC guidance. The stages are essentially iterative, being revisited as necessary in response to more detailed information, recommendations and any relevant changes to the Plan.

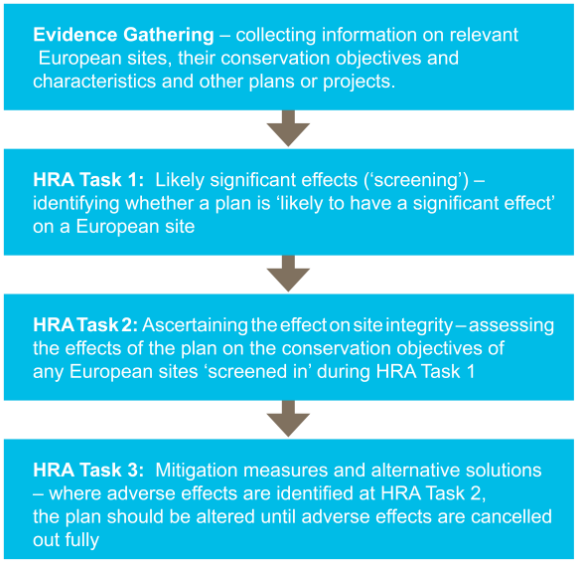

Figure 2: Four Stage Approach to Habitats Regulations Assessment. Source EC, 2001[1].

Description of HRA Tasks

HRA Task 1 – Screening for Likely Significant Effects (LSEs)

3.3 Following evidence gathering, the first stage of any Habitats Regulations Assessment is the screening for Likely Significant Effects (LSEs), essentially a high-level assessment to decide whether the full subsequent stage known as Appropriate Assessment is required. The essential question is:

"Is the project, either alone or in combination with other relevant projects and plans, likely to result in a significant effect upon European sites?"

3.4 The objective is to filter out those Plans and projects that can, without any detailed appraisal, be concluded to be unlikely to result in any impacts upon European sites, usually because there is no mechanism for a negative interaction. This stage is undertaken in Chapter 5 of this report and in Appendix B.

[8] European Commission (2001): Assessment of plans and projects significantly affecting Natura 2000 Sites: Methodological Guidance on the Provisions of Article 6(3) and 6(4) of the Habitats Directive.
[9] https://www.gov.uk/guidance/appropriate-assessment

HRA Task 2 – Appropriate Assessment (AA)

3.5 Where it is determined that a conclusion of 'no Likely Significant Effects (LSEs)' cannot be drawn, the analysis proceeds to the next stage of HRA known as Appropriate Assessment. Case law has clarified that 'Appropriate Assessment' is not a technical term. In other words, there are no particular technical analyses, or level of technical analysis, that are classified by law as belonging to Appropriate Assessment compared to the screening stage.

3.6 By virtue of the fact that it follows screening for LSEs, there is a clear implication that the analysis will be more detailed than undertaken at the previous stage. One of the key considerations during Appropriate Assessment is whether there is available mitigation that would entirely address the potential effect. In practice, the Appropriate Assessment would take any policies or allocations that could not be dismissed following the high-level screening and assess the potential for an effect in more detail, with a view to concluding whether there would be a potential for an adverse effect on site integrity (in other words, disruption of the coherent structure and function of the European site(s)). A decision by the European Court of Justice[10] concluded that measures intended to avoid or reduce the harmful effects of a proposed Plan or project on a European site may no longer be considered by competent authorities at the screening for LSEs stage of HRA. That ruling has been taken into account in producing this HRA.

3.7 Also. in 2018 the Holohan ruling[11] was handed down by the European Court of Justice. Among other provisions paragraph 39 of the ruling states that '*As regards other habitat types or species, which are present on the site, but for which that site has not been listed, and with respect to habitat types and species located outside that site, … typical habitats or species must be included in the appropriate assessment, if they are necessary to the conservation of the habitat types and species listed for the protected area*' [emphasis added]. Due account of this decision has been given in this HRA in relation to the Ashdown Forest SPA, which is designated for mobile ground-nesting birds (although it is to be noted that the qualifying species are not considered to be critically dependent on functionally linked habitats).

HRA Task 3 – Avoidance and Mitigation

3.8 Where necessary, measures are recommended for incorporation into the Plan in order to mitigate and / or avoid adverse effects on European sites. There is considerable precedent concerning the level of detail that a Local Plan document needs to contain regarding mitigation for impact pathways on European sites (e.g. regarding recreational pressure). The implication of this precedent is that it is not necessary for all measures to be fully developed prior to adoption of the Plan, but the Plan must provide an adequate policy framework within which these measures can be delivered.

3.9 When discussing mitigation for a Local Plan, one is concerned primarily with the policy framework to enable the delivery of such mitigation rather than the details of the mitigation measures themselves since a Local Plan document is a high-level policy document.

3.10 In any Local Plan, there are numerous policies for which there is a limit to the degree of assessment that is possible at the Plan level. This is because either:

- The policy in question does not contain any specifics as to what will be delivered or where, and so cannot be assessed in detail at the Plan level. In these cases, the Appropriate Assessment focusses on precautionary mitigation that can be included in the plan to ensure that whatever proposals come forward will not result in adverse effects on integrity; or
- The nature of potential impacts (e.g. visual and noise disturbance arising from construction or loss of functionally linked habitat) are related to how the development will be designed and constructed, and therefore cannot be assessed in detail at the plan level. In these instances, the Appropriate Assessment focusses on available mitigation measures, the extent to which such measures would be achievable and effective, and

[10] People Over Wind and Sweetman v Coillte Teoranta (C-323/17)
[11] Case C-461/17

whether an adequate protective framework exists to ensure that the policy would not lead to an adverse effect on the integrity of any internationally designated sites.

3.11 In these instances, the advice of Advocate-General Kokott[12] is also worth considering. She commented that: *'It would …hardly be proper to require a greater level of detail in preceding plans* [rather than planning applications] *or the abolition of multi-stage planning and approval procedures so that the assessment of implications can be concentrated on one point in the procedure. Rather, adverse effects on areas of conservation must be assessed at every relevant stage of the procedure* ***to the extent possible on the basis of the precision of the plan***. ***This assessment is to be updated with increasing specificity in subsequent stages of the procedure'*** [emphasis added].

[12] Opinion of Advocate General Kokott, 9th June 2005, Case C-6/04. Commission of the European Communities v United Kingdom of Great Britain and Northern Ireland, paragraph 49http://curia.europa.eu/juris/document/document.jsf?docid=58359&doclang=EN

4. European Sites

Ashdown Forest SAC

Introduction

4.1 The Ashdown Forest SAC is an extensive area of common land located between East Grinstead and Crowborough, and entirely within Wealden District. The geology of the Ashdown Sands (which underlies Ashdown Forest), in combination with the wetter and cooler local climate, gives rise to sandy soils, which are characteristically acid, clay and nutrient-poor. In turn, this soil type has promoted the development of heathland, valley mire and damp woodland communities.

4.2 Despite a recent acceleration in the development of woodland, Ashdown Forest remains one of the largest single continuous blocks of lowland heath in south-east England. A range of typical heathland flora is supported, including heather (*Calluna vulgaris*), bell heather (*Erica cinerea*), cross-leaved heath (*Erica tetralix*), gorse (*Ulex europaeus*) and dwarf gorse (*Ulex minor*). A rich invertebrate fauna (e.g. beetles, dragonflies, damselflies and butterflies) and unique assemblage of heath and woodland birds critically depend on the SAC habitat (see section on the overlapping Ashdown Forest SPA below).

4.3 The damp heath woodland may be varied, including birch (*Betula sp.*, acting as primary colonisers), oak (*Quercus robur*), willow (*Salix sp.*) and pine (*Pinus* sp.). In areas where grazing management has been limited, woodland often encroaches on former heath, forming dense and shaded areas with sparse ground flora. In many instances where Natural England's site condition assessment identifies sub-components as 'unfavourable declining', a lack of grazing management has been identified as a main contributing factor to negative site condition.

Qualifying Features[13]

4.4 Annex I habitats:

- Northern Atlantic wet heathland with *Erica tetralix*
- European dry heaths

4.5 Annex II species present as a qualifying feature, but not a primary reason for site selection:

- Great-crested newt *Triturus cristatus*

Conservation Objectives[14]

4.6 With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change;

4.7 Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats and habitats of qualifying species
- The structure and function (including typical species) of qualifying natural habitats
- The structure and function of the habitats of qualifying species

[13] Available at: https://sac.jncc.gov.uk/site/UK0030080 [Accessed on the 21/10/2021]
[14] Available at: http://publications.naturalengland.org.uk/publication/6183967367626752 [Accessed on the 21/10/2021]

- The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- The populations of qualifying species, and,
- The distribution of qualifying species within the site.

Threats / Pressures to Site Integrity

4.8 The key environmental sensitivities and impact pathways are summarised in the corresponding section on the Ashdown Forest SPA below because Natural England's Site Improvement Plan covers both the SAC and SPA.

Ashdown Forest SPA

Introduction

4.9 The mosaic of habitats, and specifically the heath and woodland, in Ashdown Forest harbours a high species richness of birds. These include woodland specialists (e.g. woodcock, tree pipits, siskins, lesser redpoll) as well as various birds of prey (e.g. buzzards, sparrowhawk, hobby). However, most notably, Ashdown Forest harbours specialist species that critically depend on the heath for survival, including nightjar and Dartford warbler.

4.10 The Dartford warbler depends on mature, dry heath habitats (especially gorse) in good condition for surviving the winter. It is a ground-nesting bird that builds a grassy, cup-shaped nest under the protective cover of dense heather or gorse. Similarly, nightjar usually build their nests in small gaps in dry heather, which provide shelter and protection from potential predators. Both species depend on the rich invertebrate fauna that is supported by the heath.

Qualifying Species[15]

4.11 This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of the following species:

Annex I breeding species:

- European nightjar (*Caprimulgus europaeus*) – 35 pairs (1% of the breeding population in GB)
- Dartford warbler (*Sylvia undata*) – 29 pairs (1.8% of the breeding population in GB)

Conservation Objectives[16]

4.12 With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change;

4.13 Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site.

[15] Available at: http://publications.naturalengland.org.uk/publication/6399918323269632 [Accessed on the 21/10/2021]
[16] Available at: http://publications.naturalengland.org.uk/publication/6399918323269632 [Accessed on the 21/10/2021]

Threats / Pressures to Site Integrity[17] [18]

4.14 The following threats / pressures to the integrity of the Ashdown Forest SPA (and SAC) have been identified in Natural England's Site Improvement Plan and Supplementary Advice on the Conservation Objectives for the SAC:

- Change in land management
- Air pollution: Impact of atmospheric nitrogen deposition
- Public access / disturbance
- Hydrological changes

Castle Hill SAC

Introduction

4.15 The Castle Hill SAC is a 114.54ha large site that encompasses dry grassland / steppes (90%), humid / mesophile grassland (5%) and heath / scrub (5%). It is situated in the South Downs National Character Area and South Downs National Park. The site is one of the best examples in East Sussex of the nationally uncommon chalk grassland habitat. Particular variations of plant and animal communities are seen along gradients of aspect and slope. Notable species in the sward include sheep's-fescue *Festuca ovina*, meadow oat-grass *Helictotrichon pratense*, upright brome *Bromopsis erecta* and tor-grass *Brachypodium pinnatum*.

4.16 The plant communities within the SAC also support a number of rare and scarce species, including spider-orchid *Ophrys sphegodes*, burnt orchid *Orchis ustulate* and early gentian *Gentianella anglica*. Scrub compartments provide breeding habitat for a range of downland birds, such as yellowhammer, corn bunting, linnet and whitethroat. A rich orthopteran fauna is also associated with the site, including great green bush cricket and wart-biter grasshopper.

Qualifying Features[19]

4.17 Annex I habitats that are a primary reason for selection of this site:

- Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (note that this includes important orchid sites)

4.18 Annex II species present as a qualifying feature, but not a primary reason for site selection:

- Early gentian *Gentianella anglica*

Conservation Objectives[20]

4.19 With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change;

4.20 Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats and habitats of qualifying species
- The structure and function (including typical species) of qualifying natural habitats

[17] Available at: http://publications.naturalengland.org.uk/publication/5793096570765312 [Accessed on the 21/10/2021]
[18] http://publications.naturalengland.org.uk/publication/6183967367626752#:~:text=Downloads%20available%20for%20this%20record%20%20%20,PDF%2C%2031.0%20K%20...%20%20%202014%2F09%2F09%20 [Accessed on the 21/12/2021]
[19] Available at: https://sac.jncc.gov.uk/site/UK0012836 [Accessed on the 21/10/2021]
[20] Available at: http://publications.naturalengland.org.uk/publication/6088288314064896 [Accessed on the 21/10/2021]

- The structure and function of the habitats of qualifying species
- The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- The populations of qualifying species, and,
- The distribution of qualifying species within the site.

Threats / Pressures to Site Integrity[21]

4.21 The following threats / pressures to the integrity of the Castle Hill SAC are identified in Natural England's Site Improvement Plan:

- Undergrazing
- Fertiliser use
- Air pollution: Impact of atmospheric nitrogen deposition

[21] Available at: http://publications.naturalengland.org.uk/publication/6241234389565440 [Accessed on the 21/10/2021]

5. Identified Impact Pathways

Atmospheric Pollution (Nitrogen Deposition)

5.1 The main pollutants of concern for European sites are oxides of nitrogen (NOx), ammonia (NH_3) and sulphur dioxide (SO_2) and are summarised in Table 1. Ammonia can have a directly toxic effect upon vegetation, particularly at close distances to the source such as near road verges[22]. NOx can also be toxic at very high concentrations (far above the annual average Critical Level). High levels of NOx and NH_3 are likely to increase the total nitrogen (N) deposition to soils, potentially leading to deleterious knock-on effects in resident ecosystems. Increases in nitrogen deposition from the atmosphere can, if sufficiently great, enhance soil fertility and lead to eutrophication. This often has adverse effects on the community composition and quality of semi-natural, nitrogen-limited terrestrial and aquatic habitats[23] [24].

Table 1: Main sources and effects of air pollutants on habitats and species[25]

Pollutant	Source	Effects on habitats and species
Sulphur Dioxide (SO_2)	The main sources of SO_2 are electricity generation, and industrial and domestic fuel combustion. However, total SO_2 emissions in the UK have decreased substantially since the 1980's. Another origin of sulphur dioxide is the shipping industry and high atmospheric concentrations of SO_2 have been documented in busy ports. In future years shipping is likely to become one of the most important contributors to SO_2 emissions in the UK.	Wet and dry deposition of SO_2 acidifies soils and freshwater, and may alter the composition of plant and animal communities. The magnitude of effects depends on levels of deposition, the buffering capacity of soils and the sensitivity of impacted species. However, SO_2 background levels have fallen considerably since the 1980's and are now not regarded a threat to plant communities. For example, decreases in Sulphur dioxide concentrations have been linked to returning lichen species and improved tree health in London.
Acid deposition	Leads to acidification of soils and freshwater via atmospheric deposition of SO_2, NOx, ammonia, and hydrochloric acid. Acid deposition from rain has declined by 85% in the last 20 years, which most of this contributed by lower sulphate levels.	Gaseous precursors (e.g. SO_2) can cause direct damage to sensitive vegetation, such as lichen, upon deposition. Can affect habitats and species through both wet (acid rain) and dry deposition. The effects of acidification include lowering of soil pH, leaf chlorosis, reduced decomposition rates, and compromised reproduction in birds / plants. Not all sites are equally susceptible to acidification. This varies depending on soil type, bed rock geology, weathering rate and buffering capacity. For example, sites with an underlying geology of granite, gneiss and quartz rich rocks tend to be more susceptible.

[22] http://www.apis.ac.uk/overview/pollutants/overview_NOx.htm.
[23] Wolseley, P. A.; James, P. W.; Theobald, M. R.; Sutton, M. A. (2006). Detecting changes in epiphytic lichen communities at sites affected by atmospheric ammonia from agricultural sources. *Lichenologist* **38**: 161-176.
[24] Dijk, N. (2011). Dry deposition of ammonia gas drives species change faster than wet deposition of ammonium ions: evidence from a long-term field manipulation. *Global Change Biology* **17**: 3589-3607.
[25] Information summarised from the Air Pollution Information System (http://www.apis.ac.uk/).

Pollutant	Source	Effects on habitats and species
Ammonia (NH_3)	Ammonia is a reactive, soluble alkaline gas that is released following decomposition and volatilisation of animal wastes. It is a naturally occurring trace gas, but ammonia concentrations are directly related to the distribution of livestock. Ammonia reacts with acid pollutants such as the products of SO_2 and NO_X emissions to produce fine ammonium (NH_4+) - containing aerosol. Due to its significantly longer lifetime, NH_4+ may be transferred much longer distances (and can therefore be a significant trans-boundary issue). While ammonia deposition may be estimated from its atmospheric concentration, the deposition rates are strongly influenced by meteorology and ecosystem type.	The negative effect of NH_4+ may occur via direct toxicity, when uptake exceeds detoxification capacity and via nitrogen accumulation. Its main adverse effect is eutrophication, leading to species assemblages that are dominated by fast-growing and tall species. For example, a shift in dominance from heath species (lichens, mosses) to grasses is often seen. As emissions mostly occur at ground level in the rural environment and NH_3 is rapidly deposited, some of the most acute problems of NH_3 deposition are for small relict nature reserves located in intensive agricultural landscapes.
Nitrogen oxides (NO_x)	Nitrogen oxides are mostly produced in combustion processes. Half of NO_X emissions in the UK derive from motor vehicles, one quarter from power stations and the rest from other industrial and domestic combustion processes. NOx concentrations have been falling for decades due to improvements in vehicle emissions technology and this will accelerate after 2030 as electric vehicles (or other non-combustion engine vehicles) spread through the vehicle fleet following the Government's ban on the sale of new petrol and diesel cars and vans in 2030.	Direct toxicity effects of gaseous nitrates are likely to be important in areas close to the source (e.g. roadside verges). A critical level of NOx for all vegetation types has been set to 30 ug/m3. Deposition of nitrogen compounds (nitrates (NO_3), nitrogen dioxide (NO_2) and nitric acid (HNO_3)) contributes to the total nitrogen deposition and may lead to both soil and freshwater acidification. In addition, NO_x contributes to the eutrophication of soils and water, altering the species composition of plant communities at the expense of sensitive species.
Nitrogen (N) deposition	The pollutants that contribute to the total nitrogen deposition derive mainly from oxidized (e.g. NO_X) or reduced (e.g. NH_3) nitrogen emissions (described separately above). While oxidized nitrogen mainly originates from major conurbations or highways, reduced nitrogen mostly derives from farming practices. The nitrogen pollutants together are a large contributor to acidification (see above).	All plants require nitrogen compounds to grow, but too much overall N is regarded as the major driver of biodiversity change globally. Species-rich plant communities with high proportions of slow-growing perennial species and bryophytes are most at risk from nitrogen eutrophication. This is because many semi-natural plants cannot assimilate the surplus nitrogen as well as many graminoid (grass) species. Nitrogen deposition can also increase the risk of damage from abiotic factors, e.g. drought and frost.
Ozone (O_3)	A secondary pollutant generated by photochemical reactions involving NOx, volatile organic compounds (VOCs) and sunlight. These precursors are mainly released by the combustion of fossil fuels (as discussed above). Increasing anthropogenic emissions of ozone precursors in the UK have led to an increased number of days when ozone levels rise above 40ppb ('episodes' or 'smog'). Reducing ozone pollution is believed to require action at international level to reduce levels of the precursors that form ozone.	Concentrations of O_3 above 40 ppb can be toxic to both humans and wildlife, and can affect buildings. High O_3 concentrations are widely documented to cause damage to vegetation, including visible leaf damage, reduction in floral biomass, reduction in crop yield (e.g. cereal grains, tomato, potato), reduction in the number of flowers, decrease in forest production and altered species composition in semi-natural plant communities.

5.2 Sulphur dioxide emissions overwhelmingly derive from power stations and industrial processes that require the combustion of coal and oil, as well as (particularly on a local scale) shipping[26]. As such these will not be associated with Local Plan growth. Ammonia emissions originate from agricultural practices[27], with some chemical processes also making notable contributions and traffic also contributing materially at a local scale. NOx emissions are dominated by the output of vehicle exhausts (more than half of all emissions). A 'typical' housing development will contribute by far the largest portion of its overall NOx footprint (92%) through associated road traffic. Other sources, although relevant, are of minor importance (8%) in comparison[28]. Therefore, emissions of NOx and ammonia can reasonably be expected to increase as a result of the Plan, primarily due to an increase in the volume of commuter traffic associated with housing growth.

5.3 The World Health Organisation has the following critical thresholds for plant communities: The critical NOx concentration (critical level) for the protection of vegetation is 30 μgm^{-3} and the critical level for ammonia 1-3 μgm^{-3} (depending on whether normal vegetation or lichens and bryophytes are involved). Additionally, ecological studies have determined 'Critical Loads'[29] of atmospheric nitrogen deposition (that is, NOx combined with ammonia NH_3).

5.4 According to the Department of Transport's Transport Analysis Guidance, beyond 200m, the contribution of vehicle emissions from the roads to local pollution levels is insignificant (Figure 3 and reference [30]). Therefore, this distance has been used throughout this HRA to determine whether Likely Significant Effects (LSEs) on sensitive European sites may arise due to implementation of the Plan.

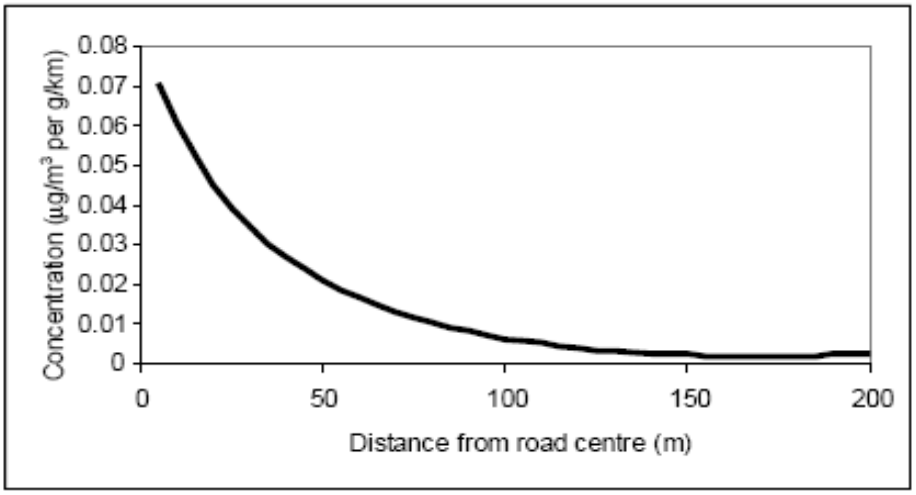

Figure 3: Traffic contribution to concentrations of pollutants at different distances from a road (Source: DfT[31])

5.5 Several studies have been previously commissioned to consider the impact of traffic associated with new housing and employment development at Ashdown Forest. For example, an Air Quality Monitoring and Modelling Study was undertaken by Air Quality Consultants on behalf of Wealden District Council, which highlighted that the annual mean critical levels for both NH_3 and NOx are being exceeded in close proximity to roads traversing the SAC. However, it has generally been difficult to attribute variation in these habitats, primarily due to a range of confounding variables such as grazing management, visitor pressure and other roadside physical disturbances (e.g. salt spray, particulates and debris). Another study undertaken by ECUS on behalf of Wealden District Council, investigated ecological impacts caused by nitrogen deposition along 15 road transects in the Ashdown Forest SAC. The study determined that the transects showed low

[26] http://www.apis.ac.uk/overview/pollutants/overview_SO2.htm.
[27] Pain, B.F.; Weerden, T.J.; Chambers, B.J.; Phillips, V.R.; Jarvis, S.C. (1998). A new inventory for ammonia emissions from U.K. agriculture. *Atmospheric Environment* **32**: 309-313.
[28] Proportions calculated based upon data presented in Dore CJ et al. 2005. UK Emissions of Air Pollutants 1970 – 2003. UK National Atmospheric Emissions Inventory. http://www.airquality.co.uk/archive/index.php [Accessed on the 21/10/2021]
[29] The critical load is the rate of deposition beyond which research indicates that adverse effects can reasonably be expected to occur.
[30] Available at: http://www.dft.gov.uk/webtag/documents/expert/unit3.3.3.php#013 [Accessed on the 21/10/2021]
[31] Available at: http://www.dft.gov.uk/ha/standards/dmrb/vol11/section3/ha20707.pdf [Accessed on the 21/10/2021]

overall species richness, which tended to decline with distance from road (in other words diversity was greater closer to the road than more distant, the opposite of what one might expect if nitrogen deposition were the main factor governing vegetation composition). Furthermore, there was no correlation between soil total nitrogen levels with distance from road, implying that road traffic alone clearly does not account for soil chemistry variation and species composition. As a general rule undergrazing and inadequate management is the primary reason more of this site does not support good quality heathland. Roads can have a significant effect but their effect will be felt closest to the road which is generally the habitat less representative of SAC features and is affected by a range of other factors controlling vegetation composition, known as edge effects. Away from the roadside, agriculture makes the greatest contribution to nitrogen deposition across the SAC. Notwithstanding this, atmospheric pollution from road traffic clearly continues to be a contributing threat to the integrity of the Ashdown Forest SAC and requires particular attention in HRAs of Local Plans.

5.6 Overall, the following European sites within 10km of the Mid Sussex District boundary are sensitive to atmospheric nitrogen deposition, primarily due to the presence of nutrient-limited habitats (the sites in **bold** are taken forward into the following HRA chapters):

- **Ashdown Forest SPA / SAC (located in Wealden District, directly adjoining to the east of Mid Sussex District)**
- **Castle Hill SAC (located approx. 6.6km to the south-east of Mid Sussex District in the adjoining authority of Lewes and Brighton and Hove)**

Recreational Pressure

5.7 There is concern over the cumulative impacts of recreation on key nature conservation sites in the UK, as most sites must fulfill conservation objectives while also providing recreational opportunity. Various research reports have provided compelling links between changes in housing and access levels[32], and impacts on European protected sites[33] [34]. This applies to any habitat, but recreational pressure from housing growth is of particular significance for European sites designated for their bird interest. Different European sites are subject to different types of recreational pressures and have different vulnerabilities. Studies across a range of species have shown that the effects from recreation can be complex. HRAs of planning documents tend to focus on recreational sources of disturbance as a result of new residents[35].

Trampling Damage, Nutrient Enrichment and Wildfires

5.8 Most terrestrial habitats (especially heathland, woodland and dune systems) can be affected by trampling and other mechanical damage, which dislodges individual plants, leads to soil compaction and erosion. The following studies have assessed the impact of trampling associated with different recreational activities in different habitats:

- Wilson & Seney)[36] examined the degree of track erosion caused by hikers, motorcyclists, horse riders and cyclists in 108 plots along tracks in the Gallatin National Forest, Montana. Although the results proved difficult to interpret, it was concluded that horses and hikers disturbed more sediment on wet tracks, and therefore caused more erosion, than motorcycles and bicycles.

[32] Weitowitz D.C., Panter C., Hoskin R. & Liley D. (2019). The effect of urban development on visitor numbers to nearby protected nature conservation sites. *Journal of Urban Ecology* **5**. https://doi.org/10.1093/jue/juz019
[33] Liley D, Clarke R.T., Mallord J.W., Bullock J.M. (2006a). The effect of urban development and human disturbance on the distribution and abundance of nightjars on the Thames Basin and Dorset Heaths. Natural England / Footprint Ecology.
[34] Liley D., Clarke R.T., Underhill-Day J., Tyldesley D.T. (2006b). Evidence to support the appropriate Assessment of development plans and projects in south-east Dorset. Footprint Ecology / Dorset County Council.
[35] The RTPI report 'Planning for an Ageing Population' (2004) which states that 'From being a marginalised group in society, the elderly are now a force to be reckoned with and increasingly seen as a market to be wooed by the leisure and tourist industries. There are more of them and generally they have more time and more money.' It also states that 'Participation in most physical activities shows a significant decline after the age of 50. The exceptions to this are walking, golf, bowls and sailing, where participation rates hold up well into the 70s'.
[36] Wilson, J.P. & J.P. Seney. (1994). Erosional impact of hikers, horses, motorcycles and off-road bicycles on mountain trails in Montana. *Mountain Research and Development* **14**:77-88

- Cole et al[37] conducted experimental off-track trampling in 18 closed forest, dwarf scrub and meadow & grassland communities (each trampled between 0 – 500 times) over five mountain regions in the US. Vegetation cover was assessed two weeks and one year after trampling, and an inverse relationship with trampling intensity was discovered, although this relationship was weaker after one year than two weeks indicating some recovery of the vegetation. Differences in plant morphology was found to explain more variation in response than soil and topographic factors. Low-growing, mat-forming grasses regained their cover best after two weeks and were considered most resistant to trampling, while tall forbs (non-woody vascular plants other than grasses, sedges, rushes and ferns) were considered least resistant. The cover of hemicryptophytes and geophytes (plants with buds below the soil surface) was heavily reduced after two weeks but had recovered well after one year and as such these were considered most resilient to trampling. Chamaephytes (plants with buds above the soil surface) were least resilient to trampling. It was concluded that these would be the least tolerant of a regular cycle of disturbance.

- Cole [38] conducted a follow-up study (across four vegetation types) in which shoe type (trainers or walking boots) and trampling weight were varied. Although immediate damage was greater with walking boots, there was no significant difference after one year. Heavier tramplers caused a greater reduction in vegetation height than lighter tramplers, but there was no differential impact on vegetation cover.

- Cole & Spildie[39] experimentally compared the effects of off-track trampling by hikers and horse riders (at two intensities – 25 and 150 passes) in two woodland vegetation types (one with an erect forb understorey and one with a low shrub understorey). Horse trampling was found to cause the largest reduction in vegetation cover. The forb-dominated vegetation suffered greatest disturbance but recovered rapidly. Generally, it was shown that higher trampling intensities caused more disturbance.

- In heathland sites, trampling damage can affect the value of a site to wildlife. For example, heavy use of sandy tracks loosens and continuously disturbs sand particles, reducing the habitat's suitability for invertebrates[40]. Species that burrow into flat surfaces such as the centres of paths, are likely to be particularly vulnerable, as the loose sediment can no longer maintain their burrow. In some instances, nature conservation bodies and local authorities resort to hardening paths to prevent further erosion. However, this is concomitant with the loss of habitat used by wildlife, such as sand lizards and burrowing invertebrates.

5.9 A major concern for nutrient-poor terrestrial habitats (e.g. heathlands, sand dunes, bogs and fens) is nutrient enrichment associated with dog fouling (addressed in various reviews, e.g.[41]). It is estimated that dogs will defecate within 10 minutes of starting a walk and therefore most nutrient enrichment arising from dog faeces will occur within 400m of a site entrance. In contrast, dogs will urinate at frequent intervals during a walk, resulting in a more spread out distribution of urine. For example, in Burnham Beeches National Nature Reserve it is estimated that 30,000 litres of urine and 60 tonnes of dog faeces are deposited annually[42]. While there is limited information on the chemical constituents of dog faeces, nitrogen is one of the main components[43].

[37] Cole, D.N. (1995a). Experimental trampling of vegetation. I. Relationship between trampling intensity and vegetation response. *Journal of Applied Ecology* **32**: 203-214
Cole, D.N. (1995b). Experimental trampling of vegetation. II. Predictors of resistance and resilience. *Journal of Applied Ecology* **32**: 215-224
[38] Cole, D.N. (1995c). Recreational trampling experiments: effects of trampler weight and shoe type. Research Note INT-RN-425. U.S. Forest Service, Intermountain Research Station, Utah.
[39] Cole, D.N., Spildie, D.R. (1998). Hiker, horse and llama trampling effects on native vegetation in Montana, USA. *Journal of Environmental Management* **53**: 61-71
[40] Taylor K., Anderson P., Liley D. & Underhill-Day J.C. (2006). Promoting positive access management to sites of nature conservation value: A guide to good practice. English Nature / Countryside Agency, Peterborough and Cheltenham.
[41] Taylor K., Anderson P., Taylor R.P., Longden K. & Fisher P. (2005). Dogs, access and nature conservation. English Nature Research Report, Peterborough.
[42] Barnard A. (2003). Getting the facts – Dog walking and visitor number surveys at Burnham Beeches and their implications for the management process. *Countryside Recreation* **11**:16-19.
[43] Taylor K., Anderson P., Liley D. & Underhill-Day J.C. (2006). Promoting positive access management to sites of nature conservation value: A guide to good practice. English Nature / Countryside Agency, Peterborough and Cheltenham.

Nutrient availability is the major determinant of plant community composition and the effect of dog defecation in sensitive habitats is comparable to a high-level application of fertiliser, potentially resulting in a shift towards plant communities that are more typical of improved grasslands.

Bird Disturbance

5.10 Human activity can affect birds either directly (e.g. by eliciting flight responses) or indirectly (e.g. by damaging habitat or reducing bird fitness in less obvious ways such as through inducing stress responses). The most obvious direct effect is that of immediate mortality such as death by shooting, but human activity can also lead to much subtler behavioural (e.g. alterations in feeding behaviour, avoidance of certain areas and use of sub optimal areas etc.) and physiological changes (e.g. an increase in heart rate). While such changes are less noticeable, they might result in major population-level changes by altering the balance between immigration / birth and emigration / death[44].

5.11 Concern regarding the effects of disturbance on birds stems from the fact that they are expending energy unnecessarily and time spent responding to disturbance is time that is not spent feeding[45]. Disturbance therefore increases energetic expenditure while reducing energetic intake, which can adversely affect the 'condition' and ultimately survival of birds. Additionally, displacement of birds from one feeding site to another can increase the pressure on the resources available within alternative foraging sites, which must sustain a greater number of birds[46]. Moreover, the higher proportion of time a breeding bird spends away from its nest, the more likely it is that eggs will cool and the more vulnerable they, or any nestlings, are to predators. Recreational effects on ground-nesting birds are particularly severe, with many studies concluding that urban sites support lower densities of key species, such as stone curlew and nightjar[47] [48].

5.12 Several factors (e.g. seasonality, type of recreational activity) may have pronounced impacts on the nature of bird disturbance. Disturbance in winter may be more impactful because food shortages make birds more vulnerable at this time of the year. In contrast, this may be counterbalanced by fewer recreational users in the winter months and lower overall sensitivity of birds outside the breeding season. Evidence in the literature suggests that the magnitude of disturbance clearly differs between different types of recreational activities. For example, dog walking leads to a significantly higher reduction in bird diversity and abundance compared to hiking[49]. Scientific evidence also suggests that key disturbance parameters, such as areas of influence and flush distance, are significantly greater for dog walkers than hikers[50]. Furthermore, differences in on-site route lengths and usage patterns likely imply that key spatial and temporal parameters (such as the area of a site potentially impacted and the frequency of disturbance) will also differ between recreational activities. This suggests that activity type is a factor that ought to be taken into account in HRAs.

Summary

5.13 Several European sites relevant to Mid Sussex District are designated for habitats and species that are sensitive to recreational pressure, including the Ashdown Forest SAC (supports parcels of dry and wet heathland), Ashdown Forest SPA (supports nightjar and Dartford warbler, which nest on or close to the ground) and the Castle Hill SAC (designated for semi-natural dry grassland and scrubland). The increase in residential development allocated in the MSDP Review will lead to an increase in the local population and demand for access to outdoor spaces. The HRA

[44] Riley, J. (2003). Review of Recreational Disturbance Research on Selected Wildlife in Scotland. Scottish Natural Heritage.
[45] Riddington, R. *et al*. (1996). The impact of disturbance on the behaviour and energy budgets of Brent geese. *Bird Study* **43**:269-279.
[46] Gill, J.A., Sutherland, W.J. & Norris, K. (1998). The consequences of human disturbance for estuarine birds. *RSPB Conservation Review* **12**: 67-72.
[47] Clarke R.T., Liley D., Sharp J.M., Green R.E. (2013). Building development and roads: Implications for the distribution of stone curlews across the Brecks. *PLOS ONE*. https://doi:10.1371/journal.pone.0072984.
[48] Liley D. & Clarke R.T. (2003). The impact of urban development and human disturbance on the numbers of nightjar *Caprimulgus europaeus* on heathlands in Dorset, England. Biological Conservation **114**: 219-230.
[49] Banks P.B., Bryant J.Y. (2007). Four-legged friend or foe? Dog walking displaces native birds from natural areas. *Biology Letters* **3**: 14pp.
[50] Miller S.G., Knight R.L., Miller C.K. (2001). Wildlife responses to pedestrians and dogs. *Wildlife Society Bulletin* **29**: 124-132.

process needs to adequately assess potential recreational pressure effects of the Plan on these European sites.

5.14 Overall, the following European sites within 10km of the Mid Sussex District boundary are sensitive to increased recreational access, due to the allocation of residential development in the MSDP (the sites in **bold** are taken forward into the following HRA chapters):

- **Ashdown Forest SPA / SAC (located in Wealden District, directly adjoining to the east of Mid Sussex District)**
- **Castle Hill SAC (located approx. 6.6km to the south-east of Mid Sussex District in the adjoining authority of Lewes and Brighton and Hove)**

6. Screening for Likely Significant Effects (LSEs)

Atmospheric Pollution (Nitrogen Deposition)

Ashdown Forest SPA / SAC

6.1 The Ashdown Forest SAC is primarily designated for its extensive, continuous block of lowland heathland, comprising northern wet heath with *Erica tetralix* and European dry heath. The Air Pollution Information System (APIS) identifies both habitats as being sensitive to atmospheric pollution with a nitrogen Critical Load (CL) of 10-20 kg N/ha/yr. An exceedance of the CL may lead to a change in botanical community composition, favouring more competitive grasses over heather species. High nitrogen concentrations can also make ericaceous species more susceptible to impacts from frost and drought. In dry heaths, elevated nitrogen levels may lead to a decline in lichens and changes in plant biochemistry. The current deposition trends for the SAC indicate that the minimum CL is already being exceeded, with maximum background nitrogen deposition in the 5km grid squares within which the SAC is situated being 14.9 kg N/ha/yr. The deposition rate will be greater than this close to roads.

6.2 The critical load for nitrogen is already exceeded across Ashdown Forest SAC. With regard to this fact the following are relevant:

- Paragraph 5.26 of the Natural England guidance on the issue[51] states that '*An exceedance* [of the critical level or load] *alone is insufficient to determine the acceptability (or otherwise) of a project'*. So, the fact that the critical level for NOx or ammonia, or critical load for nitrogen are already exceeded is not a legitimate basis to conclude that any further NOx, ammonia, or nitrogen (no matter how small) will result in an adverse effect;
- Paragraph 4.25 of the same guidance states '*…1% of critical load/level are considered by Natural England's air quality specialists (and by industry, regulators and other statutory nature conservation bodies) to be suitably precautionary, as any emissions below this level are widely considered to be imperceptible…There can therefore be a high degree of confidence in its application to screen for risks of an effect*'.

6.3 The SAC sits entirely within Wealden District to the north-east of Mid Sussex and is traversed by several potential commuter roads, including the A275, A22 and A26 as well as smaller routes that provide direct connections across the SAC. Review of habitat mapping on MAGIC indicates that extensive fragments of heathland are located directly adjacent to all these roads, clearly within the 200m screening distance for roadside atmospheric pollution effects from vehicular traffic. Furthermore, these roads may form key routes for commuters travelling to / from the adjoining authority of Wealden, or other authorities.

6.4 Natural England's Site Improvement Plan highlights atmospheric pollution as a pressure to the integrity of the SAC (second to inadequate land management), with parts of the site experiencing declines in heather coverage and becoming increasingly dominated by grasses, although the Supplementary Advice on the Conservation Objectives identify the significant role of agriculture as a source of nitrogen. **The MSDP will significantly increase the population and employment opportunities within the District, likely resulting in more commuter journeys being undertaken within 200m of sensitive heathland. Therefore, Likely Significant Effects (LSEs) cannot be excluded and the site is screened in for Appropriate Assessment regarding this impact pathway.**

[51] 'Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations. Version: June 2018'. http://publications.naturalengland.org.uk/publication/4720542048845824

6.5 The following policies contained in the MSDP are screened in for Appropriate Assessment in relation to atmospheric pollution, primarily because they may increase the number of commuter journeys within 200m of sensitive heathland in the Ashdown Forest SPA / SAC:

- Policy DPH1: Housing (allocates 18,581 dwellings in the Plan period, of which 8,332 dwellings are net new, with the potential to increase the local population by approx. 19,997);
- Policy DPH29: Gypsies, Travellers and Travelling Showpeople (allocates an unmet need for four new sites for gypsies, travellers and travelling showpeople and will result in an increase in the local population);
- Policy DPE1: Sustainable Economic Development (supports the delivery of sustainable economic development and the expansion of existing businesses across Mid Sussex, which will increase the number of commuter journeys potentially undertaken within 200m of sensitive habitats);
- Policy DPE3: Employment Allocations (allocates three employment sites on Significant Sites across Mid Sussex District and will result in an increase in the volume of commuter traffic);
- Policy DPE4: Town and Village Centre Development (identifies the development / retail hierarchy in the town centres of Mid Sussex and, potentially, where retail opportunities will be increased, intensified or maximized); and
- Policy DPE9: Sustainable Tourism and the Visitor Economy (supports sustainable tourism opportunities across the District, such as through increased visitor accommodation and new attractions, which may lead to an increase in vehicular traffic).

6.6 Modelling undertaken for the MSDP HRA (reported in Section 7 of this report and the Air Quality Impact Assessment in Appendix C) has identified that Transects T5, T6, T7, T9, T11 and T12 are all forecast to experience an increase in traffic due to the MSDP and are forecast to have an 'in combination' nitrogen dose at the roadside that will exceed 1% of the critical load, this being the threshold for defining an imperceptible nitrogen dose. As a result, likely significant effects cannot be dismissed 'in combination' with other plans or projects.

6.7 Great-crested newts are an Annex II qualifying feature of the SAC, which rely on freshwater ponds for reproduction, with larvae emerging between August and October. They prefer well vegetated ponds in a range of settings, including pastoral and arable farmland. While it is noted that the newts do not necessarily require high water quality, APIS identifies the species' broad habitat (standing open water and canals) as sensitive to atmospheric pollution. However, the main limiting nutrient in freshwater is phosphorus (which is not associated with road traffic), with nitrogen being of much lower importance. Therefore, this HRA does not consider great-crested newts further in relation to atmospheric pollution.

Castle Hill SAC

6.8 The Castle Hill SAC is designated for semi-natural dry grasslands and scrubland facies on calcareous substrates (this includes important orchid sites) that have a nitrogen CL of 15-25 kg N/ha/yr (see previous section). Natural England's Site Improvement Plan (SIP) lists the impact of atmospheric nitrogen deposition as a key pressure to the site with potential knock-on effects on community composition. However, a review of the road network shows that there are no major ('A') roads within 200m of the Castle Hill SAC (the closest point being approx. 1.7km from the A27. Therefore, AECOM concludes that road traffic is unlikely to be a major contributor to nitrogen deposition across the SAC, especially compared to nitrogen from agricultural sources. Indeed, the SIP specifies that fertiliser use on land bordering the SAC, such as on arable land parcels sloping down towards the site, is a major contributor of nitrogen through erosion, leaching and runoff. Overall, LSEs of the MSDP on the Castle Hill SAC regarding atmospheric pollution can be excluded and the site is screened out from Appropriate Assessment in relation to this impact pathway.

Recreational Pressure

Ashdown Forest SPA / SAC

6.9 The qualifying ground-nesting birds in the Ashdown Forest SPA (nightjar and Dartford warbler) are sensitive to disturbance, particularly from visitors that walk their dogs off-lead. These species nest on or close to the ground and disturbance can lead to reduced time spent incubating eggs, provisioning for chicks, increased energy expenditure and, in the case of prolonged disturbance, abandonment of eggs. Recreational trampling can also lead to the destruction of eggs, killing of chicks and damage to SAC vegetation upon which qualifying birds rely. Natural England's SIP identifies public access as potentially impacting breeding birds in the SPA and work that is ongoing to reduce visitor pressure, including baseline work to identify current impacts and identifying necessary mitigation interventions.

6.10 Previous visitor surveys undertaken within the Ashdown Forest SPA / SAC, entirely situated within Wealden District, have established the site as an attractive and compelling destination, drawing visitors from a large geographical catchment. Data from the surveys have been used to identify a core recreational catchment (i.e. the zone that 75% of visitors to the site derive from based on the linear distance to home postcodes) for the SPA / SAC of 7km, which includes a large portion of Mid Sussex District, including the nearest major settlement of East Grinstead. Therefore, it can be reasonably expected that residential growth in the authority would result in increased visitor numbers and disturbance in the SPA / SAC. A review of Natural England's SSSI condition assessments further corroborates this. For example, the assessment for East Chase Unit 47 states that the area is heavily used by walkers (especially dog walkers), although there is little evidence to indicate that visitors venture far off-track.

6.11 **The available evidence base highlights that recreational pressure is a continuing concern for the Ashdown Forest SPA / SAC, with visitor numbers expected to further increase due to emerging Local Plans. Therefore, LSEs of the MSDP on the Ashdown Forest SPA / SAC regarding recreational pressure cannot be excluded and these sites are screened in for Appropriate Assessment.**

6.12 The following policies contained in the MSDP are screened in for Appropriate Assessment in relation to recreational pressure, primarily because they will lead to an increase in the population of Mid Sussex and additional demand for recreational space, with potential implications for the Ashdown Forest SPA / SAC:

- Policy DPH1: Housing (allocates 18,581 dwellings in the Plan period, of which 8,332 dwellings are net new, with the potential to increase the local population by approx. 19,997);
- Policy DPH29: Gypsies, Travellers and Travelling Showpeople (allocates an unmet need for four new sites for gypsies, travellers and travelling showpeople and will result in an increase in the local population); and
- Policy DPE9: Sustainable Tourism and the Visitor Economy (supports sustainable tourism opportunities across the District, such as through increased visitor accommodation and new attractions, which may lead to an increase in recreational pressure).

Castle Hill SAC

6.13 The site is designated for semi-natural dry grasslands and scrubland facies on calcareous substrates, the grassland components of which are more sensitive to recreational trampling and nutrient enrichment from dog faeces. Trampling damage is of elevated concern where the sward comprises grasslands containing significant orchid assemblages or rare orchid species. The Castle Hill SAC supports a range of rare and scarce orchids including early spider-orchid and burnt orchid. However, Natural England's SIP does not list recreational use as a key pressure / threat for the SAC.

6.14 Site accessibility is a major factor in determining potential recreational impacts in nature conservation sites. There is a limited number of footpaths that permeate the SAC and it is considered that most visitors will stick to the route network without venturing off-path. At a distance of 6.7km from Mid Sussex District (and only one formal car park situated to the west of the SAC in Woodingdean), the site also lies beyond the core recreational catchment that is documented for most inland, terrestrial European sites (typically approx. 5km). Overall, AECOM concludes that there will be no LSEs of the MSDP on the Castle Hill SAC regarding recreational pressure and the site is screened out from Appropriate Assessment regarding this impact pathway.

7. Appropriate Assessment

Atmospheric Pollution (Nitrogen Deposition)

7.1 The following policies were screened in for Appropriate Assessment with regard to atmospheric pollution, because LSEs could not be excluded both alone and in combination:

- Policy DPH1: Housing (allocates 18,581 dwellings in the Plan period, of which 8,332 dwellings are net new, with the potential to increase the local population by approx. 19,997);
- Policy DPH29: Gypsies, Travellers and Travelling Showpeople (allocates an unmet need for four new sites for gypsies, travellers and travelling showpeople and will result in an increase in the local population);
- Policy DPE1: Sustainable Economic Development (supports the delivery of sustainable economic development and the expansion of existing businesses across Mid Sussex, which will increase the number of commuter journeys potentially undertaken within 200m of sensitive habitats);
- Policy DPE3: Employment Allocations (allocates three employment sites on Significant Sites across Mid Sussex District and will result in an increase in the volume of commuter traffic);
- Policy DPE4: Town and Village Centre Development (identifies the development / retail hierarchy in the town centres of Mid Sussex and, potentially, where retail opportunities will be increased, intensified or maximized); and
- Policy DPE9: Sustainable Tourism and the Visitor Economy (supports sustainable tourism opportunities across the District, such as through increased visitor accommodation and new attractions, which may lead to an increase in vehicular traffic).

Ashdown Forest SPA / SAC

7.2 It has long been established that nitrogen is an essential element for all living organisms and is the main growth-limiting nutrient in terrestrial plants. Consequently, it is known that plants are highly sensitive to changes in available nitrogen. Gaseous nitrogen is highly unreactive, so plants principally depend on oxidised and reduced nitrogen (e.g. derived from NOx and NH_3). These forms of nitrogen are primarily linked to anthropogenic activities, with vehicle emissions being a major source of nitrogen oxides and, to a lesser extent, ammonia. The primary impact of increased dry / wet nitrogen deposition is a fertilisation effect, favouring plant species that are better adapted to assimilate bioavailable nitrogen. The resulting effect on botanical communities is often one of declining species richness and increasing abundance of more competitive species.

7.3 Effects of nitrogen on heathland plants may be direct or indirect, while interacting with a host of abiotic and biotic factors, such as species-specific sensitivities. The low-growing and non-vascular species in heathland communities are particularly vulnerable to nitrogen deposition due to their limited ability to assimilate nitrogen. The primary fertilising effect of increased nitrogen deposition increases overall plant biomass, which typically shows as an increase in growth of heather. The growth of lower-growing species like mosses and lichens is impeded by increased shading and the disappearance of bare ground. In turn, heather, through toxic effects of deposition and damage to tissues, becomes more sensitive to diseases and environmental stressors. More competitive species (e.g. bracken and purple moor-grass) are then able to encroach on former heathland habitat.

7.4 The Ashdown Forest SAC is designated for wet heaths with *Erica tetralix* and European dry heaths, both of which have a nitrogen Critical Load range of 10-20 kg N/ha/yr according to the Air Pollution Information System (APIS). Both habitat types are also sensitive to ammonia due to

the presence of lichens and bryophytes, for which APIS establishes an annual mean Critical Level of 1 µg NH_3/m^3. In many areas in the UK, nitrogen CLs are already exceeded and many habitats are significantly impacted by nitrogen deposition. APIS highlights that the current maximum average nitrogen deposition rate within the 5km grid square within which the SAC is situated as 14.9 kg N/ha/yr, exceeding the minimum CL of 10 kg N/ha/yr that is identified for both dry and wet heaths. Nitrogen deposition rates will be greater than this close to roads. The maximum average ammonia concentrations in both heathland types (1.17 µg/m^3) is also above the 1 µg/m^3 Critical Level established for lichens and bryophytes.

Traffic and Air Quality Modelling for the MSDP Review

7.5 Traffic and air quality modelling has been undertaken to support the Regulation 18 MSDP Review and will be updated for Regulation 19 as necessary. The air quality modelling for the Regulation 18 HRA involved five model scenarios that target different objectives as follows:

- Baseline (2019): represents air quality in a past year on roads through the SAC based upon traffic count data coupled with background pollution taken from the Air Pollution Information System in order to account for pollution from other sources such as industry and agriculture;
- Future Baseline Scenario (2039): uses the traffic data from the 'current baseline' in 2019, but applies future assessment year vehicle emission factors and background pollutant concentrations to allow for the 'in combination' assessment required for the HRA;
- Do Minimum (2039 Reference Case): future assessment year which does not include influence of planned development from the MSDP Review but does allow for residential / employment growth in authorities adjoining Mid Sussex (e.g. in Wealden, Lewes, Tandridge, Sevenoaks, Tunbridge Wells, Rother and Eastbourne); and
- Do Something Scenarios (2039): future assessment year which includes the influence of planned development from the MSDP Review and from strategic planned development in neighbouring local authorities. The difference to the 'Do Minimum' scenario allows for quantifying the air quality impacts of the MSDP Review, while also allowing for in-combination assessment.

7.6 The five future scenarios modelled for Air Quality Impact Assessment (AQIA) use different model parameters. The Future Baseline scenario effectively uses present-day AADT, but 2030 emissions factors and background concentrations. In contrast, the 'Do Minimum' and 'Do Something' scenarios utilise 2039 projected AADT, 2030 emission factors and background concentrations, without and with the MSDP Review respectively.

7.7 Changes in air quality have been modelled up to a distance of 200m from the roadside because the contribution of traffic to local atmospheric pollution levels becomes imperceptible beyond this distance and any negative effect on the vegetation from traffic growth will therefore be greatest closest to the roadside (and certainly within 200m). The data are reported at 10m intervals perpendicular to the road; this is known as a transect. In liaison with Mid Sussex District Council and Wealden District Council, a series of 23 transects at 13 locations were identified to provide good coverage of the SAC, while taking account of the fact that a) traffic data (and therefore modelled traffic emissions) will not change between road junctions, so a given stretch of road between junctions only requires one transect (sometimes one each side of the road to take account of the prevailing wind) and b) woodland is a feature of the Ashdown Forest SSSI but not the SAC. There are numerous locations where there is little to no heathland within 200m of the road network in Ashdown Forest SAC. As a result, transects have been located where heathland is present within 200m of the road.

7.8 The modelling is deliberately precautionary to allow for variation in factors such as actual growth rates. For example:

- no account has been taken of improvements in vehicle emission factors post 2030 despite the plan running to 2039;

- the CREAM tool is used to model ammonia, which more recent evidence suggests overestimates ammonia emissions for future years;
- no account has been taken of the government's ban on the sale of new petrol and diesel cars and vans from 2030 which will materially reduce emissions of both ammonia and NOx (and thus nitrogen) in the last 9 years of the plan period compared to our forecasts; and
- no account has been taken of the role of the tree belt that lines some key roads in depleting nitrogen deposited on the heathland behind.

7.9 The air quality modelling transects are shown on the accompanying map in the Air Quality Impact Assessment in Appendix C where the detailed modelling methodology is also provided.

7.10 In summary, the modelling analysed three key pollutants shown to affect ecosystems, namely ammonia (NH_3), oxides of nitrogen (NO_X) and total nitrogen deposition. NOx and nitrogen deposition within 200m of the roadside in 2039 is forecast to be significantly better than in 2019 notwithstanding the precautionary assumptions made about both growth and improvements in vehicle emissions factors. NOx concentrations within 200m of all roads are expected to be below the Critical Level of 30 µg/m^3 by 2039 except immediately adjacent to the A26 where there is no heathland in any event.

7.11 Along many modelled transects, nitrogen deposition rates and ammonia concentrations will remain elevated above the Critical Load and Critical Level[52], but are forecast to be lower, or no higher, with the MSDP in place than they will be without the Local Plan, most likely due to changes in employment and housing within the district affecting journey to work patterns through the SAC, such routes simply not being significant journey to work routes for residents of Mid Sussex in the first place (since the main employment centres for Mid Sussex are away from Ashdown Forest) or the focus of future development in the district being away from Ashdown Forest. At these locations the MSDP Review will therefore not contribute to an increase in pollution.

7.12 There are three transects (T6, T10 and T11) where growth in the MSDP will make a contribution to nitrogen deposition and ammonia concentrations, but that contribution is only marginally above zero[53] except at the roadside itself where no SAC habitat is present. This is relevant because in European Court of Justice Case C-258/11 Advocate-General Sharpston stated at paragraph 48 of her Opinion that: '*the requirement for an effect to be 'significant' exists in order to lay down a de minimis threshold. Plans and projects that have no appreciable effect on the site can therefore be excluded. If all plans and projects capable of having any effect whatsoever on the site were to be caught by Article 6(3), activities on or near the site would risk being impossible by reason of legislative overkill'.* It is also relevant that Mr Justice Jay, when ruling in Wealden v SSCLG [2017] EWHC 351 (Admin) (2017), did accept that if the contribution of an individual plan or project to traffic related air quality effects on Ashdown Forest SAC was 'very small indeed' it could be legitimately and legally excluded from 'in combination assessment. This is consistent with Advocate-General Sharpston's position.

7.13 There are three remaining transects[54]. These are as follows:

1. Transect T5 (New Road, east of Duddleswell) – Along this road there is a narrow verge followed by a belt of dense bracken up to c.10m from road at which point the heathland begins. By this distance from the road only a small[55] 'in combination' nitrogen dose of 0.30 kg N/ha/yr (3% of the Critical Load) is forecast, and the contribution of the MSDP is only

[52] In line with Natural England guidance, the mere exceedance of the minimum or maximum Critical Load alone is not sufficient to conclude that a plan document will result in adverse effects on site integrity. This is due to such exceedances being the result of historic growth trends (unrelated to current plan proposals) or factors other than road traffic (e.g. agriculture).
[53] In the UK air quality data are generally not reported to more than 2 decimal places to avoid false precision. If the results due to the Mid Sussex Local Plan were much smaller they would be reported as effectively zero i.e. 'less than 0.01'.
[54] This does not apply to the A26 (Transect T12). Although the A26 is the busiest road through the SAC the nearest heathland is over 40m from road, by which time the in combination nitrogen dose is imperceptible (less than 1% of the critical load) while total ammonia is below the lowest critical level. Moreover, the contribution of the Mid Sussex Local Plan to pollution beyond 40m from the A26 is effectively zero.
[55] A 'small' change in atmospheric pollution is generally considered to be a change equivalent to less than 5% of the critical load (i.e. 0.5 kgN/ha/yr for heathland). This is just above the lowest dose examined in Caporn et al (2016)

marginally above zero, being 0.03-0.05 kgN/ha/yr[56]. Total ammonia concentrations are forecast to be below the minimum Critical Level beyond 10m from the road. Since the contribution of the MSDP to nitrogen and ammonia at the nearest area of heathland is very small indeed it will not contribute to an adverse effect on the SAC;

2. Transect T7 (A22) – Along the A22 the verge, followed by a belt of dense trees and scrub, extends to at least 30m from the roadside and frequently further before heathland begins. By 30m from the road only a small 'in combination' nitrogen dose of 0.24 kg N/ha/yr (2.4% of the Critical Load) is forecast, only marginally above the threshold at which it could be dismissed as mathematically imperceptible, while the contribution of the MSDP at this distance is effectively imperceptible (0.04 kg N/ha/yr), meaning that the increase in nitrogen deposition that is forecast is primarily attributable to growth outside Mid Sussex District. Total ammonia falls below the Critical Level by 30m from the road, thus not impacting lower plants within the heathland. Since the contribution of the MSDP to nitrogen at the nearest area of heathland is effectively zero it will not contribute to an adverse effect on the SAC;

3. Transect T9 (A275, Lewes Road) – Along the A275 the verge, followed by a belt of dense gorse or bracken, extends to at least 10-15m from the roadside and frequently further. Ammonia concentrations do not exceed the lowest Critical Level beyond 10m from the road. At 10m from the road a medium 'in combination' nitrogen dose of 0.56 kg N/ha/yr (5.7% of the Critical Load) is forecast and the contribution of the MSDP by 20m from the road is imperceptible (not exceeding 1% of the Critical Load), meaning that the increase in nitrogen deposition is at least partly attributable to growth within Mid Sussex District. However, even with the additional nitrogen due to traffic growth total deposition rates will be 1.18 kg N/ha/yr lower in 2039 than the 2019 baseline. Furthermore, this is conservative modelling as it freezes the improvement in vehicle emissions at 2030 and thus takes no account of the shift from petrol/diesel cars and vans to electric vehicles that will occur post 2030.

7.14 Modelling of all transects (particularly T5, T7 and T9, where in-combination (DS) nitrogen doses to heathland will be highest) illustrates that a significant proportion of nitrogen due to forecast traffic growth will be deposited within 1m-10m of the road, within the road verge and belts of dense gorse, bracken and trees that line the relevant parts of the A22, A275 and other roads. These areas have low sensitivity to nitrogen deposition and contain lower value habitats due to the general presence of the road and its associated salt spray, dust, runoff, and altered drainage or soils. Generally, there is no qualifying heathland within the 10m zone adjoining roads that could be impacted by atmospheric pollutants, and sometimes for a considerable distance beyond this. In addition, the belts of dense gorse and trees close to the road may be preserved in the long-term to protect SPA birds using adjoining heathland habitat from exposure to disturbing (visual and noise) effects of road traffic and to reduce the risk of livestock straying into the carriageway. Moreover, localised dense gorse can be of direct value for one of the SPA birds (Dartford warbler) as nesting and foraging habitat, as cited in the Supplementary Advice on the Conservation Objectives for the SAC. Even at roadside locations the nitrogen deposition due to traffic growth would not prevent heathland restoration if Natural England ever did decide to undertake it, particularly within the context of the forecast net reduction in total nitrogen deposition due to reductions in vehicle emissions.

7.15 Traffic growth will result in nitrogen deposition to areas of heathland beyond the roadside, but due to distance from the road the forecast nitrogen dose is much smaller than at the roadside. Appendix 5 of Caporn et al (2016)[57] suggests that at the forecast background nitrogen deposition rates at the SAC the worst-case additional nitrogen deposition to heathland as a result of 'in combination' traffic growth (c. 0.57 kg N/ha/yr at T9, 10m from the A275) could, if it constituted a net increase in deposition rate, result in a small (c.0.1%) increase in grass (graminoid) cover and a reduction in species richness (whether grasses, mosses or total species richness) at the roadside equivalent to c.0.6% of the maximum (c.0.2 species i.e. if you dropped a random

[56] In the UK air quality data are generally not reported to more than 2 decimal places to avoid false precision. If the results due to the Mid Sussex Local Plan were much smaller they would be reported as effectively zero i.e. 'less than 0.01'.
[57] Caporn, S., Field, C., Payne, R., Dise, N., Britton, A., Emmett, B., Jones, L., Phoenix, G., S Power, S., Sheppard, L. & Stevens, C. 2016. Assessing the effects of small increments of atmospheric nitrogen deposition (above the critical load) on semi-natural habitats of conservation importance. Natural England Commissioned Reports, Number 210.

quadrat there is an approximately 20% probability you would record one less species)[58]. Notably, because nitrogen deposition rates are predicted to significantly drop between 2019 and the Future Baseline (assuming no traffic growth but accounting for improvements in vehicle emissions), any impacts of the 'in combination' total nitrogen dose would occur as a retardation to vegetation recovery. Any change in vegetation (whether a reduction in species richness or retardation in community recovery) further than 10m into the SAC would be even smaller. Moreover, after 2030 (i.e. in the second part of the plan period) a significant shift from petrol and diesel cars and vans to electric vehicles can be expected due to the Government policy to ban the sale of new petrol and diesel cars from that year. Therefore, the results reported in this document can be considered precautionary.

7.16 Natural England have confirmed in discussions over the Wealden, Tunbridge Wells and South Downs Local Plans that nitrogen deposition from traffic is not preventing the SAC from achieving its Conservation Objectives, but that the principal issue is lack of management, which is ultimately a land stewardship issue for site owners and managers rather than a consequence of the implementation of Local Plans. For example, a review of the Natural England SSSI condition assessment covering the SAC clearly indicates that historic (and in many cases current) inadequate management is the reason why only 20% of Ashdown Forest SAC is currently in a favourable condition. That is not to say that there is no objective to address nitrogen deposition at the SAC. The Shared Nitrogen Action Plan (SNAP) is the primary mechanism by which Natural England aim to reduce nitrogen deposition to the SAC. It is targeted at agriculture rather than traffic because almost three times more nitrogen deposited to the SAC stems from agriculture (fertiliser and livestock) than traffic. Agricultural emissions also affect a much greater area of the SAC, whereas the effect of the roads is localised. The forecast 'in combination' nitrogen doses due to traffic growth will have a negligible effect on Natural England's ability to restore good quality heathland through improved management and the implementation of the SNAP.

7.17 For all these reasons it is considered that the ability of the SAC and SPA to achieve its Conservation Objectives would not be significantly compromised by the MSDP growth either alone or in combination with other plans or projects.

7.18 As a safeguard, **Policy DPN9 (Air Quality)** protects the natural environment and people from unacceptable effects of atmospheric pollution. The policy states that '*The Council will require applicants to demonstrate that there is no unacceptable impact on air quality. The development should minimise any air quality impacts, including cumulative impacts from committed developments, both during the construction process and lifetime of the completed development…*' The policy specifically makes reference to the Ashdown Forest SPA / SAC: '*In order to prevent adverse effects on the integrity of the Ashdown Forest SPA and SAC, new development likely to result in increased traffic may be expected to demonstrate how any air quality impacts, including in combination impacts, have been considered in relation to the Ashdown Forest SAC.*' Moreover, **Policy DPC6 (Ashdown Forest SPA and SAC)** addresses potential atmospheric pollution impacts by requiring site-specific air quality assessments. The modelling for the Local Plan indicates that no adverse effect on integrity will arise due to the Local Plan in combination with other plans and projects, but the above policy wording provides a further protective safeguard to the SAC.

Conclusion

7.19 The ability of the SAC and SPA to achieve its Conservation Objectives would not be significantly compromised by the MSDP growth either alone or in combination with other plans or projects.

[58] Caporn el al (2016) indicates that not all species respond equally to nitrogen deposition (some are stimulated, others negatively affected). For example, Table 22 of NECR2010 shows that at background rates of 15 kgN/ha/yr one would expect a dose of 1 kgN/ha/yr (twice times what is forecast in the AECOM model) to reduce the frequency of occurrence (percentage cover, or probability of presence) of five representative lowland heathland lower plant species (*Hylocomium splendens, Hylocomium splendens, Cladonia portentosa, Cladonia portentosa, Brachythecium rutabulum*) by between 0.2% and 0.5%. However, they also state on page 71 that '*The relatively small datasets mean that caution should be applied when drawing conclusions on site integrity based on the presence or absence of individual species and that this information* [should] *be used in conjunction with changes in species richness and composition'.*

Recreational Pressure

7.20 The following policies were screened in for Appropriate Assessment with regard to recreational pressure, because LSEs could not be excluded both alone and in combination:

- Policy DPH1: Housing (allocates 18,581 dwellings in the Plan period, of which 8,332 dwellings are net new, with the potential to increase the local population by approx. 19,997); and
- Policy DPH29: Gypsies, Travellers and Travelling Showpeople (allocates an unmet need for four new sites for gypsies, travellers and travelling showpeople and will result in an increase in the local population); and
- Policy DPE9: Sustainable Tourism and the Visitor Economy (supports sustainable tourism opportunities across the District, such as through increased visitor accommodation and new attractions, which may lead to an increase in recreational pressure).

Ashdown Forest SPA / SAC

Sensitivity of the SPA / SAC

7.21 Several studies have now shown negative impacts of housing growth on protected wildlife sites. These include evidence on the link of housing growth with nature conservation impacts, such as recreational pressure effects on ground-nesting nightjars and Dartford warblers. These species are particularly sensitive to disturbance because they nest on or close to the ground, which makes them more susceptible to trampling damage and displacement from the nest by heathland visitors. Dogs that are walked off-lead are a particular concern because they roam freely, potentially triggering major flight responses or predating on birds. Studies on nightjar breeding success have established greater failure rates for nests in proximity to footpaths.

7.22 While recreational pressure clearly has the potential to impact on individual birds / nests, population-level responses have also been observed. For example, the number of individual woodlark and nightjar in a site was negatively correlated with the amount of housing surrounding a site. In 2006, a Footprint Ecology modelling report demonstrated that the number of visitors to heathland sites was negatively correlated with nightjar density, implying that nightjars showed a statistically significant preference to habitat patches with low visitor pressure. Moreover, birds preferentially established territories away from habitat edges bordering patches with higher visitor numbers. For Dartford warblers it has been shown that disturbance events significantly reduce productivity (i.e. the number of successful broods raised) in heather-dominated territories, most likely due to the lower protection offered by heather species in comparison to gorse. The study estimated that an average of between 13 and 16 visitors passing per hour would prevent multiple broods.

7.23 It is noted that sensitivity to recreational pressure also applies to the Ashdown Forest SAC, primarily due to trampling and nutrient enrichment effects that damage SAC habitats (e.g. the wet and dry heaths) directly, as well as potentially rendering them unsuitable for supporting SPA birds. Trampling effects include direct damage to plants due to breakage and abrasion or indirect effects resulting from soil compaction and changes in soil hydrology. Trampling has been shown to lead to a more rapid appearance of bare ground in heathland than in grassland. Moreover, one study showed that when compared to grassland, heathland dominated by *Calluna* species showed a delayed response in terms of species recovery under high trampling intensities in winter. When comparing the sensitivity of dry and wet heaths, Gallet and Roze showed that wet heaths generally demonstrate lower resilience to trampling damage, most likely due to the impacts of soil compaction on water circulation. Other than trampling effects, the most important impact of recreational pressure in heathland habitats is dog fouling. For example, there was a significant linear correlation between defecation and soil phosphorus levels in recreation grounds, and high soil phosphorus concentrations remained three years after a ban on dogs. A study in Surrey established that the distribution of dog fouling coincided with a shift away from heather to wavy hair grass, likening the impact of dog fouling to the application of a fertiliser.

Evidence of Disturbance Impacts to SPA birds

7.24 A study in 2010[59] evaluated the relationship between visitor use levels and bird territories in the Ashdown Forest SPA. The methodology encompassed the overlay of visitor intensity levels (using routes weighted across a 25m by 25m cell grid) with recorded bird territories. Interestingly, and perhaps counterintuitively, bird densities generally were lowest in or near the grid cells with lowest visitor pressures, suggesting that recreation is having no impact on the distribution of birds. However, the same report also showed that habitat type represented a strong confounding factor in the study. All three SPA species (Dartford warbler, nightjar and woodlark) showed a strong preference for dry heath, which also showed significantly higher levels of visitor pressure and footpath presence. Based on the analysis undertaken, visitor disturbance currently does not appear to be impacting the use of the SPA by designated bird features. However, potential adverse effects of recreational pressure cannot be excluded, particularly in the absence of data on reproductive success.

Visitor Surveys

7.25 In 2009 an analysis of visitor data for the Ashdown Forest SPA / SAC was undertaken[60], feeding into HRAs of development plan documents at the time. It was estimated that 5,198 people visit the site over a 16-hour period, resulting in density of 2.17 visitors per ha over 16 hours. The report also developed a statistical model, predicting the additional number of visits resulting from 100 additional dwellings. For example, 100 additional dwellings in East Grinstead are estimated to cause 4.1 visits per 16 daylight hours. Overall, the model incorporates two settlements in Mid Sussex District (East Grinstead and Haywards Heath) that are projected to contribute significantly to future visit rates in the SPA / SAC.

7.26 Given the available recreation patterns, the report proposed a strategy broadly analogous to that devised for the Thames Basin Heaths where such a strategy has been shown by monitoring to be effective[61]; namely the identification of a series of zones around the SPA / SAC each of which triggered a combination of provision of alternative greenspace and improved access management. A 7km 'outer zone' for Ashdown Forest SAC and SPA was agreed with Natural England[62]. Development within this affected 7km 'zone' for affected authorities were required to provide a financial contribution towards the provision of Suitable Alternative Natural Greenspaces (SANGs) and Strategic Access Monitoring and Management (SAMM) in the Ashdown Forest SPA / SAC. This general approach was supported by Natural England and the Ashdown Forest Conservators.

7.27 In 2016 Footprint Ecology undertook a further visitor survey[63] on behalf of six local authorities (Wealden, Mid Sussex, Lewes, Tunbridge Wells, Tandridge and Sevenoaks), to provide comprehensive and current data on recreational use of the Ashdown Forest SPA / SAC. Additionally, results from the survey were to inform the strategic implementation of access management, tailor a long-term management strategy and inform the design and management of SANGs. Ensuring that SANGs are adequately sited and designed is essential for the delivery of effective mitigation and drawing visitors away from the SPA / SAC. The 2016 survey also undertook a review of the site's core catchment zone, but the 7km zone was still recognised as capturing the appropriate geographic extent of growth contributing significantly to visitor numbers in the site.

7.28 The same six local authorities commissioned a repeat visitor survey, which was undertaken in summer 2021 and published in 2022. This replicated the methodology and 18 of the 20 survey

[59] Clarke RT, Sharp J & Liley D. 2010. Ashdown Forest Visitor Survey Data Analysis (Natural England Commissioned Reports, Number 048)

[60] UE Associates and University of Brighton. 2009. Visitor Access Patterns on the Ashdown Forest: Recreational Use and Nature Conservation

[61] The most recent Visitor Access Patterns on the Thames Basin Heaths Report showed a statistical decrease in visitation to the SPA despite a concurrent increase in housing within 5km of the SPA (the core catchment of that SPA), confirming the effectiveness of the solution. https://surreyheath.moderngov.co.uk/documents/g3273/Public%20reports%20pack%2019th-Sep-2019%2010.00%20Thames%20Basin%20Heaths%20Joint%20Strategic%20Partnership%20Board.pdf?T=10

[62] UE Associates. October 2011. Habitat Regulations Assessment for the Mid Sussex District Plan

[63] When considering the magnitude of impact of the Wealden Local Plan, interviewees that visit from Wealden District regularly (i.e. daily, weekly or monthly) are clearly most important, because they are associated with the largest recreational footprint stemming from the authority. Therefore, the following section largely focuses on repeat visitors from Wealden District. D., Panter, C. & Blake, D. (2016). Ashdown Forest Visitor Survey 2016. Footprint Ecology Unpublished report.

points of the 2016 survey, allowing for comparisons of access patterns, activities undertaken and core recreational catchments. Furthermore, it provided a framework in which to assess the efficacy of the current mitigation framework, including some of the SAMM measures and SANG approaches currently in place.

Overview of the 2016 Visitor Survey Results

7.29 Overall, the visitor survey demonstrated that Ashdown Forest SPA / SAC received roughly 4,500 visits per day (slightly fewer than those modelled in Clarke et al., 2010), equating to over 1.5 million visits annually. It is one of the largest open public greenspaces in south England and clearly provides a major draw for people undertaking recreational outings. A total of 452 visitors were interviewed, with most being on a trip from home from within a 9.6km radius. Most interviewees visit the SPA / SAC regularly, as is highlighted by 63% of respondents travelling to the site at least weekly. Importantly, approx. half (46%) of people stated that they would not have visited elsewhere if they could not have visited the Ashdown Forest SPA / SAC, highlighting the attractiveness of the site to local residents.

2016 Survey Results as Relevant to Mid Sussex District

7.30 When considering the magnitude of impact of the MSDP Review, interviewees that visit from the district and those that do so regularly (i.e. daily, weekly or monthly) are clearly most important, because they are associated with the largest recreational footprint stemming from the authority. Therefore, the following section largely focuses on such 'regular' visitors.

7.31 Overall, of the 411 visitors interviewed that provided valid postcodes, 53 interviewees had travelled from Mid Sussex, accounting for 12.9% of the visitors captured in the survey and second only to Wealden in terms of overall visitor flux. This is unsurprising because the Ashdown Forest SPA / SAC lies in Wealden District, directly adjoining Mid Sussex and close to East Grinstead, a relatively large settlement in the northern part of the authority. Being the largest continuous and most attractive greenspace in close proximity, it is expected that the SPA / SAC would attract a large portion of visitors from Mid Sussex and Wealden. Furthermore, the report also indicates that people from Mid Sussex District also visit the site relatively frequently with 54.8% of all interviewed dog walkers travelling to Ashdown Forest between one to three times per week. However, it is to be noted that visit frequencies are much lower compared to interviewees from Wealden District. Given that distance to home is one of the most important predictors of site choice, this is an expected pattern. Importantly, most visitors to the site from Mid Sussex visit from the settlement of East Grinstead (30 interviewees) and the majority of these walk their dogs (57%). East Grinstead is the third most important source of recreational pressure, following Crowborough (139 interviewees) and Forest Row (50 interviewees), both in Wealden District.

7.32 Footprint Ecology's 2016 survey also assessed the Euclidean straight-line distances between home postcodes and survey points for different subsets of interview data. This is an important step for identifying the core recreational catchment of European sites, which typically encompasses the distance of the nearest 75% of postcodes to the relevant survey points. The following core recreational catchments were established:

- For all interviewees on a day trip and travelling from home – 75% of visitors lived within approx. 9.6km
- For dog-walking interviewees only – 75% of visitors lived within approx. 7.5km
- For interviewees visiting at least weekly – 75% of visitors lived within approx. 6km (note that the core recreational catchment is much smaller for interviewees that visit daily, 3.6km, and on most days, 5.9km)

7.33 Overall, the 2016 visitor survey established that the 7km core recreational catchment zone still provided a sufficiently precautionary compromise on the different types of user groups discussed above and, importantly, captured the high-impact user groups (i.e. dog walkers and those who visit at least weekly) to the SPA / SAC.

Overview of the 2021 Visitor Survey Results

7.34 The following key points emerge from a review of the 2021 report:

- Excluding tourists, 78% of visitors to the SAC live in Wealden or Mid Sussex. That alone shows these are clearly the most important districts to capture to address the recreational pressure effect.
- Approximately 80% of all frequent visitors (i.e. those who visit at least once a week) live within 7km of the SAC, which is similar to the 2016 survey.
- Moreover, 50% of all visitors (excluding tourists) live within 5km of the points at which they were surveyed. Indeed, 63% of dog walkers and 72% of weekly visitors (the two most important/beneficial groups to capture) live at just three settlements: Crowborough, East Grinstead and Uckfield, which are all within 5km of the SAC.

7.35 The focus on frequent visitors is relevant because the survey shows that the majority (58%) of current visitors to the SAC, excluding tourists, are frequent visitors and will have a disproportionate impact compared to the 42% who are occasional visitors. In summary, the 2021 visitor survey results broadly fit with those from 2016.

SANG and SAMM Mitigation

7.36 The Local Plan Review includes several residential allocations within 7km of the Ashdown Forest SPA / SAC (Table 2). The screening of the full list of housing sites allocated in the MSDP can be found in Appendix A, Table 5. Two sites either lie just outside the 7km zone or only have a very small area located within 7km (sites DPH13 and DPH14). However, since the 7km zone is not intended to be precise to the nearest 0.1km they have both been included in line with the precautionary principle. These sites are both covered by the wording in Policy DPC6 (Ashdown Forest SPA and SAC) with reference to development proposals just outside of the 7km zone of influence. Table 3 identifies that a total of 8.5ha of SANG will be required (rounded up to the nearest hectare).

Table 2: Proposed residential allocations in the 7km recreational pressure mitigation zone surrounding the Ashdown Forest SPA / SAC.

Site Name	Number of Proposed New Dwellings	Distance to Ashdown Forest SPA / SAC (km)
The Paddocks, Lewes Road, Ashurst Wood	8-12	2.5
Land off West Hoathly Road, East Grinstead	45	3.1
Land to west of Turners Hill Road, Crawley Down[64]	350	6.8
Hurst Farm, Turners Hill Road, Crawley Down	37	7.5 *(included as a precaution as lies close to the 7km zone)*
All Proposed Residential Allocations Within Mitigation Zone	**444**	

[64] It is to be noted that only a relatively small portion of this proposed allocation falls within the 7km mitigation zone surrounding the Ashdown Forest SPA / SAC. Therefore, any mitigation contributions may depend on the distribution of housing within the site boundary, which will be refined as the site moves forward. For precautionary reasons, a 'worst-case' capacity of 350 dwellings is assumed in the SANG requirement calculations. Further detailed assessment of the potential impacts of this proposed site allocation may be required.

Table 3: SANG requirement to mitigate the residential growth within 7km of the Ashdown Forest SPA / SAC (this being the Scenario with the greatest amount of housing within the 7km zone), accounting for average housing occupancy and Natural England SANG guidelines.

Number of Dwellings Requiring Mitigation	Number of Future Residents Requiring Mitigation	Amount of SANG Required (8ha/1,000 Population Increase)
444	1,065.6 (444 * 2.4)	8.52ha (1,065.6 * 0.008)

7.37 There is an existing adopted mitigation strategy for recreational pressure in Ashdown Forest which has been agreed by all authorities in the Ashdown Forest Working Group and with Natural England. It is similar to that which has been shown to be effective at the Thames Basin Heaths SPA which is designated for the same species and experiences similar types of recreational impact. Delivery of such a mitigation strategy involves the identification of measures themselves (i.e. both SANG and SAMM deliverables) and the geographic area to which these requirements apply. It is the main purpose of the Habitats Regulations Assessment (HRA) process to identify an adequate quantum of mitigation in line with the agreed strategy that ensures no adverse effects on sensitive European sites result from local development plans.

7.38 It is noted that Mid Sussex District Council already have a SANG inventory in place, which provides bespoke and strategic mitigation for residential developments. For example, East Court & Ashplats Wood SANG, located to the east of East Grinstead, comprises a range of features such as woodland, a lake, children's play area and car parking. Ashplats Wood itself is a 28ha large site comprising ancient woodland, streams, ponds, wildlife and a way-marked 2.5km circular route. The SANG is advertised online on the Mid Sussex District Council website, addressing the protection of Ashdown Forest. The SANG now has limited residual capacity and a visitor survey has been recently carried out to identify potential future management projects to ensure the continued effectiveness of the SANG.

7.39 Other SANGs are being developed as part of planning applications. For example, the Hill Place Farm SANG is now operational and is being delivered alongside 200 dwellings and will have residual capacity for 554 dwellings. The residual capacity is being transferred to Mid Sussex District Council, which will then use it as strategic SANG for future residential developments. The SANG management plan identifies three objectives for the site, including the provision of attractive alternative natural greenspace to the Ashdown Forest SPA / SAC, enhancement of the landscape attributes of key habitats in the site and maximisation of ecological interest. The Imberhorne Farm SANG in East Grinstead is another emerging SANG in support of housing allocation SA20 from the Site Allocations Development Plan Document (DPD). Taking into account the 550 dwellings from the allocated site, it is predicted that it will have residual capacity for 1,665 dwellings. However, it is to be noted that the future land ownership and management arrangements for this SANG have not been confirmed and the capacity may need to be reviewed in the future. The Concept Masterplan for the site indicates that it will comprise 71.32ha of 'additional land' in the western half of the site, the majority (c. 40ha) of which being SANG with direct foot access to the proposed dwellings. Overall, Mid Sussex District Council is well under way in developing a suite of SANGs to support the Local Plan Review.

7.40 Table 2 indicates that the MSDP allocates a maximum of 444 dwellings within or just beyond the 7km mitigation zone surrounding the Ashdown Forest SPA / SAC. Most of the residential growth is anticipated to occur in the western and southern part of the authority (e.g. adjacent to Crawley and Burgess Hill), outside the mitigation zone. The dwellings within the 7km Zone of Influence of the Ashdown Forest SPA / SAC would require the support of approx. 8.5ha of SANG to be delivered. As discussed above, the Council already have a SANG programme in place, which has sufficient residual capacity in place to absorb this additional growth. For example, the Imberhorne Farm SANG in East Grinstead alone (which may have c. 40ha of SANG available), is situated adequately and has sufficient residual capacity to provide an effective mitigation solution due to its proximity to the proposed housing allocations. Mid Sussex District Council would have to ensure that sufficient SANG capacity is available prior to giving planning consent.

7.41 To ensure that the SANG programme delivers ongoing effective mitigation, long-term and regular monitoring should be undertaken in designated SANGs, the details of which to be agreed in partnership with the other local authorities affected by the mitigation requirements. This is because visitors that are drawn away from protected sites and rely on access to SANGs for the majority of recreational visits, are unlikely to be captured in surveys in European sites. SANG surveys should include both visitor counts and interviews. Importantly, SANG surveys should determine to what extent interviewees from different authorities still rely on a European site, supplying important data on the effectiveness of mitigation. Furthermore, visitor monitoring at SANGs can also help in identifying future management approaches and projects that help in making such sites more attractive. For example, interviews can help in identifying footpaths for enhancement / repair, better coverage of a site with dog poo bins and creating more appealing habitats. Such information is crucial in improving SANGs and, ultimately, making them more efficient in delivering mitigation. As highlighted above, Mid Sussex's current operational SANG is at East Court & Ashplats Wood (to the east of East Grinstead) and evidence including that collected for the 2021 visitor survey identifying alternative sites people visit besides the SPA suggests that site use has increased, most likely due to housing growth. SANG monitoring should also be undertaken in the other SANGs once they are established and operational.

7.42 Work on the Strategic Access Management and Monitoring (SAMM) strategy for the Ashdown Forest SPA / SAC has been ongoing between the local authorities of Wealden, Mid Sussex, Lewes, Tunbridge Wells, Tandridge and Sevenoaks in partnership with the Conservators of Ashdown Forest and Natural England since 2012. The SAMM partnership is proactively working to deliver access management projects that address recreational impacts and monitor visitor levels across the SPA / SAC. The partnership has published a SAMM tariff guidance document that currently sets out a tariff of £1,170 per dwelling and has most recently been updated in October 2019[65]. SAMM is required because local residents, notwithstanding SANGs being in place, are still likely to visit the Ashdown Forest SPA / SAC, at least occasionally. Local Authorities that deliver residential development within the site's 7km core recreational catchment have committed to collecting developer contributions with the aim to deliver the SAMM programme. The following key SAMM projects have been identified in consultation with the Conservators of Ashdown Forest and Natural England:

- Development and promotion (e.g. through media presence and leaflet distribution) of a Code of Conduct with particular focus on dog walkers[66]
- Provision of appropriate signage and interpretation boards (e.g. through raising awareness of sensitive ground-nesting birds)
- Organisation of responsible dog ownership training events
- Recruitment of volunteer dog rangers, an Access Management Lead Officer and Assistant Access Management Officer
- Delivery of on-site and off-site education, information and volunteering events
- Monitoring, coordination and analysis of protected bird surveys (in collaboration with other relevant organisations)
- Continued visitor monitoring in the Ashdown Forest SPA / SAC and SANG sites

7.43 The SAMM tariff contribution for residential development in the Ashdown Forest SPA / SAC catchment zone is calculated on a per unit basis and is the same for all housing types (house, flat, studio flat – including all affordable housing). The SAMM tariff has been calculated using a cash flow model, accounting for the current housing projections, estimated costs of SAMM

[65] (October 2019). Ashdown Forest Special Protection Area (SPA) – Strategic Access Management and Monitoring Strategy Tariff Guidance for Lewes District Council, Mid Sussex District Council, Sevenoaks District Council, District Council of Tandridge, Tunbridge Wells Borough Council and Wealden District Council. Available at: https://www.midsussex.gov.uk/media/5596/samm-strategy-tariff-guidance.pdf [Accessed on the 25/11/2021]
[66] The Code of Conduct for dog walkers is available on the Mid Sussex District Council website: https://www.midsussex.gov.uk/planning-building/protecting-ashdown-forest/ [Accessed on the 25/11/2021]

projects and a requirement for mitigation in-perpetuity. The inter-authority SAMM monetary pot is reviewed annually, in line with changes to housing numbers and the timing of housing delivery.

Mitigation contained in MSDP Review

7.44 Policy mitigation of recreational pressure in sensitive European sites centres around several pillars, including the recognition of any formally adopted, legally binding frameworks and preserving / enhancing other publicly accessible greenspaces. The MSDP Review acknowledges the requirements established for Ashdown Forest mitigation in **Policy DPC6 (Ashdown Forest SPA and SAC)**. This policy stipulates that '*In order to prevent adverse effects on the integrity of the Ashdown Forest SPA and SAC, new development likely to have a significant effect, either alone or in combination with other development, will be required to demonstrate that adequate measures are put in place to avoid or mitigate any potential adverse effects.*' The policy goes on to identify the key buffer zones surrounding the site, including the 400m zone in which no net new residential dwellings are permitted and the 7km zone in which adequate SANG and SAMM provision is mandatory. Therefore, AECOM considers that the Plan recognises all essential conditions that are imposed on development in the Zone of Influence of the SPA / SAC.

7.45 The MSDP also maximizes the amount of greenspace provision in other parts of the District with the aim to offer alternative recreation destinations to local residents. **Policy DPN3 (Green Infrastructure)** sets out that '*Green infrastructure assets, links and the overall multi-functional network will be protected and enhanced by ensuring development:*

- *Responds to and incorporates existing on-site and off-site green infrastructure into the development design; and*
- *Provides new green infrastructure integrated into the development design; and*
- *Contributes to the wider green infrastructure network by taking opportunities to improve, enhance, manage and restore green infrastructure, and providing links to existing green infrastructure including outside the development's boundaries.*'

7.46 Policy **DPN5 (Historic Parks and Gardens)** protects the special local historic interest of special parks and gardens, some of which are likely to represent popular recreation destinations. It states that '*The character, appearance and setting of a registered park or garden, or park or garden of special local historic interest will be protected. This will be achieved by ensuring that any development within or adjacent to a registered park or garden, or park or garden of special local historic interest will only be permitted where it protects and enhances its special features, setting and views into and out of the park or garden.*'

7.47 Ensuring the continuing appeal of alternative recreation destinations is a key mechanism for shifting some of the recreational footprint away from more sensitive European sites.

Conclusion

7.48 Overall, this HRA shows that Mid Sussex District Council has an adequate SANG and SAMM strategy in place to protect the integrity of the Ashdown Forest SPA / SAC and this is the agreed strategic cross-boundary solution for Ashdown Forest that is supported by Natural England. Furthermore, the Plan policies make adequate reference to the existing mitigation framework in place to protect the integrity of the SPA / SAC. **Provided that adequately sited and sized SANG is delivered in line with the anticipated housing delivery, it is concluded that the MSDP Review will not result in adverse effects on the integrity of the SPA / SAC, both alone and in combination with other plans and projects.**

8. Conclusions & Recommendations

8.1 This HRA assessed the potential for the MSDP Review to result in Likely Significant Effects (LSEs) and, where relevant, adverse effects on European sites, specifically the Ashdown Forest SPA / SAC and the Castle Hill SAC. LSEs screening identified that the Castle Hill SAC could be screened out from Appropriate Assessment regarding atmospheric pollution and recreational pressure. However, due to the proximity of the district to the Ashdown Forest SPA / SAC and potential major commuter routes within 200m of air-quality sensitive habitats, the site was taken forward to Appropriate Assessment in relation to both impact pathways.

Ashdown Forest SPA / SAC

Atmospheric Pollution

8.2 Modelling of all transects (particularly T5, T7 and T9, where total nitrogen doses will be highest) illustrates that a significant proportion of nitrogen due to traffic growth will be deposited within 1m-10m of the road, within the road verge and belts of dense gorse, bracken and trees that line the relevant parts of the A22, A275 and other relevant roads. These areas have low sensitivity to nitrogen deposition and contain lower value habitats due to the general presence of the road and its associated salt spray, dust, runoff, and altered drainage or soils. Even at roadside locations the nitrogen due to traffic growth would not prevent heathland restoration (if Natural England decided to undertake it), particularly within the context of the forecast net reduction in total nitrogen deposition.

8.3 Natural England have confirmed in discussions over the Wealden, Tunbridge Wells and South Downs Local Plans that nitrogen deposition from traffic is not preventing the SAC from achieving its Conservation Objectives, but that the principal issue is lack of management, which is ultimately a land stewardship issue for the site owners and managers rather than something associated with Local Plans. For example, a review of the Natural England SSSI condition assessments clearly indicates that historic (and in many cases current) inadequate management is the reason why only 20% of Ashdown Forest SAC is currently in a favourable condition. Notwithstanding this, there is an objective to address nitrogen deposition at the SAC. The Shared Nitrogen Action Plan (SNAP) is the primary mechanism by which Natural England aim to reduce nitrogen deposition to the SAC, which is targeted at agriculture rather than traffic (three times more nitrogen deposited at the SAC stems from agriculture). The forecast 'in combination' nitrogen doses due to traffic growth will have a negligible effect on Natural England's ability to restore good quality heathland through improved management and the implementation of the SNAP.

8.4 **Overall, it is concluded that the MSDP Review will not result in adverse effects on the integrity of the Ashdown Forest SPA / SAC regarding atmospheric pollution, either alone or in combination with other plans or projects. No additional policy recommendations are made.**

Recreational Pressure

8.5 It is noted that Mid Sussex District Council already has a SANG inventory in place, which provides bespoke and strategic mitigation opportunities for the 444 dwellings to be delivered in the 7km mitigation zone surrounding the Ashdown Forest SPA / SAC. A total SANG area of approx. 8.5ha will be required according to Natural England's 8ha per 1,000 population increase. For example, East Court & Ashplats Wood SANG, located to the east of East Grinstead, comprises a range of features such as woodland, a lake, children's play area and car parking. Ashplats Wood itself is a 28ha large site comprising ancient woodland, streams, ponds, wildlife and a way-marked 2.5km circular route. The SANG is advertised online on the Mid Sussex District Council website, addressing the protection of Ashdown Forest.

8.6 Other SANGs are being developed as part of emerging planning applications. For example, the Hill Place Farm SANG is being delivered alongside 200 dwellings and will have residual capacity

for 554 dwellings. The SANG is now operational and the residual capacity has been transferred to Mid Sussex District Council, which will use it as strategic SANG for future residential developments. The SANG management plan identifies three objectives for the site, including the provision of attractive alternative natural greenspace to the Ashdown Forest SPA / SAC, enhancement of the landscape attributes of key habitats in the site and maximisation of ecological interest. The Imberhorne Farm SANG in East Grinstead is another emerging SANG in support of housing allocation SA20 from the Site Allocations Development Plan Document (DPD). Taking into account the 550 dwellings from the allocated site, it is predicted that it will have residual capacity for 1,665 dwellings. However, it is to be noted that the future land ownership and management arrangements for this SANG have not been confirmed and the capacity may need to be reviewed in the future. The Concept Masterplan for the site indicates that it will comprise 71.32ha of 'additional land' in the western half of the site, the majority of which being SANG with direct foot access to the proposed dwellings. Overall, Mid Sussex District Council is well under way in developing a suite of SANGs to support the Local Plan Review. Mid Sussex District Council will have to ensure that sufficient SANG capacity is available prior to giving planning consent.

8.7 Work on the Strategic Access Management and Monitoring (SAMM) strategy for the Ashdown Forest SPA / SAC has been ongoing between the local authorities of Wealden, Mid Sussex, Lewes, Tunbridge Wells, Tandridge and Sevenoaks in partnership with the Conservators of Ashdown Forest and Natural England since 2012. The SAMM partnership is proactively working to deliver access management projects that address recreational impacts and monitor visitor levels across the SPA / SAC. The partnership has published a SAMM tariff guidance document that currently sets out a tariff of £1,170 per dwelling and has most recently been updated in October 2019[67].

8.8 **Overall, given that an established mitigation framework comprising SANG and SAMM measures is in place (and this is adequately captured in Plan policy), and has been agreed with Natural England, it is concluded that the MSDP Review will not result in adverse effects on the integrity of the Ashdown Forest SPA / SAC regarding recreational pressure, either alone or in combination with other plans or projects. No additional policy recommendations are made.**

[67] (October 2019). Ashdown Forest Special Protection Area (SPA) – Strategic Access Management and Monitoring Strategy Tariff Guidance for Lewes District Council, Mid Sussex District Council, Sevenoaks District Council, District Council of Tandridge, Tunbridge Wells Borough Council and Wealden District Council. Available at: https://www.midsussex.gov.uk/media/5596/samm-strategy-tariff-guidance.pdf [Accessed on the 25/11/2021]

Appendix A Maps

Figure 4: Map of housing sites allocated in the MSDP Review, European sites within 10km of the district boundary and the 7km mitigation zone surrounding the Ashdown Forest SPA / SAC.

Revision: 0 Drawn: AG Checked: JR Approved: JR Date: 2022-10-07

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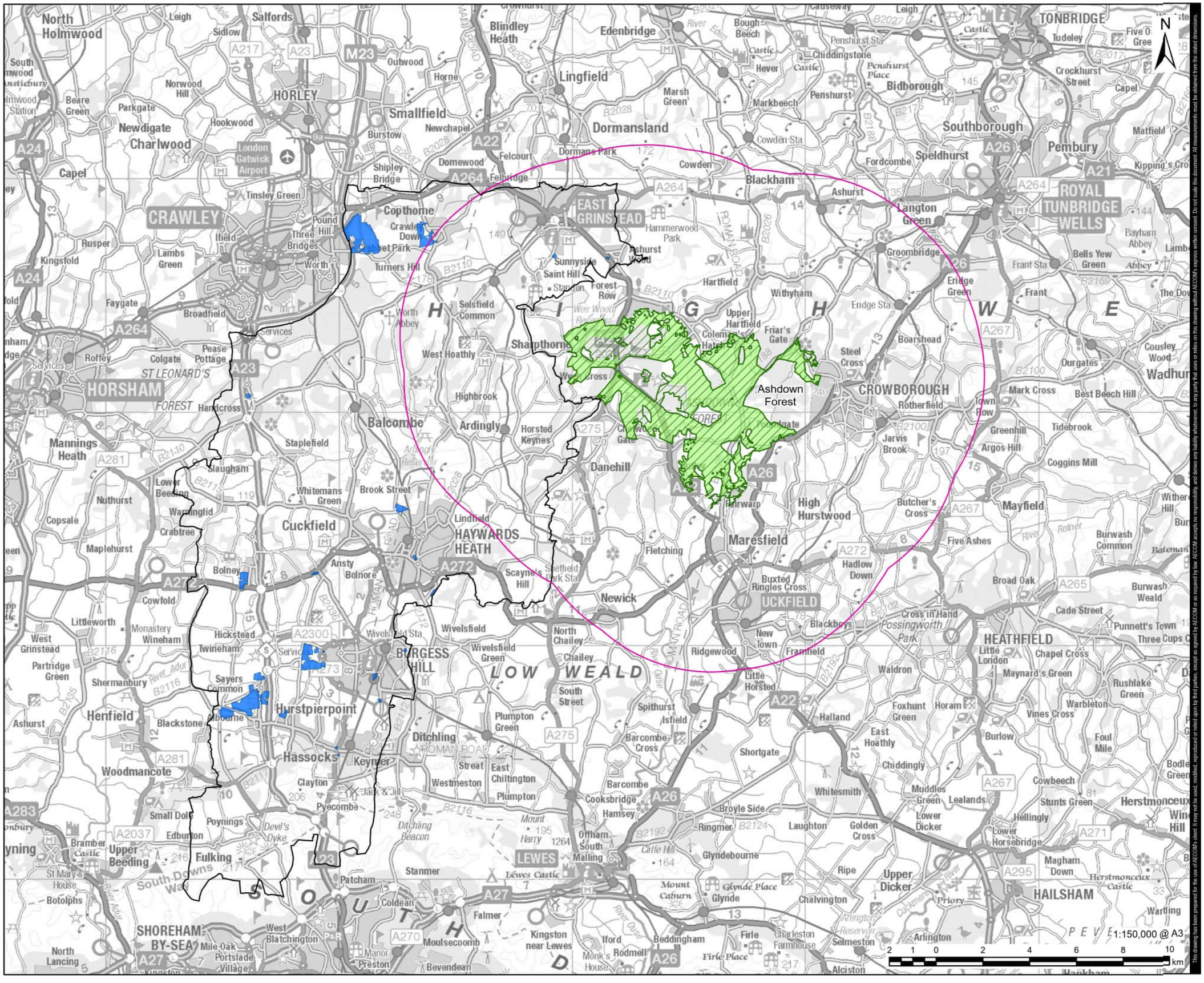

AECOM

PROJECT

Habitats Regulations Assessment of the Mid Sussex Local Plan Review

CLIENT

Mid Sussex District Council

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LEGEND

- Mid Sussex District Boundary
- Recreation Mitigation Buffer Zone - 7km
- Housing Allocation
- Special Protection Area
- Special Area of Conservation

NOTES

ISSUE PURPOSE

FINAL

PROJECT NUMBER

60671970

FIGURE TITLE

Housing Allocations and European Sites Within 10km of the Mid Sussex District Boundary

FIGURE NUMBER

Figure 1

Appendix B LSEs Screening

Table 4: Likely Significant Effects (LSEs) screening assessment of the policies contained in the MSDP Review. Where the LSEs screening outcome column is shaded orange, this indicates that impacts of the policy on European sites cannot be excluded and the site is screened in for Appropriate Assessment. Where this column is shaded green, there are no impact pathways present and the policy is screened out.

Policy	Summary of Policy	Likely Significant Effects (LSEs) Screening Outcome
Chapter 8 – Sustainability		
Policy DPS1: Climate Change	This policy represents the Council's approach to tackling climate change, such as through reducing carbon emissions, maximizing carbon sequestration and climate change adaptation	There are no LSEs of Policy DPS1 on European sites. This is a positive policy for the environment that sets out the Council's approach to mitigating against climate change by reducing carbon emissions and maximizing carbon sequestration. While this is positive for the environment, in particular air quality, this has no direct relevance for European sites. The policy does not propose a quantum or location of residential or employment development. There are no impact pathways present and Policy DPS1 is screened out from Appropriate Assessment.
Policy DPS2: Sustainable Design and Construction	This policy highlights that the Council will be directing development towards sustainable design and construction. Assessment frameworks will be employed (e.g. BREEAM standards) to assess this. It further addresses important topics, such as energy use. water efficiency measures and minimizing waste.	There are no LSEs of Policy DPS2 on European sites. This is a positive policy for the environment that highlights the Council's support for sustainability regarding a range of themes, including water efficiency, energy use and minimizing waste. While this is positive for the environment, this has no direct relevance for the European sites included in this assessment. The policy does not propose a quantum or location of residential or employment development. There are no impact pathways present and Policy DPS2 is screened out from Appropriate Assessment.
Policy DPS3: Renewable and	Policy DPS3 provides support for renewable and low carbon	There are no LSEs of Policy DPS3 on European sites.

Low Carbon Energy Schemes	energy schemes, including wind turbines (one or more wind turbines), provided that negative impacts on ecology and biodiversity are acceptable.	This policy specifies that proposals for renewable and low carbon energy schemes across Mid Sussex will be supported, provided there are no adverse impacts on designated and non-designated wildlife sites. While the policy supports development in principle, any impact pathways relevant to European sites will be assessed and mitigated (where required) in project-level HRAs. There are no impact pathways present and Policy DPS3 is screened out from Appropriate Assessment.
Policy DPS4: Flood Risk and Drainage	Policy DPS4 addresses flood risk and drainage to ensure that development is safe across its lifetime. The Strategic Flood Risk Assessment (SFRA) should be utilised to identify areas at risk. Sustainable Drainage Systems (SuDS) should be implemented in all developments of 10 dwellings or more and these should be managed / maintained in the long-term. Preferably, where feasible, surface water drainage should occur via ground infiltration and, post-attenuation, to surface watercourses.	There are no LSEs of Policy DPS4 on European sites. This policy stipulates how flood risk and drainage will be addressed in developments across Mid Sussex District, including Strategic Flood Risk Assessments and provision and long-term management of Sustainable Drainage Systems (SuDS). This is a positive policy for the environment as it protects against water level / quality changes across the district. There are no impact pathways present and Policy DPS4 is screened out from Appropriate Assessment.
Policy DPS5: Water Infrastructure and Water Environment	This policy establishes that developments should protect and enhance water resources and quality. It provides for off-site water service infrastructure and the development / expansion of water supply or sewage treatment facilities (where	There are no LSEs of Policy DPS5 on European sites. This policy protects Mid Sussex's water resources and quality. It specifies that development will only be permitted where it does not result in an unacceptable adverse effect on the district's water assets. This is a positive policy for the environment. There are no impact pathways present and Policy DPS5 is screened out from Appropriate Assessment.

	required and environmentally acceptable).	
Policy DPS6: Health and Wellbeing	Policy DPS6 details the Council's approach to achieving healthy, inclusive and safe places. These are outlined in the Joint Strategic Needs Assessment and West Sussex Joint Health and Wellbeing Strategy. A range of requirements are made for new developments, including high-quality design, accessibility, high-quality outdoor space, green infrastructure and biodiversity.	There are no LSEs of this policy on European sites. Policy DPS6 promotes health and wellbeing across Mid Sussex by securing high-quality design, sustainable transport and undertaking Health Impact Assessments. It has no bearing on European sites. There are no impact pathways present and Policy DPS6 is screened out from Appropriate Assessment.
Chapter 9 – Natural Environment and Green Infrastructure		
Policy DPN1: Biodiversity, Geodiversity and Nature Recovery	Policy DPN1 protects and enhances the biodiversity and geodiversity of Mid Sussex. Development proposals need to retain features of interest, reduce disturbance to sensitive habitats / species, result in a net gain in biodiversity, minimize habitat fragmentation and avoid damage. Designated sites are given protection according to their importance to nature conservation.	There are no LSEs of Policy DPN1 on European sites. This is a development management policy that protects biodiversity and geodiversity, and promotes nature recovery. Importantly, the policy provides for a general protection of Special Protection Areas and Special Areas of Conservation, including the avoidance of damage and their general enhancement. This is a positive policy from an HRA perspective. There are no impact pathways present and Policy DPN1 is screened out from Appropriate Assessment.
Policy DPN2: Biodiversity Net Gain	Policy DPN2 highlights that biodiversity net gain will contribute to the delivery of	There are no LSEs of Policy DPN2 on European sites.

	ecological networks, green infrastructure and nature recovery. Development proposals will need to deliver a Biodiversity Net Gain Plan that provides for measurable net gains in biodiversity. A minimum of 10% biodiversity net gain will be required. On Significant Sites (DPSC1 – 3) biodiversity net gain of 20% will be required.	This is a development management policy that aligns development in Mid Sussex with the most up-to-date biodiversity net gain requirements, specifically a minimum of 10% biodiversity net gain. While positive for the environment, biodiversity net gain is not directly relevant to European sites. There are no impact pathways present and Policy DPN2 is screened out from Appropriate Assessment.
Policy DPN3: Green Infrastructure	Policy DPN3 protects green infrastructure assets by requiring development to incorporate existing green infrastructure into design, provide new green infrastructure and strengthen connectivity of ecological networks. Planning applications should consider landscape assets at an early stage and consider how they link to existing and proposed greenspace features.	There are no LSEs of Policy DPN3 on European sites. This is a development management policy that promotes green infrastructure in the District, and highlights one asset in the form of a Green Circle around Burgess Hill. While not delivered to SANG standards, informal open spaces are positive because they can help absorb recreational pressure locally. There are no impact pathways present and Policy DPN3 is screened out from Appropriate Assessment.
Policy DPN4: Trees, Woodland and Hedgerows	Policy DPN4 protects and enhances trees, woodland and hedgerows across Mid Sussex. Development that will result in the loss of such features (including ancient woodland or veteran trees) will not be permitted. Development proposals should incorporate existing trees into design,	There are no LSEs of Policy DPN4 on European sites. This is a development management policy that protects trees, woodland and hedgerows in Mid Sussex District. While positive for the natural environment, this policy has no direct bearing on European sites. There are no impact pathways present and Policy DPN4 is screened out from Appropriate Assessment.

	prevent damage to root systems, provide new planting and apply appropriate protection measures. There should be a 15m buffer between development and ancient woodland.	
Policy DPN5: Historic Parks and Gardens	Policy DPN5 protects the character, appearance and setting of registered parks or gardens. Development proposals in such settings will only be permitted where special features (e.g. setting and views) are protected and enhanced.	There are no LSEs of Policy DPN5 on European sites. This is a development management policy that protects the characteristics and settings of historic parks and gardens. Publicly accessible historic parks or gardens may help reduce the number of recreational visits to more sensitive European sites, such as the Ashdown Forest SPA / SAC. There are no impact pathways present and Policy DPN5 is screened out from Appropriate Assessment.
Policy DPN6: Pollution	Policy DPN6 requires development to avoid pollution or hazards through effects on air, noise, vibration, light, water, soil, odour, dust and other means. The health of people and the natural environment (e.g. nature conservation sites) is to be protected.	There are no LSEs of Policy DPN6 on European sites. This is a development management policy that aims to minimize noise, air and light pollution across Mid Sussex District. This is generally a positive policy for the environment. There are no impact pathways present and Policy DPN6 is screened out from Appropriate Assessment.
Policy DPN7: Noise Impacts	Policy DPN7 protects the natural environment (specifically also nature conservation sites) and people from unacceptable levels of noise. Generally, developments will require good acoustic design and orientation. Planning	There are no LSEs of Policy DPN7 on European sites. This is a development management policy that aims to reduce the impacts of noise on the environment and people. While positive for the environment, this has no bearing on the European sites that are relevant to Mid Sussex District. The policy does not stipulate a quantum and / or location of growth.

	proposals may be required to undertake noise impact assessment and consider the Council's noise guidance.	There are no impact pathways present and Policy DPN7 is screened out from Appropriate Assessment.
Policy DPN8: Light Impacts and Dark Skies	This policy protects the environment and people from unacceptable levels of light pollution (including from sky glow, glare and light spillage). For example, artificial light sources should be minimized through using the minimum of light required to achieve a purpose, good-quality design, low energy light sources and considering light colour. The Institute of Lighting Professionals guidance must be followed.	There are no LSEs of Policy DPN8 on European sites. This is a development management policy that aims to reduce the impacts of artificial lighting on the environment and people. For example, lighting proposals should use the minimum of light required to achieve their objective, use low energy light sources and consider the impact of light colour on wildlife. While positive for the environment, the European sites relevant to Mid Sussex District are not designated for species that have a particularly high light sensitivity. The policy does not stipulate a quantum and / or location of growth. There are no impact pathways present and Policy DPN8 is screened out from Appropriate Assessment.
Policy DPN9: Air Quality	Policy DPN9 protects the natural environment and people from unacceptable effects of atmospheric pollution. As a primary measure, the Council encourages active and sustainable travel modes / measures and green infrastructure. Development proposals will need to demonstrate that they will not have negative impacts on air quality. If needed, an air quality assessment will be required and the Council's guidance (Air Quality and Emissions	There are no LSEs of Policy DPN9 on European sites. This is a development management policy that protects against unacceptable impacts on air quality, such as through the identification of Air Quality Management Areas (AQMAs). Importantly, the policy also explicitly protects the Ashdown Forest SPA / SAC from air quality impacts of development schemes that will result in increases in traffic flows. The policy requires any adverse air quality effects to be mitigated, both when considered alone and in combination. The policy does not stipulate a quantum and / or location of growth. There are no impact pathways present and Policy DPN9 is screened out from Appropriate Assessment.

	Mitigation Guidance for Sussex) must be followed. Sites in proximity to Air Quality Management Areas (AQMAs) and nature conservation sites will need to incorporate mitigation measures to reduce air quality impacts. The policy specifically protects the Ashdown Forest SPA / SAC from air quality impacts. Development with the potential for effects will need to demonstrate that adequate measures are in place to avoid or mitigate impacts on the SPA / SAC.	
Policy DPN10: Land Stability and Contaminated Land	Planning applications must consider whether a site is suitable for its intended purpose, taking into account ground conditions, land stability and contamination. The policy also requires measures to protect the natural environment, including soil, waterbodies, groundwater, aquifers and wildlife.	There are no LSEs of Policy DPN10 on European sites. This is a development management policy that ensures proposed development sites are fit for purpose. Making sure that there are no concerns regarding land stability and contamination will reduce the potential for negative impacts on the natural environment. While positive for the environment, this policy has no direct relevance for European sites. The policy does not stipulate a quantum and / or location of growth. There are no impact pathways present and Policy DPN10 is screened out from Appropriate Assessment.
Chapter 10 – Countryside		
Policy DPC1: Protection and Enhancement of the Countryside	Policy DPC1 protects and enhances the countryside in Mid Sussex. Furthermore, the most versatile agricultural land (Grades 1, 2 and 3a) will be protected from non-agricultural	There are no LSEs of Policy DPC1 on European sites. This is a development management policy that protects and enhances the countryside, including areas of the most versatile agricultural land. However, the protection of the countryside has no relevance for European sites.

	uses. Economically viable mineral reserves in the district will be safeguarded.	There are no impact pathways present and Policy DPC1 is screened out from Appropriate Assessment.
Policy DPC2: Preventing Coalescence	Policy DPC2 maintains the unique characteristics of individual towns and villages in Mid Sussex. Development will only be permitted where it does not result in the coalescence of settlements.	There are no LSEs of Policy DPC2 on European sites. This is a development management policy that aims at to prevent coalescence in Mid Sussex by preserving the distinct character of different settlements. However, this policy approach has no relevance for European sites. There are no impact pathways present and Policy DPC2 is screened out from Appropriate Assessment.
Policy DPC3: New Homes in the Countryside	This policy permits new homes in the countryside provided they fulfil specific criteria, such as being essential for agricultural or forestry workers and exceptional quality of design. The policy also addresses both permanent and temporary dwellings for agricultural workers.	There are no LSEs of Policy DPC3 on European sites. This is a development management policy that permits new homes in the countryside, provided that a set of stringent conditions is fulfilled. However, setting general conditions for the delivery of permanent or temporary agricultural dwellings in the countryside, has no immediate bearing on European sites. There are no impact pathways present and Policy DPC3 is screened out from Appropriate Assessment.
Policy DPC4: High Weald Area of Outstanding Natural Beauty	Policy DPC4 indicates that development within the High Weald AONB will only be permitted where it conserves and enhances its natural beauty. This includes its landscape features, land management techniques and wildlife / cultural heritage.	There are no LSEs of Policy DPC4 on European sites. This is a development management policy that conserves and enhances the beauty of the High Weald Area of Outstanding Natural Beauty, such as by abiding to the AONB Management Plan. However, conservation and enhancement of the AONB, while positive, has no direct relevance to European sites. There are no impact pathways present and Policy DPC4 is screened out from Appropriate Assessment.
Policy DPC5: Setting of the South Downs National Park	Policy DPC5 stipulates that development that contributes to the setting of the South Downs National Park, must not detract from its visual and	There are no LSEs of Policy DPC5 on European sites.

	special qualities (e.g. dark skies, tranquility, views, etc.).	This is a development management policy that aims at protecting the setting of the South Downs National Park (SDNP), including not impacting transitional open green spaces. However, protecting the SDNP, while positive, has no direct relevance to European sites. There are no impact pathways present and Policy DPC5 is screened out from Appropriate Assessment.
Policy DPC6: Ashdown Forest SPA and SAC	Policy DPC6 protects the integrity of the Ashdown Forest SPA / SAC. It prevents adverse effects from recreational pressure by ensuring that adequate mitigation measures are put in place. These requirements will be sought in accordance with the strategic solution in place for the site, such as a 400m exclusion zone where no residential development is permitted and a 7km zone in which appropriate contributions to Suitable Alternative Natural Greenspace (SANG) and Strategic Access Management and Monitoring (SAMM) will need to be made by residential developments. The policy also stipulates that sites associated with traffic increases will require project-level HRA to ensure that they will not result in adverse effects on the SAC regarding atmospheric pollution.	There are no LSEs of Policy DPC6 on European sites. This is a development management policy that protects the Ashdown Forest SPA / SAC from adverse effects of development, both alone and in combination. The policy stipulates that mitigation for each planning application will be sought in line with the strategic mitigation framework in force at the time of application. It specifies that residential development within 7km of the Ashdown Forest SPA / SAC will need to deliver Suitable Alternative Natural Greenspace (SANG) or provide financial contributions to strategic SANG, as well as contributing to Strategic Access Management and Monitoring (SAMM). Additionally, the policy also addresses potential atmospheric pollution impacts by requiring site-specific air quality assessments. This policy represents the key framework for protecting the Ashdown Forest SPA / SAC. There are no impact pathways present and Policy DPC6 is screened out from Appropriate Assessment.
Chapter 11 – Built Environment		

Policy DPB1: Character and Design	Policy DPB1 stipulates that all development should comprise high-quality design and be in keeping with the character of Mid Sussex. Developments are required to consider context, layouts / streets / spaces, structure, design and residential amenity to gain planning consent.	There are no LSEs of Policy DPB1 on European sites. This is a development management policy that sets important character and design criteria for development in Mid Sussex, including layout of streets and building design. However, design criteria generally have no direct relevance to European sites. There are no impact pathways present and Policy DPB1 is screened out from Appropriate Assessment.
Policy DPB2: Listed Buildings and Other Heritage Assets	This policy protects listed buildings and their settings. This is to be achieved through the use of traditional building materials. Other heritage assets of architectural or historic merit will also need to be considered by development proposals.	There are no LSEs of Policy DPB2 on European sites. This development management policy protects listed buildings and other heritage assets across Mid Sussex, including architecturally, culturally and historically important sites. However, the protection of such assets is not relevant to European sites. There are no impact pathways present and Policy DPB2 is screened out from Appropriate Assessment.
Policy DPB3: Conservation Areas	Development in Conservation Areas will need to conserve and enhance its special character and appearance. This should be achieved through sensitive design, protection of open spaces / gardens, preservation of traditional shop fronts and appropriate urban surfaces (e.g. pavements, roads).	There are no LSEs of Policy DPB3 on European sites. This development management policy protects important conservation areas across Mid Sussex. However, these areas do not relate to environmental / natural assets and as such this policy has no bearing on European sites. There are no impact pathways present and Policy DPB3 is screened out from Appropriate Assessment.
Chapter 12 – Transport		
Policy DPT1: Placemaking and Connectivity	Policy DTP1 sets out that development proposals shall support the West Sussex	There are no LSEs of Policy DPT1 on European sites.

	Transport Plan 2022-2036, including the provision of Transport Assessments and sustainable travel interventions, prioritization of sustainable / active travel modes, and creation of attractive and permeable street networks.	This is a development management policy that outlines the Council's approach towards placemaking and connectivity. Importantly, it focuses on sustainable travel interventions and the promotion of active travel modes (i.e. walking and cycling). Importantly, transport-related management approaches can help reduce the volume of traffic, and thereby pollutant deposition, that occurs in close proximity to European sites. The policy does not stipulate a quantum and / or location of growth. There are no impact pathways present and Policy DPT1 is screened out from Appropriate Assessment.
Policy DPT2: Rights Of Way and Other Recreational Routes	Policy DTP2 protects Rights of Way, national cycle routes and recreational routes in Mid Sussex. It promotes access to the countryside by providing convenient links to recreational routes, delivering additional routes within and between settlements, and promoting multi-functional routes.	There are no LSEs of Policy DPT2 on European sites. This is a development management policy that protects and enhances Public Rights of Way (PRoWs) and recreational routes across Mid Sussex. This is a positive policy for European sites, because it promotes access to the wider countryside and may help reduce recreational pressure within sensitive European sites, such as the Ashdown Forest SPA / SAC. The policy does not stipulate a quantum and / or location of growth. There are no impact pathways present and Policy DPT2 is screened out from Appropriate Assessment.
Policy DPT3: Cycling	Development proposals are expected to remove barriers to active travel by providing high-quality active travel infrastructure and adequate opportunities cycle parking facilities. The importance of the Mid Sussex Local Cycling and Walking Infrastructure Plan (LCWIP) is highlighted.	There are no LSEs of Policy DPT3 on European sites. This is a development management policy that promotes the use of alternative transport modes, specifically active travel such as cycling (as set out in the Mid Sussex Local Cycling and Walking Infrastructure Plan (LCWIP)). Facilitating this modal shift in transport is important because it may have positive implications for air quality and recreational pressure impact pathways. The policy does not stipulate a quantum and / or location of growth. There are no impact pathways present and Policy DPT3 is screened out from Appropriate Assessment.
Policy DPT4: Parking and Electric Vehicle Charging Infrastructure	Policy DPT4 supports appropriate parking and electric vehicle charging infrastructure across Mid Sussex. All new non-	There are no LSEs of Policy DPT4 on European sites. This is a development management policy that sets parking and electric vehicle charging infrastructure standards across Mid Sussex, such as delivering well-integrated parking spaces and adequate Electric Vehicle

	residential developments with 10 or more associated parking spaces must provide a minimum of two fast charging points and cable routes for the remaining 50%.	Charging points. Promoting the use of electric vehicles is positive for minimizing air quality impacts and is one of the main measures for improving air-quality at sensitive European sites. The policy does not stipulate a quantum and / or location of growth. There are no impact pathways present and Policy DPT4 is screened out from Appropriate Assessment.
Chapter 13 – Economy		
Policy DPE1: Sustainable Economic Development	Policy DPE1 supports sustainable economic development across the District. It encourages high-quality development of land and premises, supports the expansion of existing businesses and requires appropriate infrastructure.	Likely Significant Effects of Policy DPE1 on European sites cannot be excluded. This policy supports sustainable economic development across Mid Sussex, including the expansion of existing businesses. New employment opportunities in the district are likely to increase the number of commuter journeys within Mid Sussex and between adjoining authorities, potentially leading to increased nitrogen and ammonia deposition in European sites. The following impact pathway is present: • Atmospheric pollution (through nitrogen and ammonia deposition) Due to this linking impact pathway, Policy DPE1 is screened in for Appropriate Assessment.
Policy DPE2: Existing Employment Sites	Policy DPE2 protects existing employment sites (e.g. General Industrial and Storage or Distribution Class Uses). It supports the intensification of employment uses within Existing Employment Sites. Furthermore, within the built-up area, expansion of employment sites will be supported.	There are no LSEs of Policy DPE2 on European sites. This development management policy supports the protection, intensification, redevelopment and expansion of existing employment sites. However, the general support in principle for the expansion of such sites, has no direct bearing on European sites. The implications of employment development are adequately assessed as part of other policies in the Plan. There are no impact pathways present and Policy DPE2 is screened out from Appropriate Assessment.
Policy DPE3: Employment Allocations	Policy DPE3 provides for employment land on Significant Sites: Land to South of Reeds Lane, Sayers	Likely Significant Effects of Policy DPE3 on European sites cannot be excluded. This policy allocates employment sites across Mid Sussex, thereby likely influencing the volume of commuter traffic and routes of new commuter journeys (potentially leading within 200m of air quality sensitive habitats).

	Common and Land at Crabbet Park.	The following impact pathway is present: • Atmospheric pollution (through nitrogen and ammonia deposition) Due to this linking impact pathway, Policy DPE3 is screened in for Appropriate Assessment.
Policy DPE4: Town and Village Centre	Policy DPE4 supports development in Town or Village Centres, including the major settlements of Burgess Hill, East Grinstead and Haywards Heath. Centre boundaries for each settlement in the hierarchy are defined on the accompanying Policies Map.	Likely Significant Effects of Policy DPE4 on European sites cannot be excluded. This policy identifies the development hierarchy in Mid Sussex and partly determines where new employment floorspace will be delivered. This will have important implications on the spread of commuter traffic across the District, dictating where atmospheric pollution issues will be greatest. The following impact pathway is present: • Atmospheric pollution (through nitrogen and ammonia deposition) Due to this linking impact pathway, Policy DPE4 is screened in for Appropriate Assessment.
Policy DPE5: Within Town and Village Centre Boundaries	The policy supports development of main town centre uses within defined boundaries, in accordance with Town Centre Masterplans.	There are no LSEs of Policy DPE5 on European sites. This is a development management policy that supports the development of main town centre uses within Town and Village Centres. However, the support of such development in principle has no bearing on European sites and any impacts will be assessed in project-level HRAs as required. There are no impact pathways present and Policy DPE5 is screened out from Appropriate Assessment.
Policy DPE6: Development within Primary Shopping Areas	Policy DPE6 promotes thriving centres by maintaining a dominance of Class E uses in Primary Shopping Areas. New developments for retail, food, beverage and service uses will be supported. The policy also restricts residential uses to upper storeys.	There are no LSEs of Policy DPE6 on European sites. This is a development management policy that promotes the vitality of urban centres by supporting the dominance of and development of new Class E uses. However, the support of such development in principle has no bearing on European sites and any impacts will be assessed in project-level HRAs as required. There are no impact pathways present and Policy DPE6 is screened out from Appropriate Assessment.

Policy DPE7: Smaller Village and Neighbourhood Centres	Policy DPE7 defines the policy approach outside of defined Town and Village Centres. Uses in smaller villages, neighbourhood centres and parades should be protected to meet the needs of local communities, except where such uses are no longer viable.	There are no LSEs of Policy DPE7 on European sites. This is a development management policy that protects existing uses of community importance in smaller villages and neighbourhood centres. However, the support of such existing uses generally has no bearing on European sites. There are no impact pathways present and Policy DPE7 is screened out from Appropriate Assessment.
Policy DPE8: Sustainable Rural Development and The Rural Economy	This policy supports new small-scale economic development and extensions to existing facilities, provided that such development is not in conflict with other policies in the Plan. It also provides support in principle for diversification of agricultural uses and the re-use of existing buildings for business uses.	There are no LSEs of Policy DPE8 on European sites. This is a development management policy that supports small-scale sustainable rural development to promote the rural economy, provided that certain conditions are met. However, the support of such development in principle has no bearing on European sites and any impacts will be assessed in project-level HRAs as required. There are no impact pathways present and Policy DPE8 is screened out from Appropriate Assessment.
Policy DPE9: Sustainable Tourism and the Visitor Economy	Policy DPE8 supports the retention of existing tourism accommodation and attractions. Furthermore, proposals for tourism assets will be supported, provided that sustainable travel opportunities are encouraged and a range of other conditions are met.	Likely Significant Effects of Policy DPE8 on European sites cannot be excluded. This policy supports the provision of sustainable tourism across Mid Sussex, such as through expanded visitor accommodation or new attractions. Promoting tourism can lead to a temporary increase in the local population and, often inadvertently, access levels to designated sites. Therefore, this policy may have important implications for European sites, in particular the Ashdown Forest SPA / SAC. The following impact pathways are present: • Atmospheric pollution (through nitrogen and ammonia deposition) • Recreational pressure Due to these linking impact pathways, Policy DPE8 is screened in for Appropriate Assessment.
Chapter 14 – Housing		

Policy DPH1: Housing	Policy DPH1 specifies the District's Local Housing Need as 18,581 dwellings over the Plan period 2021 – 2039. Importantly, 11,519 have existing planning permission, such that the District Plan only needs to make provision for 8,332 new dwellings. The housing need is to be met through delivery of three Significant Sites (DPSC1-3) and several smaller housing sites (DPH5 – DPH28).	Likely Significant Effects of Policy DPH1 on European sites cannot be excluded. This policy provides for a minimum of 8,332 new dwellings in the Plan period, which includes 1,000 dwellings in the North West Sussex Housing Market area. These new dwellings will increase the local population and result in additional demand for recreational space as well as increasing the number of commuter journeys. This may have impacts on European sites, in particular the Ashdown Forest SPA / SAC. The following impact pathways are present: • Atmospheric pollution (through nitrogen and ammonia deposition) • Recreational pressure Due to these linking impact pathways, Policy DPH1 is screened in for Appropriate Assessment.
Policy DPH2: Sustainable Development – Outside the Built-up Area	This policy supports the expansion of settlements outside of built-up areas, where this is needed to meet identified local housing, employment and community needs. All development should be sustainable.	There are no LSEs of Policy DPH2 on European sites. Policy DPH2 supports the sustainable expansion of settlements outside built-up areas, provided that this growth is sustainable. However, this is a general development policy, which does not set out a quantum or location of growth. As such, the policy has no bearing on European sites. There are no impact pathways present and Policy DPH2 is screened out from Appropriate Assessment.
Policy DPH3: Sustainable Development – Inside the Built-up Area	Policy DPH3 supports development within built-up areas. Greater concentrations of development may be delivered in areas with good accessibility to shops, services and sustainable transport modes.	There are no LSEs of Policy DPH3 on European sites. Policy DPH3 supports development within Mid Sussex' built-up areas, provided that this growth is in keeping with the character of the District. However, this is a general development policy, which does not set out a quantum or location of growth. As such, the policy has no bearing on European sites. There are no impact pathways present and Policy DPH3 is screened out from Appropriate Assessment.
Policy DPH4: General Development Principles for Housing Allocations	Policy DPH4 provides general principles for housing allocations and specifies other policies that will need to be considered. The key themes	There are no LSEs of Policy DPH4 on European sites. Policy DPH4 contains development principles for housing allocations, including the conservation of wildlife, protection of Green Infrastructure, Sustainable Transport Strategy. Sustainable Drainage Systems (SuDS) and

	covered include urban design principles, landscape considerations, social and community needs, historic environment and cultural heritage, air quality / light / noise, accessibility, flood risk and drainage, utilities, sustainability and others. Notably, Significant Sites must deliver water consumption standards of 85 litres per person per day (including external water use) and, ideally, target water neutrality.	utilities (e.g. water consumption). However, development management generally has no negative implications for European sites. There are no impact pathways present and Policy DPH4 is screened out from Appropriate Assessment.
	See following table for DPSC1-3 and DPH5 to DPH28	
Policy DPH26: Older Persons' Housing and Specialist Accommodation	Policy DPH26 sets out that 1,887 additional dwellings with support or care capacities are provided over the Plan period. Overall, seven sites for older persons' accommodation are allocated. The policy also provides further detail regarding the potential extensions to and loss of older people and specialist housing.	There are no LSEs of Policy DPH30 on European sites. This is a development management policy that relates to the provision of homes for the elderly and people with specialist needs. However, this has no implications for European sites. There are no impact pathways present and Policy DPH26 is screened out from Appropriate Assessment.
Policy DPH29: Gypsies, Travellers and Travelling Showpeople	Policy DPH34 identifies that sixteen net new permanent traveller pitches are required in the Plan period 2021 to 2039, many of which will be delivered through existing commitments. A residual requirement of four pitches is unmet. On-site	Likely Significant Effects of Policy DPH29 on European sites cannot be excluded. This policy provides for a residual requirement of four gypsy and traveller pitches, which would lead to an increase in the population of Mid Sussex. Similar to new dwellings, these pitches are likely to result in additional demand for recreational space as well as increasing the number of vehicle journeys. This may have impacts on European sites, in particular the Ashdown Forest SPA / SAC.

	provision of pitches will be required on Significant Sites to meet the identified need. Proposals for new gypsy and traveller sites will need to meet a range of requirements, including safe access and access to community facilities. The policy stipulates that sites within the 7km mitigation zone surrounding the Ashdown Forest SPA / SAC will require Appropriate Assessment and need to deliver adequate mitigation measures.	Importantly, the policy specifies that sites within the 7km mitigation zone surrounding the Ashdown Forest SPA / SAC will require Appropriate Assessment and need to be in compliance with Policy DPC6 that protects this designated site. The following impact pathways are present: • Atmospheric pollution (through nitrogen and ammonia deposition) • Recreational pressure Due to these linking impact pathways, Policy DPH29 is screened in for Appropriate Assessment.
Policy DPH30: Self and Custom Build Housing	Policy DPH34 supports the important role that self and custom build housing is to play in the future housing in the district. A minimum of 5% of the residential plots on housing sites comprising 100 or more dwellings are to be self and custom built. These plots will need to be serviced with water, foul and surface water drainage, telecommunications and gas / electricity supply.	There are no LSEs of Policy DPH30 on European sites. This is a development management policy that supports self and custom build housing projects. However, whether houses are self-built or not has no relevance to European sites. There are no impact pathways present and Policy DPH30 is screened out from Appropriate Assessment.
Policy DPH31: Housing Mix	Policy DPH35 stipulates that sustainable, mixed and balanced communities need to be delivered. This includes an adequate mix of dwelling types and sizes. Furthermore, other types of accommodation (e.g. for older persons and people	There are no LSEs of Policy DPH31 on European sites. This is a development management policy that identifies the housing mix to be delivered across Mid Sussex, such as the proportion of dwellings with different capacities. However, the housing mix to be provided has no bearing on European sites. There are no impact pathways present and Policy DPH31 is screened out from Appropriate Assessment.

	with disabilities) are also highlighted.	
Policy DPH32: Affordable Housing	This policy supports the provision of an adequate amount and type of housing across the district, including affordable housing. For example, on residential and mixed-use development of 10 or more dwellings, a minimum of 30% affordable housing is to be provided. A minimum of 4% of affordable homes is to be provided with wheelchair accessibility.	There are no LSEs of Policy DPH32 on European sites. This is a development management policy that stipulates the proportion of affordable housing (and associated floorspace) to be delivered across the district. However, affordable housing delivery has no bearing on European sites. There are no impact pathways present and Policy DPH32 is screened out from Appropriate Assessment.
Policy DPH33: First Homes	Policy DPH37 supports the delivery of First Homes in line with Government policy. Affordable first homes are to be discounted by a minimum of 30% against the market value. Furthermore, the Council will also support First Homes Exception Sites.	There are no LSEs of Policy DPH33 on European sites. This is a development management policy detailing the Council's approach to first home ownership. However, strategies to promote home ownership have no relevance to European sites. There are no impact pathways present and Policy DPH33 is screened out from Appropriate Assessment.
Policy DPH34: Rural Exception Sites	This policy identifies that rural exception sites for affordable housing will be permitted, provided that certain criteria are met. The delivery of rural exception sites will primarily be led by Parish Councils.	There are no LSEs of Policy DPH34 on European sites. This is a development management policy that relates to the development of affordable housing in rural exception sites. However, these exceptions have no bearing on European sites. There are no impact pathways present and Policy DPH34 is screened out from Appropriate Assessment.
Policy DPH35: Dwelling Space Standards	Policy DPH39 stipulates that all new residential development will need to meet	There are no LSEs of Policy DPH35 on European sites.

	nationally set space standards for internal floorspace and storage space. These will be applied to the full range of dwelling types.	This is a development management policy that identifies space standards in new dwellings, including for internal floorspace and storage space. However, this has no bearing on European sites. There are no impact pathways present and Policy DPH35 is screened out from Appropriate Assessment.
Policy DPH36: Accessibility	This policy provides the Council's approach to accessibility. It outlines the requirements for accessible / adaptable dwellings (category 2) and wheelchair-user dwellings (category 3).	There are no LSEs of Policy DPH36 on European sites. This is a development management policy that sets accessibility and adaptability standards for dwellings across Mid Sussex, such as accessibility by wheelchairs. However, accessibility generally has no bearing on European sites. There are no impact pathways present and Policy DPH36 is screened out from Appropriate Assessment.
Chapter 15 – Infrastructure		
Policy DPI1: Securing Infrastructure	Policy DPI1 stipulates that development will need to be supported by adequate and suitably maintained infrastructure and / or mitigation measures to support any additional need. On-site or off-site infrastructure will need to be provided at an appropriate time, prior to the development becoming operational / occupied. Larger developments may need to be phased for this requirement to be met.	There are no LSEs of Policy DPI1 on European sites. This is a development management policy that ensures the delivery of appropriate infrastructure (e.g. utilities, wastewater treatment, potable water supply) in line with emerging development. This is a positive policy for the environment. However, the European sites relevant to Mid Sussex are not designated for any habitats / species that rely on good water quality / sufficient hydrological levels. The policy does not stipulate a quantum and / or location of growth. There are no impact pathways present and Policy DPI1 is screened out from Appropriate Assessment.
Policy DPI2: Planning Obligations	Policy DPI2 states that the Council will use planning obligations to address the impacts of development, in line with the Community Infrastructure Levy	There are no LSEs of Policy DPI2 on European sites. This policy reserves the right of the council to set planning obligations in line with the Community Infrastructure Levy Regulations 2010 and through Section 106 Agreements. However, this process has no relevance to European sites.

	Regulations 2010 (as amended).	The policy does not stipulate a quantum and / or location of growth. There are no impact pathways present and Policy DPI2 is screened out from Appropriate Assessment.
Policy DPI3: Major Infrastructure Projects	Policy DPI3 addresses how the Council will approach major infrastructure projects. Such proposals should contribute positively to the implementation of the spatial strategy. Nationally Significant Infrastructure Projects (NSIPs) will need to ensure that they minimize adverse impacts / harm to local places, communities and businesses. Assessments of NSIPs will include the construction, operation and decommissioning phases.	There are no LSEs of Policy DPI3 on European sites. Policy DPI3 highlights how Mid Sussex District Council will address Nationally Significant Infrastructure Projects (NSIPs). This will include adequate assessments of construction, operation and decommissioning phases. This is a positive policy because it ensures that large-scale proposals are adequately addressed. However, this process has no bearing on European sites. The policy does not stipulate a quantum and / or location of growth. There are no impact pathways present and Policy DPI3 is screened out from Appropriate Assessment.
Policy DPI4: Communications Infrastructure	This policy supports the delivery of high-quality digital infrastructure, including fibre broadband. New telecommunications must seek to minimize impacts on the visual amenity, character and appearance of the surrounding area. They should not have an unacceptable effect on sensitive areas, including Areas of Outstanding Natural Beauty, South Downs National Park and conservation areas.	There are no LSEs of Policy DPI4 on European sites. This is a development management policy that supports adequate communications infrastructure across the District. However, this has no direct bearing on the European sites relevant to the Mid Sussex District Plan. The policy does not stipulate a quantum and / or location of growth. There are no impact pathways present and Policy DPI4 is screened out from Appropriate Assessment.

Policy DPI5: Open Space, Sport and Recreational Facilities	The Council will support developments that provide new / enhanced open space, leisure, sport and recreational facilities (e.g. allotments). Proposals that result in the net loss of such features will generally not be supported unless several conditions are fulfilled.	There are no LSEs of Policy DPI5 on European sites. This is a development management policy that secures the delivery of open space, sport and recreational facilities in new developments. Such spaces are important as they absorb recreational activities locally and may help reduce the number of recreational visits to European sites. The policy does not stipulate a quantum and / or location of growth. There are no impact pathways present and Policy DPI5 is screened out from Appropriate Assessment.
Policy DPI6: Community and Cultural Facilities and Local Services	Policy DPI6 supports the provision or improvement of community and cultural facilities. Proposals that involve the net loss of such facilities will not be supported unless several conditions are met. Larger developments will need to provide community facilities on-site.	There are no LSEs of Policy DPI6 on European sites. This is a development management policy that protects and / or enhances community facilities and local services. However, the supply of such services has no direct relevance to the integrity of European sites. The policy does not stipulate a quantum and / or location of growth. There are no impact pathways present and Policy DPI6 is screened out from Appropriate Assessment.

Table 5: Housing allocation policies contained in the MSDP Review, detailing site area (ha), capacity and approx. distance to the Ashdown Forest SPA / SAC. Sites that fall within the 7km mitigation zone surrounding the SPA / SAC are colour-coded orange.

Type of Site	Policy	Site Area (ha)	Capacity	Approx. Distance to the Ashdown Forest SPA / SAC (km)
Significant sites	DPSC1: Land to West of Burgess Hill	67.7	1,400 dwellings	15.9
	DPSC2: Land to South of Reeds Lane, Sayers Common	88.5	2,000 dwellings (1,850 dwellings within the Plan period) and up to 9,000m^2 of employment uses	18.9
	DPSC3: Land at Crabbet Park	172	2,300 dwellings (approx. 1,000 to the end of 2039)	8.7
Housing Allocation	DPH5: Batchelors Farm, Keymer Road, Burgess Hill	1.5	33 dwellings	15.9
	DPH6: Land at Brow Hill, Janes Lane, Burgess Hill	1.2	25 dwellings	13.5
	DPH7: Burgess Hill Station, Burgess Hill	3.5	300 dwellings	15.3
	DPH8: Land off West Hoathly Road, East Grinstead	1.8	45 dwellings	3.1
	DPH9: Land at Hurstwood Lane, Haywards Heath	1.8	45 dwellings	10.3
	DPH10: Land at Junction of Hurstwood Lane and Colwell Lane, Haywards Heath	1	25 dwellings	10.6
	DPH11: Land east of Borde Hill Lane, Haywards Heath	10.5	60 dwellings	8.8
	DPH12: Orchards Shopping Centre, Haywards Heath	1.9	100 dwellings	10.4
	DPH13: Land to west of Turners Hill Road, Crawley Down	33.7	350 dwellings	6.8

DPH14: Hurst Farm, Turners Hill Road, Crawley Down	2.2	37 dwellings	7.5 *(included as a precaution as lies close to the 7km zone)*
DPH15: Land rear of 2 Hurst Road, Hassocks		25 dwellings	17.7
DPH16: Land west of Kemps, Hurstpierpoint	5.8	90 dwellings	18.7
DPH17: The Paddocks, Lewes Road, Ashurst Wood	0.84	8-12 dwellings	2.5
DPH18: Land at Foxhole Farm, Bolney	8.99	100 dwellings	16
DPH19: Land at Chesapeke and Meadow View, Reeds Lane, Sayers Common	1.5	33 dwellings	18.8
DPH20: Land at Coombe Farm, London Road, Sayers Common	14.2	210 dwellings	18.4
DPH21: Land to the West of Kings Business Centre, Reeds Lane, Sayers Common	3.3	100 dwellings	18.7
DPH22: Land at LVS Hassocks, London Road, Sayers Common	6.4	120 dwellings	18.1
DPH23: Ham Lane Farm House, Ham Lane, Scaynes Hill	0.97	30 dwellings	8.3
DPH24: Challoners, Cuckfield Road, Ansty	1.3	37 dwellings	13.4
DPH25 Land to the west of Marwick Close, Bolney Road, Ansty	1.5	45 dwellings	13.5

Older Persons' Specialist Accommodation	DPH27: Land at Byanda, Brighton Road, Hassocks	0.4	To be confirmed	18.2
	DPH28: Land at Hyde Lodge, London Road, Handcross	3	To be confirmed	13.6

Appendix C Air Quality Impact Assessment

C.1 Methodology

Ashdown Forest SAC - Air Quality Modelling

Mid Sussex District Plan Review - Regulation 18

Mid Sussex District Council

Project number: 60671970

30 September 2022

Delivering a better world

Project number: 60671970

Quality information

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Revision History

Revision	Revision date	Details	Authorized	Name	Position
1.0	01/02/22	Draft for client review	AS	Anna Savage	Associate
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9. Introduction

9.1 Mid Sussex District Council (MSDC) is undertaking a review of its adopted District Plan 2014-2031. The Council has commissioned AECOM Limited to conduct an air quality assessment to inform the Habitats Regulations Assessment (HRA) of the Regulation 18 Mid Sussex District Plan (MSDP) Review (2021-2039).

9.2 The work presented in this report is to be used to inform the Appropriate Assessment of the HRA. It focuses on the impact of traffic related emissions due to planned development in the District Plan Review on sensitive ecosystems within the Ashdown Forest Special Area of Conservation (SAC). The Ashdown Forest SAC is designated for heathland, which is sensitive to nitrogen and ammonia deposition due to the presence of lichens and bryophytes.

9.3 This assessment therefore considers the following four key pollutants shown to affect sensitive ecosystems: ammonia (NH_3), oxides of nitrogen (NO_X), total nitrogen deposition and total acid deposition. All pollutants are considered at receptor points, within transects, up to 200m of the roadside, within the SAC.

9.4 Wealden District Council undertook monitoring of nitrogen dioxide (NO_2) and NH_3 from 2015 to 2020 within the Ashdown Forest SAC. Published monitoring data have been used to verify the model performance with regard to NOx and NH_3 concentrations.

9.5 The main aims of this study are to:

- Identify potentially sensitive ecological receptor locations within the SAC within 200m of roads that are expected to be affected by the District Plan Review;
- Predict annual mean NO_x and NH_3 concentrations and nitrogen and acid deposition rates for the following scenarios at selected ecological receptors;
    - Baseline year (2019): represents air quality in a past year (2019);
    - Future Baseline (2039): uses the traffic data from the ‘current baseline’ in 2019, but applies future assessment year vehicle emission factors and background pollutant concentrations to allow for the ‘in combination’ assessment required for the HRA;
    - 2039 ‘Do Minimum’ Reference Case: future assessment year which does not include the influence of planned development from the Mid Sussex District Plan Review but does allow for strategic planned development in neighbouring local authorities; and
    - 2039 ‘Do Something’ Scenarios 4 and 4b: future assessment year which each include the influence of planned development from the Mid Sussex District Plan Review and from strategic planned development in neighbouring local authorities, ‘without’ and ‘with’ a site at Ansty, respectively (an additional Significant Site at Ansty for 1,600 dwellings and 1,000m^2 of employment floorspace, which is not included under Scenario 4)[68].
- Determine if there are any exceedances of NOx and NH_3 critical levels, and nitrogen and acid deposition critical loads within the Ashdown Forest SAC.

9.6 The results are presented in the accompanying report ‘Habitats Regulations Assessment of the Mid Sussex Local Plan Review’.

[68] Note that site DPH5 (Land at Ansty Farm)' has no longer been allocated as there is now a different site DPH5.

10. Policy Context

Clean Air Strategy

10.1 In 2019, the UK government released its Clean Air Strategy 2019 (Defra, 2019) as part of its 25 Year Environment Plan (Defra, 2018). These documents include targets to reduce emissions of ammonia from farming activities, and nitrogen oxides from combustion processes, and thus reduce the deposition of nitrogen to sensitive ecosystems.

Environment Act

10.2 The Environment Act 2021 (HM Government, 2021) amends the Environment Act 1995 (HM Government, 1995). On 9th November 2021, the Act received Royal Assent after being first introduced to Parliament in January 2020 to address environmental protection and the delivery of the Government's 25 Year Environment Plan. It includes provisions to establish a post-Brexit set of statutory environmental principles to ensure environmental governance through an environmental watchdog, the Office for Environmental Protection (OEP).

10.3 The Secretary of State must publish a review report every five years (as a minimum and with yearly updates to Parliament). The 25 Year Environment Plan will be adopted as the first Environmental Improvement Plan (EIP) of the Environment Act 2021, with long-term legally binding targets expected to be set in 2022.

Habitats Regulations Assessment

10.4 While the UK is no longer a member of the EU, a requirement for Habitats Regulations Assessment (HRA) will continue as set out in the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

10.5 The HRA process applies the 'Precautionary Principle'[69] to European sites. Plans and projects can only be permitted having ascertained that there will be no adverse effect on the integrity of the European site(s) in question. To ascertain whether or not site integrity will be affected, an Appropriate Assessment should be undertaken of the Plan or project in question.

10.6 Following evidence gathering, the first stage of any Habitats Regulations Assessment is the screening for Likely Significant Effects (LSEs), a high-level assessment to decide whether the Appropriate Assessment is required. Where it is determined that a conclusion of 'no Likely Significant Effects' cannot be drawn, the analysis proceeds to the Appropriate Assessment.

10.7 The District Plan will significantly increase the population and employment opportunities within the District, which may result in more commuter journeys being undertaken within 200m of sensitive heathland. Therefore, LSEs cannot be excluded, and the Ashdown Forest SAC is screened in for Appropriate Assessment regarding this impact pathway.

10.8 As such, the air quality modelling methodology and analyses presented in this report have been undertaken to inform the HRA for the Ashdown Forest SAC.

Other Guidance documents

10.9 Best practice and advice / guidance contained within documents from Natural England (Natural England, 2018), the Institute of Air Quality Management (IAQM) (IAQM, 2019), the Chartered Institute of Ecology and Environmental Management (CIEEM) (CIEEM, 2021) and National Highways (Design Manual for Roads and Bridges DMRB LA105) (DMRB, 2019) have been used to determine the methodology applied, and in the accompanying ecological interpretation of the results.

[69] The Precautionary Principle, which is referenced in Article 191 of the Treaty on the Functioning of the European Union, has been defined by the United Nations Educational, Scientific and Cultural Organisation (UNESCO, 2005) as: *"When human activities may lead to morally unacceptable harm* [to the environment] *that is scientifically plausible but uncertain, actions shall be taken to avoid or diminish that harm. The judgement of plausibility should be grounded in scientific analysis".*

Critical Levels

10.10 Annual mean critical levels of NOx and NH_3 are summarised in Table 6. These are concentrations above which adverse effects on ecosystems may occur based on present knowledge. The critical level for NOx is taken from the EU Ambient Air Quality Directive 2008/50/EU (EU Directives, 2008) which has also been set as the Air Quality Strategy objective for the protection of vegetation and ecosystems, and has been incorporated into English legislation.

10.11 The EU Directive (EU Directives, 2008) states that the sampling point to determine compliance should be sited more than 20 km away from agglomerations or more than 5 km away from other built-up areas, industrial installations or motorways or major roads with traffic counts of more than 50,000 vehicles per day, which means that a sampling point must be sited in such a way that is representative of an area of at least 1,000 km^2. Applying the critical level for NO_x to designated nature conservation sites that are located close to busy roads is therefore precautionary.

10.12 The critical levels for NH_3 have not been incorporated into legislation and are a recommendation made by the United Nations Economic Commission for Europe (UNECE) Executive Body for the Convention on Long-Range Transboundary Air Pollution (CLRTAP) (UNECE, 2013).

Table 6: Annual Mean Critical Levels (NO_x and NH_3)

Pollutant	Critical Level
Oxides of nitrogen (NOx)	30 µg/m^3
Ammonia (NH_3)	3 µg/m^3 for higher plants 1 µg/m^3 for lichens and bryophytes

11. Methodology

11.1 This section presents the methodology used to model air quality within the Ashdown Forest. The following sources of information and data have been used to form the basis of the air quality assessment:

- Department for Environment, Food and Rural Affairs (Defra)'s Air Quality Background Concentration Maps based on a 2018 base year (Defra, 2020);
- Defra's Vehicle Emission Factors (Defra, 2021b);
- Emission rates as published in the Calculator for Road Emissions of Ammonia (CREAM) tool (Air Quality Consultants, 2020);
- 5x5 km modelled nitrogen and acid deposition data and ammonia background concentrations from the Air Pollution Information System (APIS, 2022);
- Air quality monitoring data for 2019 undertaken by Wealden District Council (WDC); and
- Traffic count and speed data provided by MSDC / SYSTRA Limited for 2019 and 2039.

11.2 The modelling assessment was conducted following methodology within Defra's LAQM.TG(16) Technical Guidance (Defra, 2021a), and guidance contained within documents from Natural England (Natural England, 2018), the Institute of Air Quality Management (IAQM) (IAQM, 2019) and the Chartered Institute of Ecology and Environmental Management (CIEEM) (CIEEM, 2021).

Pollutants of Interest

11.3 The pollutants of interest with regard to sensitive ecosystems for which critical levels and critical loads exist, and which are included in the air quality modelling and assessment of impacts on the Ashdown Forest SAC, are NOx, NH_3, and nitrogen and acid deposition. Modelling of these pollutants is undertaken to assess the air quality impacts of planned development in the Local Plan on the Ashdown Forest SAC alone and 'in combination' with that that is in the jurisdiction of surrounding authorities.

11.4 Whilst emissions of NOx from road vehicles are regulated according to Euro standards, emissions of NH_3 are not. This means that emissions of NH_3 from individual vehicle types are highly uncertain, particularly as measurements are rarely made (as this is not required for regulatory purposes). The uncertainty associated with the predicted nitrogen deposition rates from NH_3 is also greater than for NO_2, with the NH_3 derived nitrogen deposition rates representing an upper estimate.

11.5 There is currently no tool publicly available for the assessment of road traffic emissions of NH_3 from National Highways, Defra, Natural England, or other nature conservation bodies. However, there is evidence that exclusion of NH_3 from assessments leads to an underestimate of deposited nitrogen (Air Quality Consultants, 2020).

11.6 The methodology used to model ammonia concentrations from road traffic, using ADMS Roads, and the subsequent contribution to nitrogen deposition within the SAC (described below), is considered the most appropriate that is available at this time. The methodology has been applied by AECOM in several Appropriate Assessments to inform HRA including that for Tunbridge Wells Borough and Epping Forest District Councils.

Nitrogen Oxides

11.7 Detailed dispersion modelling of road traffic emissions of NOx has been undertaken using the latest version of ADMS Roads (currently v5), combined with the latest version – at the time of assessment – of Defra's Emissions Factor Toolkit (EFT v11.0). The subsequent contribution of emitted NOx to nitrogen deposition within the SAC has also been assessed.

11.8 Future fleet predictions were updated in EFT v11.0 (November 2021) for the fleet operating outside of London. However, the UK government's policy to ban the sale of new petrol and diesel cars and vans by 2030 are not accounted for in the fleet information within the current version of the EFT.

11.9 As the latest year for which emission factors and fleet information are available in EFT v11.0 is 2030, AECOM proposes to use 2030 information for any later modelled years. This therefore offers a precautionary approach for Local Plan modelling as it would not account for any improvements in vehicle emission factors in the latter part of the plan period (even though such improvements are likely with the introduction of Euro 7 from around 2025 or the ban on the sale of new petrol and diesel cars and vans from 2030).

Ammonia

11.10 In February 2020, Air Quality Consultants developed and published the Calculator for Road Emissions of Ammonia (CREAM) tool, '*in order to allow tentative predictions regarding trends in traffic-related ammonia emissions over time*'. The tool is based upon remotely sensed pollutant measurements, published real-world fuel consumption data, and ambient measurements of ammonia recorded in Ashdown Forest (2014-2016).

11.11 The report that was published alongside the CREAM tool states that:

"*It should be recognised that these emissions factors remain uncertain. Using them to make future year predictions will clearly be an improvement on any assessment which omits ammonia. They are also considered to be more robust than the emissions factors contained in the EEA Guidebook, which risk significantly under-predicting ammonia emissions. The emissions factors contained in the CREAM model can be considered to provide the most robust estimate of traffic-related ammonia possible at the present time, but they may be updated in the future as more information becomes available*."

11.12 The CREAM tool currently uses vehicle fleet information from Defra's EFT v9 which has now been superseded. AECOM has therefore applied the ammonia emission factors, as derived by Air Quality Consultants and in the current version of CREAM, with the average vehicle fleet on rural roads from EFT v11.0 to estimate emissions in the SAC.

11.13 The latest version of ADMS Roads has been employed to model the dispersion of emissions of NH_3 from road traffic, consistent with the approach for modelling emissions of NOx.

Traffic Data

11.14 Traffic data were provided by the SYSTRA Transport Team for a series of road links within 200m of the Ashdown Forest SAC. These links were chosen as they are located on the busiest roads in the area that are expected to experience the greatest increase in flows over the District Plan period to 2039. As such, these are the roads where an air quality effect due to additional traffic growth is most likely to be observed. The Ashdown Forest SAC modelled road links are shown in Figure 5.

11.15 Traffic data were provided for each of the road links, in the form of 24-hour Annual Average Daily Traffic (AADT) flows, with percentage heavy duty vehicle (HDV) flows and average speed for four scenarios – 2019 baseline (also used for the future baseline), future year 'Do Minimum' (or 'Reference Case'), and future year 'Do Something' Scenarios (4 and 4b). A summary of the traffic data used in the air quality assessment is given in Annex A.1.

11.16 The emerging MSDP explores two Housing Scenarios (4 and 4b). Scenario 4b proposes an additional Significant Site at Ansty for 1,600 dwellings and 1,000m^2 of employment floorspace, which is not included under Scenario 4[70].

[70] Note that site DPH5 (Land at Ansty Farm)' has no longer been allocated as there is now a different site DPH5.

Figure 5: Modelled Road Network and Ecological Receptor Transects

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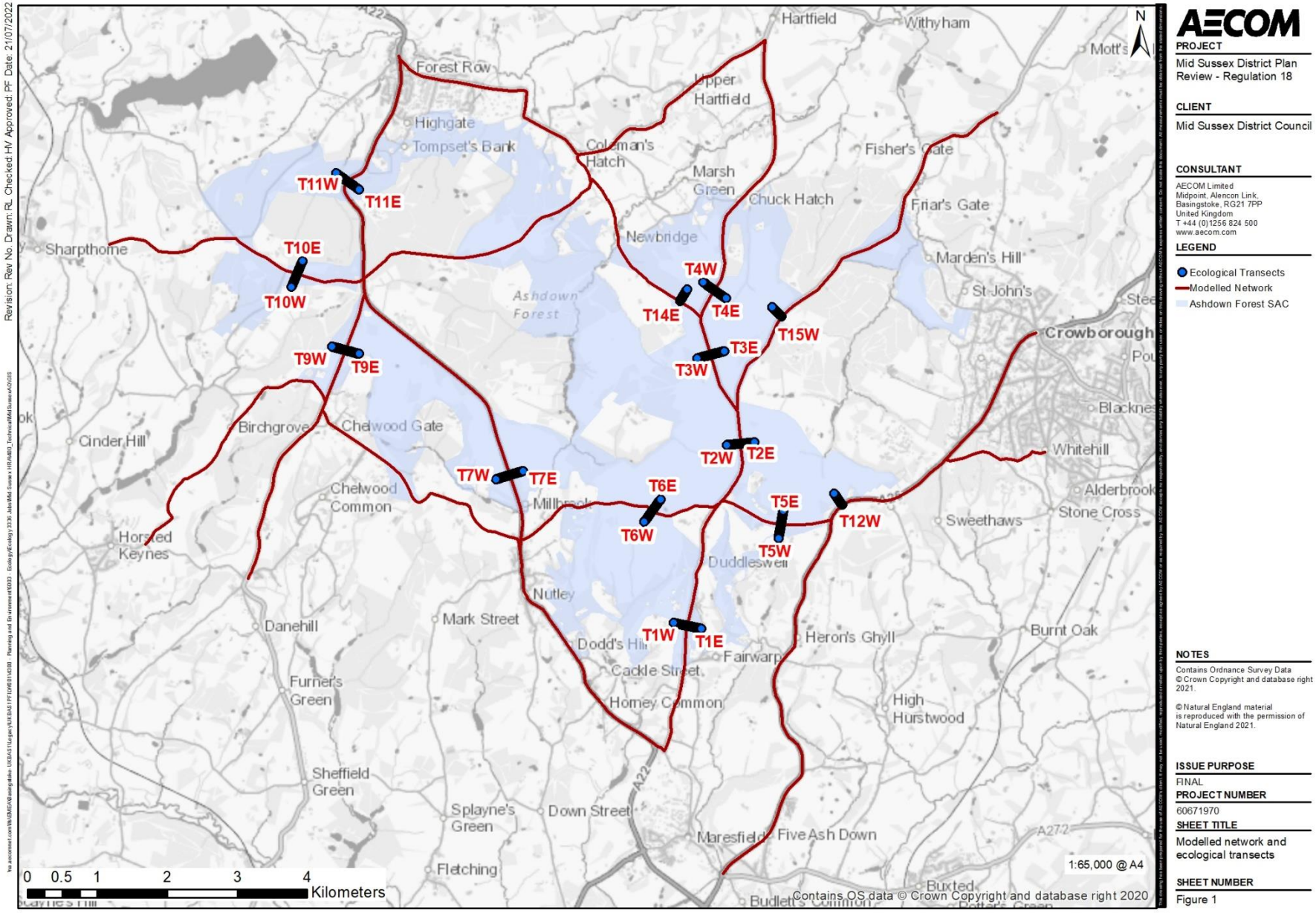

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AECOM

PROJECT
Mid Sussex District Plan Review - Regulation 18

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LEGEND
- Ecological Transects
- Modelled Network
- Ashdown Forest SAC

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ISSUE PURPOSE
FINAL

PROJECT NUMBER
60671970

SHEET TITLE
Modelled network and ecological transects

SHEET NUMBER
Figure 1

Receptors

11.17 Pollutant concentrations and deposition rates have been predicted along defined transects within the SAC within 200m of affected roads, in accordance with National Highways guidance for ecological assessments (LA105) (DMRB, 2019), Natural England guidance (Natural England, 2018), and consistent with the approach undertaken to modelling impacts on Ashdown Forest for the South Downs and Lewes Local Plans. The greatest impacts from changes in road traffic emissions will be observed and modelled closest to the roadside. Consideration of the road network within 200m of the SAC is therefore considered robust as background concentrations utilised in the assessment will account for all other sources that are not defined explicitly in the model.

11.18 The locations of the ecological transects relevant to this project were agreed with MSDC and other stakeholders. The transects are situated at key locations where the greatest impacts upon the SAC are likely to occur. The locations are presented in Figure 5 and further details are presented in Annex A.2.

11.19 The receptors are situated at the closest point to the road within the SAC, and spaced every 10m within the transects, up to 200m from the roadside. All receptors are modelled at ground level.

11.20 The greatest impacts will generally occur where both the greatest change in traffic flows is expected and the SAC habitat (heathland) lies closest to the road. This information has been used to select transect locations. The usual approach is to place a transect on a modelled link (sometimes having a transect either side of the road to account for differences in the dispersion of emissions due to meteorology), with each link being defined as a stretch of road between changes in emissions i.e. where there are changes in traffic flows and/or speeds.

11.21 The modelled transects presented in Figure 5 provide a good coverage of the SAC, match well to air quality monitoring locations and previously modelled transects, and avoid modelling in areas where there is only woodland within 200m of the road. This is based on confirmation from Natural England that woodland is not an SAC interest feature, only a SSSI interest feature.

Model Setup

11.22 As detailed above, road traffic emissions of NOx were derived using the latest version of Defra's Emissions Factor Toolkit (EFT v11.0) at the time of assessment, and associated guidance and tools (Defra, 2022). Road traffic emissions of NH_3 were derived using emission rates CREAM V1A (Air Quality Consultants, 2020) combined with the EFT v11.0 vehicle fleet for the relevant year.

11.23 Detailed dispersion modelling was undertaken using the current version of ADMS-Roads (v5.0) to model concentrations of NOx and NH_3 using the parameters in Table 7 for the following scenarios:

- 2019 Baseline – 2019 AADT, 2019 emission factors and 2019 background concentrations;
- 2039 Future Baseline – 2019 AADT, 2030 emission factors and 2030 background concentrations (the latest projected year available from Defra);
- 2039 Do Minimum (Reference Case) – 2039 AADT without Local Plan, 2030 emission factors and 2030 background concentrations;
- 2039 Do Something (Scenario 4 'Without Ansty') – 2039 AADT with Local Plan, 2030 emission factors and 2030 background concentrations; and
- 2039 Do Something (Scenario 4b 'With Ansty') – 2039 AADT with Local Plan, 2030 emission factors and 2030 background concentrations.

11.24 A baseline year was modelled to provide a means of model verification – for this assessment, 2019 traffic data were provided for the modelled baseline. To support the assessment of the potential impact of the planned development in the Local Plan scenarios, a 'future baseline' and future year 'do minimum' scenario were modelled. The 'do minimum' scenario includes the

influence of development in neighbouring local authorities, whereas the 'future baseline' does not.

11.25 The future baseline is a hypothetical scenario as it applies improvements in vehicle emissions standards to the baseline vehicle fleet without allowing for any traffic growth. However, such an approach enables the 'in combination' effect of development and traffic growth to be seen unobscured by improvements in emissions technology / performance.

11.26 The difference between the 'do something' and the 'do minimum' scenarios provides the impact of the planned development within the Local Plan, alone. The difference between the 'do something' and the 'future baseline' scenarios provides a thorough and precautionary assessment of the impact of the planned development within the Local Plan 'in combination', as the 'future baseline' accounts for no future growth.

11.27 Version 11.0 of the EFT and Defra's associated tools provide data from 2018 to 2030. For this reason, 2019 emission rates and background concentrations were used for the baseline year scenario, and 2030 emission rates and background concentrations were used for the future year scenarios.

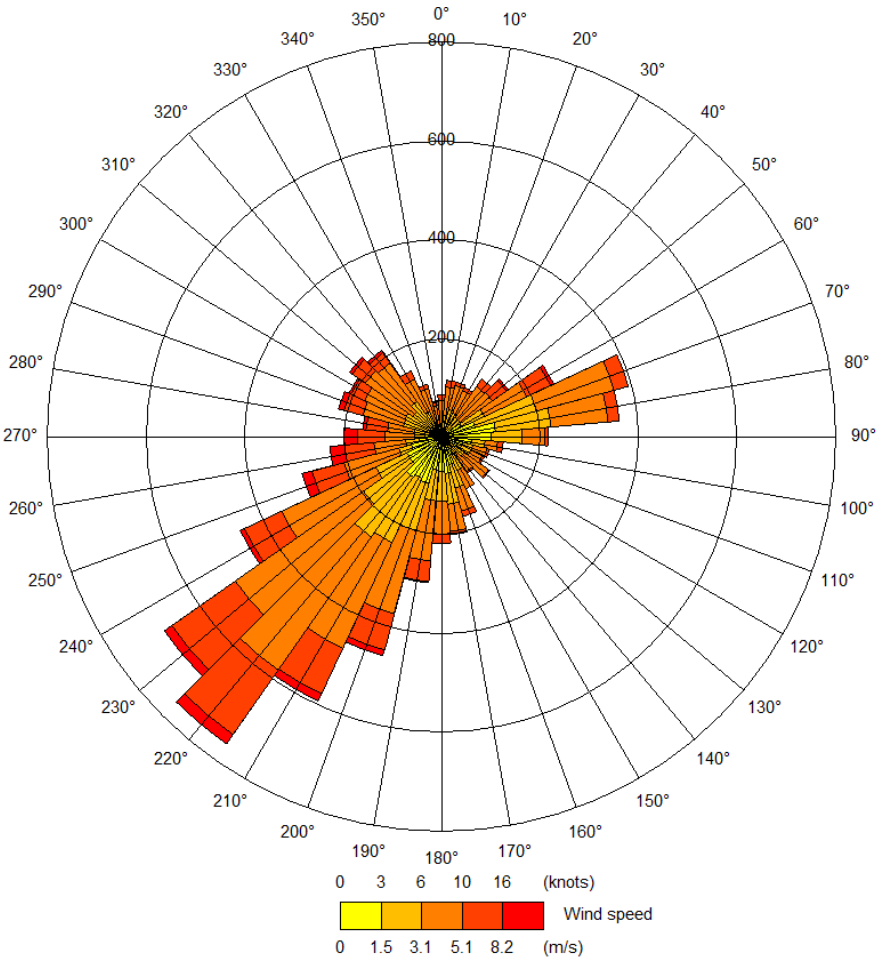
Table 7: General ADMS-Roads Model Conditions

Variables	ADMS-Roads Model Input
Surface roughness at source	0.5m
Surface roughness at Meteorological Site	0.2m
Minimum Monin-Obukhov length for stable conditions	30m
Terrain types	Flat
Receptor location	x, y coordinates determined by GIS, z = 0m for ecological receptors.
Emissions	NO_x – Defra's EFT v11.0 NH_3 – CREAM V1A
Meteorological data	1 year (2019) hourly sequential data from Gatwick meteorological station.
Receptors	Ecological transects
Model output	Long-term (annual) mean NO_x and NH_3 concentrations.

Meteorological Data

11.28 One year (2019) of hourly sequential observation data from Gatwick meteorological station has been used in this assessment to correspond with the baseline traffic data and emission factors. The station is located approximately 26 km north-west of the SAC and experiences meteorological conditions that are representative of those experienced within the air quality study area. Figure 6 shows that the dominant direction of wind was from the south-west, as is typical for the UK.

Figure 6: Wind Rose, Gatwick Airport Meteorological Data, 2019



Background Data

11.29 Background concentrations of nitrogen dioxide (NO_2) and NO_x for 2019 and 2030 were extracted from Defra's 2018-based 1x1km background maps (Defra, 2020). Contributions from explicitly modelled source sectors were removed from the NO_2 and NO_x background concentrations, in accordance with Defra guidance (Defra, 2021a). The data presented in Table 8 show that the concentrations are predicted to decrease between 2019 and 2030 and NO_2 concentrations are well below the objectives.

11.30 Background NO_2 monitoring data for 2019 were reviewed, and an average of 8.1 µg/m^3 calculated using 27 background monitoring locations. Defra mapped background NO_2 concentrations were identified as being approximately 4-14% lower than this average monitored concentration across the area of the SAC. As such, Defra background NO_2 and NOx were uplifted by the calculated ratio in both the base and future years for use in the modelling assessment.

11.31 For this assessment, 2019 emission rates and monitored background concentrations were used for the baseline year scenario, and 2030 emission rates and adjusted background concentrations were used for the future year scenarios. Whilst fleet data beyond 2030 are provided within the EFT, 2030 is the latest year for which the accompanying tools are available e.g. mapped background concentrations and the NOx-to-NO_2 calculator.

Table 8: Defra Mapped Background Pollutant Concentrations

Transects	Road Name	Grid Square (X, Y)	Annual Mean Concentrations(µg/m³)			
			2019 NO_2	2019 NO_x	2030 NO_2	2030 NO_x
T1E, T1W	B2026	546500, 127500	7.3	9.3	5.4	6.8
T2E, T2W	B2026	547500, 129500	7.0	9.0	5.3	6.7
T3E, T3W	B2026	546500, 130500	7.1	9.1	5.4	6.8
T4E, T4W	B2026	546500, 131500	7.2	9.2	5.4	6.8
T5E, T5W	New Road	547500, 128500	7.1	9.1	5.3	6.7
T6E, T6W	Crowborough Road	546500, 128500	7.1	9.1	5.3	6.7
T7E, T7W	A22	544500, 129500	7.1	9.1	5.4	6.8
T8E	Kidd's Hill	546500, 131500	7.2	9.2	5.4	6.8
T9E, T9W	A275	541500, 131500	7.8	10.1	5.9	7.4
T10E, T10W	Hindleap Lane	541500, 132500	7.7	9.9	5.8	7.4
T11E, T11W	Colemans Hatch Road	541500, 133500	7.8	10.1	5.9	7.5
T12W	A26	548500, 128500	7.1	9.1	5.4	6.8
T13W	B2188	547500, 131500	7.1	9.1	5.4	6.8

Note: Sectors removed as emissions included in detailed dispersion modelling: Motorway (in of 1x1km grid square), Trunk A road (in of 1x1km grid square) and Primary A Road (in of 1x1km grid square)

Ecological Data

11.32 APIS provides 'a searchable database and information on pollutants and their impacts on habitats and species'. Data for the appropriate habitat – heathland, as this is the only habitat for which the SAC is designated – have been applied for each receptor in the study. This includes critical loads of nitrogen and the average nitrogen and acid deposition rates to the habitat, as presented in Table 9.

11.33 Background concentrations of ammonia were also sourced from modelled maps available from APIS, thereby accounting for all sources that are not explicitly defined in the model. The NH_3 background concentrations from APIS presented in Table 9 are greater than the average monitored concentration of 0.51, which is used in model verification and subsequent calculations for the baseline and future year assessments.

11.34 While gorse scrub and other shrubs are present in Ashdown Forest SAC, they are not of significance to heathland integrity in dense stands. The deposition velocity to short vegetation is applicable where such shrubs are interspersed as part of the heathland matrix.

11.35 In order to create a robust and scientifically agreed projection for background nitrogen deposition trends in the UK, even allowing for growth, the Joint Nature Conservation Committee (JNCC) commissioned the Nitrogen Futures project, which reported in 2020 (JNCC, 2020). The JNCC Nitrogen Futures project investigated whether a net improvement in nitrogen deposition (including expected development over the same period) was expected to occur to 2030 under a range of scenarios ranging from the most cautious scenario (Business As Usual, BAU, reflecting simply existing emission reduction commitments /measures already in place) to much more ambitious scenarios that would require varying amounts of additional, currently uncommitted, measures from the UK government and devolved administrations.

11.36 The report concluded that *'The scenario modelling predicts a substantial decrease in risk of impacts on sensitive vegetation by 2030, under the most likely future baseline [a scenario called '2030 NAPCP+DA (NECR NOx)']. This is estimated to achieve the UK Government's Clean Air Strategy (CAS) target for England, defined as a 17% decrease in total reactive N deposition onto protected priority sensitive habitats, with a predicted 18.9% decrease [for England] from a 2016*

base year'. The report predicted a fall in nitrogen deposition by 2030 under every modelled scenario, including the most cautious (2030 BAU). For the BAU scenario nitrogen deposition was forecast to decrease between 2017 and 2030 from 277.1 kt N to 239.5 kt N (i.e. a reduction of 37.6 kt N).

11.37 Background nitrogen deposition at Ashdown Forest was specifically discussed in Annex 5 of the report as a case study. The report predicted a 1-2 kgN/ha/yr reduction in background nitrogen deposition to low growing vegetation (i.e. the heathland interest feature) at the SAC between 2016 and 2030, depending on scenario, and noted that *'The emission reductions predicted between the 2017 and 2030 baseline scenarios cover a range of sectors, including road transport, and so improvements are predicted to occur over the whole site, including the worst-affected roadside locations'*. This was the case under all modelled scenarios.

11.38 In summary, the Nitrogen Futures study forecast a minimum rate of improvement in background nitrogen of 0.07 kgN/ha/yr at Ashdown Forest, with other forecasts indicating a greater rate of reduction. In line with the forecast for Ashdown Forest, and therefore taking a precautionary approach, this study applies a projected decrease in background nitrogen of 0.07 kgN/ha/yr. The corresponding decrease is also reflected in the total average acid deposition rate for nitrogen in the future scenarios (reduction of 0.065 keq/ha/yr N.).

11.39 Over the 20-year period, this equates to a reduction in the APIS background nitrogen deposition rate presented in Table 9 (3-year average, 2018-20) of 1.4 kg N/ha/yr for the 2039 model scenarios. This decrease is also reflected in the total average acid deposition rate for nitrogen in the 2039 scenarios (reduction of 0.10 keq/ha/yr N).

11.40 No other changes to the APIS data have been made from those presented (3-year average, 2018-20) for any modelled scenario.

11.41 Not to make *any* allowance for improvements in emission factors or background concentrations would result in increased emissions and hence concentrations over the plan period as an increased number of vehicles is expected on the roads. This is not expected to occur as can be seen from previous long-term trends in the UK, which show slowing of improvements over extended periods, not worsening. Historical records (e.g. Defra monitoring trends) show that as increased vehicles enter the fleet that these increases are offset by the improvements in the emissions of the newer vehicles and the removal of older vehicles.

11.42 In 2018 the Court of Justice of the European Union (CJEU) ruled in cases C-293/17 and C-294/17 (often dubbed the Dutch Nitrogen cases). One aspect of that ruling concerned the extent to which autonomous measures (i.e. improvements in baseline nitrogen deposition that are not attributable to the Local Plan) can be taken into account in appropriate assessment, the CJEU ruled that it *was* legally compliant to take such autonomous measures into account provided the benefits were not 'uncertain' (paras. 130&132). Note that previous case law on the interpretation of the Habitats Directive has clarified that 'certain' does not mean absolute certainty but '*where no reasonable scientific doubt remains*'[71] [emphasis added].

11.43 The forecasts for improvements in NOx emission factors, background concentrations and background deposition rates used in this report are considered to be realistic and have the requisite level of certainty. This is because a) data are used and to a large extent they build upon established historic trends in NOx and oxidised nitrogen deposition and b) for total nitrogen deposition they are based on a cautious use of evidenced central government forecasts associated with uptake of technology that has either already been introduced or is widely expected within the professional community to be introduced and effective before 2030, as illustrated in the Nitrogen Futures project:

- When it comes to forecasting the NOx emissions of additional traffic, it would overestimate those emissions to assume that by 2039 the emission factors will be no different to those in 2019; to make such an assumption would be to fail to take account of the expected continued uptake of Euro 6 compliant vehicles between 2019 and 2039 and would assume (putting it simply) that no motorists would replace their cars during the entire plan period. For example,

[71] Case C-239/04 Commission v Portugal [2006] ECR 10183, para. 24; Holohan et al vs. An Bord Pleanála (C-461/17), para. 33

the latest (Euro 6/VI) emissions standard only became mandatory in 2014 (for heavy duty vehicles) and 2015 (for cars) and the effects will not therefore be visible in the data available from APIS because relatively few people will have been driving vehicles compliant with that standard as early as 2019. Far more drivers can be expected to be using Euro 6 compliant vehicles by the end of the Local Plan period (2039).

- The air quality modelling tools available only go to 2030, although some data are available up to 2050. The modelling includes an inherent caution as the 2030 vehicle fleet (and hence emissions) are taken to be a proxy for 2039, whereas NOx emissions are actually likely to be better in 2039 than in 2030. In addition, the modelling does not allow for the recent Government announcement that the ban on sales of new petrol and diesel cars and vans will be brought forward from 2035 to 2030. Indeed, the ban is not accounted for in the modelling at all since robust forecasts for the effects of the ban do not yet exist.

Table 9: APIS Data for Ecological Transects for 2018-2020

Transect	Average N Dep kgN/ha/yr[$]	Critical Load N Dep kgN/ha/yr	Total Av. Acid Dep keq/ha/yr N[$]	Critical Load N Acid Dep keq/ha/yr MinCLMaxN	Background NH_3 ($\mu g/m^3$)*
T1E, T1W	19.18	10 - 20	1.41	0.952	2.23
T2E, T2W	19.18	10 - 20	1.41	0.952	2.23
T3E, T3W	19.46	10 - 20	1.42	0.952	2.08
T4E, T4W	19.46	10 - 20	1.42	0.952	2.08
T5E, T5W	19.18	10 - 20	1.41	0.952	2.23
T6E, T6W	19.18	10 - 20	1.41	0.952	2.23
T7E, T7W	17.92	10 - 20	1.31	0.952	1.98
T8E	19.46	10 - 20	1.42	0.952	2.08
T9E, T9W	20.72	10 - 20	1.52	0.952	2.20
T10E, T10W	20.72	10 - 20	1.52	0.952	2.20
T11E, T11W	20.72	10 - 20	1.52	0.952	2.20
T12W	19.18	10 - 20	1.41	0.952	2.23
T13W	19.46	10 - 20	1.42	0.952	2.08

Note:
[$] Average nitrogen deposition rate (kgN/ha/yr) projected to decrease by 1.4 kgN/ha/yr from base year to future year (i.e. 0.07 x 20 years = 1.40 kgN/ha/yr). This results in a corresponding decrease in acid deposition of 0.100 keq/ha/yr N.
* Average 2019 monitored NH_3 background concentration applied in modelling assessment = 0.51 $\mu g/m^3$

Verification

11.44 Model verification is the process by which the performance of the model is assessed to identify any discrepancies between modelled and measured concentrations at air quality monitoring sites within the study area.

11.45 Long-term roadside monitoring of both NO_2 and NH_3 has been undertaken in Ashdown Forest in recent years (2015-2020). Maps of monitoring locations are presented in Figure 7 and Figure 8.

11.46 These data have been used to make a direct comparison between 'road source' modelled and measured concentrations at the same location, so as to calculate a site-specific adjustment factor – or 'verification factor' – for the SAC for each pollutant, to enable adjustment of the model results to account for any model bias.

11.47 Defra provide guidance regarding verification of NOx and NO_2 concentrations (Defra, 2021a). There are currently no guidelines for verifying against ammonia measurements, however the same principles have been followed as for other road sources (i.e. comparing modelled and

monitored road source contributions, separate from background concentrations). This is aligned with general air quality modelling convention.

11.48 Statistical evaluations have been used to evaluate the model performance e.g. correlation coefficient, fractional bias and Root Mean Square Error (RMSE), allowing for a better understanding of how the model results agree or diverge from the monitored observations.

NO_2 Verification

11.49 Modelled predictions were made for annual mean NO_2 concentrations at monitoring sites in order to compare monitored and modelled pollutant concentrations. The comparison of model outputs was made against selected 2019 monitoring data so as to correspond with the baseline year of assessment.

11.50 Following detailed analysis of each monitoring location in the study area, a total of 59 roadside monitoring sites were taken forward in the model verification process. Table 10 details the sites used in model verification.

Table 10: Local Authority NO_2 Monitoring Sites used in Model Verification

Site ID	Total modelled NO_2 before adjustment ($\mu g/m^3$)	Total modelled NO_2 after adjustment ($\mu g/m^3$)
T1	12.0	18.3
T2	12.0	18.2
T3	11.8	17.7
T4	11.8	17.8
T5	9.8	12.5
T6	10.8	15.3
T10	8.8	9.9
T11	8.6	9.5
T13	10.3	14.0
T14	11.1	15.9
T15	8.8	10.0
T16	8.7	9.7
T19	13.8	22.9
T20	14.2	23.8
T21	16.1	28.3
T22	14.3	24.2
T23	10.4	14.3
T24	9.7	12.4
T25	9.8	12.6
T28	11.9	17.9
T29	11.4	16.9
T31	14.3	24.0
T33	13.4	21.9
T34	12.6	19.9
T35	11.8	17.7

Site ID	Total modelled NO_2 before adjustment ($\mu g/m^3$)	Total modelled NO_2 after adjustment ($\mu g/m^3$)
T36	12.3	19.2
T37	12.8	20.2
T38	9.9	12.9
T40	10.9	15.4
T42	11.9	17.9
T44	8.8	9.9
T47	11.1	16.0
T48	11.0	15.7
T49	10.8	15.1
T51	13.0	20.8
T52	11.5	16.9
T56	10.5	14.4
T58	9.2	11.0
T59	9.8	12.6
T61	10.4	14.3
T62	10.2	13.8
T65	11.8	17.9
T66	10.2	13.7
T67	10.7	15.1
T68	9.7	12.3
T71	10.9	15.4
R1.1	14.1	23.6
R2.1	15.0	25.8
R3.1	12.1	18.6
R4.1	16.8	30.2
A1	11.8	17.6
R1.2	13.2	21.3
R1.3	12.2	18.8
R2.2	15.0	25.8
R2.3	13.8	22.8
R3.2	11.9	17.9
R3.3	10.8	15.1
R4.2	16.2	28.6
R4.3	14.8	25.4

11.51 Model performance was analysed at these monitoring sites. Without adjustment the root mean square error (RMSE) was 7.0 µg/m^3. A model adjustment factor was calculated (2.73) and applied to the model results. After adjustment the RMSE was reduced to 3.8 µg/m^3 as shown in Table 11.

Table 11: NO_2 Model Verification details

Number of Sites	Number of Monitoring Sites within ±10% of the Monitored Concentration Pre-Adjustment	RMSE pre-adjustment (µg/m^3)	Model Adjustment Factor Applied	Number of Sites within ±10% of the Monitored Concentration Post Adjustment	RMSE post adjustment (µg/m^3)	Fractional Bias post adjustment)
59	12	7.2	2.73	14	3.8	0.0

NH_3 Verification

11.52 Modelled predictions were made for annual mean NH_3 concentrations at monitoring sites in order to compare monitored and modelled pollutant concentrations. The comparison of model outputs was made against selected 2019 monitoring data so as to correspond with the baseline year of assessment.

11.53 Following detailed analysis of each monitoring location in the study area, a total of 21 monitoring sites were taken forward in the model verification process. Table 12 summarises the sites used in model verification.

11.54 A model adjustment factor was calculated (1.01) and applied to the model results. After adjustment the RMSE was 0.2 µg/m^3.

Table 12: Local Authority NH_3 Monitoring Sites used in Model Verification

Site ID	Total modelled NH_3 before adjustment (µg/m^3)	Total modelled NH_3 after adjustment (µg/m^3)
T14	0.89	0.89
T59	0.72	0.73
T61	0.81	0.81
T62	0.80	0.80
T65	0.98	0.99
T67	0.85	0.85
T68	0.71	0.72
R1.1	1.36	1.36
R1.2	1.22	1.23
R1.3	1.08	1.08
R1.4	0.92	0.93
R2.1	1.48	1.49
R2.2	1.48	1.49
R2.3	1.31	1.31
R2.4	1.10	1.11
R3.1	1.02	1.03

Site ID	Total modelled NH_3 before adjustment ($\mu g/m^3$)	Total modelled NH_3 after adjustment ($\mu g/m^3$)
R3.2	0.99	0.99
R3.3	0.85	0.85
R3.4	0.78	0.78
D3	0.98	0.98
D6	1.45	1.46

Deposition velocities

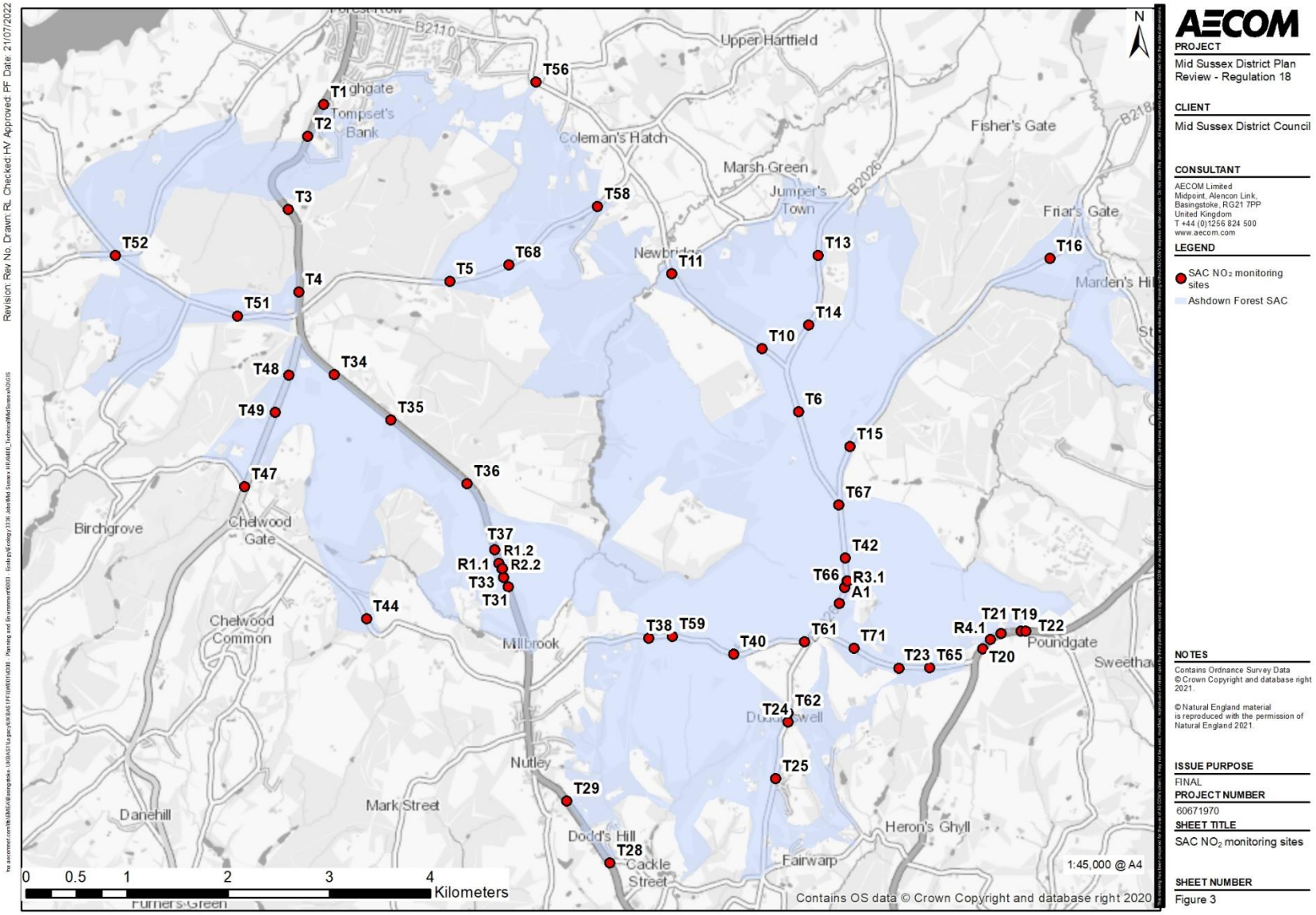
11.55 Deposition of nitrogen from road traffic derived NH_3 and NO_2 were estimated using the Air Quality Technical Advisory Group (AQTAG) deposition velocities that are cited in the 2020 Institute of Air Quality Management (IAQM) guidance (IAQM, 2019), as shown in Table 13. All of the transects have been modelled and analysed as heathland i.e. 'short vegetation' has been used at all locations as this is the only habitat for which the SAC is designated.

11.56 The modelling methodology does not account for any depletion of concentrations of NOx, NO_2 or NH_3 following the deposition of nitrogen from these species. This therefore presents a precautionary assessment of the impacts of the Local Plan relative to the critical levels and loads.

Table 13: Nitrogen Deposition Velocities and Conversion Rates

Pollutant	Habitat	Nitrogen deposition conversion rates	Deposition velocity
NO_2	Grassland / short vegetation	1 $\mu g/m^3$ NO_2 = 0.14 kgN/ha/yr	0.0015 m/s
NH_3	Grassland / short vegetation	1 $\mu g/m^3$ NH_3 = 5.2 kgN/ha/yr	0.020 m/s

Figure 7: WDC Air Quality NO_2 Monitoring Sites in relation to Ashdown Forest SAC


Revision: Rev No. Drawn: RL Checked: HV Approved: PF Date: 21/07/2022
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Upper Hartfield
Forest Row
T56
T1
ghgate
T2
Tompset's Bank
Coleman's Hatch
Fisher's Gate
B2026
Marsh Green
Jumper's Town
T3
T58
T52
T68
T5
Newbridge
T11
T13
T16
Friar's Gate
T4
T51
T14
T10
T48
T34
T6
T49
T35
T15
T47
T36
T67
Birchgrove
Chelwood Gate
T37
R1.2
R1.1
R2.2
T33
T31
T42
T66
R3.1
A1
T44
Chelwood Common
T38
T59
T40
T61
T71
T21
T19
T22
R4.1
T23
T65
T20
Poundgate
Millbrook
T24
T62
T25
Nutley
T29
Mark Street
Danehill
Dodd's Hill
T28
Cackle Street
Heron's Ghyll
Fairwarp
Furners Green
0 0.5 1 2 3 4 Kilometers
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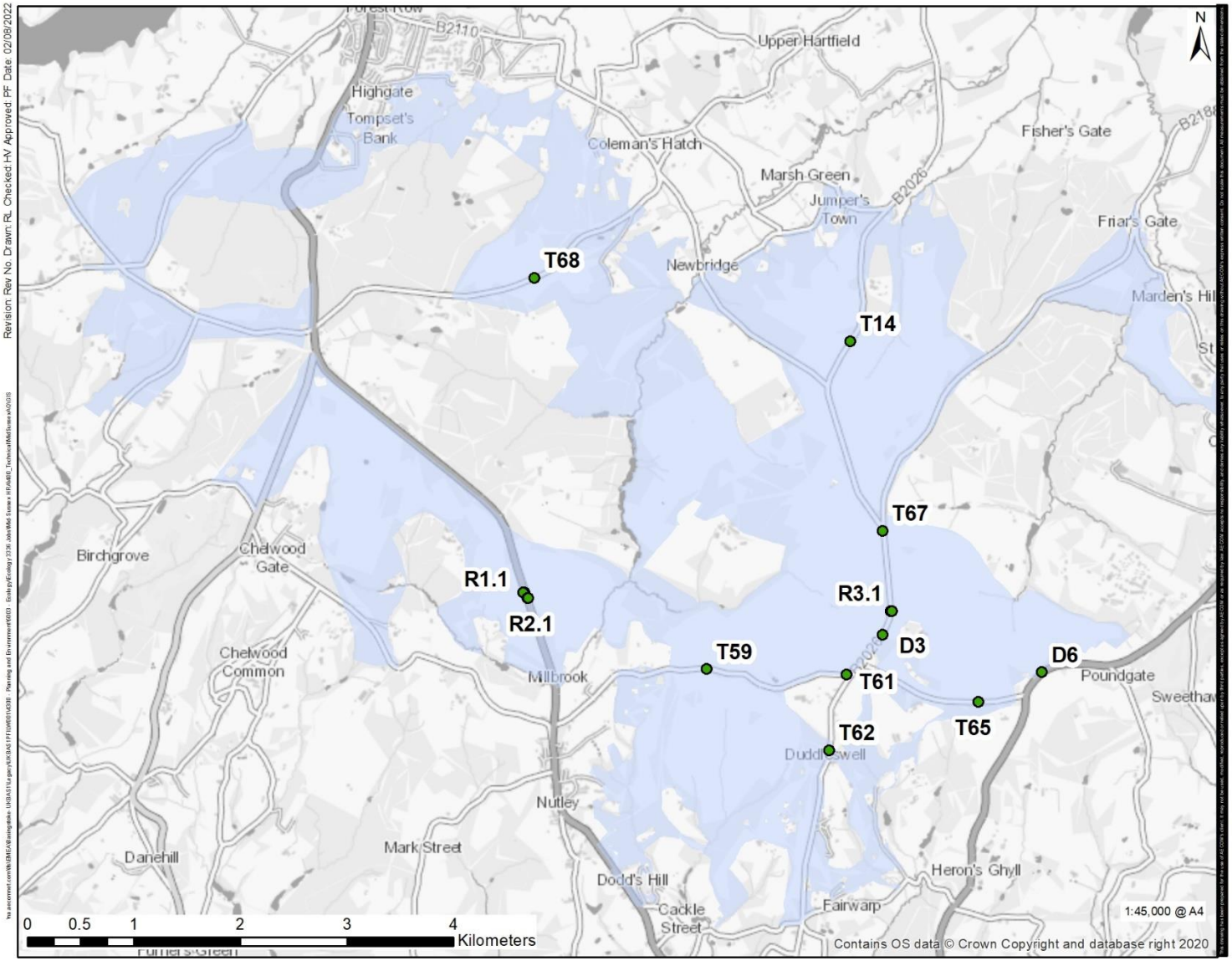
SHEET NUMBER
Figure 3

Figure 8: WDC NH_3 Monitoring Sites in relation to Ashdown Forest SAC



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SAC NH_3 monitoring sites

SHEET NUMBER
Figure 4

12. References

Air Quality Consultants. (2020). *Ammonia Emissions from Roads for Assessing Impacts on Nitrogen-sensitive Habitats*. Retrieved from https://www.aqconsultants.co.uk/resources/ammonia-emissions-from-roads-for-assessing-impacts

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13. Annexes

A.1 Traffic Data

Link	2019 Base AADT	2019 Base HDV %	2019 Base Speed (kph)	2039 DM AADT	2039 DM HDV %	2039 DM Speed (kph)	2039 DS4 AADT	2039 DS4 HDV %	2039 DS4 Speed (kph)	2039 DS4B AADT	2039 DS4B HDV %	2039 DS4B Speed (kph)
14348_14114	6065	3	60	7088	3	58	7326	3	56	7329	3	56
14114_14096	10488	2	41	12580	2	41	13120	2	40	13148	2	40
11829_18129	7778	2	54	8730	2	54	8811	2	54	8825	2	54
14096_11829	9412	2	54	10628	2	54	10742	2	54	10813	2	54
15540_15539	8357	3	53	9431	3	52	9518	3	52	9516	3	52
15539_13422	6039	4	53	6821	3	53	6821	3	52	6804	3	52
18130_18131	6409	2	67	7347	2	66	7460	2	66	7474	2	66
14096_13920	3068	2	44	4300	2	44	4822	2	44	4834	2	44
18129_15538	1963	3	42	2278	2	42	2363	2	42	2341	2	42
13426_15538	2498	1	52	2556	1	51	2590	1	51	2598	1	51
15538_15537	3332	1	43	3483	2	43	3520	2	43	3532	2	43
15537_15553	598	0	43	685	0	43	685	0	43	685	0	43
15539_15538	3107	1	41	3428	1	41	3519	1	41	3538	1	41
14114_18128	1262	1	43	1183	1	43	1121	1	43	1119	1	43
13920_18130	593	0	44	893	2	44	1010	2	44	988	2	44
13920_13780	2129	2	31	2875	2	30	3084	2	30	3084	2	30
15607_14114	5070	1	35	5661	1	34	5650	1	33	5656	1	33
18132_14154	4347	1	62	4712	1	61	4945	1	61	4927	1	61
14348_18127	2966	1	32	3000	1	32	2951	2	32	2951	2	32
18127_18128	1812	2	42	2670	2	42	3058	2	42	3061	2	42
15536_15336	2920	1	43	2536	1	43	2357	1	43	2357	1	43

Link	2019 Base AADT	2019 Base HDV %	2019 Base Speed (kph)	2039 DM AADT	2039 DM HDV %	2039 DM Speed (kph)	2039 DS4 AADT	2039 DS4 HDV %	2039 DS4 Speed (kph)	2039 DS4B AADT	2039 DS4B HDV %	2039 DS4B Speed (kph)
13782_13920	1419	1	62	1818	1	61	1829	1	61	1846	1	61
18128_15336	726	1	43	804	1	43	839	2	43	839	2	43
18127_15536	3474	1	43	3361	1	43	3221	1	43	3218	1	43
18132_15607	5070	1	43	5661	1	43	5650	1	43	5656	1	43
15336_15537	2754	1	43	2345	1	43	2173	1	43	2173	1	43
18129_18130	6177	2	53	7358	2	53	7599	2	53	7630	2	53
18131_13426	4208	1	40	4307	1	40	4463	1	40	4475	1	40
14114_14348	4857	3	64	5181	3	64	5228	3	64	5257	3	64
14096_14114	8720	2	27	9055	2	26	9166	2	26	9183	2	26
18129_11829	7109	2	54	7523	2	54	7678	2	54	7675	2	54
11829_14096	7740	2	53	8217	2	53	8465	2	53	8465	2	53
15539_15540	9125	2	53	9986	2	53	10145	2	53	10212	2	53
13422_15539	5846	3	53	6261	3	53	6362	3	53	6449	3	53
18131_18130	5619	3	67	6532	3	67	6724	3	67	6728	3	67
13920_14096	2972	3	43	3186	2	42	3145	2	42	3218	2	42
15538_18129	2205	1	41	2468	1	41	2583	1	41	2594	1	41
15538_13426	2212	1	52	1784	1	52	1526	1	52	1530	1	52
15537_15538	3328	1	43	3014	1	43	2764	1	43	2764	1	43
15553_15537	574	1	43	669	1	43	592	1	43	591	1	43
15538_15539	3226	2	41	3621	2	41	3687	2	41	3666	2	41
18128_14114	1193	2	42	1959	2	41	2388	2	41	2390	2	41
18130_13920	703	5	44	1453	3	44	1604	3	44	1622	2	44
13780_13920	2162	3	31	2275	3	31	2342	3	31	2375	3	31

Link	2019 Base AADT	2019 Base HDV %	2019 Base Speed (kph)	2039 DM AADT	2039 DM HDV %	2039 DM Speed (kph)	2039 DS4 AADT	2039 DS4 HDV %	2039 DS4 Speed (kph)	2039 DS4B AADT	2039 DS4B HDV %	2039 DS4B Speed (kph)
14114_15607	4347	1	43	4712	1	43	4945	1	43	4927	1	43
14154_18132	5070	1	62	5661	1	62	5640	1	62	5646	1	62
18127_14348	2200	2	32	2460	2	32	2456	2	31	2455	2	31
18128_18127	1948	2	41	1960	2	41	1856	2	41	1853	2	41
15336_15536	2791	1	43	2902	1	43	2936	1	43	2948	1	43
13920_13782	1634	3	62	2871	2	62	3348	2	62	3377	2	62
15336_18128	793	4	43	870	3	43	903	3	43	903	3	43
15536_18127	2601	2	43	3543	2	43	3917	2	43	3919	2	43
15607_18132	4347	1	43	4712	1	43	4945	1	43	4927	1	43
15537_15336	2734	2	43	2799	2	43	2835	2	43	2847	2	43
18130_18129	5282	3	66	5972	3	65	6252	3	65	6231	3	65
13426_18131	3260	4	36	2631	6	36	2545	7	36	2545	7	36
15541_15540	5142	4	42	6086	4	42	6106	4	42	6100	4	42
15540_15541	5554	3	40	6182	3	40	6319	3	40	6372	3	40
15540_15340	2485	2	30	2594	2	30	2572	2	30	2572	2	30
15340_15540	2321	1	30	2359	1	30	2358	1	30	2355	1	30

A.2 Modelled Ecological Receptor Locations

Transect 1Ea	X co-ordinate (m)	Y co-ordinate (m)	Transect 1Wa	X co-ordinate (m)	Y co-ordinate (m)
T1Ea_1m	546585	127072	T1Wa_1m	546579	127073
T1Ea_10m	546594	127070	T1Wa_10m	546570	127075
T1Ea_20m	546604	127068	T1Wa_20m	546560	127077
T1Ea_30m	546614	127066	T1Wa_30m	546550	127079
T1Ea_40m	546624	127064	T1Wa_40m	546541	127081
T1Ea_50m	546633	127062	T1Wa_50m	546531	127083
T1Ea_60m	546643	127060	T1Wa_60m	546521	127086
T1Ea_70m	546653	127058	T1Wa_70m	546511	127088
T1Ea_80m	546663	127055	T1Wa_80m	546501	127090
T1Ea_90m	546672	127053	T1Wa_90m	546492	127092
T1Ea_100m	546682	127051	T1Wa_100m	546482	127094
T1Ea_110m	546692	127049	T1Wa_110m	546472	127096
T1Ea_120m	546702	127047	T1Wa_120m	546462	127098
T1Ea_130m	546712	127045	T1Wa_130m	546453	127100
T1Ea_140m	546721	127043	T1Wa_140m	546443	127102
T1Ea_150m	546731	127041	T1Wa_150m	546433	127104
T1Ea_160m	546741	127039	T1Wa_160m	546423	127106
T1Ea_170m	546751	127037	T1Wa_170m	546413	127108
T1Ea_180m	546760	127035	T1Wa_180m	546404	127110
T1Ea_190m	546770	127033	T1Wa_190m	546394	127113
Transect 2Ea	**X co-ordinate (m)**	**Y co-ordinate (m)**	**Transect 2Wa**	**X co-ordinate (m)**	**Y co-ordinate (m)**
T2Ea_1m	547344	129673	T2Wa_1m	547338	129672
T2Ea_10m	547353	129673	T2Wa_10m	547329	129671
T2Ea_20m	547363	129674	T2Wa_20m	547319	129670
T2Ea_30m	547373	129675	T2Wa_30m	547309	129669
T2Ea_40m	547383	129676	T2Wa_40m	547299	129669
T2Ea_50m	547393	129677	T2Wa_50m	547289	129668
T2Ea_60m	547403	129678	T2Wa_60m	547279	129667
T2Ea_70m	547413	129679	T2Wa_70m	547269	129666
T2Ea_80m	547423	129679	T2Wa_80m	547259	129665
T2Ea_90m	547433	129680	T2Wa_90m	547249	129664
T2Ea_100m	547443	129681	T2Wa_100m	547239	129663
T2Ea_110m	547453	129682	T2Wa_110m	547229	129662
T2Ea_120m	547463	129683	T2Wa_120m	547219	129662
T2Ea_130m	547473	129684	T2Wa_130m	547209	129661
T2Ea_140m	547483	129685	T2Wa_140m	547199	129660

T2Ea_150m	547493	129686	T2Wa_150m	547189	129659
T2Ea_160m	547502	129686	T2Wa_160m	547179	129658
T2Ea_170m	547512	129687	T2Wa_170m	547169	129657
T2Ea_180m	547522	129688	T2Wa_180m	547159	129656
T2Ea_190m	547532	129689	T2Wa_190m	547149	129655
T2Ea_200m	547542	129690	T2Wa_200m	547139	129655
Transect 3Ea	**X co-ordinate (m)**	**Y co-ordinate (m)**	**Transect 3Wa**	**X co-ordinate (m)**	**Y co-ordinate (m)**
T3Ea_1m	546918	130941	T3Wa_1m	546913	130940
T3Ea_10m	546927	130944	T3Wa_10m	546904	130938
T3Ea_20m	546937	130946	T3Wa_20m	546895	130935
T3Ea_30m	546946	130949	T3Wa_30m	546885	130932
T3Ea_40m	546956	130951	T3Wa_40m	546875	130930
T3Ea_50m	546966	130954	T3Wa_50m	546866	130927
T3Ea_60m	546975	130956	T3Wa_60m	546856	130925
T3Ea_70m	546985	130959	T3Wa_70m	546846	130922
T3Ea_80m	546995	130962	T3Wa_80m	546837	130920
T3Ea_90m	547004	130964	T3Wa_90m	546827	130917
T3Ea_100m	547014	130967	T3Wa_100m	546817	130914
T3Ea_110m	547024	130969	T3Wa_110m	546808	130912
T3Ea_120m	547033	130972	T3Wa_120m	546798	130909
T3Ea_130m	547043	130975	T3Wa_130m	546788	130907
T3Ea_140m	547052	130977	T3Wa_140m	546779	130904
T3Ea_150m	547062	130980	T3Wa_150m	546769	130901
T3Ea_160m	547072	130982	T3Wa_160m	546760	130899
T3Ea_170m	547081	130985	T3Wa_170m	546750	130896
T3Ea_180m	547091	130988	T3Wa_180m	546740	130894
T3Ea_190m	547101	130990	T3Wa_190m	546731	130891
T3Ea_200m	547110	130993	T3Wa_200m	546721	130888
Transect 4Ea	**X co-ordinate (m)**	**Y co-ordinate (m)**	**Transect 4Wa**	**X co-ordinate (m)**	**Y co-ordinate (m)**
T4Ea_1m	546969	131861	T4Wa_1m	546964	131863
T4Ea_10m	546976	131855	T4Wa_10m	546957	131868
T4Ea_20m	546985	131850	T4Wa_20m	546949	131874
T4Ea_30m	546993	131844	T4Wa_30m	546941	131880
T4Ea_40m	547001	131838	T4Wa_40m	546933	131886
T4Ea_50m	547009	131832	T4Wa_50m	546925	131892
T4Ea_60m	547017	131826	T4Wa_60m	546916	131897
T4Ea_70m	547025	131820	T4Wa_70m	546908	131903
T4Ea_80m	547033	131815	T4Wa_80m	546900	131909
T4Ea_90m	547041	131809	T4Wa_90m	546892	131915

T4Ea_100m	547050	131803	T4Wa_100m	546884	131921
T4Ea_110m	547058	131797	T4Wa_110m	546876	131927
T4Ea_120m	547066	131791	T4Wa_120m	546868	131932
T4Ea_130m	547074	131786	T4Wa_130m	546859	131938
T4Ea_140m	547082	131780	T4Wa_140m	546851	131944
T4Ea_150m	547090	131774	T4Wa_150m	546843	131950
T4Ea_160m	547098	131768	T4Wa_160m	546835	131956
T4Ea_170m	547107	131762	T4Wa_170m	546827	131961
T4Ea_180m	547115	131757	T4Wa_180m	546819	131967
T4Ea_190m	547123	131751	T4Wa_190m	546811	131973
T4Ea_200m	547131	131745	T4Wa_200m	546802	131979

Transect 5Ea	X co-ordinate (m)	Y co-ordinate (m)	Transect 5Wa	X co-ordinate (m)	Y co-ordinate (m)
T5Ea_1m	547915	128521	T5Wa_1m	547915	128515
T5Ea_10m	547917	128530	T5Wa_10m	547914	128506
T5Ea_20m	547919	128540	T5Wa_20m	547912	128496
T5Ea_30m	547920	128550	T5Wa_30m	547910	128486
T5Ea_40m	547922	128560	T5Wa_40m	547908	128476
T5Ea_50m	547924	128569	T5Wa_50m	547907	128467
T5Ea_60m	547926	128579	T5Wa_60m	547905	128457
T5Ea_70m	547927	128589	T5Wa_70m	547903	128447
T5Ea_80m	547929	128599	T5Wa_80m	547901	128437
T5Ea_90m	547931	128609	T5Wa_90m	547900	128427
T5Ea_100m	547933	128619	T5Wa_100m	547898	128417
T5Ea_110m	547934	128629	T5Wa_110m	547896	128407
T5Ea_120m	547936	128638	T5Wa_120m	547894	128398
T5Ea_130m	547938	128648	T5Wa_130m	547893	128388
T5Ea_140m	547940	128658	T5Wa_140m	547891	128378
T5Ea_150m	547941	128668	T5Wa_150m	547889	128368
T5Ea_160m	547943	128678	T5Wa_160m	547887	128358
T5Ea_170m	547945	128688	T5Wa_170m	547886	128348
T5Ea_180m	547947	128697	T5Wa_180m	547884	128338
T5Ea_190m	547948	128707	T5Wa_190m	547882	128329
T5Ea_200m	547950	128717	T5Wa_200m	547881	128319

Transect 6Ea	X co-ordinate (m)	Y co-ordinate (m)	Transect 6Wa	X co-ordinate (m)	Y co-ordinate (m)
T6Ea_1m	546084	128719	T6Wa_1m	546080	128714
T6Ea_10m	546089	128726	T6Wa_10m	546075	128707
T6Ea_20m	546095	128734	T6Wa_20m	546069	128699
T6Ea_30m	546101	128742	T6Wa_30m	546063	128691
T6Ea_40m	546107	128750	T6Wa_40m	546057	128683

T6Ea_50m	546112	128758	T6Wa_50m	546051	128675
T6Ea_60m	546118	128767	T6Wa_60m	546045	128667
T6Ea_70m	546124	128775	T6Wa_70m	546040	128659
T6Ea_80m	546130	128783	T6Wa_80m	546034	128650
T6Ea_90m	546136	128791	T6Wa_90m	546028	128642
T6Ea_100m	546142	128799	T6Wa_100m	546022	128634
T6Ea_110m	546148	128807	T6Wa_110m	546016	128626
T6Ea_120m	546154	128815	T6Wa_120m	546010	128618
T6Ea_130m	546159	128823	T6Wa_130m	546004	128610
T6Ea_140m	546165	128831	T6Wa_140m	545998	128602
T6Ea_150m	546171	128839	T6Wa_150m	545992	128594
T6Ea_160m	546177	128847	T6Wa_160m	545987	128586
T6Ea_170m	546183	128856	T6Wa_170m	545981	128578
T6Ea_180m	546189	128864	T6Wa_180m	545975	128570
T6Ea_190m	546195	128872	T6Wa_190m	545969	128561
T6Ea_200m	546201	128880	T6Wa_200m	545963	128553

Transect 7Ea	X co-ordinate (m)	Y co-ordinate (m)	Transect 7Wa	X co-ordinate (m)	Y co-ordinate (m)
T7Ea_1m	544048	129224	T7Wa_1m	544041	129222
T7Ea_10m	544057	129226	T7Wa_10m	544032	129219
T7Ea_20m	544066	129229	T7Wa_20m	544023	129216
T7Ea_30m	544076	129232	T7Wa_30m	544013	129213
T7Ea_40m	544085	129235	T7Wa_40m	544004	129210
T7Ea_50m	544095	129238	T7Wa_50m	543994	129207
T7Ea_60m	544104	129241	T7Wa_60m	543984	129204
T7Ea_70m	544114	129244	T7Wa_70m	543975	129202
T7Ea_80m	544124	129247	T7Wa_80m	543965	129199
T7Ea_90m	544133	129250	T7Wa_90m	543956	129196
T7Ea_100m	544143	129253	T7Wa_100m	543946	129193
T7Ea_110m	544152	129256	T7Wa_110m	543937	129190
T7Ea_120m	544162	129259	T7Wa_120m	543927	129187
T7Ea_130m	544171	129261	T7Wa_130m	543917	129184
T7Ea_140m	544181	129264	T7Wa_140m	543908	129181
T7Ea_150m	544191	129267	T7Wa_150m	543898	129178
T7Ea_160m	544200	129270	T7Wa_160m	543889	129175
T7Ea_170m	544210	129273	T7Wa_170m	543879	129172
T7Ea_180m	544219	129276	T7Wa_180m	543870	129169
T7Ea_190m	544229	129279	T7Wa_190m	543860	129166
T7Ea_200m	544238	129282	T7Wa_200m	543851	129164

Transect 8Ea	X co-ordinate (m)	Y co-ordinate (m)

T8Ea_1m	546476	131704			
T8Ea_10m	546481	131712			
T8Ea_20m	546486	131721			
T8Ea_30m	546491	131729			
T8Ea_40m	546496	131738			
T8Ea_50m	546501	131746			
T8Ea_60m	546506	131755			
T8Ea_70m	546512	131764			
T8Ea_80m	546517	131772			
T8Ea_90m	546522	131781			
T8Ea_100m	546527	131789			
T8Ea_110m	546532	131798			
T8Ea_120m	546537	131806			
T8Ea_130m	546543	131815			
T8Ea_140m	546548	131824			
T8Ea_150m	546553	131832			
T8Ea_160m	546558	131841			
T8Ea_170m	546563	131849			
T8Ea_180m	546568	131858			
T8Ea_190m	546573	131866			
T8Ea_200m	546579	131875			
Transect 9Ea	**X co-ordinate (m)**	**Y co-ordinate (m)**	**Transect 9Wa**	**X co-ordinate (m)**	**Y co-ordinate (m)**
T9Ea_1m	541706	131005	T9Wa_1m	541700	131007
T9Ea_10m	541715	131002	T9Wa_10m	541691	131009
T9Ea_20m	541725	131000	T9Wa_20m	541682	131012
T9Ea_30m	541734	130997	T9Wa_30m	541672	131014
T9Ea_40m	541744	130995	T9Wa_40m	541662	131017
T9Ea_50m	541754	130992	T9Wa_50m	541653	131020
T9Ea_60m	541763	130989	T9Wa_60m	541643	131022
T9Ea_70m	541773	130987	T9Wa_70m	541633	131025
T9Ea_80m	541783	130984	T9Wa_80m	541624	131027
T9Ea_90m	541792	130982	T9Wa_90m	541614	131030
T9Ea_100m	541802	130979	T9Wa_100m	541604	131033
T9Ea_110m	541812	130976	T9Wa_110m	541595	131035
T9Ea_120m	541821	130974	T9Wa_120m	541585	131038
T9Ea_130m	541831	130971	T9Wa_130m	541576	131040
T9Ea_140m	541841	130969	T9Wa_140m	541566	131043
T9Ea_150m	541850	130966	T9Wa_150m	541556	131046
T9Ea_160m	541860	130964	T9Wa_160m	541547	131048
T9Ea_170m	541870	130961	T9Wa_170m	541537	131051

T9Ea_180m	541879	130958	T9Wa_180m	541527	131053
T9Ea_190m	541889	130956	T9Wa_190m	541518	131056
T9Ea_200m	541899	130953	T9Wa_200m	541508	131058

Transect 10Ea	X co-ordinate (m)	Y co-ordinate (m)	Transect 10Wa	X co-ordinate (m)	Y co-ordinate (m)
T10Ea_1m	541008	132099	T10Wa_1m	541007	132093
T10Ea_10m	541012	132107	T10Wa_10m	541003	132085
T10Ea_20m	541016	132116	T10Wa_20m	540999	132076
T10Ea_30m	541020	132125	T10Wa_30m	540995	132066
T10Ea_40m	541023	132134	T10Wa_40m	540991	132057
T10Ea_50m	541027	132144	T10Wa_50m	540988	132048
T10Ea_60m	541031	132153	T10Wa_60m	540984	132039
T10Ea_70m	541035	132162	T10Wa_70m	540980	132030
T10Ea_80m	541039	132171	T10Wa_80m	540976	132020
T10Ea_90m	541043	132180	T10Wa_90m	540972	132011
T10Ea_100m	541047	132190	T10Wa_100m	540968	132002
T10Ea_110m	541051	132199	T10Wa_110m	540964	131993
T10Ea_120m	541055	132208	T10Wa_120m	540960	131984
T10Ea_130m	541059	132217	T10Wa_130m	540956	131974
T10Ea_140m	541063	132226	T10Wa_140m	540952	131965
T10Ea_150m	541066	132236	T10Wa_150m	540948	131956
T10Ea_160m	541070	132245	T10Wa_160m	540945	131947
T10Ea_170m	541074	132254	T10Wa_170m	540941	131938
T10Ea_180m	541078	132263	T10Wa_180m	540937	131928
T10Ea_190m	541082	132273	T10Wa_190m	540933	131919
T10Ea_200m	541086	132282	T10Wa_200m	540929	131910

Transect 11Ea	X co-ordinate (m)	Y co-ordinate (m)	Transect 11Wa	X co-ordinate (m)	Y co-ordinate (m)
T11Ea_1m	541734	133412	T11Wa_1m	541728	133417
T11Ea_10m	541741	133407	T11Wa_10m	541721	133422
T11Ea_20m	541749	133401	T11Wa_20m	541713	133428
T11Ea_30m	541758	133395	T11Wa_30m	541704	133434
T11Ea_40m	541766	133390	T11Wa_40m	541696	133439
T11Ea_50m	541774	133384	T11Wa_50m	541688	133445
T11Ea_60m	541782	133378	T11Wa_60m	541680	133451
T11Ea_70m	541790	133372	T11Wa_70m	541672	133456
T11Ea_80m	541799	133367	T11Wa_80m	541663	133462
T11Ea_90m	541807	133361	T11Wa_90m	541655	133468
T11Ea_100m	541815	133355	T11Wa_100m	541647	133474
T11Ea_110m	541823	133350	T11Wa_110m	541639	133479
T11Ea_120m	541831	133344	T11Wa_120m	541631	133485

T11Ea_130m	541840	133338	T11Wa_130m	541622	133491
T11Ea_140m	541848	133332	T11Wa_140m	541614	133497
T11Ea_150m	541856	133327	T11Wa_150m	541606	133502
T11Ea_160m	541864	133321	T11Wa_160m	541598	133508
T11Ea_170m	541872	133315	T11Wa_170m	541590	133514
T11Ea_180m	541881	133309	T11Wa_180m	541581	133520
T11Ea_190m	541889	133304	T11Wa_190m	541573	133525
T11Ea_200m	541897	133298	T11Wa_200m	541565	133531

Transect 12Wa	X co-ordinate (m)	Y co-ordinate (m)
T12Wa_1m	548790	128796
T12Wa_10m	548785	128804
T12Wa_20m	548779	128812
T12Wa_30m	548774	128820
T12Wa_40m	548768	128829
T12Wa_50m	548762	128837
T12Wa_60m	548757	128845
T12Wa_70m	548751	128854
T12Wa_80m	548746	128862
T12Wa_90m	548740	128870
T12Wa_100m	548735	128878
T12Wa_110m	548729	128887
T12Wa_120m	548723	128895
T12Wa_130m	548718	128903
T12Wa_140m	548712	128912
T12Wa_150m	548707	128920
T12Wa_160m	548701	128928
T12Wa_170m	548695	128936
T12Wa_180m	548690	128945
T12Wa_190m	548684	128953
T12Wa_200m	548679	128961

Transect 13Wa	X co-ordinate (m)	Y co-ordinate (m)
T13Wa_1m	547928	131484
T13Wa_10m	547922	131490
T13Wa_20m	547915	131497
T13Wa_30m	547908	131504
T13Wa_40m	547901	131511
T13Wa_50m	547894	131518
T13Wa_60m	547887	131525
T13Wa_70m	547880	131532

T13Wa_80m	547872	131540
T13Wa_90m	547865	131547
T13Wa_100m	547858	131554
T13Wa_110m	547851	131561
T13Wa_120m	547844	131568
T13Wa_130m	547837	131575
T13Wa_140m	547830	131582
T13Wa_150m	547823	131589
T13Wa_160m	547816	131596
T13Wa_170m	547809	131603
T13Wa_180m	547802	131610
T13Wa_190m	547795	131617
T13Wa_200m	547788	131624

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C.2 Results

Scenario 4 (without the Ansty site)

		Total Annual Mean NOx (µg/m3)				Total Annual Mean Ammonia NH3 (µg/m3)				Total Annual Mean Nitrogen Deposition				Total Annual Mean Acid Deposition			
Road Link	Distance from Road (m)	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Ref	2039 Do Something
T1Ea_1m	1m	30.21	14.18	13.73	13.45	1.05	1.13	1.09	1.06	23.52	21.54	21.28	21.11	1.68	1.54	1.52	1.51
T1Ea_10m	10m	18.17	10.27	10.11	10.01	0.72	0.75	0.73	0.72	20.90	19.26	19.17	19.10	1.49	1.38	1.37	1.36
T1Ea_20m	20m	15.31	9.34	9.25	9.19	0.64	0.66	0.65	0.64	20.27	18.71	18.66	18.63	1.45	1.34	1.33	1.33
T1Ea_30m	30m	14.10	8.94	8.89	8.84	0.60	0.62	0.61	0.61	20.00	18.48	18.45	18.42	1.43	1.32	1.32	1.32
T1Ea_40m	40m	13.41	8.72	8.68	8.65	0.58	0.60	0.59	0.59	19.85	18.35	18.33	18.31	1.42	1.31	1.31	1.31
T1Ea_50m	50m	12.98	8.58	8.56	8.53	0.57	0.58	0.58	0.58	19.75	18.27	18.25	18.24	1.41	1.31	1.30	1.30
T1Ea_60m	60m	12.68	8.49	8.47	8.44	0.56	0.57	0.57	0.57	19.69	18.21	18.20	18.19	1.41	1.30	1.30	1.30
T1Ea_70m	70m	12.47	8.41	8.40	8.38	0.56	0.57	0.56	0.56	19.64	18.17	18.16	18.15	1.40	1.30	1.30	1.30
T1Ea_80m	80m	12.30	8.36	8.35	8.33	0.55	0.56	0.56	0.56	19.60	18.14	18.14	18.12	1.40	1.30	1.30	1.29
T1Ea_90m	90m	12.17	8.32	8.31	8.30	0.55	0.56	0.56	0.55	19.57	18.12	18.11	18.10	1.40	1.29	1.29	1.29
T1Ea_100m	100m	12.06	8.28	8.28	8.26	0.55	0.55	0.55	0.55	19.55	18.09	18.09	18.08	1.40	1.29	1.29	1.29
T1Ea_110m	110m	11.97	8.25	8.25	8.24	0.54	0.55	0.55	0.55	19.53	18.08	18.08	18.07	1.39	1.29	1.29	1.29
T1Ea_120m	120m	11.90	8.23	8.23	8.22	0.54	0.55	0.55	0.55	19.51	18.06	18.06	18.06	1.39	1.29	1.29	1.29
T1Ea_130m	130m	11.83	8.21	8.21	8.20	0.54	0.55	0.55	0.54	19.50	18.05	18.05	18.05	1.39	1.29	1.29	1.29
T1Ea_140m	140m	11.78	8.19	8.19	8.18	0.54	0.54	0.54	0.54	19.49	18.04	18.04	18.04	1.39	1.29	1.29	1.29
T1Ea_150m	150m	11.73	8.17	8.18	8.17	0.54	0.54	0.54	0.54	19.48	18.03	18.04	18.03	1.39	1.29	1.29	1.29
T1Ea_160m	160m	11.69	8.16	8.17	8.16	0.54	0.54	0.54	0.54	19.47	18.02	18.03	18.02	1.39	1.29	1.29	1.29
T1Ea_170m	170m	11.65	8.15	8.15	8.15	0.53	0.54	0.54	0.54	19.46	18.02	18.02	18.02	1.39	1.29	1.29	1.29
T1Ea_180m	180m	11.61	8.14	8.14	8.14	0.53	0.54	0.54	0.54	19.45	18.01	18.01	18.01	1.39	1.29	1.29	1.29
T1Ea_190m	190m	11.58	8.13	8.13	8.13	0.53	0.54	0.54	0.54	19.44	18.00	18.01	18.01	1.39	1.29	1.29	1.29
T1Ea_200m	200m	11.56	8.12	8.13	8.12	0.53	0.54	0.54	0.54	19.44	18.00	18.00	18.00	1.39	1.29	1.29	1.29
T1Wa_1m	1m	28.68	13.68	13.27	13.00	1.01	1.08	1.04	1.01	23.19	21.25	21.01	20.85	1.66	1.52	1.50	1.49
T1Wa_10m	10m	17.16	9.94	9.81	9.72	0.69	0.71	0.70	0.69	20.68	19.06	18.99	18.93	1.48	1.36	1.36	1.35
T1Wa_20m	20m	14.61	9.11	9.04	8.99	0.62	0.63	0.63	0.62	20.11	18.58	18.54	18.51	1.44	1.33	1.32	1.32
T1Wa_30m	30m	13.55	8.77	8.72	8.69	0.59	0.60	0.60	0.59	19.88	18.38	18.36	18.33	1.42	1.31	1.31	1.31
T1Wa_40m	40m	12.96	8.58	8.55	8.52	0.57	0.58	0.58	0.58	19.75	18.27	18.25	18.24	1.41	1.30	1.30	1.30
T1Wa_50m	50m	12.60	8.46	8.44	8.42	0.56	0.57	0.57	0.57	19.67	18.20	18.19	18.18	1.40	1.30	1.30	1.30
T1Wa_60m	60m	12.34	8.37	8.36	8.35	0.55	0.56	0.56	0.56	19.61	18.15	18.14	18.13	1.40	1.30	1.30	1.30
T1Wa_70m	70m	12.16	8.31	8.31	8.29	0.55	0.56	0.56	0.55	19.57	18.11	18.11	18.10	1.40	1.29	1.29	1.29
T1Wa_80m	80m	12.02	8.27	8.27	8.25	0.54	0.55	0.55	0.55	19.54	18.09	18.09	18.08	1.40	1.29	1.29	1.29
T1Wa_90m	90m	11.91	8.23	8.23	8.22	0.54	0.55	0.55	0.55	19.52	18.07	18.07	18.06	1.39	1.29	1.29	1.29
T1Wa_100m	100m	11.82	8.20	8.21	8.20	0.54	0.55	0.55	0.54	19.50	18.05	18.05	18.05	1.39	1.29	1.29	1.29
T1Wa_110m	110m	11.75	8.18	8.18	8.18	0.54	0.54	0.54	0.54	19.48	18.04	18.04	18.03	1.39	1.29	1.29	1.29
T1Wa_120m	120m	11.68	8.16	8.17	8.16	0.54	0.54	0.54	0.54	19.47	18.02	18.03	18.02	1.39	1.29	1.29	1.29
T1Wa_130m	130m	11.63	8.14	8.15	8.15	0.53	0.54	0.54	0.54	19.45	18.01	18.02	18.02	1.39	1.29	1.29	1.29

		Total Annual Mean NOx (µg/m3)				Total Annual Mean Ammonia NH3 (µg/m3)				Total Annual Mean Nitrogen Deposition				Total Annual Mean Acid Deposition			
Road Link	Distance from Road (m)	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Ref	2039 Do Something
T1Wa_140m	140m	11.59	8.13	8.14	8.13	0.53	0.54	0.54	0.54	19.44	18.01	18.01	18.01	1.39	1.29	1.29	1.29
T1Wa_150m	150m	11.55	8.12	8.13	8.12	0.53	0.54	0.54	0.54	19.44	18.00	18.01	18.00	1.39	1.29	1.29	1.29
T1Wa_160m	160m	11.52	8.11	8.12	8.11	0.53	0.54	0.54	0.54	19.43	17.99	18.00	18.00	1.39	1.29	1.29	1.29
T1Wa_170m	170m	11.49	8.10	8.11	8.10	0.53	0.53	0.54	0.54	19.42	17.99	17.99	17.99	1.39	1.28	1.29	1.29
T1Wa_180m	180m	11.46	8.09	8.10	8.10	0.53	0.53	0.54	0.53	19.42	17.98	17.99	17.99	1.39	1.28	1.28	1.28
T1Wa_190m	190m	11.44	8.08	8.09	8.09	0.53	0.53	0.53	0.53	19.41	17.98	17.99	17.98	1.39	1.28	1.28	1.28
T1Wa_200m	200m	11.42	8.07	8.09	8.08	0.53	0.53	0.53	0.53	19.41	17.97	17.98	17.98	1.39	1.28	1.28	1.28
T2Ea_1m	1m	40.58	17.60	17.40	17.12	1.28	1.40	1.38	1.35	25.47	23.18	23.08	22.93	1.82	1.66	1.65	1.64
T2Ea_10m	10m	22.57	11.76	11.69	11.58	0.82	0.86	0.86	0.85	21.76	19.97	19.93	19.88	1.55	1.43	1.42	1.42
T2Ea_20m	20m	18.09	10.30	10.27	10.21	0.70	0.73	0.73	0.72	20.82	19.16	19.15	19.11	1.49	1.37	1.37	1.37
T2Ea_30m	30m	16.14	9.67	9.66	9.61	0.65	0.67	0.67	0.67	20.40	18.82	18.81	18.78	1.46	1.34	1.34	1.34
T2Ea_40m	40m	15.06	9.32	9.31	9.28	0.62	0.64	0.64	0.64	20.18	18.62	18.62	18.60	1.44	1.33	1.33	1.33
T2Ea_50m	50m	14.37	9.10	9.09	9.07	0.60	0.62	0.62	0.62	20.03	18.50	18.50	18.48	1.43	1.32	1.32	1.32
T2Ea_60m	60m	13.88	8.94	8.94	8.92	0.59	0.60	0.61	0.60	19.93	18.41	18.41	18.40	1.42	1.32	1.32	1.31
T2Ea_70m	70m	13.53	8.82	8.83	8.81	0.58	0.59	0.59	0.59	19.85	18.35	18.35	18.34	1.42	1.31	1.31	1.31
T2Ea_80m	80m	13.25	8.73	8.74	8.72	0.58	0.59	0.59	0.59	19.79	18.30	18.30	18.29	1.41	1.31	1.31	1.31
T2Ea_90m	90m	13.04	8.66	8.67	8.66	0.57	0.58	0.58	0.58	19.75	18.26	18.26	18.26	1.41	1.30	1.30	1.30
T2Ea_100m	100m	12.86	8.61	8.62	8.60	0.56	0.57	0.58	0.57	19.71	18.23	18.23	18.23	1.41	1.30	1.30	1.30
T2Ea_110m	110m	12.71	8.56	8.57	8.56	0.56	0.57	0.57	0.57	19.68	18.20	18.21	18.20	1.41	1.30	1.30	1.30
T2Ea_120m	120m	12.59	8.52	8.53	8.52	0.56	0.57	0.57	0.57	19.65	18.18	18.19	18.18	1.40	1.30	1.30	1.30
T2Ea_130m	130m	12.48	8.49	8.50	8.49	0.56	0.56	0.56	0.56	19.63	18.16	18.17	18.16	1.40	1.30	1.30	1.30
T2Ea_140m	140m	12.39	8.46	8.47	8.46	0.55	0.56	0.56	0.56	19.61	18.14	18.15	18.15	1.40	1.30	1.30	1.30
T2Ea_150m	150m	12.31	8.43	8.44	8.44	0.55	0.56	0.56	0.56	19.59	18.13	18.14	18.13	1.40	1.29	1.30	1.30
T2Ea_160m	160m	12.24	8.41	8.42	8.41	0.55	0.56	0.56	0.56	19.58	18.12	18.13	18.12	1.40	1.29	1.29	1.29
T2Ea_170m	170m	12.18	8.39	8.40	8.39	0.55	0.55	0.56	0.55	19.56	18.11	18.11	18.11	1.40	1.29	1.29	1.29
T2Ea_180m	180m	12.12	8.37	8.38	8.38	0.55	0.55	0.55	0.55	19.55	18.10	18.10	18.10	1.40	1.29	1.29	1.29
T2Ea_190m	190m	12.07	8.35	8.37	8.36	0.54	0.55	0.55	0.55	19.54	18.09	18.10	18.09	1.40	1.29	1.29	1.29
T2Ea_200m	200m	12.02	8.33	8.35	8.35	0.54	0.55	0.55	0.55	19.53	18.08	18.09	18.08	1.40	1.29	1.29	1.29
T2Wa_1m	1m	33.95	15.45	15.30	15.07	1.11	1.20	1.19	1.17	24.12	22.00	21.92	21.80	1.72	1.57	1.57	1.56
T2Wa_10m	10m	19.36	10.72	10.68	10.60	0.73	0.77	0.76	0.76	21.08	19.39	19.37	19.33	1.51	1.39	1.38	1.38
T2Wa_20m	20m	15.99	9.62	9.61	9.56	0.65	0.67	0.67	0.66	20.37	18.79	18.78	18.76	1.46	1.34	1.34	1.34
T2Wa_30m	30m	14.59	9.17	9.16	9.13	0.61	0.63	0.63	0.62	20.08	18.54	18.54	18.52	1.43	1.32	1.32	1.32
T2Wa_40m	40m	13.81	8.91	8.92	8.89	0.59	0.60	0.60	0.60	19.91	18.40	18.40	18.39	1.42	1.31	1.31	1.31
T2Wa_50m	50m	13.31	8.75	8.76	8.74	0.58	0.59	0.59	0.59	19.81	18.31	18.31	18.30	1.41	1.31	1.31	1.31
T2Wa_60m	60m	12.97	8.64	8.65	8.64	0.57	0.58	0.58	0.58	19.73	18.25	18.25	18.25	1.41	1.30	1.30	1.30
T2Wa_70m	70m	12.72	8.56	8.57	8.56	0.56	0.57	0.57	0.57	19.68	18.20	18.21	18.20	1.41	1.30	1.30	1.30
T2Wa_80m	80m	12.53	8.50	8.51	8.50	0.56	0.56	0.57	0.56	19.64	18.17	18.18	18.17	1.40	1.30	1.30	1.30
T2Wa_90m	90m	12.38	8.45	8.47	8.46	0.55	0.56	0.56	0.56	19.61	18.14	18.15	18.15	1.40	1.30	1.30	1.30
T2Wa_100m	100m	12.26	8.41	8.43	8.42	0.55	0.56	0.56	0.56	19.58	18.12	18.13	18.13	1.40	1.29	1.29	1.29
T2Wa_110m	110m	12.16	8.38	8.40	8.39	0.55	0.55	0.55	0.55	19.56	18.10	18.11	18.11	1.40	1.29	1.29	1.29

		Total Annual Mean NOx (µg/m3)				Total Annual Mean Ammonia NH3 (µg/m3)				Total Annual Mean Nitrogen Deposition				Total Annual Mean Acid Deposition			
Road Link	Distance from Road (m)	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Ref	2039 Do Something
T2Wa_120m	120m	12.07	8.35	8.37	8.36	0.54	0.55	0.55	0.55	19.54	18.09	18.10	18.09	1.40	1.29	1.29	1.29
T2Wa_130m	130m	12.00	8.33	8.35	8.34	0.54	0.55	0.55	0.55	19.53	18.07	18.08	18.08	1.39	1.29	1.29	1.29
T2Wa_140m	140m	11.94	8.31	8.33	8.32	0.54	0.55	0.55	0.55	19.51	18.06	18.07	18.07	1.39	1.29	1.29	1.29
T2Wa_150m	150m	11.88	8.29	8.31	8.30	0.54	0.55	0.55	0.55	19.50	18.05	18.06	18.06	1.39	1.29	1.29	1.29
T2Wa_160m	160m	11.84	8.28	8.29	8.29	0.54	0.54	0.55	0.55	19.49	18.04	18.06	18.05	1.39	1.29	1.29	1.29
T2Wa_170m	170m	11.80	8.26	8.28	8.28	0.54	0.54	0.54	0.54	19.48	18.04	18.05	18.05	1.39	1.29	1.29	1.29
T2Wa_180m	180m	11.76	8.25	8.27	8.27	0.54	0.54	0.54	0.54	19.48	18.03	18.04	18.04	1.39	1.29	1.29	1.29
T2Wa_190m	190m	11.72	8.24	8.26	8.25	0.54	0.54	0.54	0.54	19.47	18.02	18.04	18.03	1.39	1.29	1.29	1.29
T2Wa_200m	200m	11.69	8.23	8.25	8.25	0.53	0.54	0.54	0.54	19.46	18.02	18.03	18.03	1.39	1.29	1.29	1.29
T3Ea_1m	1m	36.67	16.38	15.90	15.72	1.18	1.28	1.24	1.22	24.96	22.77	22.51	22.41	1.78	1.63	1.61	1.60
T3Ea_10m	10m	20.81	11.24	11.07	11.00	0.77	0.81	0.79	0.79	21.67	19.93	19.84	19.80	1.55	1.42	1.42	1.41
T3Ea_20m	20m	16.91	9.98	9.88	9.84	0.67	0.69	0.69	0.68	20.84	19.23	19.18	19.16	1.49	1.37	1.37	1.37
T3Ea_30m	30m	15.24	9.44	9.37	9.34	0.63	0.64	0.64	0.64	20.49	18.93	18.90	18.88	1.46	1.35	1.35	1.35
T3Ea_40m	40m	14.32	9.14	9.09	9.07	0.60	0.62	0.61	0.61	20.30	18.77	18.74	18.73	1.45	1.34	1.34	1.34
T3Ea_50m	50m	13.73	8.95	8.91	8.90	0.59	0.60	0.60	0.60	20.17	18.66	18.64	18.63	1.44	1.33	1.33	1.33
T3Ea_60m	60m	13.32	8.81	8.79	8.77	0.58	0.59	0.59	0.58	20.08	18.59	18.57	18.57	1.43	1.33	1.33	1.33
T3Ea_70m	70m	13.02	8.72	8.70	8.68	0.57	0.58	0.58	0.58	20.02	18.53	18.52	18.52	1.43	1.32	1.32	1.32
T3Ea_80m	80m	12.78	8.64	8.63	8.62	0.56	0.57	0.57	0.57	19.97	18.49	18.49	18.48	1.43	1.32	1.32	1.32
T3Ea_90m	90m	12.60	8.58	8.57	8.56	0.56	0.57	0.57	0.56	19.93	18.46	18.45	18.45	1.42	1.32	1.32	1.32
T3Ea_100m	100m	12.45	8.53	8.53	8.52	0.55	0.56	0.56	0.56	19.90	18.43	18.43	18.42	1.42	1.32	1.32	1.32
T3Ea_110m	110m	12.33	8.49	8.49	8.48	0.55	0.56	0.56	0.56	19.87	18.41	18.41	18.40	1.42	1.31	1.31	1.31
T3Ea_120m	120m	12.23	8.46	8.46	8.45	0.55	0.55	0.55	0.55	19.85	18.39	18.39	18.39	1.42	1.31	1.31	1.31
T3Ea_130m	130m	12.14	8.43	8.43	8.43	0.55	0.55	0.55	0.55	19.83	18.38	18.38	18.37	1.42	1.31	1.31	1.31
T3Ea_140m	140m	12.06	8.41	8.41	8.40	0.54	0.55	0.55	0.55	19.82	18.36	18.36	18.36	1.42	1.31	1.31	1.31
T3Ea_150m	150m	12.00	8.39	8.39	8.38	0.54	0.55	0.55	0.55	19.80	18.35	18.35	18.35	1.41	1.31	1.31	1.31
T3Ea_160m	160m	11.94	8.37	8.37	8.37	0.54	0.55	0.55	0.55	19.79	18.34	18.34	18.34	1.41	1.31	1.31	1.31
T3Ea_170m	170m	11.89	8.35	8.36	8.35	0.54	0.54	0.55	0.55	19.78	18.33	18.33	18.33	1.41	1.31	1.31	1.31
T3Ea_180m	180m	11.84	8.34	8.34	8.34	0.54	0.54	0.54	0.54	19.77	18.32	18.33	18.32	1.41	1.31	1.31	1.31
T3Ea_190m	190m	11.80	8.32	8.33	8.32	0.54	0.54	0.54	0.54	19.76	18.31	18.32	18.32	1.41	1.31	1.31	1.31
T3Ea_200m	200m	11.76	8.31	8.32	8.31	0.54	0.54	0.54	0.54	19.75	18.31	18.31	18.31	1.41	1.31	1.31	1.31
T3Wa_1m	1m	30.24	14.30	13.94	13.79	1.02	1.09	1.06	1.05	23.63	21.62	21.42	21.35	1.69	1.54	1.53	1.52
T3Wa_10m	10m	17.62	10.21	10.10	10.05	0.69	0.72	0.71	0.70	20.99	19.36	19.30	19.27	1.50	1.38	1.38	1.38
T3Wa_20m	20m	14.86	9.31	9.26	9.23	0.62	0.63	0.63	0.63	20.41	18.86	18.83	18.82	1.46	1.35	1.35	1.34
T3Wa_30m	30m	13.72	8.94	8.91	8.89	0.59	0.60	0.60	0.59	20.17	18.66	18.64	18.63	1.44	1.33	1.33	1.33
T3Wa_40m	40m	13.10	8.74	8.72	8.71	0.57	0.58	0.58	0.58	20.04	18.55	18.54	18.53	1.43	1.32	1.32	1.32
T3Wa_50m	50m	12.70	8.61	8.60	8.59	0.56	0.57	0.57	0.57	19.95	18.48	18.47	18.47	1.43	1.32	1.32	1.32
T3Wa_60m	60m	12.43	8.53	8.52	8.51	0.55	0.56	0.56	0.56	19.90	18.43	18.43	18.42	1.42	1.32	1.32	1.32
T3Wa_70m	70m	12.24	8.46	8.46	8.45	0.55	0.56	0.56	0.55	19.85	18.39	18.39	18.39	1.42	1.31	1.31	1.31
T3Wa_80m	80m	12.09	8.41	8.41	8.41	0.54	0.55	0.55	0.55	19.82	18.37	18.37	18.36	1.42	1.31	1.31	1.31
T3Wa_90m	90m	11.97	8.38	8.38	8.37	0.54	0.55	0.55	0.55	19.80	18.35	18.35	18.35	1.41	1.31	1.31	1.31

		Total Annual Mean NOx (µg/m3)				Total Annual Mean Ammonia NH3 (µg/m3)				Total Annual Mean Nitrogen Deposition				Total Annual Mean Acid Deposition			
Road Link	Distance from Road (m)	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Ref	2039 Do Something
T3Wa_100m	100m	11.87	8.35	8.35	8.35	0.54	0.54	0.55	0.54	19.78	18.33	18.33	18.33	1.41	1.31	1.31	1.31
T3Wa_110m	110m	11.80	8.32	8.33	8.32	0.54	0.54	0.54	0.54	19.76	18.31	18.32	18.32	1.41	1.31	1.31	1.31
T3Wa_120m	120m	11.73	8.30	8.31	8.30	0.54	0.54	0.54	0.54	19.75	18.30	18.31	18.31	1.41	1.31	1.31	1.31
T3Wa_130m	130m	11.68	8.28	8.29	8.29	0.53	0.54	0.54	0.54	19.73	18.29	18.30	18.30	1.41	1.31	1.31	1.31
T3Wa_140m	140m	11.63	8.27	8.27	8.27	0.53	0.54	0.54	0.54	19.72	18.28	18.29	18.29	1.41	1.31	1.31	1.31
T3Wa_150m	150m	11.59	8.25	8.26	8.26	0.53	0.54	0.54	0.54	19.72	18.28	18.28	18.28	1.41	1.31	1.31	1.31
T3Wa_160m	160m	11.55	8.24	8.25	8.25	0.53	0.53	0.54	0.54	19.71	18.27	18.28	18.28	1.41	1.30	1.31	1.31
T3Wa_170m	170m	11.51	8.23	8.24	8.24	0.53	0.53	0.53	0.53	19.70	18.26	18.27	18.27	1.41	1.30	1.30	1.30
T3Wa_180m	180m	11.49	8.22	8.23	8.23	0.53	0.53	0.53	0.53	19.69	18.26	18.27	18.27	1.41	1.30	1.30	1.30
T3Wa_190m	190m	11.46	8.21	8.22	8.22	0.53	0.53	0.53	0.53	19.69	18.25	18.26	18.26	1.41	1.30	1.30	1.30
T3Wa_200m	200m	11.44	8.20	8.22	8.22	0.53	0.53	0.53	0.53	19.68	18.25	18.26	18.26	1.41	1.30	1.30	1.30
T4Ea_1m	1m	36.58	16.35	15.99	15.78	1.18	1.28	1.25	1.23	24.93	22.74	22.55	22.44	1.78	1.62	1.61	1.60
T4Ea_10m	10m	19.60	10.83	10.73	10.66	0.74	0.77	0.76	0.76	21.41	19.71	19.65	19.61	1.53	1.41	1.40	1.40
T4Ea_20m	20m	16.02	9.67	9.62	9.58	0.65	0.67	0.66	0.66	20.65	19.07	19.04	19.02	1.47	1.36	1.36	1.36
T4Ea_30m	30m	14.54	9.19	9.16	9.13	0.61	0.62	0.62	0.62	20.34	18.80	18.78	18.77	1.45	1.34	1.34	1.34
T4Ea_40m	40m	13.73	8.93	8.91	8.89	0.59	0.60	0.60	0.60	20.17	18.66	18.65	18.64	1.44	1.33	1.33	1.33
T4Ea_50m	50m	13.22	8.76	8.75	8.74	0.57	0.58	0.58	0.58	20.06	18.57	18.56	18.55	1.43	1.33	1.33	1.33
T4Ea_60m	60m	12.87	8.65	8.64	8.63	0.56	0.57	0.57	0.57	19.98	18.50	18.50	18.49	1.43	1.32	1.32	1.32
T4Ea_70m	70m	12.62	8.57	8.56	8.55	0.56	0.57	0.57	0.56	19.93	18.46	18.46	18.45	1.42	1.32	1.32	1.32
T4Ea_80m	80m	12.42	8.51	8.50	8.50	0.55	0.56	0.56	0.56	19.89	18.42	18.42	18.42	1.42	1.32	1.32	1.32
T4Ea_90m	90m	12.27	8.46	8.46	8.45	0.55	0.56	0.56	0.56	19.86	18.40	18.40	18.39	1.42	1.31	1.31	1.31
T4Ea_100m	100m	12.15	8.42	8.42	8.41	0.55	0.55	0.55	0.55	19.83	18.37	18.38	18.37	1.42	1.31	1.31	1.31
T4Ea_110m	110m	12.05	8.38	8.39	8.38	0.54	0.55	0.55	0.55	19.81	18.36	18.36	18.36	1.41	1.31	1.31	1.31
T4Ea_120m	120m	11.96	8.36	8.36	8.36	0.54	0.55	0.55	0.55	19.79	18.34	18.34	18.34	1.41	1.31	1.31	1.31
T4Ea_130m	130m	11.89	8.33	8.34	8.34	0.54	0.54	0.55	0.54	19.78	18.33	18.33	18.33	1.41	1.31	1.31	1.31
T4Ea_140m	140m	11.83	8.31	8.32	8.32	0.54	0.54	0.54	0.54	19.76	18.32	18.32	18.32	1.41	1.31	1.31	1.31
T4Ea_150m	150m	11.78	8.29	8.30	8.30	0.54	0.54	0.54	0.54	19.75	18.31	18.31	18.31	1.41	1.31	1.31	1.31
T4Ea_160m	160m	11.73	8.28	8.29	8.29	0.53	0.54	0.54	0.54	19.74	18.30	18.30	18.30	1.41	1.31	1.31	1.31
T4Ea_170m	170m	11.69	8.27	8.28	8.27	0.53	0.54	0.54	0.54	19.73	18.29	18.30	18.30	1.41	1.31	1.31	1.31
T4Ea_180m	180m	11.65	8.25	8.26	8.26	0.53	0.54	0.54	0.54	19.73	18.28	18.29	18.29	1.41	1.31	1.31	1.31
T4Ea_190m	190m	11.62	8.24	8.25	8.25	0.53	0.54	0.54	0.54	19.72	18.28	18.29	18.28	1.41	1.31	1.31	1.31
T4Ea_200m	200m	11.59	8.23	8.25	8.24	0.53	0.54	0.54	0.54	19.71	18.27	18.28	18.28	1.41	1.31	1.31	1.31
T4Wa_1m	1m	40.22	17.53	17.12	16.89	1.27	1.39	1.35	1.33	25.67	23.39	23.18	23.05	1.83	1.67	1.66	1.65
T4Wa_10m	10m	20.90	11.26	11.13	11.05	0.77	0.81	0.80	0.79	21.68	19.94	19.88	19.83	1.55	1.42	1.42	1.42
T4Wa_20m	20m	16.80	9.93	9.86	9.81	0.67	0.69	0.68	0.68	20.82	19.21	19.17	19.15	1.49	1.37	1.37	1.37
T4Wa_30m	30m	15.09	9.37	9.33	9.30	0.62	0.64	0.64	0.63	20.46	18.90	18.88	18.86	1.46	1.35	1.35	1.35
T4Wa_40m	40m	14.15	9.07	9.04	9.02	0.60	0.61	0.61	0.61	20.26	18.73	18.72	18.71	1.45	1.34	1.34	1.34
T4Wa_50m	50m	13.56	8.87	8.86	8.84	0.58	0.59	0.59	0.59	20.13	18.63	18.62	18.61	1.44	1.33	1.33	1.33
T4Wa_60m	60m	13.14	8.74	8.73	8.71	0.57	0.58	0.58	0.58	20.04	18.55	18.55	18.54	1.43	1.33	1.32	1.32
T4Wa_70m	70m	12.84	8.64	8.64	8.62	0.56	0.57	0.57	0.57	19.98	18.50	18.50	18.49	1.43	1.32	1.32	1.32

		Total Annual Mean NOx (µg/m3)				Total Annual Mean Ammonia NH3 (µg/m3)				Total Annual Mean Nitrogen Deposition				Total Annual Mean Acid Deposition			
Road Link	Distance from Road (m)	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Ref	2039 Do Something
T4Wa_80m	80m	12.61	8.57	8.56	8.56	0.56	0.57	0.57	0.56	19.93	18.46	18.46	18.45	1.42	1.32	1.32	1.32
T4Wa_90m	90m	12.43	8.51	8.51	8.50	0.55	0.56	0.56	0.56	19.89	18.42	18.43	18.42	1.42	1.32	1.32	1.32
T4Wa_100m	100m	12.29	8.46	8.46	8.46	0.55	0.56	0.56	0.56	19.86	18.40	18.40	18.40	1.42	1.31	1.31	1.31
T4Wa_110m	110m	12.17	8.42	8.43	8.42	0.55	0.55	0.55	0.55	19.83	18.38	18.38	18.38	1.42	1.31	1.31	1.31
T4Wa_120m	120m	12.07	8.39	8.40	8.39	0.54	0.55	0.55	0.55	19.81	18.36	18.36	18.36	1.42	1.31	1.31	1.31
T4Wa_130m	130m	11.98	8.36	8.37	8.37	0.54	0.55	0.55	0.55	19.80	18.34	18.35	18.35	1.41	1.31	1.31	1.31
T4Wa_140m	140m	11.91	8.34	8.35	8.34	0.54	0.54	0.55	0.55	19.78	18.33	18.34	18.34	1.41	1.31	1.31	1.31
T4Wa_150m	150m	11.85	8.32	8.33	8.33	0.54	0.54	0.54	0.54	19.77	18.32	18.33	18.32	1.41	1.31	1.31	1.31
T4Wa_160m	160m	11.79	8.30	8.31	8.31	0.54	0.54	0.54	0.54	19.76	18.31	18.32	18.32	1.41	1.31	1.31	1.31
T4Wa_170m	170m	11.75	8.29	8.30	8.30	0.54	0.54	0.54	0.54	19.75	18.30	18.31	18.31	1.41	1.31	1.31	1.31
T4Wa_180m	180m	11.71	8.27	8.28	8.28	0.53	0.54	0.54	0.54	19.74	18.29	18.30	18.30	1.41	1.31	1.31	1.31
T4Wa_190m	190m	11.67	8.26	8.27	8.27	0.53	0.54	0.54	0.54	19.73	18.29	18.30	18.29	1.41	1.31	1.31	1.31
T4Wa_200m	200m	11.63	8.25	8.26	8.26	0.53	0.54	0.54	0.54	19.72	18.28	18.29	18.29	1.41	1.31	1.31	1.31
T5Ea_1m	1m	42.98	18.38	19.52	19.78	1.34	1.46	1.56	1.58	25.91	23.55	24.18	24.31	1.85	1.68	1.73	1.74
T5Ea_10m	10m	23.26	11.99	12.45	12.55	0.83	0.88	0.92	0.93	21.88	20.07	20.32	20.38	1.56	1.43	1.45	1.46
T5Ea_20m	20m	18.49	10.45	10.73	10.80	0.71	0.74	0.77	0.77	20.89	19.23	19.38	19.42	1.49	1.37	1.38	1.39
T5Ea_30m	30m	16.47	9.79	10.01	10.05	0.66	0.68	0.70	0.70	20.47	18.87	18.99	19.01	1.46	1.35	1.36	1.36
T5Ea_40m	40m	15.34	9.43	9.60	9.64	0.63	0.65	0.66	0.67	20.23	18.67	18.76	18.78	1.45	1.33	1.34	1.34
T5Ea_50m	50m	14.63	9.20	9.34	9.37	0.61	0.63	0.64	0.64	20.08	18.54	18.62	18.64	1.43	1.32	1.33	1.33
T5Ea_60m	60m	14.14	9.04	9.17	9.19	0.60	0.61	0.62	0.63	19.98	18.45	18.53	18.54	1.43	1.32	1.32	1.32
T5Ea_70m	70m	13.77	8.92	9.04	9.06	0.59	0.60	0.61	0.61	19.90	18.39	18.45	18.47	1.42	1.31	1.32	1.32
T5Ea_80m	80m	13.49	8.83	8.93	8.95	0.58	0.59	0.60	0.60	19.84	18.34	18.40	18.41	1.42	1.31	1.31	1.32
T5Ea_90m	90m	13.27	8.76	8.85	8.87	0.58	0.59	0.60	0.60	19.80	18.30	18.36	18.37	1.41	1.31	1.31	1.31
T5Ea_100m	100m	13.09	8.70	8.79	8.81	0.57	0.58	0.59	0.59	19.76	18.27	18.32	18.33	1.41	1.31	1.31	1.31
T5Ea_110m	110m	12.94	8.65	8.74	8.75	0.57	0.58	0.58	0.59	19.73	18.24	18.29	18.30	1.41	1.30	1.31	1.31
T5Ea_120m	120m	12.82	8.61	8.69	8.70	0.56	0.57	0.58	0.58	19.70	18.22	18.27	18.27	1.41	1.30	1.30	1.31
T5Ea_130m	130m	12.71	8.58	8.65	8.66	0.56	0.57	0.58	0.58	19.68	18.20	18.24	18.25	1.41	1.30	1.30	1.30
T5Ea_140m	140m	12.61	8.54	8.62	8.63	0.56	0.57	0.57	0.58	19.66	18.18	18.22	18.23	1.40	1.30	1.30	1.30
T5Ea_150m	150m	12.53	8.52	8.59	8.60	0.56	0.56	0.57	0.57	19.64	18.17	18.21	18.21	1.40	1.30	1.30	1.30
T5Ea_160m	160m	12.46	8.49	8.56	8.57	0.55	0.56	0.57	0.57	19.63	18.16	18.19	18.20	1.40	1.30	1.30	1.30
T5Ea_170m	170m	12.39	8.47	8.54	8.55	0.55	0.56	0.57	0.57	19.61	18.14	18.18	18.19	1.40	1.30	1.30	1.30
T5Ea_180m	180m	12.33	8.45	8.52	8.53	0.55	0.56	0.56	0.57	19.60	18.13	18.17	18.17	1.40	1.30	1.30	1.30
T5Ea_190m	190m	12.28	8.44	8.50	8.51	0.55	0.56	0.56	0.56	19.59	18.12	18.16	18.16	1.40	1.29	1.30	1.30
T5Ea_200m	200m	12.23	8.42	8.48	8.49	0.55	0.56	0.56	0.56	19.58	18.12	18.15	18.15	1.40	1.29	1.30	1.30
T5Wa_1m	1m	32.84	15.09	15.88	16.05	1.08	1.16	1.23	1.25	23.86	21.76	22.19	22.28	1.70	1.55	1.59	1.59
T5Wa_10m	10m	19.06	10.63	10.93	11.00	0.72	0.76	0.78	0.79	21.01	19.33	19.49	19.53	1.50	1.38	1.39	1.39
T5Wa_20m	20m	15.97	9.63	9.82	9.86	0.64	0.67	0.68	0.69	20.36	18.78	18.89	18.91	1.45	1.34	1.35	1.35
T5Wa_30m	30m	14.66	9.21	9.35	9.38	0.61	0.63	0.64	0.64	20.09	18.55	18.63	18.64	1.43	1.32	1.33	1.33
T5Wa_40m	40m	13.93	8.97	9.09	9.11	0.59	0.61	0.62	0.62	19.94	18.42	18.49	18.50	1.42	1.32	1.32	1.32
T5Wa_50m	50m	13.46	8.82	8.92	8.94	0.58	0.59	0.60	0.60	19.84	18.34	18.39	18.40	1.42	1.31	1.31	1.31

		Total Annual Mean NOx (µg/m3)				Total Annual Mean Ammonia NH3 (µg/m3)				Total Annual Mean Nitrogen Deposition				Total Annual Mean Acid Deposition			
Road Link	Distance from Road (m)	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Ref	2039 Do Something
T5Wa_60m	60m	13.14	8.72	8.81	8.82	0.57	0.58	0.59	0.59	19.77	18.28	18.33	18.34	1.41	1.31	1.31	1.31
T5Wa_70m	70m	12.90	8.64	8.72	8.74	0.57	0.58	0.58	0.58	19.72	18.24	18.28	18.29	1.41	1.30	1.31	1.31
T5Wa_80m	80m	12.72	8.58	8.65	8.67	0.56	0.57	0.58	0.58	19.68	18.20	18.25	18.25	1.41	1.30	1.30	1.30
T5Wa_90m	90m	12.57	8.53	8.60	8.61	0.56	0.57	0.57	0.57	19.65	18.18	18.22	18.22	1.40	1.30	1.30	1.30
T5Wa_100m	100m	12.45	8.49	8.56	8.57	0.55	0.56	0.57	0.57	19.62	18.16	18.19	18.20	1.40	1.30	1.30	1.30
T5Wa_110m	110m	12.35	8.46	8.52	8.53	0.55	0.56	0.57	0.57	19.60	18.14	18.17	18.18	1.40	1.30	1.30	1.30
T5Wa_120m	120m	12.26	8.43	8.49	8.50	0.55	0.56	0.56	0.56	19.59	18.12	18.16	18.16	1.40	1.29	1.30	1.30
T5Wa_130m	130m	12.19	8.41	8.46	8.47	0.55	0.56	0.56	0.56	19.57	18.11	18.14	18.15	1.40	1.29	1.30	1.30
T5Wa_140m	140m	12.13	8.39	8.44	8.45	0.55	0.55	0.56	0.56	19.56	18.10	18.13	18.13	1.40	1.29	1.30	1.30
T5Wa_150m	150m	12.07	8.37	8.42	8.43	0.55	0.55	0.56	0.56	19.54	18.09	18.12	18.12	1.40	1.29	1.29	1.29
T5Wa_160m	160m	12.02	8.35	8.40	8.41	0.54	0.55	0.55	0.56	19.53	18.08	18.11	18.11	1.40	1.29	1.29	1.29
T5Wa_170m	170m	11.98	8.34	8.39	8.39	0.54	0.55	0.55	0.55	19.52	18.07	18.10	18.10	1.39	1.29	1.29	1.29
T5Wa_180m	180m	11.94	8.32	8.37	8.38	0.54	0.55	0.55	0.55	19.52	18.06	18.09	18.10	1.39	1.29	1.29	1.29
T5Wa_190m	190m	11.90	8.31	8.36	8.37	0.54	0.55	0.55	0.55	19.51	18.06	18.09	18.09	1.39	1.29	1.29	1.29
T5Wa_200m	200m	11.87	8.30	8.35	8.35	0.54	0.55	0.55	0.55	19.50	18.05	18.08	18.08	1.39	1.29	1.29	1.29
T6Ea_1m	1m	31.31	14.56	15.45	15.75	1.04	1.12	1.20	1.22	23.55	21.50	21.99	22.14	1.68	1.54	1.57	1.58
T6Ea_10m	10m	18.90	10.55	10.91	11.02	0.72	0.75	0.78	0.79	20.98	19.30	19.50	19.56	1.50	1.38	1.39	1.40
T6Ea_20m	20m	15.81	9.55	9.78	9.85	0.64	0.66	0.68	0.69	20.33	18.75	18.87	18.91	1.45	1.34	1.35	1.35
T6Ea_30m	30m	14.49	9.12	9.29	9.34	0.61	0.62	0.64	0.64	20.05	18.51	18.61	18.64	1.43	1.32	1.33	1.33
T6Ea_40m	40m	13.76	8.88	9.02	9.06	0.59	0.60	0.61	0.62	19.90	18.38	18.46	18.48	1.42	1.31	1.32	1.32
T6Ea_50m	50m	13.29	8.73	8.85	8.88	0.58	0.59	0.60	0.60	19.80	18.30	18.37	18.38	1.41	1.31	1.31	1.31
T6Ea_60m	60m	12.96	8.63	8.73	8.76	0.57	0.58	0.59	0.59	19.73	18.24	18.30	18.32	1.41	1.30	1.31	1.31
T6Ea_70m	70m	12.73	8.55	8.64	8.67	0.56	0.57	0.58	0.58	19.68	18.20	18.25	18.27	1.41	1.30	1.30	1.30
T6Ea_80m	80m	12.54	8.49	8.58	8.60	0.56	0.56	0.57	0.57	19.64	18.17	18.22	18.23	1.40	1.30	1.30	1.30
T6Ea_90m	90m	12.40	8.45	8.52	8.54	0.55	0.56	0.57	0.57	19.61	18.14	18.19	18.20	1.40	1.30	1.30	1.30
T6Ea_100m	100m	12.28	8.41	8.48	8.50	0.55	0.56	0.56	0.57	19.59	18.12	18.16	18.17	1.40	1.29	1.30	1.30
T6Ea_110m	110m	12.19	8.38	8.45	8.46	0.55	0.55	0.56	0.56	19.57	18.11	18.14	18.15	1.40	1.29	1.30	1.30
T6Ea_120m	120m	12.11	8.35	8.42	8.43	0.55	0.55	0.56	0.56	19.55	18.09	18.13	18.14	1.40	1.29	1.29	1.30
T6Ea_130m	130m	12.04	8.33	8.39	8.41	0.54	0.55	0.56	0.56	19.53	18.08	18.11	18.12	1.40	1.29	1.29	1.29
T6Ea_140m	140m	11.98	8.31	8.37	8.38	0.54	0.55	0.55	0.55	19.52	18.07	18.10	18.11	1.39	1.29	1.29	1.29
T6Ea_150m	150m	11.92	8.29	8.35	8.36	0.54	0.55	0.55	0.55	19.51	18.06	18.09	18.10	1.39	1.29	1.29	1.29
T6Ea_160m	160m	11.88	8.28	8.33	8.34	0.54	0.54	0.55	0.55	19.50	18.05	18.08	18.09	1.39	1.29	1.29	1.29
T6Ea_170m	170m	11.84	8.26	8.32	8.33	0.54	0.54	0.55	0.55	19.49	18.04	18.07	18.08	1.39	1.29	1.29	1.29
T6Ea_180m	180m	11.80	8.25	8.30	8.31	0.54	0.54	0.55	0.55	19.48	18.04	18.07	18.07	1.39	1.29	1.29	1.29
T6Ea_190m	190m	11.76	8.24	8.29	8.30	0.54	0.54	0.55	0.55	19.48	18.03	18.06	18.06	1.39	1.29	1.29	1.29
T6Ea_200m	200m	11.73	8.23	8.28	8.29	0.54	0.54	0.55	0.55	19.47	18.03	18.05	18.06	1.39	1.29	1.29	1.29
T6Wa_1m	1m	25.85	12.79	13.46	13.67	0.90	0.96	1.02	1.03	22.42	20.53	20.89	21.01	1.60	1.47	1.49	1.50
T6Wa_10m	10m	16.18	9.67	9.91	9.99	0.65	0.67	0.69	0.70	20.41	18.81	18.95	18.99	1.46	1.34	1.35	1.36
T6Wa_20m	20m	14.16	9.01	9.17	9.22	0.60	0.61	0.63	0.63	19.98	18.46	18.54	18.57	1.43	1.32	1.32	1.33
T6Wa_30m	30m	13.32	8.74	8.86	8.90	0.58	0.59	0.60	0.60	19.81	18.31	18.37	18.39	1.41	1.31	1.31	1.31

		Total Annual Mean NOx (µg/m3)				Total Annual Mean Ammonia NH3 (µg/m3)				Total Annual Mean Nitrogen Deposition				Total Annual Mean Acid Deposition			
Road Link	Distance from Road (m)	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Ref	2039 Do Something
T6Wa_40m	40m	12.86	8.59	8.69	8.72	0.56	0.57	0.58	0.59	19.71	18.23	18.28	18.29	1.41	1.30	1.31	1.31
T6Wa_50m	50m	12.57	8.50	8.59	8.61	0.56	0.57	0.57	0.58	19.65	18.17	18.22	18.23	1.40	1.30	1.30	1.30
T6Wa_60m	60m	12.37	8.43	8.51	8.53	0.55	0.56	0.57	0.57	19.60	18.14	18.18	18.19	1.40	1.30	1.30	1.30
T6Wa_70m	70m	12.22	8.39	8.46	8.47	0.55	0.55	0.56	0.56	19.57	18.11	18.15	18.16	1.40	1.29	1.30	1.30
T6Wa_80m	80m	12.10	8.35	8.41	8.43	0.55	0.55	0.56	0.56	19.55	18.09	18.13	18.14	1.40	1.29	1.29	1.30
T6Wa_90m	90m	12.01	8.32	8.38	8.40	0.54	0.55	0.55	0.56	19.53	18.07	18.11	18.12	1.39	1.29	1.29	1.29
T6Wa_100m	100m	11.93	8.29	8.35	8.37	0.54	0.55	0.55	0.55	19.51	18.06	18.09	18.10	1.39	1.29	1.29	1.29
T6Wa_110m	110m	11.87	8.27	8.33	8.34	0.54	0.54	0.55	0.55	19.50	18.05	18.08	18.09	1.39	1.29	1.29	1.29
T6Wa_120m	120m	11.81	8.26	8.31	8.32	0.54	0.54	0.55	0.55	19.49	18.04	18.07	18.08	1.39	1.29	1.29	1.29
T6Wa_130m	130m	11.77	8.24	8.29	8.30	0.54	0.54	0.55	0.55	19.48	18.03	18.06	18.07	1.39	1.29	1.29	1.29
T6Wa_140m	140m	11.73	8.23	8.28	8.29	0.54	0.54	0.55	0.55	19.47	18.02	18.05	18.06	1.39	1.29	1.29	1.29
T6Wa_150m	150m	11.69	8.22	8.26	8.27	0.53	0.54	0.54	0.54	19.46	18.02	18.04	18.05	1.39	1.29	1.29	1.29
T6Wa_160m	160m	11.66	8.20	8.25	8.26	0.53	0.54	0.54	0.54	19.45	18.01	18.04	18.04	1.39	1.29	1.29	1.29
T6Wa_170m	170m	11.63	8.20	8.24	8.25	0.53	0.54	0.54	0.54	19.45	18.01	18.03	18.04	1.39	1.29	1.29	1.29
T6Wa_180m	180m	11.60	8.19	8.23	8.24	0.53	0.54	0.54	0.54	19.44	18.00	18.03	18.03	1.39	1.29	1.29	1.29
T6Wa_190m	190m	11.57	8.18	8.22	8.23	0.53	0.54	0.54	0.54	19.44	18.00	18.02	18.03	1.39	1.29	1.29	1.29
T6Wa_200m	200m	11.55	8.17	8.21	8.22	0.53	0.54	0.54	0.54	19.43	17.99	18.02	18.02	1.39	1.29	1.29	1.29
T7Ea_1m	1m	66.46	25.93	27.54	27.81	2.09	2.32	2.48	2.50	30.09	27.30	28.25	28.41	2.15	1.95	2.02	2.03
T7Ea_10m	10m	34.36	15.59	16.30	16.42	1.18	1.28	1.35	1.36	23.24	21.14	21.56	21.63	1.66	1.51	1.54	1.54
T7Ea_20m	20m	25.44	12.72	13.18	13.25	0.93	0.99	1.03	1.04	21.28	19.42	19.69	19.74	1.52	1.39	1.41	1.41
T7Ea_30m	30m	21.51	11.45	11.80	11.85	0.81	0.86	0.89	0.90	20.41	18.66	18.87	18.90	1.46	1.33	1.35	1.35
T7Ea_40m	40m	19.27	10.73	11.01	11.06	0.75	0.79	0.81	0.82	19.91	18.23	18.40	18.42	1.42	1.30	1.31	1.32
T7Ea_50m	50m	17.83	10.27	10.50	10.55	0.71	0.74	0.76	0.77	19.59	17.95	18.09	18.12	1.40	1.28	1.29	1.29
T7Ea_60m	60m	16.81	9.94	10.15	10.18	0.68	0.71	0.73	0.73	19.36	17.76	17.88	17.90	1.38	1.27	1.28	1.28
T7Ea_70m	70m	16.06	9.70	9.88	9.92	0.66	0.68	0.70	0.70	19.19	17.61	17.72	17.74	1.37	1.26	1.27	1.27
T7Ea_80m	80m	15.49	9.51	9.68	9.71	0.64	0.66	0.68	0.68	19.06	17.50	17.60	17.62	1.36	1.25	1.26	1.26
T7Ea_90m	90m	15.02	9.36	9.52	9.55	0.63	0.65	0.66	0.67	18.96	17.41	17.50	17.52	1.35	1.24	1.25	1.25
T7Ea_100m	100m	14.65	9.24	9.39	9.41	0.62	0.64	0.65	0.65	18.87	17.34	17.42	17.44	1.35	1.24	1.24	1.25
T7Ea_110m	110m	14.34	9.14	9.28	9.30	0.61	0.63	0.64	0.64	18.80	17.28	17.36	17.37	1.34	1.23	1.24	1.24
T7Ea_120m	120m	14.07	9.06	9.18	9.21	0.60	0.62	0.63	0.63	18.74	17.23	17.30	17.31	1.34	1.23	1.24	1.24
T7Ea_130m	130m	13.85	8.98	9.10	9.12	0.60	0.61	0.62	0.62	18.69	17.18	17.25	17.27	1.34	1.23	1.23	1.23
T7Ea_140m	140m	13.65	8.92	9.03	9.05	0.59	0.60	0.62	0.62	18.65	17.14	17.21	17.22	1.33	1.22	1.23	1.23
T7Ea_150m	150m	13.48	8.87	8.97	8.99	0.59	0.60	0.61	0.61	18.61	17.11	17.17	17.19	1.33	1.22	1.23	1.23
T7Ea_160m	160m	13.32	8.82	8.92	8.94	0.58	0.59	0.60	0.61	18.58	17.08	17.14	17.15	1.33	1.22	1.22	1.23
T7Ea_170m	170m	13.19	8.77	8.87	8.89	0.58	0.59	0.60	0.60	18.55	17.06	17.11	17.12	1.32	1.22	1.22	1.22
T7Ea_180m	180m	13.07	8.73	8.83	8.85	0.58	0.59	0.60	0.60	18.52	17.03	17.09	17.10	1.32	1.22	1.22	1.22
T7Ea_190m	190m	12.96	8.70	8.79	8.81	0.57	0.58	0.59	0.59	18.50	17.01	17.06	17.07	1.32	1.22	1.22	1.22
T7Ea_200m	200m	12.86	8.67	8.76	8.77	0.57	0.58	0.59	0.59	18.47	16.99	17.04	17.05	1.32	1.21	1.22	1.22
T7Wa_1m	1m	52.99	21.59	22.88	23.09	1.71	1.88	2.01	2.03	27.25	24.72	25.48	25.61	1.95	1.77	1.82	1.83
T7Wa_10m	10m	27.07	13.24	13.76	13.85	0.97	1.04	1.09	1.10	21.64	19.73	20.04	20.09	1.55	1.41	1.43	1.44

		Total Annual Mean NOx (µg/m3)				Total Annual Mean Ammonia NH3 (µg/m3)				Total Annual Mean Nitrogen Deposition				Total Annual Mean Acid Deposition			
Road Link	Distance from Road (m)	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Ref	2039 Do Something
T7Wa_20m	20m	20.59	11.16	11.48	11.54	0.79	0.83	0.86	0.87	20.20	18.48	18.68	18.71	1.44	1.32	1.33	1.34
T7Wa_30m	30m	17.82	10.26	10.51	10.55	0.71	0.74	0.76	0.77	19.58	17.95	18.09	18.12	1.40	1.28	1.29	1.29
T7Wa_40m	40m	16.27	9.77	9.96	10.00	0.67	0.69	0.71	0.71	19.24	17.65	17.77	17.79	1.37	1.26	1.27	1.27
T7Wa_50m	50m	15.28	9.45	9.61	9.64	0.64	0.66	0.67	0.68	19.02	17.46	17.56	17.58	1.36	1.25	1.25	1.26
T7Wa_60m	60m	14.60	9.23	9.37	9.40	0.62	0.64	0.65	0.65	18.86	17.33	17.41	17.43	1.35	1.24	1.24	1.24
T7Wa_70m	70m	14.10	9.07	9.20	9.22	0.60	0.62	0.63	0.63	18.75	17.23	17.31	17.32	1.34	1.23	1.24	1.24
T7Wa_80m	80m	13.71	8.94	9.06	9.08	0.59	0.61	0.62	0.62	18.66	17.16	17.23	17.24	1.33	1.23	1.23	1.23
T7Wa_90m	90m	13.41	8.85	8.96	8.98	0.58	0.60	0.61	0.61	18.60	17.10	17.16	17.17	1.33	1.22	1.23	1.23
T7Wa_100m	100m	13.17	8.77	8.87	8.89	0.58	0.59	0.60	0.60	18.54	17.05	17.11	17.12	1.32	1.22	1.22	1.22
T7Wa_110m	110m	12.97	8.70	8.80	8.82	0.57	0.58	0.59	0.59	18.50	17.01	17.07	17.08	1.32	1.22	1.22	1.22
T7Wa_120m	120m	12.80	8.65	8.74	8.76	0.57	0.58	0.59	0.59	18.46	16.98	17.04	17.04	1.32	1.21	1.22	1.22
T7Wa_130m	130m	12.66	8.60	8.69	8.71	0.56	0.57	0.58	0.58	18.43	16.95	17.00	17.01	1.32	1.21	1.21	1.22
T7Wa_140m	140m	12.54	8.56	8.65	8.66	0.56	0.57	0.58	0.58	18.40	16.93	16.98	16.99	1.31	1.21	1.21	1.21
T7Wa_150m	150m	12.43	8.53	8.61	8.62	0.56	0.57	0.57	0.57	18.37	16.91	16.96	16.96	1.31	1.21	1.21	1.21
T7Wa_160m	160m	12.33	8.50	8.57	8.59	0.55	0.56	0.57	0.57	18.35	16.89	16.93	16.94	1.31	1.21	1.21	1.21
T7Wa_170m	170m	12.25	8.47	8.55	8.56	0.55	0.56	0.57	0.57	18.33	16.87	16.92	16.93	1.31	1.21	1.21	1.21
T7Wa_180m	180m	12.17	8.45	8.52	8.53	0.55	0.56	0.56	0.57	18.32	16.86	16.90	16.91	1.31	1.20	1.21	1.21
T7Wa_190m	190m	12.10	8.42	8.49	8.51	0.55	0.55	0.56	0.56	18.30	16.85	16.89	16.90	1.31	1.20	1.21	1.21
T7Wa_200m	200m	12.04	8.40	8.47	8.49	0.55	0.55	0.56	0.56	18.29	16.83	16.87	16.88	1.31	1.20	1.21	1.21
T9Ea_1m	1m	37.73	16.65	18.57	19.20	1.22	1.32	1.50	1.55	26.46	24.23	25.31	25.64	1.89	1.73	1.81	1.83
T9Ea_10m	10m	20.94	11.26	12.01	12.25	0.78	0.81	0.88	0.91	22.96	21.21	21.63	21.76	1.64	1.52	1.55	1.55
T9Ea_20m	20m	17.11	10.04	10.51	10.66	0.68	0.70	0.74	0.76	22.14	20.52	20.79	20.87	1.58	1.47	1.49	1.49
T9Ea_30m	30m	15.46	9.50	9.86	9.97	0.63	0.65	0.68	0.69	21.79	20.22	20.42	20.48	1.56	1.44	1.46	1.46
T9Ea_40m	40m	14.54	9.21	9.50	9.59	0.61	0.62	0.65	0.66	21.60	20.06	20.22	20.27	1.54	1.43	1.44	1.45
T9Ea_50m	50m	13.95	9.02	9.26	9.34	0.59	0.61	0.63	0.63	21.47	19.95	20.09	20.13	1.53	1.43	1.44	1.44
T9Ea_60m	60m	13.54	8.89	9.10	9.17	0.58	0.59	0.61	0.62	21.38	19.88	20.00	20.03	1.53	1.42	1.43	1.43
T9Ea_70m	70m	13.23	8.79	8.98	9.04	0.57	0.58	0.60	0.61	21.32	19.82	19.93	19.96	1.52	1.42	1.42	1.43
T9Ea_80m	80m	13.00	8.72	8.89	8.94	0.57	0.58	0.59	0.60	21.27	19.78	19.88	19.91	1.52	1.41	1.42	1.42
T9Ea_90m	90m	12.82	8.66	8.82	8.87	0.56	0.57	0.59	0.59	21.23	19.75	19.84	19.87	1.52	1.41	1.42	1.42
T9Ea_100m	100m	12.67	8.61	8.76	8.80	0.56	0.57	0.58	0.58	21.20	19.72	19.81	19.83	1.51	1.41	1.41	1.42
T9Ea_110m	110m	12.55	8.57	8.71	8.75	0.56	0.56	0.58	0.58	21.17	19.70	19.78	19.80	1.51	1.41	1.41	1.41
T9Ea_120m	120m	12.44	8.54	8.67	8.71	0.55	0.56	0.57	0.58	21.15	19.68	19.76	19.78	1.51	1.41	1.41	1.41
T9Ea_130m	130m	12.35	8.51	8.63	8.67	0.55	0.56	0.57	0.57	21.13	19.67	19.74	19.76	1.51	1.40	1.41	1.41
T9Ea_140m	140m	12.28	8.48	8.60	8.64	0.55	0.56	0.57	0.57	21.11	19.65	19.72	19.74	1.51	1.40	1.41	1.41
T9Ea_150m	150m	12.21	8.46	8.58	8.61	0.55	0.55	0.56	0.57	21.10	19.64	19.70	19.72	1.51	1.40	1.41	1.41
T9Ea_160m	160m	12.15	8.44	8.55	8.58	0.55	0.55	0.56	0.56	21.09	19.63	19.69	19.71	1.51	1.40	1.41	1.41
T9Ea_170m	170m	12.10	8.43	8.53	8.56	0.54	0.55	0.56	0.56	21.07	19.62	19.68	19.69	1.51	1.40	1.41	1.41
T9Ea_180m	180m	12.05	8.41	8.51	8.54	0.54	0.55	0.56	0.56	21.07	19.61	19.67	19.68	1.50	1.40	1.40	1.41
T9Ea_190m	190m	12.01	8.40	8.50	8.52	0.54	0.55	0.56	0.56	21.06	19.60	19.66	19.67	1.50	1.40	1.40	1.41
T9Ea_200m	200m	11.98	8.39	8.48	8.51	0.54	0.55	0.55	0.56	21.05	19.60	19.65	19.66	1.50	1.40	1.40	1.40

		Total Annual Mean NOx (µg/m3)				Total Annual Mean Ammonia NH3 (µg/m3)				Total Annual Mean Nitrogen Deposition				Total Annual Mean Acid Deposition			
Road Link	Distance from Road (m)	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Ref	2039 Do Something
T9Wa_1m	1m	38.18	16.79	18.75	19.38	1.23	1.33	1.51	1.57	26.55	24.31	25.40	25.74	1.90	1.74	1.81	1.84
T9Wa_10m	10m	20.74	11.20	11.94	12.17	0.77	0.81	0.88	0.90	22.91	21.18	21.59	21.72	1.64	1.51	1.54	1.55
T9Wa_20m	20m	16.88	9.96	10.42	10.57	0.67	0.69	0.74	0.75	22.10	20.48	20.74	20.82	1.58	1.46	1.48	1.49
T9Wa_30m	30m	15.25	9.44	9.78	9.89	0.63	0.64	0.68	0.69	21.75	20.19	20.38	20.44	1.55	1.44	1.46	1.46
T9Wa_40m	40m	14.35	9.15	9.43	9.51	0.60	0.62	0.64	0.65	21.56	20.03	20.18	20.23	1.54	1.43	1.44	1.44
T9Wa_50m	50m	13.78	8.97	9.20	9.27	0.59	0.60	0.62	0.63	21.44	19.92	20.06	20.09	1.53	1.42	1.43	1.44
T9Wa_60m	60m	13.39	8.84	9.05	9.11	0.58	0.59	0.61	0.61	21.35	19.85	19.97	20.00	1.53	1.42	1.43	1.43
T9Wa_70m	70m	13.10	8.75	8.93	8.99	0.57	0.58	0.60	0.60	21.29	19.80	19.90	19.93	1.52	1.41	1.42	1.42
T9Wa_80m	80m	12.88	8.68	8.84	8.89	0.56	0.57	0.59	0.59	21.24	19.76	19.86	19.88	1.52	1.41	1.42	1.42
T9Wa_90m	90m	12.70	8.62	8.77	8.82	0.56	0.57	0.58	0.59	21.20	19.73	19.82	19.84	1.51	1.41	1.42	1.42
T9Wa_100m	100m	12.56	8.57	8.72	8.76	0.56	0.56	0.58	0.58	21.17	19.70	19.78	19.81	1.51	1.41	1.41	1.41
T9Wa_110m	110m	12.44	8.54	8.67	8.71	0.55	0.56	0.57	0.58	21.15	19.68	19.76	19.78	1.51	1.41	1.41	1.41
T9Wa_120m	120m	12.34	8.51	8.63	8.67	0.55	0.56	0.57	0.57	21.13	19.66	19.74	19.76	1.51	1.40	1.41	1.41
T9Wa_130m	130m	12.26	8.48	8.60	8.64	0.55	0.55	0.57	0.57	21.11	19.65	19.72	19.74	1.51	1.40	1.41	1.41
T9Wa_140m	140m	12.19	8.46	8.57	8.61	0.55	0.55	0.56	0.57	21.09	19.64	19.70	19.72	1.51	1.40	1.41	1.41
T9Wa_150m	150m	12.12	8.44	8.55	8.58	0.54	0.55	0.56	0.56	21.08	19.62	19.69	19.71	1.51	1.40	1.41	1.41
T9Wa_160m	160m	12.07	8.42	8.53	8.56	0.54	0.55	0.56	0.56	21.07	19.61	19.68	19.69	1.50	1.40	1.41	1.41
T9Wa_170m	170m	12.02	8.40	8.51	8.54	0.54	0.55	0.56	0.56	21.06	19.60	19.67	19.68	1.50	1.40	1.40	1.41
T9Wa_180m	180m	11.97	8.39	8.49	8.52	0.54	0.55	0.56	0.56	21.05	19.60	19.66	19.67	1.50	1.40	1.40	1.41
T9Wa_190m	190m	11.94	8.37	8.47	8.50	0.54	0.55	0.55	0.56	21.04	19.59	19.65	19.66	1.50	1.40	1.40	1.40
T9Wa_200m	200m	11.90	8.36	8.46	8.49	0.54	0.54	0.55	0.56	21.03	19.58	19.64	19.65	1.50	1.40	1.40	1.40
T10Ea_1m	1m	58.00	23.39	25.88	26.44	1.69	1.87	2.01	2.04	30.29	27.57	28.49	28.69	2.16	1.97	2.03	2.05
T10Ea_10m	10m	28.76	13.88	14.83	15.05	0.96	1.03	1.08	1.09	24.49	22.51	22.87	22.95	1.75	1.61	1.63	1.64
T10Ea_20m	20m	21.58	11.55	12.12	12.25	0.78	0.82	0.85	0.86	23.03	21.26	21.48	21.53	1.64	1.52	1.53	1.54
T10Ea_30m	30m	18.54	10.56	10.98	11.07	0.70	0.73	0.76	0.76	22.40	20.74	20.90	20.93	1.60	1.48	1.49	1.50
T10Ea_40m	40m	16.88	10.02	10.35	10.42	0.66	0.69	0.71	0.71	22.06	20.45	20.58	20.61	1.58	1.46	1.47	1.47
T10Ea_50m	50m	15.82	9.67	9.95	10.01	0.64	0.66	0.67	0.68	21.84	20.26	20.37	20.40	1.56	1.45	1.46	1.46
T10Ea_60m	60m	15.09	9.44	9.67	9.73	0.62	0.63	0.65	0.65	21.69	20.14	20.23	20.25	1.55	1.44	1.45	1.45
T10Ea_70m	70m	14.55	9.26	9.47	9.52	0.60	0.62	0.63	0.64	21.58	20.04	20.13	20.15	1.54	1.43	1.44	1.44
T10Ea_80m	80m	14.14	9.13	9.32	9.36	0.59	0.61	0.62	0.62	21.50	19.97	20.05	20.07	1.54	1.43	1.43	1.43
T10Ea_90m	90m	13.82	9.02	9.20	9.24	0.59	0.60	0.61	0.61	21.43	19.92	19.99	20.00	1.53	1.42	1.43	1.43
T10Ea_100m	100m	13.56	8.94	9.10	9.13	0.58	0.59	0.60	0.60	21.37	19.87	19.94	19.95	1.53	1.42	1.42	1.43
T10Ea_110m	110m	13.34	8.87	9.02	9.05	0.57	0.58	0.59	0.60	21.33	19.83	19.89	19.91	1.52	1.42	1.42	1.42
T10Ea_120m	120m	13.16	8.81	8.95	8.98	0.57	0.58	0.59	0.59	21.29	19.80	19.86	19.87	1.52	1.41	1.42	1.42
T10Ea_130m	130m	13.01	8.76	8.89	8.92	0.57	0.57	0.58	0.59	21.26	19.77	19.83	19.84	1.52	1.41	1.42	1.42
T10Ea_140m	140m	12.87	8.72	8.84	8.87	0.56	0.57	0.58	0.58	21.23	19.75	19.80	19.81	1.52	1.41	1.41	1.42
T10Ea_150m	150m	12.75	8.68	8.79	8.82	0.56	0.57	0.58	0.58	21.21	19.73	19.78	19.79	1.51	1.41	1.41	1.41
T10Ea_160m	160m	12.65	8.64	8.75	8.78	0.56	0.56	0.57	0.57	21.18	19.71	19.76	19.77	1.51	1.41	1.41	1.41
T10Ea_170m	170m	12.56	8.61	8.72	8.75	0.55	0.56	0.57	0.57	21.17	19.70	19.74	19.75	1.51	1.41	1.41	1.41
T10Ea_180m	180m	12.48	8.59	8.69	8.71	0.55	0.56	0.57	0.57	21.15	19.68	19.73	19.74	1.51	1.41	1.41	1.41

		Total Annual Mean NOx (µg/m3)				Total Annual Mean Ammonia NH3 (µg/m3)				Total Annual Mean Nitrogen Deposition				Total Annual Mean Acid Deposition			
Road Link	Distance from Road (m)	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Ref	2039 Do Something
T10Ea_190m	190m	12.41	8.56	8.66	8.69	0.55	0.56	0.56	0.57	21.13	19.67	19.71	19.72	1.51	1.40	1.41	1.41
T10Ea_200m	200m	12.34	8.54	8.64	8.66	0.55	0.56	0.56	0.56	21.12	19.66	19.70	19.71	1.51	1.40	1.41	1.41
T10Wa_1m	1m	43.22	18.58	20.31	20.70	1.32	1.44	1.54	1.56	27.39	25.02	25.66	25.80	1.96	1.79	1.83	1.84
T10Wa_10m	10m	22.54	11.86	12.49	12.63	0.80	0.85	0.89	0.89	23.22	21.43	21.67	21.73	1.66	1.53	1.55	1.55
T10Wa_20m	20m	17.93	10.36	10.75	10.84	0.69	0.72	0.74	0.74	22.28	20.63	20.78	20.82	1.59	1.47	1.48	1.49
T10Wa_30m	30m	15.99	9.73	10.01	10.08	0.64	0.66	0.68	0.68	21.88	20.29	20.41	20.43	1.56	1.45	1.46	1.46
T10Wa_40m	40m	14.91	9.38	9.60	9.66	0.61	0.63	0.64	0.65	21.65	20.10	20.20	20.22	1.55	1.44	1.44	1.44
T10Wa_50m	50m	14.22	9.15	9.35	9.39	0.60	0.61	0.62	0.62	21.51	19.98	20.06	20.08	1.54	1.43	1.43	1.43
T10Wa_60m	60m	13.74	9.00	9.16	9.20	0.58	0.60	0.61	0.61	21.41	19.90	19.97	19.99	1.53	1.42	1.43	1.43
T10Wa_70m	70m	13.39	8.88	9.03	9.07	0.57	0.59	0.60	0.60	21.34	19.84	19.90	19.92	1.52	1.42	1.42	1.42
T10Wa_80m	80m	13.12	8.80	8.93	8.96	0.57	0.58	0.59	0.59	21.28	19.79	19.85	19.86	1.52	1.41	1.42	1.42
T10Wa_90m	90m	12.90	8.73	8.85	8.88	0.56	0.57	0.58	0.58	21.24	19.75	19.81	19.82	1.52	1.41	1.41	1.42
T10Wa_100m	100m	12.73	8.67	8.78	8.81	0.56	0.57	0.57	0.58	21.20	19.72	19.78	19.79	1.51	1.41	1.41	1.41
T10Wa_110m	110m	12.58	8.62	8.73	8.75	0.55	0.56	0.57	0.57	21.17	19.70	19.75	19.76	1.51	1.41	1.41	1.41
T10Wa_120m	120m	12.46	8.58	8.68	8.71	0.55	0.56	0.57	0.57	21.14	19.68	19.72	19.73	1.51	1.41	1.41	1.41
T10Wa_130m	130m	12.35	8.55	8.64	8.66	0.55	0.56	0.56	0.56	21.12	19.66	19.70	19.71	1.51	1.40	1.41	1.41
T10Wa_140m	140m	12.26	8.52	8.61	8.63	0.55	0.55	0.56	0.56	21.10	19.64	19.68	19.69	1.51	1.40	1.41	1.41
T10Wa_150m	150m	12.18	8.49	8.58	8.60	0.54	0.55	0.56	0.56	21.09	19.63	19.67	19.68	1.51	1.40	1.40	1.41
T10Wa_160m	160m	12.11	8.47	8.55	8.57	0.54	0.55	0.56	0.56	21.07	19.62	19.65	19.66	1.51	1.40	1.40	1.40
T10Wa_170m	170m	12.05	8.45	8.53	8.55	0.54	0.55	0.55	0.55	21.06	19.60	19.64	19.65	1.50	1.40	1.40	1.40
T10Wa_180m	180m	11.99	8.43	8.51	8.52	0.54	0.55	0.55	0.55	21.05	19.59	19.63	19.64	1.50	1.40	1.40	1.40
T10Wa_190m	190m	11.94	8.41	8.49	8.51	0.54	0.54	0.55	0.55	21.03	19.59	19.62	19.63	1.50	1.40	1.40	1.40
T10Wa_200m	200m	11.89	8.40	8.47	8.49	0.54	0.54	0.55	0.55	21.03	19.58	19.61	19.62	1.50	1.40	1.40	1.40
T11Ea_1m	1m	49.89	20.52	22.33	22.78	1.67	1.83	1.99	2.02	29.64	27.19	28.14	28.33	2.12	1.94	2.01	2.02
T11Ea_10m	10m	25.55	12.76	13.46	13.63	0.95	1.01	1.07	1.08	24.18	22.33	22.70	22.77	1.73	1.59	1.62	1.63
T11Ea_20m	20m	20.00	11.00	11.44	11.55	0.78	0.82	0.86	0.87	22.91	21.22	21.45	21.50	1.64	1.52	1.53	1.54
T11Ea_30m	30m	17.65	10.24	10.58	10.66	0.71	0.74	0.77	0.78	22.37	20.74	20.92	20.96	1.60	1.48	1.49	1.50
T11Ea_40m	40m	16.34	9.83	10.10	10.17	0.67	0.70	0.72	0.72	22.07	20.48	20.63	20.66	1.58	1.46	1.47	1.48
T11Ea_50m	50m	15.51	9.56	9.80	9.85	0.65	0.67	0.69	0.69	21.88	20.32	20.44	20.47	1.56	1.45	1.46	1.46
T11Ea_60m	60m	14.94	9.38	9.59	9.64	0.63	0.65	0.67	0.67	21.74	20.20	20.31	20.33	1.55	1.44	1.45	1.45
T11Ea_70m	70m	14.52	9.25	9.44	9.48	0.62	0.63	0.65	0.65	21.65	20.12	20.22	20.24	1.55	1.44	1.44	1.45
T11Ea_80m	80m	14.20	9.15	9.32	9.36	0.61	0.62	0.64	0.64	21.57	20.05	20.15	20.17	1.54	1.43	1.44	1.44
T11Ea_90m	90m	13.95	9.07	9.23	9.27	0.60	0.62	0.63	0.63	21.52	20.00	20.09	20.11	1.54	1.43	1.44	1.44
T11Ea_100m	100m	13.75	9.00	9.16	9.19	0.60	0.61	0.62	0.62	21.47	19.96	20.05	20.06	1.53	1.43	1.43	1.43
T11Ea_110m	110m	13.59	8.95	9.10	9.13	0.59	0.60	0.62	0.62	21.43	19.93	20.01	20.03	1.53	1.42	1.43	1.43
T11Ea_120m	120m	13.46	8.91	9.05	9.08	0.59	0.60	0.61	0.61	21.40	19.91	19.98	20.00	1.53	1.42	1.43	1.43
T11Ea_130m	130m	13.35	8.88	9.01	9.04	0.58	0.59	0.61	0.61	21.38	19.88	19.96	19.97	1.53	1.42	1.43	1.43
T11Ea_140m	140m	13.26	8.85	8.97	9.01	0.58	0.59	0.60	0.61	21.35	19.87	19.93	19.95	1.53	1.42	1.42	1.42
T11Ea_150m	150m	13.18	8.82	8.94	8.98	0.58	0.59	0.60	0.60	21.34	19.85	19.92	19.93	1.52	1.42	1.42	1.42
T11Ea_160m	160m	13.10	8.80	8.92	8.95	0.58	0.59	0.60	0.60	21.32	19.83	19.90	19.91	1.52	1.42	1.42	1.42

		Total Annual Mean NOx (µg/m3)				Total Annual Mean Ammonia NH3 (µg/m3)				Total Annual Mean Nitrogen Deposition				Total Annual Mean Acid Deposition			
Road Link	Distance from Road (m)	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Ref	2039 Do Something
T11Ea_170m	170m	13.04	8.78	8.90	8.93	0.57	0.58	0.59	0.60	21.30	19.82	19.89	19.90	1.52	1.42	1.42	1.42
T11Ea_180m	180m	12.99	8.76	8.88	8.90	0.57	0.58	0.59	0.59	21.29	19.81	19.87	19.89	1.52	1.41	1.42	1.42
T11Ea_190m	190m	12.93	8.74	8.86	8.88	0.57	0.58	0.59	0.59	21.28	19.80	19.86	19.87	1.52	1.41	1.42	1.42
T11Ea_200m	200m	12.89	8.73	8.84	8.87	0.57	0.58	0.59	0.59	21.27	19.79	19.85	19.86	1.52	1.41	1.42	1.42
T11Wa_1m	1m	55.55	22.33	24.36	24.89	1.84	2.02	2.20	2.24	30.88	28.31	29.39	29.60	2.21	2.02	2.10	2.11
T11Wa_10m	10m	27.85	13.50	14.29	14.49	1.01	1.09	1.16	1.17	24.70	22.79	23.21	23.29	1.76	1.63	1.66	1.66
T11Wa_20m	20m	20.93	11.29	11.77	11.89	0.81	0.85	0.89	0.90	23.12	21.40	21.66	21.71	1.65	1.53	1.55	1.55
T11Wa_30m	30m	17.88	10.32	10.66	10.74	0.72	0.75	0.78	0.78	22.42	20.79	20.97	21.01	1.60	1.49	1.50	1.50
T11Wa_40m	40m	16.17	9.77	10.04	10.10	0.67	0.69	0.71	0.72	22.03	20.45	20.59	20.62	1.57	1.46	1.47	1.47
T11Wa_50m	50m	15.10	9.43	9.65	9.70	0.64	0.65	0.67	0.68	21.78	20.24	20.35	20.37	1.56	1.45	1.45	1.46
T11Wa_60m	60m	14.37	9.20	9.38	9.42	0.61	0.63	0.65	0.65	21.61	20.09	20.19	20.20	1.54	1.43	1.44	1.44
T11Wa_70m	70m	13.84	9.03	9.19	9.23	0.60	0.61	0.63	0.63	21.49	19.98	20.07	20.08	1.54	1.43	1.43	1.43
T11Wa_80m	80m	13.45	8.91	9.04	9.08	0.59	0.60	0.61	0.61	21.40	19.90	19.98	19.99	1.53	1.42	1.43	1.43
T11Wa_90m	90m	13.15	8.81	8.93	8.96	0.58	0.59	0.60	0.60	21.33	19.84	19.91	19.92	1.52	1.42	1.42	1.42
T11Wa_100m	100m	12.91	8.73	8.85	8.87	0.57	0.58	0.59	0.59	21.27	19.80	19.86	19.87	1.52	1.41	1.42	1.42
T11Wa_110m	110m	12.71	8.67	8.77	8.80	0.56	0.57	0.58	0.58	21.23	19.76	19.81	19.82	1.52	1.41	1.42	1.42
T11Wa_120m	120m	12.55	8.62	8.72	8.74	0.56	0.57	0.58	0.58	21.19	19.72	19.78	19.79	1.51	1.41	1.41	1.41
T11Wa_130m	130m	12.42	8.58	8.67	8.69	0.56	0.56	0.57	0.57	21.16	19.70	19.75	19.76	1.51	1.41	1.41	1.41
T11Wa_140m	140m	12.30	8.54	8.63	8.65	0.55	0.56	0.57	0.57	21.13	19.67	19.72	19.73	1.51	1.41	1.41	1.41
T11Wa_150m	150m	12.20	8.51	8.59	8.61	0.55	0.56	0.56	0.56	21.11	19.65	19.70	19.71	1.51	1.40	1.41	1.41
T11Wa_160m	160m	12.12	8.48	8.56	8.58	0.55	0.55	0.56	0.56	21.09	19.64	19.68	19.69	1.51	1.40	1.41	1.41
T11Wa_170m	170m	12.05	8.46	8.53	8.55	0.54	0.55	0.56	0.56	21.07	19.62	19.66	19.67	1.51	1.40	1.40	1.41
T11Wa_180m	180m	11.98	8.44	8.51	8.52	0.54	0.55	0.55	0.56	21.06	19.61	19.65	19.66	1.50	1.40	1.40	1.40
T11Wa_190m	190m	11.92	8.42	8.49	8.50	0.54	0.55	0.55	0.55	21.05	19.60	19.63	19.64	1.50	1.40	1.40	1.40
T11Wa_200m	200m	11.87	8.40	8.47	8.48	0.54	0.55	0.55	0.55	21.03	19.59	19.62	19.63	1.50	1.40	1.40	1.40
T12Wa_1m	1m	85.55	32.02	34.45	34.75	2.62	2.92	3.16	3.19	35.24	32.12	33.53	33.69	2.52	2.29	2.39	2.41
T12Wa_10m	10m	40.18	17.44	18.45	18.57	1.34	1.46	1.56	1.57	25.74	23.48	24.07	24.14	1.84	1.68	1.72	1.72
T12Wa_20m	20m	29.00	13.85	14.49	14.57	1.02	1.10	1.16	1.17	23.31	21.34	21.72	21.76	1.66	1.52	1.55	1.55
T12Wa_30m	30m	24.01	12.25	12.72	12.78	0.88	0.94	0.98	0.99	22.21	20.39	20.66	20.69	1.59	1.46	1.48	1.48
T12Wa_40m	40m	21.11	11.32	11.70	11.74	0.80	0.84	0.88	0.88	21.57	19.83	20.05	20.08	1.54	1.42	1.43	1.43
T12Wa_50m	50m	19.23	10.72	11.03	11.07	0.75	0.78	0.81	0.82	21.15	19.47	19.65	19.67	1.51	1.39	1.40	1.41
T12Wa_60m	60m	17.89	10.29	10.55	10.58	0.71	0.74	0.77	0.77	20.85	19.21	19.37	19.39	1.49	1.37	1.38	1.38
T12Wa_70m	70m	16.90	9.97	10.20	10.23	0.68	0.71	0.73	0.73	20.63	19.02	19.16	19.17	1.47	1.36	1.37	1.37
T12Wa_80m	80m	16.13	9.72	9.92	9.95	0.66	0.68	0.70	0.71	20.46	18.87	18.99	19.01	1.46	1.35	1.36	1.36
T12Wa_90m	90m	15.52	9.52	9.71	9.73	0.64	0.66	0.68	0.68	20.32	18.76	18.86	18.88	1.45	1.34	1.35	1.35
T12Wa_100m	100m	15.02	9.36	9.53	9.55	0.63	0.65	0.66	0.67	20.21	18.66	18.76	18.77	1.44	1.33	1.34	1.34
T12Wa_110m	110m	14.61	9.23	9.38	9.40	0.62	0.63	0.65	0.65	20.12	18.58	18.67	18.68	1.44	1.33	1.33	1.33
T12Wa_120m	120m	14.27	9.12	9.26	9.28	0.61	0.62	0.64	0.64	20.04	18.52	18.60	18.61	1.43	1.32	1.33	1.33
T12Wa_130m	130m	13.98	9.03	9.16	9.17	0.60	0.61	0.63	0.63	19.98	18.46	18.53	18.54	1.43	1.32	1.32	1.32
T12Wa_140m	140m	13.73	8.95	9.07	9.08	0.59	0.61	0.62	0.62	19.92	18.41	18.48	18.49	1.42	1.32	1.32	1.32

		Total Annual Mean NOx (µg/m3)				Total Annual Mean Ammonia NH3 (µg/m3)				Total Annual Mean Nitrogen Deposition				Total Annual Mean Acid Deposition			
Road Link	Distance from Road (m)	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Do Min	2039 Do Something	2017	2017 Future Base	2039 Ref	2039 Do Something
T12Wa_150m	150m	13.52	8.88	8.99	9.00	0.59	0.60	0.61	0.61	19.87	18.37	18.44	18.44	1.42	1.31	1.32	1.32
T12Wa_160m	160m	13.33	8.82	8.92	8.93	0.58	0.59	0.60	0.60	19.83	18.34	18.40	18.40	1.42	1.31	1.31	1.31
T12Wa_170m	170m	13.16	8.77	8.86	8.88	0.58	0.59	0.60	0.60	19.80	18.30	18.36	18.37	1.41	1.31	1.31	1.31
T12Wa_180m	180m	13.02	8.72	8.81	8.82	0.57	0.58	0.59	0.59	19.76	18.28	18.33	18.34	1.41	1.31	1.31	1.31
T12Wa_190m	190m	12.89	8.68	8.77	8.78	0.57	0.58	0.59	0.59	19.73	18.25	18.30	18.31	1.41	1.30	1.31	1.31
T12Wa_200m	200m	12.78	8.64	8.72	8.73	0.57	0.58	0.58	0.58	19.71	18.23	18.28	18.28	1.41	1.30	1.31	1.31
T14Ea_1m	1m	17.41	10.10	10.32	10.42	0.68	0.71	0.73	0.74	20.95	19.32	19.43	19.49	1.50	1.38	1.39	1.39
T14Ea_10m	10m	13.85	8.96	9.06	9.11	0.59	0.60	0.61	0.62	20.20	18.68	18.73	18.76	1.44	1.33	1.34	1.34
T14Ea_20m	20m	12.83	8.63	8.70	8.73	0.56	0.57	0.58	0.58	19.98	18.50	18.53	18.55	1.43	1.32	1.32	1.33
T14Ea_30m	30m	12.38	8.49	8.54	8.56	0.55	0.56	0.56	0.57	19.88	18.42	18.45	18.46	1.42	1.32	1.32	1.32
T14Ea_40m	40m	12.13	8.41	8.45	8.47	0.55	0.55	0.56	0.56	19.83	18.37	18.40	18.41	1.42	1.31	1.31	1.31
T14Ea_50m	50m	11.97	8.36	8.40	8.41	0.54	0.55	0.55	0.55	19.79	18.34	18.37	18.37	1.41	1.31	1.31	1.31
T14Ea_60m	60m	11.86	8.32	8.36	8.37	0.54	0.54	0.55	0.55	19.77	18.32	18.34	18.35	1.41	1.31	1.31	1.31
T14Ea_70m	70m	11.78	8.29	8.33	8.34	0.54	0.54	0.54	0.55	19.75	18.31	18.33	18.33	1.41	1.31	1.31	1.31
T14Ea_80m	80m	11.72	8.27	8.31	8.32	0.53	0.54	0.54	0.54	19.74	18.30	18.31	18.32	1.41	1.31	1.31	1.31
T14Ea_90m	90m	11.67	8.26	8.29	8.30	0.53	0.54	0.54	0.54	19.73	18.29	18.31	18.31	1.41	1.31	1.31	1.31
T14Ea_100m	100m	11.63	8.25	8.28	8.28	0.53	0.54	0.54	0.54	19.72	18.28	18.30	18.30	1.41	1.31	1.31	1.31
T14Ea_110m	110m	11.60	8.24	8.26	8.27	0.53	0.54	0.54	0.54	19.71	18.28	18.29	18.30	1.41	1.31	1.31	1.31
T14Ea_120m	120m	11.57	8.23	8.25	8.26	0.53	0.53	0.54	0.54	19.71	18.27	18.29	18.29	1.41	1.30	1.31	1.31
T14Ea_130m	130m	11.55	8.22	8.25	8.25	0.53	0.53	0.54	0.54	19.70	18.27	18.28	18.28	1.41	1.30	1.31	1.31
T14Ea_140m	140m	11.53	8.21	8.24	8.25	0.53	0.53	0.54	0.54	19.70	18.26	18.28	18.28	1.41	1.30	1.31	1.31
T14Ea_150m	150m	11.51	8.21	8.23	8.24	0.53	0.53	0.54	0.54	19.70	18.26	18.27	18.28	1.41	1.30	1.31	1.31
T14Ea_160m	160m	11.50	8.20	8.23	8.23	0.53	0.53	0.53	0.54	19.69	18.26	18.27	18.27	1.41	1.30	1.30	1.31
T14Ea_170m	170m	11.48	8.20	8.22	8.23	0.53	0.53	0.53	0.54	19.69	18.25	18.27	18.27	1.41	1.30	1.30	1.31
T14Ea_180m	180m	11.47	8.20	8.22	8.22	0.53	0.53	0.53	0.53	19.69	18.25	18.27	18.27	1.41	1.30	1.30	1.30
T14Ea_190m	190m	11.46	8.19	8.22	8.22	0.53	0.53	0.53	0.53	19.69	18.25	18.26	18.27	1.41	1.30	1.30	1.30
T14Ea_200m	200m	11.45	8.19	8.21	8.22	0.53	0.53	0.53	0.53	19.68	18.25	18.26	18.26	1.41	1.30	1.30	1.30
T15Wa_1m	1m	16.81	9.97	10.27	10.15	0.67	0.69	0.72	0.71	20.82	19.21	19.38	19.32	1.49	1.37	1.38	1.38
T15Wa_10m	10m	13.15	8.78	8.90	8.85	0.57	0.58	0.59	0.59	20.05	18.56	18.63	18.60	1.43	1.33	1.33	1.33
T15Wa_20m	20m	12.29	8.50	8.57	8.55	0.55	0.56	0.56	0.56	19.87	18.40	18.45	18.43	1.42	1.31	1.32	1.32
T15Wa_30m	30m	11.93	8.38	8.44	8.42	0.54	0.55	0.55	0.55	19.79	18.34	18.37	18.36	1.41	1.31	1.31	1.31
T15Wa_40m	40m	11.73	8.31	8.36	8.35	0.54	0.54	0.55	0.54	19.75	18.30	18.33	18.32	1.41	1.31	1.31	1.31
T15Wa_50m	50m	11.60	8.27	8.31	8.31	0.53	0.54	0.54	0.54	19.72	18.28	18.31	18.30	1.41	1.31	1.31	1.31
T15Wa_60m	60m	11.52	8.24	8.28	8.27	0.53	0.53	0.54	0.54	19.70	18.27	18.29	18.28	1.41	1.30	1.31	1.31
T15Wa_70m	70m	11.45	8.22	8.26	8.25	0.53	0.53	0.54	0.53	19.69	18.25	18.27	18.27	1.41	1.30	1.31	1.30
T15Wa_80m	80m	11.41	8.21	8.24	8.23	0.53	0.53	0.53	0.53	19.68	18.25	18.26	18.26	1.41	1.30	1.30	1.30
T15Wa_90m	90m	11.37	8.20	8.23	8.22	0.53	0.53	0.53	0.53	19.67	18.24	18.26	18.25	1.41	1.30	1.30	1.30
T15Wa_100m	100m	11.34	8.19	8.21	8.21	0.53	0.53	0.53	0.53	19.67	18.23	18.25	18.25	1.40	1.30	1.30	1.30
T15Wa_110m	110m	11.31	8.18	8.21	8.20	0.52	0.53	0.53	0.53	19.66	18.23	18.25	18.24	1.40	1.30	1.30	1.30
T15Wa_120m	120m	11.29	8.17	8.20	8.19	0.52	0.53	0.53	0.53	19.66	18.23	18.24	18.24	1.40	1.30	1.30	1.30

		Total Annual Mean NOx (µg/m3)				Total Annual Mean Ammonia NH3 (µg/m3)				Total Annual Mean Nitrogen Deposition				Total Annual Mean Acid Deposition			
Road Link	**Distance from Road (m)**	**2017**	**2017 Future Base**	**2039 Do Min**	**2039 Do Something**	**2017**	**2017 Future Base**	**2039 Do Min**	**2039 Do Something**	**2017**	**2017 Future Base**	**2039 Do Min**	**2039 Do Something**	**2017**	**2017 Future Base**	**2039 Ref**	**2039 Do Something**
T15Wa_130m	130m	11.28	8.17	8.19	8.19	0.52	0.53	0.53	0.53	19.65	18.22	18.24	18.24	1.40	1.30	1.30	1.30
T15Wa_140m	140m	11.26	8.16	8.19	8.18	0.52	0.53	0.53	0.53	19.65	18.22	18.23	18.23	1.40	1.30	1.30	1.30
T15Wa_150m	150m	11.25	8.16	8.18	8.18	0.52	0.53	0.53	0.53	19.65	18.22	18.23	18.23	1.40	1.30	1.30	1.30
T15Wa_160m	160m	11.24	8.15	8.18	8.17	0.52	0.53	0.53	0.53	19.64	18.22	18.23	18.23	1.40	1.30	1.30	1.30
T15Wa_170m	170m	11.23	8.15	8.17	8.17	0.52	0.53	0.53	0.53	19.64	18.21	18.23	18.23	1.40	1.30	1.30	1.30
T15Wa_180m	180m	11.22	8.15	8.17	8.17	0.52	0.53	0.53	0.53	19.64	18.21	18.23	18.22	1.40	1.30	1.30	1.30
T15Wa_190m	190m	11.21	8.14	8.17	8.17	0.52	0.53	0.53	0.53	19.64	18.21	18.22	18.22	1.40	1.30	1.30	1.30
T15Wa_200m	200m	11.21	8.14	8.16	8.16	0.52	0.52	0.53	0.53	19.64	18.21	18.22	18.22	1.40	1.30	1.30	1.30

Scenario 4b (with the Ansty site)

		Total Annual Mean NOx (µg/m3)				Total Annual Mean Ammonia NH3 (µg/m3)				Total Annual Mean Nitrogen Deposition				Total Annual Mean Acid Deposition			
Road Link	Distance from Road (m)	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Ref	2038 Do Something
T1Ea_1m	1m	30.21	14.18	13.73	13.46	1.05	1.13	1.09	1.06	23.52	21.54	21.28	21.12	1.68	1.54	1.52	1.51
T1Ea_10m	10m	18.17	10.27	10.11	10.01	0.72	0.75	0.73	0.72	20.90	19.26	19.17	19.11	1.49	1.38	1.37	1.36
T1Ea_20m	20m	15.31	9.34	9.25	9.19	0.64	0.66	0.65	0.64	20.27	18.71	18.66	18.63	1.45	1.34	1.33	1.33
T1Ea_30m	30m	14.10	8.94	8.89	8.85	0.60	0.62	0.61	0.61	20.00	18.48	18.45	18.43	1.43	1.32	1.32	1.32
T1Ea_40m	40m	13.41	8.72	8.68	8.65	0.58	0.60	0.59	0.59	19.85	18.35	18.33	18.31	1.42	1.31	1.31	1.31
T1Ea_50m	50m	12.98	8.58	8.56	8.53	0.57	0.58	0.58	0.58	19.75	18.27	18.25	18.24	1.41	1.31	1.30	1.30
T1Ea_60m	60m	12.68	8.49	8.47	8.44	0.56	0.57	0.57	0.57	19.69	18.21	18.20	18.19	1.41	1.30	1.30	1.30
T1Ea_70m	70m	12.47	8.41	8.40	8.38	0.56	0.57	0.56	0.56	19.64	18.17	18.16	18.15	1.40	1.30	1.30	1.30
T1Ea_80m	80m	12.30	8.36	8.35	8.33	0.55	0.56	0.56	0.56	19.60	18.14	18.14	18.13	1.40	1.30	1.30	1.29
T1Ea_90m	90m	12.17	8.32	8.31	8.30	0.55	0.56	0.56	0.55	19.57	18.12	18.11	18.10	1.40	1.29	1.29	1.29
T1Ea_100m	100m	12.06	8.28	8.28	8.27	0.55	0.55	0.55	0.55	19.55	18.09	18.09	18.09	1.40	1.29	1.29	1.29
T1Ea_110m	110m	11.97	8.25	8.25	8.24	0.54	0.55	0.55	0.55	19.53	18.08	18.08	18.07	1.39	1.29	1.29	1.29
T1Ea_120m	120m	11.90	8.23	8.23	8.22	0.54	0.55	0.55	0.55	19.51	18.06	18.06	18.06	1.39	1.29	1.29	1.29
T1Ea_130m	130m	11.83	8.21	8.21	8.20	0.54	0.55	0.55	0.54	19.50	18.05	18.05	18.05	1.39	1.29	1.29	1.29
T1Ea_140m	140m	11.78	8.19	8.19	8.19	0.54	0.54	0.54	0.54	19.49	18.04	18.04	18.04	1.39	1.29	1.29	1.29
T1Ea_150m	150m	11.73	8.17	8.18	8.17	0.54	0.54	0.54	0.54	19.48	18.03	18.04	18.03	1.39	1.29	1.29	1.29
T1Ea_160m	160m	11.69	8.16	8.17	8.16	0.54	0.54	0.54	0.54	19.47	18.02	18.03	18.02	1.39	1.29	1.29	1.29
T1Ea_170m	170m	11.65	8.15	8.15	8.15	0.53	0.54	0.54	0.54	19.46	18.02	18.02	18.02	1.39	1.29	1.29	1.29
T1Ea_180m	180m	11.61	8.14	8.14	8.14	0.53	0.54	0.54	0.54	19.45	18.01	18.01	18.01	1.39	1.29	1.29	1.29
T1Ea_190m	190m	11.58	8.13	8.13	8.13	0.53	0.54	0.54	0.54	19.44	18.00	18.01	18.01	1.39	1.29	1.29	1.29
T1Ea_200m	200m	11.56	8.12	8.13	8.12	0.53	0.54	0.54	0.54	19.44	18.00	18.00	18.00	1.39	1.29	1.29	1.29
T1Wa_1m	1m	28.68	13.68	13.27	13.02	1.01	1.08	1.04	1.02	23.19	21.25	21.01	20.86	1.66	1.52	1.50	1.49
T1Wa_10m	10m	17.16	9.94	9.81	9.72	0.69	0.71	0.70	0.69	20.68	19.06	18.99	18.94	1.48	1.36	1.36	1.35
T1Wa_20m	20m	14.61	9.11	9.04	8.99	0.62	0.63	0.63	0.62	20.11	18.58	18.54	18.51	1.44	1.33	1.32	1.32
T1Wa_30m	30m	13.55	8.77	8.72	8.69	0.59	0.60	0.60	0.59	19.88	18.38	18.36	18.34	1.42	1.31	1.31	1.31
T1Wa_40m	40m	12.96	8.58	8.55	8.52	0.57	0.58	0.58	0.58	19.75	18.27	18.25	18.24	1.41	1.30	1.30	1.30
T1Wa_50m	50m	12.60	8.46	8.44	8.42	0.56	0.57	0.57	0.57	19.67	18.20	18.19	18.18	1.40	1.30	1.30	1.30
T1Wa_60m	60m	12.34	8.37	8.36	8.35	0.55	0.56	0.56	0.56	19.61	18.15	18.14	18.13	1.40	1.30	1.30	1.30
T1Wa_70m	70m	12.16	8.31	8.31	8.30	0.55	0.56	0.56	0.55	19.57	18.11	18.11	18.10	1.40	1.29	1.29	1.29
T1Wa_80m	80m	12.02	8.27	8.27	8.26	0.54	0.55	0.55	0.55	19.54	18.09	18.09	18.08	1.40	1.29	1.29	1.29
T1Wa_90m	90m	11.91	8.23	8.23	8.22	0.54	0.55	0.55	0.55	19.52	18.07	18.07	18.06	1.39	1.29	1.29	1.29
T1Wa_100m	100m	11.82	8.20	8.21	8.20	0.54	0.55	0.55	0.54	19.50	18.05	18.05	18.05	1.39	1.29	1.29	1.29
T1Wa_110m	110m	11.75	8.18	8.18	8.18	0.54	0.54	0.54	0.54	19.48	18.04	18.04	18.04	1.39	1.29	1.29	1.29
T1Wa_120m	120m	11.68	8.16	8.17	8.16	0.54	0.54	0.54	0.54	19.47	18.02	18.03	18.03	1.39	1.29	1.29	1.29
T1Wa_130m	130m	11.63	8.14	8.15	8.15	0.53	0.54	0.54	0.54	19.45	18.01	18.02	18.02	1.39	1.29	1.29	1.29
T1Wa_140m	140m	11.59	8.13	8.14	8.13	0.53	0.54	0.54	0.54	19.44	18.01	18.01	18.01	1.39	1.29	1.29	1.29
T1Wa_150m	150m	11.55	8.12	8.13	8.12	0.53	0.54	0.54	0.54	19.44	18.00	18.01	18.00	1.39	1.29	1.29	1.29
T1Wa_160m	160m	11.52	8.11	8.12	8.11	0.53	0.54	0.54	0.54	19.43	17.99	18.00	18.00	1.39	1.29	1.29	1.29
T1Wa_170m	170m	11.49	8.10	8.11	8.11	0.53	0.53	0.54	0.54	19.42	17.99	17.99	17.99	1.39	1.28	1.29	1.29

		Total Annual Mean NOx (µg/m3)				Total Annual Mean Ammonia NH3 (µg/m3)				Total Annual Mean Nitrogen Deposition				Total Annual Mean Acid Deposition			
Road Link	Distance from Road (m)	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Ref	2038 Do Something
T1Wa_180m	180m	11.46	8.09	8.10	8.10	0.53	0.53	0.54	0.53	19.42	17.98	17.99	17.99	1.39	1.28	1.28	1.28
T1Wa_190m	190m	11.44	8.08	8.09	8.09	0.53	0.53	0.53	0.53	19.41	17.98	17.99	17.98	1.39	1.28	1.28	1.28
T1Wa_200m	200m	11.42	8.07	8.09	8.09	0.53	0.53	0.53	0.53	19.41	17.97	17.98	17.98	1.39	1.28	1.28	1.28
T2Ea_1m	1m	40.58	17.60	17.40	17.14	1.28	1.40	1.38	1.36	25.47	23.18	23.08	22.94	1.82	1.66	1.65	1.64
T2Ea_10m	10m	22.57	11.76	11.69	11.59	0.82	0.86	0.86	0.85	21.76	19.97	19.93	19.88	1.55	1.43	1.42	1.42
T2Ea_20m	20m	18.09	10.30	10.27	10.21	0.70	0.73	0.73	0.72	20.82	19.16	19.15	19.12	1.49	1.37	1.37	1.37
T2Ea_30m	30m	16.14	9.67	9.66	9.61	0.65	0.67	0.67	0.67	20.40	18.82	18.81	18.79	1.46	1.34	1.34	1.34
T2Ea_40m	40m	15.06	9.32	9.31	9.28	0.62	0.64	0.64	0.64	20.18	18.62	18.62	18.60	1.44	1.33	1.33	1.33
T2Ea_50m	50m	14.37	9.10	9.09	9.07	0.60	0.62	0.62	0.62	20.03	18.50	18.50	18.48	1.43	1.32	1.32	1.32
T2Ea_60m	60m	13.88	8.94	8.94	8.92	0.59	0.60	0.61	0.60	19.93	18.41	18.41	18.40	1.42	1.32	1.32	1.31
T2Ea_70m	70m	13.53	8.82	8.83	8.81	0.58	0.59	0.59	0.59	19.85	18.35	18.35	18.34	1.42	1.31	1.31	1.31
T2Ea_80m	80m	13.25	8.73	8.74	8.73	0.58	0.59	0.59	0.59	19.79	18.30	18.30	18.29	1.41	1.31	1.31	1.31
T2Ea_90m	90m	13.04	8.66	8.67	8.66	0.57	0.58	0.58	0.58	19.75	18.26	18.26	18.26	1.41	1.30	1.30	1.30
T2Ea_100m	100m	12.86	8.61	8.62	8.61	0.56	0.57	0.58	0.57	19.71	18.23	18.23	18.23	1.41	1.30	1.30	1.30
T2Ea_110m	110m	12.71	8.56	8.57	8.56	0.56	0.57	0.57	0.57	19.68	18.20	18.21	18.20	1.41	1.30	1.30	1.30
T2Ea_120m	120m	12.59	8.52	8.53	8.52	0.56	0.57	0.57	0.57	19.65	18.18	18.19	18.18	1.40	1.30	1.30	1.30
T2Ea_130m	130m	12.48	8.49	8.50	8.49	0.56	0.56	0.56	0.56	19.63	18.16	18.17	18.16	1.40	1.30	1.30	1.30
T2Ea_140m	140m	12.39	8.46	8.47	8.46	0.55	0.56	0.56	0.56	19.61	18.14	18.15	18.15	1.40	1.30	1.30	1.30
T2Ea_150m	150m	12.31	8.43	8.44	8.44	0.55	0.56	0.56	0.56	19.59	18.13	18.14	18.13	1.40	1.29	1.30	1.30
T2Ea_160m	160m	12.24	8.41	8.42	8.41	0.55	0.56	0.56	0.56	19.58	18.12	18.13	18.12	1.40	1.29	1.29	1.29
T2Ea_170m	170m	12.18	8.39	8.40	8.39	0.55	0.55	0.56	0.55	19.56	18.11	18.11	18.11	1.40	1.29	1.29	1.29
T2Ea_180m	180m	12.12	8.37	8.38	8.38	0.55	0.55	0.55	0.55	19.55	18.10	18.10	18.10	1.40	1.29	1.29	1.29
T2Ea_190m	190m	12.07	8.35	8.37	8.36	0.54	0.55	0.55	0.55	19.54	18.09	18.10	18.09	1.40	1.29	1.29	1.29
T2Ea_200m	200m	12.02	8.33	8.35	8.35	0.54	0.55	0.55	0.55	19.53	18.08	18.09	18.09	1.40	1.29	1.29	1.29
T2Wa_1m	1m	33.95	15.45	15.30	15.09	1.11	1.20	1.19	1.17	24.12	22.00	21.92	21.81	1.72	1.57	1.57	1.56
T2Wa_10m	10m	19.36	10.72	10.68	10.60	0.73	0.77	0.76	0.76	21.08	19.39	19.37	19.33	1.51	1.39	1.38	1.38
T2Wa_20m	20m	15.99	9.62	9.61	9.57	0.65	0.67	0.67	0.66	20.37	18.79	18.78	18.76	1.46	1.34	1.34	1.34
T2Wa_30m	30m	14.59	9.17	9.16	9.14	0.61	0.63	0.63	0.62	20.08	18.54	18.54	18.52	1.43	1.32	1.32	1.32
T2Wa_40m	40m	13.81	8.91	8.92	8.90	0.59	0.60	0.60	0.60	19.91	18.40	18.40	18.39	1.42	1.31	1.31	1.31
T2Wa_50m	50m	13.31	8.75	8.76	8.74	0.58	0.59	0.59	0.59	19.81	18.31	18.31	18.30	1.41	1.31	1.31	1.31
T2Wa_60m	60m	12.97	8.64	8.65	8.64	0.57	0.58	0.58	0.58	19.73	18.25	18.25	18.25	1.41	1.30	1.30	1.30
T2Wa_70m	70m	12.72	8.56	8.57	8.56	0.56	0.57	0.57	0.57	19.68	18.20	18.21	18.20	1.41	1.30	1.30	1.30
T2Wa_80m	80m	12.53	8.50	8.51	8.51	0.56	0.56	0.57	0.57	19.64	18.17	18.18	18.17	1.40	1.30	1.30	1.30
T2Wa_90m	90m	12.38	8.45	8.47	8.46	0.55	0.56	0.56	0.56	19.61	18.14	18.15	18.15	1.40	1.30	1.30	1.30
T2Wa_100m	100m	12.26	8.41	8.43	8.42	0.55	0.56	0.56	0.56	19.58	18.12	18.13	18.13	1.40	1.29	1.29	1.29
T2Wa_110m	110m	12.16	8.38	8.40	8.39	0.55	0.55	0.55	0.55	19.56	18.10	18.11	18.11	1.40	1.29	1.29	1.29
T2Wa_120m	120m	12.07	8.35	8.37	8.36	0.54	0.55	0.55	0.55	19.54	18.09	18.10	18.09	1.40	1.29	1.29	1.29
T2Wa_130m	130m	12.00	8.33	8.35	8.34	0.54	0.55	0.55	0.55	19.53	18.07	18.08	18.08	1.39	1.29	1.29	1.29
T2Wa_140m	140m	11.94	8.31	8.33	8.32	0.54	0.55	0.55	0.55	19.51	18.06	18.07	18.07	1.39	1.29	1.29	1.29
T2Wa_150m	150m	11.88	8.29	8.31	8.31	0.54	0.55	0.55	0.55	19.50	18.05	18.06	18.06	1.39	1.29	1.29	1.29

		Total Annual Mean NOx (µg/m3)				Total Annual Mean Ammonia NH3 (µg/m3)				Total Annual Mean Nitrogen Deposition				Total Annual Mean Acid Deposition			
Road Link	Distance from Road (m)	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Ref	2038 Do Something
T2Wa_160m	160m	11.84	8.28	8.29	8.29	0.54	0.54	0.55	0.55	19.49	18.04	18.06	18.05	1.39	1.29	1.29	1.29
T2Wa_170m	170m	11.80	8.26	8.28	8.28	0.54	0.54	0.54	0.54	19.48	18.04	18.05	18.05	1.39	1.29	1.29	1.29
T2Wa_180m	180m	11.76	8.25	8.27	8.27	0.54	0.54	0.54	0.54	19.48	18.03	18.04	18.04	1.39	1.29	1.29	1.29
T2Wa_190m	190m	11.72	8.24	8.26	8.26	0.54	0.54	0.54	0.54	19.47	18.02	18.04	18.03	1.39	1.29	1.29	1.29
T2Wa_200m	200m	11.69	8.23	8.25	8.25	0.53	0.54	0.54	0.54	19.46	18.02	18.03	18.03	1.39	1.29	1.29	1.29
T3Ea_1m	1m	36.67	16.38	15.90	15.73	1.18	1.28	1.24	1.22	24.96	22.77	22.51	22.42	1.78	1.63	1.61	1.60
T3Ea_10m	10m	20.81	11.24	11.07	11.01	0.77	0.81	0.79	0.79	21.67	19.93	19.84	19.80	1.55	1.42	1.42	1.41
T3Ea_20m	20m	16.91	9.98	9.88	9.84	0.67	0.69	0.69	0.68	20.84	19.23	19.18	19.16	1.49	1.37	1.37	1.37
T3Ea_30m	30m	15.24	9.44	9.37	9.35	0.63	0.64	0.64	0.64	20.49	18.93	18.90	18.88	1.46	1.35	1.35	1.35
T3Ea_40m	40m	14.32	9.14	9.09	9.07	0.60	0.62	0.61	0.61	20.30	18.77	18.74	18.73	1.45	1.34	1.34	1.34
T3Ea_50m	50m	13.73	8.95	8.91	8.90	0.59	0.60	0.60	0.60	20.17	18.66	18.64	18.63	1.44	1.33	1.33	1.33
T3Ea_60m	60m	13.32	8.81	8.79	8.78	0.58	0.59	0.59	0.58	20.08	18.59	18.57	18.57	1.43	1.33	1.33	1.33
T3Ea_70m	70m	13.02	8.72	8.70	8.69	0.57	0.58	0.58	0.58	20.02	18.53	18.52	18.52	1.43	1.32	1.32	1.32
T3Ea_80m	80m	12.78	8.64	8.63	8.62	0.56	0.57	0.57	0.57	19.97	18.49	18.49	18.48	1.43	1.32	1.32	1.32
T3Ea_90m	90m	12.60	8.58	8.57	8.56	0.56	0.57	0.57	0.56	19.93	18.46	18.45	18.45	1.42	1.32	1.32	1.32
T3Ea_100m	100m	12.45	8.53	8.53	8.52	0.55	0.56	0.56	0.56	19.90	18.43	18.43	18.43	1.42	1.32	1.32	1.32
T3Ea_110m	110m	12.33	8.49	8.49	8.48	0.55	0.56	0.56	0.56	19.87	18.41	18.41	18.41	1.42	1.31	1.31	1.31
T3Ea_120m	120m	12.23	8.46	8.46	8.45	0.55	0.55	0.55	0.55	19.85	18.39	18.39	18.39	1.42	1.31	1.31	1.31
T3Ea_130m	130m	12.14	8.43	8.43	8.43	0.55	0.55	0.55	0.55	19.83	18.38	18.38	18.37	1.42	1.31	1.31	1.31
T3Ea_140m	140m	12.06	8.41	8.41	8.40	0.54	0.55	0.55	0.55	19.82	18.36	18.36	18.36	1.42	1.31	1.31	1.31
T3Ea_150m	150m	12.00	8.39	8.39	8.38	0.54	0.55	0.55	0.55	19.80	18.35	18.35	18.35	1.41	1.31	1.31	1.31
T3Ea_160m	160m	11.94	8.37	8.37	8.37	0.54	0.55	0.55	0.55	19.79	18.34	18.34	18.34	1.41	1.31	1.31	1.31
T3Ea_170m	170m	11.89	8.35	8.36	8.35	0.54	0.54	0.55	0.55	19.78	18.33	18.33	18.33	1.41	1.31	1.31	1.31
T3Ea_180m	180m	11.84	8.34	8.34	8.34	0.54	0.54	0.54	0.54	19.77	18.32	18.33	18.32	1.41	1.31	1.31	1.31
T3Ea_190m	190m	11.80	8.32	8.33	8.33	0.54	0.54	0.54	0.54	19.76	18.31	18.32	18.32	1.41	1.31	1.31	1.31
T3Ea_200m	200m	11.76	8.31	8.32	8.31	0.54	0.54	0.54	0.54	19.75	18.31	18.31	18.31	1.41	1.31	1.31	1.31
T3Wa_1m	1m	30.24	14.30	13.94	13.81	1.02	1.09	1.06	1.05	23.63	21.62	21.42	21.35	1.69	1.54	1.53	1.53
T3Wa_10m	10m	17.62	10.21	10.10	10.05	0.69	0.72	0.71	0.70	20.99	19.36	19.30	19.27	1.50	1.38	1.38	1.38
T3Wa_20m	20m	14.86	9.31	9.26	9.23	0.62	0.63	0.63	0.63	20.41	18.86	18.83	18.82	1.46	1.35	1.35	1.34
T3Wa_30m	30m	13.72	8.94	8.91	8.89	0.59	0.60	0.60	0.60	20.17	18.66	18.64	18.63	1.44	1.33	1.33	1.33
T3Wa_40m	40m	13.10	8.74	8.72	8.71	0.57	0.58	0.58	0.58	20.04	18.55	18.54	18.53	1.43	1.32	1.32	1.32
T3Wa_50m	50m	12.70	8.61	8.60	8.59	0.56	0.57	0.57	0.57	19.95	18.48	18.47	18.47	1.43	1.32	1.32	1.32
T3Wa_60m	60m	12.43	8.53	8.52	8.51	0.55	0.56	0.56	0.56	19.90	18.43	18.43	18.42	1.42	1.32	1.32	1.32
T3Wa_70m	70m	12.24	8.46	8.46	8.45	0.55	0.56	0.56	0.55	19.85	18.39	18.39	18.39	1.42	1.31	1.31	1.31
T3Wa_80m	80m	12.09	8.41	8.41	8.41	0.54	0.55	0.55	0.55	19.82	18.37	18.37	18.37	1.42	1.31	1.31	1.31
T3Wa_90m	90m	11.97	8.38	8.38	8.38	0.54	0.55	0.55	0.55	19.80	18.35	18.35	18.35	1.41	1.31	1.31	1.31
T3Wa_100m	100m	11.87	8.35	8.35	8.35	0.54	0.54	0.55	0.54	19.78	18.33	18.33	18.33	1.41	1.31	1.31	1.31
T3Wa_110m	110m	11.80	8.32	8.33	8.32	0.54	0.54	0.54	0.54	19.76	18.31	18.32	18.32	1.41	1.31	1.31	1.31
T3Wa_120m	120m	11.73	8.30	8.31	8.30	0.54	0.54	0.54	0.54	19.75	18.30	18.31	18.31	1.41	1.31	1.31	1.31
T3Wa_130m	130m	11.68	8.28	8.29	8.29	0.53	0.54	0.54	0.54	19.73	18.29	18.30	18.30	1.41	1.31	1.31	1.31

		Total Annual Mean NOx (µg/m3)				Total Annual Mean Ammonia NH3 (µg/m3)				Total Annual Mean Nitrogen Deposition				Total Annual Mean Acid Deposition			
Road Link	Distance from Road (m)	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Ref	2038 Do Something
T3Wa_140m	140m	11.63	8.27	8.27	8.27	0.53	0.54	0.54	0.54	19.72	18.28	18.29	18.29	1.41	1.31	1.31	1.31
T3Wa_150m	150m	11.59	8.25	8.26	8.26	0.53	0.54	0.54	0.54	19.72	18.28	18.28	18.28	1.41	1.31	1.31	1.31
T3Wa_160m	160m	11.55	8.24	8.25	8.25	0.53	0.53	0.54	0.54	19.71	18.27	18.28	18.28	1.41	1.30	1.31	1.31
T3Wa_170m	170m	11.51	8.23	8.24	8.24	0.53	0.53	0.53	0.53	19.70	18.26	18.27	18.27	1.41	1.30	1.30	1.30
T3Wa_180m	180m	11.49	8.22	8.23	8.23	0.53	0.53	0.53	0.53	19.69	18.26	18.27	18.27	1.41	1.30	1.30	1.30
T3Wa_190m	190m	11.46	8.21	8.22	8.22	0.53	0.53	0.53	0.53	19.69	18.25	18.26	18.26	1.41	1.30	1.30	1.30
T3Wa_200m	200m	11.44	8.20	8.22	8.22	0.53	0.53	0.53	0.53	19.68	18.25	18.26	18.26	1.41	1.30	1.30	1.30
T4Ea_1m	1m	36.58	16.35	15.99	15.80	1.18	1.28	1.25	1.23	24.93	22.74	22.55	22.45	1.78	1.62	1.61	1.60
T4Ea_10m	10m	19.60	10.83	10.73	10.66	0.74	0.77	0.76	0.76	21.41	19.71	19.65	19.61	1.53	1.41	1.40	1.40
T4Ea_20m	20m	16.02	9.67	9.62	9.58	0.65	0.67	0.66	0.66	20.65	19.07	19.04	19.02	1.47	1.36	1.36	1.36
T4Ea_30m	30m	14.54	9.19	9.16	9.13	0.61	0.62	0.62	0.62	20.34	18.80	18.78	18.77	1.45	1.34	1.34	1.34
T4Ea_40m	40m	13.73	8.93	8.91	8.89	0.59	0.60	0.60	0.60	20.17	18.66	18.65	18.64	1.44	1.33	1.33	1.33
T4Ea_50m	50m	13.22	8.76	8.75	8.74	0.57	0.58	0.58	0.58	20.06	18.57	18.56	18.55	1.43	1.33	1.33	1.33
T4Ea_60m	60m	12.87	8.65	8.64	8.63	0.56	0.57	0.57	0.57	19.98	18.50	18.50	18.49	1.43	1.32	1.32	1.32
T4Ea_70m	70m	12.62	8.57	8.56	8.56	0.56	0.57	0.57	0.56	19.93	18.46	18.46	18.45	1.42	1.32	1.32	1.32
T4Ea_80m	80m	12.42	8.51	8.50	8.50	0.55	0.56	0.56	0.56	19.89	18.42	18.42	18.42	1.42	1.32	1.32	1.32
T4Ea_90m	90m	12.27	8.46	8.46	8.45	0.55	0.56	0.56	0.56	19.86	18.40	18.40	18.39	1.42	1.31	1.31	1.31
T4Ea_100m	100m	12.15	8.42	8.42	8.41	0.55	0.55	0.55	0.55	19.83	18.37	18.38	18.37	1.42	1.31	1.31	1.31
T4Ea_110m	110m	12.05	8.38	8.39	8.38	0.54	0.55	0.55	0.55	19.81	18.36	18.36	18.36	1.41	1.31	1.31	1.31
T4Ea_120m	120m	11.96	8.36	8.36	8.36	0.54	0.55	0.55	0.55	19.79	18.34	18.34	18.34	1.41	1.31	1.31	1.31
T4Ea_130m	130m	11.89	8.33	8.34	8.34	0.54	0.54	0.55	0.54	19.78	18.33	18.33	18.33	1.41	1.31	1.31	1.31
T4Ea_140m	140m	11.83	8.31	8.32	8.32	0.54	0.54	0.54	0.54	19.76	18.32	18.32	18.32	1.41	1.31	1.31	1.31
T4Ea_150m	150m	11.78	8.29	8.30	8.30	0.54	0.54	0.54	0.54	19.75	18.31	18.31	18.31	1.41	1.31	1.31	1.31
T4Ea_160m	160m	11.73	8.28	8.29	8.29	0.53	0.54	0.54	0.54	19.74	18.30	18.30	18.30	1.41	1.31	1.31	1.31
T4Ea_170m	170m	11.69	8.27	8.28	8.27	0.53	0.54	0.54	0.54	19.73	18.29	18.30	18.30	1.41	1.31	1.31	1.31
T4Ea_180m	180m	11.65	8.25	8.26	8.26	0.53	0.54	0.54	0.54	19.73	18.28	18.29	18.29	1.41	1.31	1.31	1.31
T4Ea_190m	190m	11.62	8.24	8.25	8.25	0.53	0.54	0.54	0.54	19.72	18.28	18.29	18.28	1.41	1.31	1.31	1.31
T4Ea_200m	200m	11.59	8.23	8.25	8.25	0.53	0.54	0.54	0.54	19.71	18.27	18.28	18.28	1.41	1.31	1.31	1.31
T4Wa_1m	1m	40.22	17.53	17.12	16.91	1.27	1.39	1.35	1.33	25.67	23.39	23.18	23.06	1.83	1.67	1.66	1.65
T4Wa_10m	10m	20.90	11.26	11.13	11.06	0.77	0.81	0.80	0.79	21.68	19.94	19.88	19.83	1.55	1.42	1.42	1.42
T4Wa_20m	20m	16.80	9.93	9.86	9.82	0.67	0.69	0.68	0.68	20.82	19.21	19.17	19.15	1.49	1.37	1.37	1.37
T4Wa_30m	30m	15.09	9.37	9.33	9.30	0.62	0.64	0.64	0.63	20.46	18.90	18.88	18.86	1.46	1.35	1.35	1.35
T4Wa_40m	40m	14.15	9.07	9.04	9.02	0.60	0.61	0.61	0.61	20.26	18.73	18.72	18.71	1.45	1.34	1.34	1.34
T4Wa_50m	50m	13.56	8.87	8.86	8.84	0.58	0.59	0.59	0.59	20.13	18.63	18.62	18.61	1.44	1.33	1.33	1.33
T4Wa_60m	60m	13.14	8.74	8.73	8.72	0.57	0.58	0.58	0.58	20.04	18.55	18.55	18.54	1.43	1.33	1.32	1.32
T4Wa_70m	70m	12.84	8.64	8.64	8.63	0.56	0.57	0.57	0.57	19.98	18.50	18.50	18.49	1.43	1.32	1.32	1.32
T4Wa_80m	80m	12.61	8.57	8.56	8.56	0.56	0.57	0.57	0.57	19.93	18.46	18.46	18.45	1.42	1.32	1.32	1.32
T4Wa_90m	90m	12.43	8.51	8.51	8.50	0.55	0.56	0.56	0.56	19.89	18.42	18.43	18.42	1.42	1.32	1.32	1.32
T4Wa_100m	100m	12.29	8.46	8.46	8.46	0.55	0.56	0.56	0.56	19.86	18.40	18.40	18.40	1.42	1.31	1.31	1.31
T4Wa_110m	110m	12.17	8.42	8.43	8.42	0.55	0.55	0.55	0.55	19.83	18.38	18.38	18.38	1.42	1.31	1.31	1.31

		Total Annual Mean NOx (µg/m3)				Total Annual Mean Ammonia NH3 (µg/m3)				Total Annual Mean Nitrogen Deposition				Total Annual Mean Acid Deposition			
Road Link	Distance from Road (m)	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Ref	2038 Do Something
T4Wa_120m	120m	12.07	8.39	8.40	8.39	0.54	0.55	0.55	0.55	19.81	18.36	18.36	18.36	1.42	1.31	1.31	1.31
T4Wa_130m	130m	11.98	8.36	8.37	8.37	0.54	0.55	0.55	0.55	19.80	18.34	18.35	18.35	1.41	1.31	1.31	1.31
T4Wa_140m	140m	11.91	8.34	8.35	8.35	0.54	0.54	0.55	0.55	19.78	18.33	18.34	18.34	1.41	1.31	1.31	1.31
T4Wa_150m	150m	11.85	8.32	8.33	8.33	0.54	0.54	0.54	0.54	19.77	18.32	18.33	18.33	1.41	1.31	1.31	1.31
T4Wa_160m	160m	11.79	8.30	8.31	8.31	0.54	0.54	0.54	0.54	19.76	18.31	18.32	18.32	1.41	1.31	1.31	1.31
T4Wa_170m	170m	11.75	8.29	8.30	8.30	0.54	0.54	0.54	0.54	19.75	18.30	18.31	18.31	1.41	1.31	1.31	1.31
T4Wa_180m	180m	11.71	8.27	8.28	8.28	0.53	0.54	0.54	0.54	19.74	18.29	18.30	18.30	1.41	1.31	1.31	1.31
T4Wa_190m	190m	11.67	8.26	8.27	8.27	0.53	0.54	0.54	0.54	19.73	18.29	18.30	18.30	1.41	1.31	1.31	1.31
T4Wa_200m	200m	11.63	8.25	8.26	8.26	0.53	0.54	0.54	0.54	19.72	18.28	18.29	18.29	1.41	1.31	1.31	1.31
T5Ea_1m	1m	42.98	18.38	19.52	19.78	1.34	1.46	1.56	1.58	25.91	23.55	24.18	24.31	1.85	1.68	1.73	1.74
T5Ea_10m	10m	23.26	11.99	12.45	12.55	0.83	0.88	0.92	0.93	21.88	20.07	20.32	20.38	1.56	1.43	1.45	1.46
T5Ea_20m	20m	18.49	10.45	10.73	10.80	0.71	0.74	0.77	0.77	20.89	19.23	19.38	19.42	1.49	1.37	1.38	1.39
T5Ea_30m	30m	16.47	9.79	10.01	10.05	0.66	0.68	0.70	0.70	20.47	18.87	18.99	19.01	1.46	1.35	1.36	1.36
T5Ea_40m	40m	15.34	9.43	9.60	9.64	0.63	0.65	0.66	0.67	20.23	18.67	18.76	18.78	1.45	1.33	1.34	1.34
T5Ea_50m	50m	14.63	9.20	9.34	9.37	0.61	0.63	0.64	0.64	20.08	18.54	18.62	18.64	1.43	1.32	1.33	1.33
T5Ea_60m	60m	14.14	9.04	9.17	9.19	0.60	0.61	0.62	0.63	19.98	18.45	18.53	18.54	1.43	1.32	1.32	1.32
T5Ea_70m	70m	13.77	8.92	9.04	9.06	0.59	0.60	0.61	0.61	19.90	18.39	18.45	18.47	1.42	1.31	1.32	1.32
T5Ea_80m	80m	13.49	8.83	8.93	8.95	0.58	0.59	0.60	0.60	19.84	18.34	18.40	18.41	1.42	1.31	1.31	1.32
T5Ea_90m	90m	13.27	8.76	8.85	8.87	0.58	0.59	0.60	0.60	19.80	18.30	18.36	18.37	1.41	1.31	1.31	1.31
T5Ea_100m	100m	13.09	8.70	8.79	8.81	0.57	0.58	0.59	0.59	19.76	18.27	18.32	18.33	1.41	1.31	1.31	1.31
T5Ea_110m	110m	12.94	8.65	8.74	8.75	0.57	0.58	0.58	0.59	19.73	18.24	18.29	18.30	1.41	1.30	1.31	1.31
T5Ea_120m	120m	12.82	8.61	8.69	8.71	0.56	0.57	0.58	0.58	19.70	18.22	18.27	18.27	1.41	1.30	1.30	1.31
T5Ea_130m	130m	12.71	8.58	8.65	8.67	0.56	0.57	0.58	0.58	19.68	18.20	18.24	18.25	1.41	1.30	1.30	1.30
T5Ea_140m	140m	12.61	8.54	8.62	8.63	0.56	0.57	0.57	0.58	19.66	18.18	18.22	18.23	1.40	1.30	1.30	1.30
T5Ea_150m	150m	12.53	8.52	8.59	8.60	0.56	0.56	0.57	0.57	19.64	18.17	18.21	18.22	1.40	1.30	1.30	1.30
T5Ea_160m	160m	12.46	8.49	8.56	8.57	0.55	0.56	0.57	0.57	19.63	18.16	18.19	18.20	1.40	1.30	1.30	1.30
T5Ea_170m	170m	12.39	8.47	8.54	8.55	0.55	0.56	0.57	0.57	19.61	18.14	18.18	18.19	1.40	1.30	1.30	1.30
T5Ea_180m	180m	12.33	8.45	8.52	8.53	0.55	0.56	0.56	0.57	19.60	18.13	18.17	18.18	1.40	1.30	1.30	1.30
T5Ea_190m	190m	12.28	8.44	8.50	8.51	0.55	0.56	0.56	0.56	19.59	18.12	18.16	18.16	1.40	1.29	1.30	1.30
T5Ea_200m	200m	12.23	8.42	8.48	8.49	0.55	0.56	0.56	0.56	19.58	18.12	18.15	18.15	1.40	1.29	1.30	1.30
T5Wa_1m	1m	32.84	15.09	15.88	16.05	1.08	1.16	1.23	1.25	23.86	21.76	22.19	22.28	1.70	1.55	1.59	1.59
T5Wa_10m	10m	19.06	10.63	10.93	11.00	0.72	0.76	0.78	0.79	21.01	19.33	19.49	19.53	1.50	1.38	1.39	1.39
T5Wa_20m	20m	15.97	9.63	9.82	9.86	0.64	0.67	0.68	0.69	20.36	18.78	18.89	18.91	1.45	1.34	1.35	1.35
T5Wa_30m	30m	14.66	9.21	9.35	9.38	0.61	0.63	0.64	0.64	20.09	18.55	18.63	18.65	1.43	1.32	1.33	1.33
T5Wa_40m	40m	13.93	8.97	9.09	9.11	0.59	0.61	0.62	0.62	19.94	18.42	18.49	18.50	1.42	1.32	1.32	1.32
T5Wa_50m	50m	13.46	8.82	8.92	8.94	0.58	0.59	0.60	0.60	19.84	18.34	18.39	18.40	1.42	1.31	1.31	1.31
T5Wa_60m	60m	13.14	8.72	8.81	8.82	0.57	0.58	0.59	0.59	19.77	18.28	18.33	18.34	1.41	1.31	1.31	1.31
T5Wa_70m	70m	12.90	8.64	8.72	8.74	0.57	0.58	0.58	0.58	19.72	18.24	18.28	18.29	1.41	1.30	1.31	1.31
T5Wa_80m	80m	12.72	8.58	8.65	8.67	0.56	0.57	0.58	0.58	19.68	18.20	18.25	18.25	1.41	1.30	1.30	1.30
T5Wa_90m	90m	12.57	8.53	8.60	8.61	0.56	0.57	0.57	0.57	19.65	18.18	18.22	18.22	1.40	1.30	1.30	1.30

		Total Annual Mean NOx (µg/m3)				Total Annual Mean Ammonia NH3 (µg/m3)				Total Annual Mean Nitrogen Deposition				Total Annual Mean Acid Deposition			
Road Link	Distance from Road (m)	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Ref	2038 Do Something
T5Wa_100m	100m	12.45	8.49	8.56	8.57	0.55	0.56	0.57	0.57	19.62	18.16	18.19	18.20	1.40	1.30	1.30	1.30
T5Wa_110m	110m	12.35	8.46	8.52	8.53	0.55	0.56	0.57	0.57	19.60	18.14	18.17	18.18	1.40	1.30	1.30	1.30
T5Wa_120m	120m	12.26	8.43	8.49	8.50	0.55	0.56	0.56	0.56	19.59	18.12	18.16	18.16	1.40	1.29	1.30	1.30
T5Wa_130m	130m	12.19	8.41	8.46	8.47	0.55	0.56	0.56	0.56	19.57	18.11	18.14	18.15	1.40	1.29	1.30	1.30
T5Wa_140m	140m	12.13	8.39	8.44	8.45	0.55	0.55	0.56	0.56	19.56	18.10	18.13	18.14	1.40	1.29	1.30	1.30
T5Wa_150m	150m	12.07	8.37	8.42	8.43	0.55	0.55	0.56	0.56	19.54	18.09	18.12	18.12	1.40	1.29	1.29	1.29
T5Wa_160m	160m	12.02	8.35	8.40	8.41	0.54	0.55	0.55	0.56	19.53	18.08	18.11	18.11	1.40	1.29	1.29	1.29
T5Wa_170m	170m	11.98	8.34	8.39	8.40	0.54	0.55	0.55	0.55	19.52	18.07	18.10	18.11	1.39	1.29	1.29	1.29
T5Wa_180m	180m	11.94	8.32	8.37	8.38	0.54	0.55	0.55	0.55	19.52	18.06	18.09	18.10	1.39	1.29	1.29	1.29
T5Wa_190m	190m	11.90	8.31	8.36	8.37	0.54	0.55	0.55	0.55	19.51	18.06	18.09	18.09	1.39	1.29	1.29	1.29
T5Wa_200m	200m	11.87	8.30	8.35	8.36	0.54	0.55	0.55	0.55	19.50	18.05	18.08	18.08	1.39	1.29	1.29	1.29
T6Ea_1m	1m	31.31	14.56	15.45	15.73	1.04	1.12	1.20	1.22	23.55	21.50	21.99	22.13	1.68	1.54	1.57	1.58
T6Ea_10m	10m	18.90	10.55	10.91	11.02	0.72	0.75	0.78	0.79	20.98	19.30	19.50	19.55	1.50	1.38	1.39	1.40
T6Ea_20m	20m	15.81	9.55	9.78	9.84	0.64	0.66	0.68	0.69	20.33	18.75	18.87	18.91	1.45	1.34	1.35	1.35
T6Ea_30m	30m	14.49	9.12	9.29	9.34	0.61	0.62	0.64	0.64	20.05	18.51	18.61	18.63	1.43	1.32	1.33	1.33
T6Ea_40m	40m	13.76	8.88	9.02	9.06	0.59	0.60	0.61	0.62	19.90	18.38	18.46	18.48	1.42	1.31	1.32	1.32
T6Ea_50m	50m	13.29	8.73	8.85	8.88	0.58	0.59	0.60	0.60	19.80	18.30	18.37	18.38	1.41	1.31	1.31	1.31
T6Ea_60m	60m	12.96	8.63	8.73	8.76	0.57	0.58	0.59	0.59	19.73	18.24	18.30	18.32	1.41	1.30	1.31	1.31
T6Ea_70m	70m	12.73	8.55	8.64	8.67	0.56	0.57	0.58	0.58	19.68	18.20	18.25	18.27	1.41	1.30	1.30	1.30
T6Ea_80m	80m	12.54	8.49	8.58	8.60	0.56	0.56	0.57	0.57	19.64	18.17	18.22	18.23	1.40	1.30	1.30	1.30
T6Ea_90m	90m	12.40	8.45	8.52	8.54	0.55	0.56	0.57	0.57	19.61	18.14	18.19	18.20	1.40	1.30	1.30	1.30
T6Ea_100m	100m	12.28	8.41	8.48	8.50	0.55	0.56	0.56	0.57	19.59	18.12	18.16	18.17	1.40	1.29	1.30	1.30
T6Ea_110m	110m	12.19	8.38	8.45	8.46	0.55	0.55	0.56	0.56	19.57	18.11	18.14	18.15	1.40	1.29	1.30	1.30
T6Ea_120m	120m	12.11	8.35	8.42	8.43	0.55	0.55	0.56	0.56	19.55	18.09	18.13	18.14	1.40	1.29	1.29	1.30
T6Ea_130m	130m	12.04	8.33	8.39	8.41	0.54	0.55	0.56	0.56	19.53	18.08	18.11	18.12	1.40	1.29	1.29	1.29
T6Ea_140m	140m	11.98	8.31	8.37	8.38	0.54	0.55	0.55	0.55	19.52	18.07	18.10	18.11	1.39	1.29	1.29	1.29
T6Ea_150m	150m	11.92	8.29	8.35	8.36	0.54	0.55	0.55	0.55	19.51	18.06	18.09	18.10	1.39	1.29	1.29	1.29
T6Ea_160m	160m	11.88	8.28	8.33	8.34	0.54	0.54	0.55	0.55	19.50	18.05	18.08	18.09	1.39	1.29	1.29	1.29
T6Ea_170m	170m	11.84	8.26	8.32	8.33	0.54	0.54	0.55	0.55	19.49	18.04	18.07	18.08	1.39	1.29	1.29	1.29
T6Ea_180m	180m	11.80	8.25	8.30	8.31	0.54	0.54	0.55	0.55	19.48	18.04	18.07	18.07	1.39	1.29	1.29	1.29
T6Ea_190m	190m	11.76	8.24	8.29	8.30	0.54	0.54	0.55	0.55	19.48	18.03	18.06	18.07	1.39	1.29	1.29	1.29
T6Ea_200m	200m	11.73	8.23	8.28	8.29	0.54	0.54	0.55	0.55	19.47	18.03	18.05	18.06	1.39	1.29	1.29	1.29
T6Wa_1m	1m	25.85	12.79	13.46	13.66	0.90	0.96	1.02	1.03	22.42	20.53	20.89	21.00	1.60	1.47	1.49	1.50
T6Wa_10m	10m	16.18	9.67	9.91	9.98	0.65	0.67	0.69	0.70	20.41	18.81	18.95	18.99	1.46	1.34	1.35	1.36
T6Wa_20m	20m	14.16	9.01	9.17	9.21	0.60	0.61	0.63	0.63	19.98	18.46	18.54	18.57	1.43	1.32	1.32	1.33
T6Wa_30m	30m	13.32	8.74	8.86	8.89	0.58	0.59	0.60	0.60	19.81	18.31	18.37	18.39	1.41	1.31	1.31	1.31
T6Wa_40m	40m	12.86	8.59	8.69	8.72	0.56	0.57	0.58	0.59	19.71	18.23	18.28	18.29	1.41	1.30	1.31	1.31
T6Wa_50m	50m	12.57	8.50	8.59	8.61	0.56	0.57	0.57	0.58	19.65	18.17	18.22	18.23	1.40	1.30	1.30	1.30
T6Wa_60m	60m	12.37	8.43	8.51	8.53	0.55	0.56	0.57	0.57	19.60	18.14	18.18	18.19	1.40	1.30	1.30	1.30
T6Wa_70m	70m	12.22	8.39	8.46	8.47	0.55	0.55	0.56	0.56	19.57	18.11	18.15	18.16	1.40	1.29	1.30	1.30

		Total Annual Mean NOx (µg/m3)				Total Annual Mean Ammonia NH3 (µg/m3)				Total Annual Mean Nitrogen Deposition				Total Annual Mean Acid Deposition			
Road Link	Distance from Road (m)	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Ref	2038 Do Something
T6Wa_80m	80m	12.10	8.35	8.41	8.43	0.55	0.55	0.56	0.56	19.55	18.09	18.13	18.14	1.40	1.29	1.29	1.30
T6Wa_90m	90m	12.01	8.32	8.38	8.40	0.54	0.55	0.55	0.56	19.53	18.07	18.11	18.12	1.39	1.29	1.29	1.29
T6Wa_100m	100m	11.93	8.29	8.35	8.37	0.54	0.55	0.55	0.55	19.51	18.06	18.09	18.10	1.39	1.29	1.29	1.29
T6Wa_110m	110m	11.87	8.27	8.33	8.34	0.54	0.54	0.55	0.55	19.50	18.05	18.08	18.09	1.39	1.29	1.29	1.29
T6Wa_120m	120m	11.81	8.26	8.31	8.32	0.54	0.54	0.55	0.55	19.49	18.04	18.07	18.08	1.39	1.29	1.29	1.29
T6Wa_130m	130m	11.77	8.24	8.29	8.30	0.54	0.54	0.55	0.55	19.48	18.03	18.06	18.07	1.39	1.29	1.29	1.29
T6Wa_140m	140m	11.73	8.23	8.28	8.29	0.54	0.54	0.55	0.55	19.47	18.02	18.05	18.06	1.39	1.29	1.29	1.29
T6Wa_150m	150m	11.69	8.22	8.26	8.27	0.53	0.54	0.54	0.54	19.46	18.02	18.04	18.05	1.39	1.29	1.29	1.29
T6Wa_160m	160m	11.66	8.20	8.25	8.26	0.53	0.54	0.54	0.54	19.45	18.01	18.04	18.04	1.39	1.29	1.29	1.29
T6Wa_170m	170m	11.63	8.20	8.24	8.25	0.53	0.54	0.54	0.54	19.45	18.01	18.03	18.04	1.39	1.29	1.29	1.29
T6Wa_180m	180m	11.60	8.19	8.23	8.24	0.53	0.54	0.54	0.54	19.44	18.00	18.03	18.03	1.39	1.29	1.29	1.29
T6Wa_190m	190m	11.57	8.18	8.22	8.23	0.53	0.54	0.54	0.54	19.44	18.00	18.02	18.03	1.39	1.29	1.29	1.29
T6Wa_200m	200m	11.55	8.17	8.21	8.22	0.53	0.54	0.54	0.54	19.43	17.99	18.02	18.02	1.39	1.29	1.29	1.29
T7Ea_1m	1m	66.46	25.93	27.54	27.83	2.09	2.32	2.48	2.51	30.09	27.30	28.25	28.43	2.15	1.95	2.02	2.03
T7Ea_10m	10m	34.36	15.59	16.30	16.43	1.18	1.28	1.35	1.36	23.24	21.14	21.56	21.64	1.66	1.51	1.54	1.55
T7Ea_20m	20m	25.44	12.72	13.18	13.26	0.93	0.99	1.03	1.04	21.28	19.42	19.69	19.74	1.52	1.39	1.41	1.41
T7Ea_30m	30m	21.51	11.45	11.80	11.86	0.81	0.86	0.89	0.90	20.41	18.66	18.87	18.90	1.46	1.33	1.35	1.35
T7Ea_40m	40m	19.27	10.73	11.01	11.06	0.75	0.79	0.81	0.82	19.91	18.23	18.40	18.43	1.42	1.30	1.31	1.32
T7Ea_50m	50m	17.83	10.27	10.50	10.55	0.71	0.74	0.76	0.77	19.59	17.95	18.09	18.12	1.40	1.28	1.29	1.29
T7Ea_60m	60m	16.81	9.94	10.15	10.19	0.68	0.71	0.73	0.73	19.36	17.76	17.88	17.90	1.38	1.27	1.28	1.28
T7Ea_70m	70m	16.06	9.70	9.88	9.92	0.66	0.68	0.70	0.70	19.19	17.61	17.72	17.74	1.37	1.26	1.27	1.27
T7Ea_80m	80m	15.49	9.51	9.68	9.71	0.64	0.66	0.68	0.68	19.06	17.50	17.60	17.62	1.36	1.25	1.26	1.26
T7Ea_90m	90m	15.02	9.36	9.52	9.55	0.63	0.65	0.66	0.67	18.96	17.41	17.50	17.52	1.35	1.24	1.25	1.25
T7Ea_100m	100m	14.65	9.24	9.39	9.41	0.62	0.64	0.65	0.65	18.87	17.34	17.42	17.44	1.35	1.24	1.24	1.25
T7Ea_110m	110m	14.34	9.14	9.28	9.30	0.61	0.63	0.64	0.64	18.80	17.28	17.36	17.37	1.34	1.23	1.24	1.24
T7Ea_120m	120m	14.07	9.06	9.18	9.21	0.60	0.62	0.63	0.63	18.74	17.23	17.30	17.31	1.34	1.23	1.24	1.24
T7Ea_130m	130m	13.85	8.98	9.10	9.13	0.60	0.61	0.62	0.63	18.69	17.18	17.25	17.27	1.34	1.23	1.23	1.23
T7Ea_140m	140m	13.65	8.92	9.03	9.06	0.59	0.60	0.62	0.62	18.65	17.14	17.21	17.22	1.33	1.22	1.23	1.23
T7Ea_150m	150m	13.48	8.87	8.97	8.99	0.59	0.60	0.61	0.61	18.61	17.11	17.17	17.19	1.33	1.22	1.23	1.23
T7Ea_160m	160m	13.32	8.82	8.92	8.94	0.58	0.59	0.60	0.61	18.58	17.08	17.14	17.15	1.33	1.22	1.22	1.23
T7Ea_170m	170m	13.19	8.77	8.87	8.89	0.58	0.59	0.60	0.60	18.55	17.06	17.11	17.13	1.32	1.22	1.22	1.22
T7Ea_180m	180m	13.07	8.73	8.83	8.85	0.58	0.59	0.60	0.60	18.52	17.03	17.09	17.10	1.32	1.22	1.22	1.22
T7Ea_190m	190m	12.96	8.70	8.79	8.81	0.57	0.58	0.59	0.59	18.50	17.01	17.06	17.08	1.32	1.22	1.22	1.22
T7Ea_200m	200m	12.86	8.67	8.76	8.77	0.57	0.58	0.59	0.59	18.47	16.99	17.04	17.05	1.32	1.21	1.22	1.22
T7Wa_1m	1m	52.99	21.59	22.88	23.11	1.71	1.88	2.01	2.03	27.25	24.72	25.48	25.62	1.95	1.77	1.82	1.83
T7Wa_10m	10m	27.07	13.24	13.76	13.86	0.97	1.04	1.09	1.10	21.64	19.73	20.04	20.10	1.55	1.41	1.43	1.44
T7Wa_20m	20m	20.59	11.16	11.48	11.54	0.79	0.83	0.86	0.87	20.20	18.48	18.68	18.71	1.44	1.32	1.33	1.34
T7Wa_30m	30m	17.82	10.26	10.51	10.55	0.71	0.74	0.76	0.77	19.58	17.95	18.09	18.12	1.40	1.28	1.29	1.29
T7Wa_40m	40m	16.27	9.77	9.96	10.00	0.67	0.69	0.71	0.71	19.24	17.65	17.77	17.79	1.37	1.26	1.27	1.27
T7Wa_50m	50m	15.28	9.45	9.61	9.64	0.64	0.66	0.67	0.68	19.02	17.46	17.56	17.58	1.36	1.25	1.25	1.26

		Total Annual Mean NOx (µg/m3)				Total Annual Mean Ammonia NH3 (µg/m3)				Total Annual Mean Nitrogen Deposition				Total Annual Mean Acid Deposition			
Road Link	Distance from Road (m)	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Ref	2038 Do Something
T7Wa_60m	60m	14.60	9.23	9.37	9.40	0.62	0.64	0.65	0.65	18.86	17.33	17.41	17.43	1.35	1.24	1.24	1.25
T7Wa_70m	70m	14.10	9.07	9.20	9.22	0.60	0.62	0.63	0.63	18.75	17.23	17.31	17.32	1.34	1.23	1.24	1.24
T7Wa_80m	80m	13.71	8.94	9.06	9.08	0.59	0.61	0.62	0.62	18.66	17.16	17.23	17.24	1.33	1.23	1.23	1.23
T7Wa_90m	90m	13.41	8.85	8.96	8.98	0.58	0.60	0.61	0.61	18.60	17.10	17.16	17.18	1.33	1.22	1.23	1.23
T7Wa_100m	100m	13.17	8.77	8.87	8.89	0.58	0.59	0.60	0.60	18.54	17.05	17.11	17.12	1.32	1.22	1.22	1.22
T7Wa_110m	110m	12.97	8.70	8.80	8.82	0.57	0.58	0.59	0.59	18.50	17.01	17.07	17.08	1.32	1.22	1.22	1.22
T7Wa_120m	120m	12.80	8.65	8.74	8.76	0.57	0.58	0.59	0.59	18.46	16.98	17.04	17.05	1.32	1.21	1.22	1.22
T7Wa_130m	130m	12.66	8.60	8.69	8.71	0.56	0.57	0.58	0.58	18.43	16.95	17.00	17.02	1.32	1.21	1.21	1.22
T7Wa_140m	140m	12.54	8.56	8.65	8.66	0.56	0.57	0.58	0.58	18.40	16.93	16.98	16.99	1.31	1.21	1.21	1.21
T7Wa_150m	150m	12.43	8.53	8.61	8.62	0.56	0.57	0.57	0.57	18.37	16.91	16.96	16.96	1.31	1.21	1.21	1.21
T7Wa_160m	160m	12.33	8.50	8.57	8.59	0.55	0.56	0.57	0.57	18.35	16.89	16.93	16.94	1.31	1.21	1.21	1.21
T7Wa_170m	170m	12.25	8.47	8.55	8.56	0.55	0.56	0.57	0.57	18.33	16.87	16.92	16.93	1.31	1.21	1.21	1.21
T7Wa_180m	180m	12.17	8.45	8.52	8.53	0.55	0.56	0.56	0.57	18.32	16.86	16.90	16.91	1.31	1.20	1.21	1.21
T7Wa_190m	190m	12.10	8.42	8.49	8.51	0.55	0.55	0.56	0.56	18.30	16.85	16.89	16.90	1.31	1.20	1.21	1.21
T7Wa_200m	200m	12.04	8.40	8.47	8.49	0.55	0.55	0.56	0.56	18.29	16.83	16.87	16.88	1.31	1.20	1.21	1.21
T9Ea_1m	1m	37.73	16.65	18.57	19.30	1.22	1.32	1.50	1.56	26.46	24.23	25.31	25.70	1.89	1.73	1.81	1.84
T9Ea_10m	10m	20.94	11.26	12.01	12.29	0.78	0.81	0.88	0.91	22.96	21.21	21.63	21.78	1.64	1.52	1.55	1.56
T9Ea_20m	20m	17.11	10.04	10.51	10.68	0.68	0.70	0.74	0.76	22.14	20.52	20.79	20.89	1.58	1.47	1.49	1.49
T9Ea_30m	30m	15.46	9.50	9.86	9.99	0.63	0.65	0.68	0.70	21.79	20.22	20.42	20.49	1.56	1.44	1.46	1.46
T9Ea_40m	40m	14.54	9.21	9.50	9.60	0.61	0.62	0.65	0.66	21.60	20.06	20.22	20.28	1.54	1.43	1.44	1.45
T9Ea_50m	50m	13.95	9.02	9.26	9.35	0.59	0.61	0.63	0.64	21.47	19.95	20.09	20.14	1.53	1.43	1.44	1.44
T9Ea_60m	60m	13.54	8.89	9.10	9.18	0.58	0.59	0.61	0.62	21.38	19.88	20.00	20.04	1.53	1.42	1.43	1.43
T9Ea_70m	70m	13.23	8.79	8.98	9.05	0.57	0.58	0.60	0.61	21.32	19.82	19.93	19.97	1.52	1.42	1.42	1.43
T9Ea_80m	80m	13.00	8.72	8.89	8.95	0.57	0.58	0.59	0.60	21.27	19.78	19.88	19.91	1.52	1.41	1.42	1.42
T9Ea_90m	90m	12.82	8.66	8.82	8.87	0.56	0.57	0.59	0.59	21.23	19.75	19.84	19.87	1.52	1.41	1.42	1.42
T9Ea_100m	100m	12.67	8.61	8.76	8.81	0.56	0.57	0.58	0.59	21.20	19.72	19.81	19.83	1.51	1.41	1.41	1.42
T9Ea_110m	110m	12.55	8.57	8.71	8.76	0.56	0.56	0.58	0.58	21.17	19.70	19.78	19.80	1.51	1.41	1.41	1.41
T9Ea_120m	120m	12.44	8.54	8.67	8.71	0.55	0.56	0.57	0.58	21.15	19.68	19.76	19.78	1.51	1.41	1.41	1.41
T9Ea_130m	130m	12.35	8.51	8.63	8.67	0.55	0.56	0.57	0.57	21.13	19.67	19.74	19.76	1.51	1.40	1.41	1.41
T9Ea_140m	140m	12.28	8.48	8.60	8.64	0.55	0.56	0.57	0.57	21.11	19.65	19.72	19.74	1.51	1.40	1.41	1.41
T9Ea_150m	150m	12.21	8.46	8.58	8.61	0.55	0.55	0.56	0.57	21.10	19.64	19.70	19.72	1.51	1.40	1.41	1.41
T9Ea_160m	160m	12.15	8.44	8.55	8.59	0.55	0.55	0.56	0.56	21.09	19.63	19.69	19.71	1.51	1.40	1.41	1.41
T9Ea_170m	170m	12.10	8.43	8.53	8.57	0.54	0.55	0.56	0.56	21.07	19.62	19.68	19.70	1.51	1.40	1.41	1.41
T9Ea_180m	180m	12.05	8.41	8.51	8.55	0.54	0.55	0.56	0.56	21.07	19.61	19.67	19.69	1.50	1.40	1.40	1.41
T9Ea_190m	190m	12.01	8.40	8.50	8.53	0.54	0.55	0.56	0.56	21.06	19.60	19.66	19.68	1.50	1.40	1.40	1.41
T9Ea_200m	200m	11.98	8.39	8.48	8.51	0.54	0.55	0.55	0.56	21.05	19.60	19.65	19.67	1.50	1.40	1.40	1.40
T9Wa_1m	1m	38.18	16.79	18.75	19.48	1.23	1.33	1.51	1.58	26.55	24.31	25.40	25.80	1.90	1.74	1.81	1.84
T9Wa_10m	10m	20.74	11.20	11.94	12.21	0.77	0.81	0.88	0.90	22.91	21.18	21.59	21.74	1.64	1.51	1.54	1.55
T9Wa_20m	20m	16.88	9.96	10.42	10.59	0.67	0.69	0.74	0.75	22.10	20.48	20.74	20.83	1.58	1.46	1.48	1.49
T9Wa_30m	30m	15.25	9.44	9.78	9.91	0.63	0.64	0.68	0.69	21.75	20.19	20.38	20.45	1.55	1.44	1.46	1.46

		Total Annual Mean NOx (µg/m3)				Total Annual Mean Ammonia NH3 (µg/m3)				Total Annual Mean Nitrogen Deposition				Total Annual Mean Acid Deposition			
Road Link	Distance from Road (m)	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Ref	2038 Do Something
T9Wa_40m	40m	14.35	9.15	9.43	9.53	0.60	0.62	0.64	0.65	21.56	20.03	20.18	20.24	1.54	1.43	1.44	1.45
T9Wa_50m	50m	13.78	8.97	9.20	9.29	0.59	0.60	0.62	0.63	21.44	19.92	20.06	20.10	1.53	1.42	1.43	1.44
T9Wa_60m	60m	13.39	8.84	9.05	9.12	0.58	0.59	0.61	0.61	21.35	19.85	19.97	20.01	1.53	1.42	1.43	1.43
T9Wa_70m	70m	13.10	8.75	8.93	9.00	0.57	0.58	0.60	0.60	21.29	19.80	19.90	19.94	1.52	1.41	1.42	1.42
T9Wa_80m	80m	12.88	8.68	8.84	8.90	0.56	0.57	0.59	0.59	21.24	19.76	19.86	19.89	1.52	1.41	1.42	1.42
T9Wa_90m	90m	12.70	8.62	8.77	8.83	0.56	0.57	0.58	0.59	21.20	19.73	19.82	19.85	1.51	1.41	1.42	1.42
T9Wa_100m	100m	12.56	8.57	8.72	8.77	0.56	0.56	0.58	0.58	21.17	19.70	19.78	19.81	1.51	1.41	1.41	1.42
T9Wa_110m	110m	12.44	8.54	8.67	8.72	0.55	0.56	0.57	0.58	21.15	19.68	19.76	19.78	1.51	1.41	1.41	1.41
T9Wa_120m	120m	12.34	8.51	8.63	8.68	0.55	0.56	0.57	0.57	21.13	19.66	19.74	19.76	1.51	1.40	1.41	1.41
T9Wa_130m	130m	12.26	8.48	8.60	8.64	0.55	0.55	0.57	0.57	21.11	19.65	19.72	19.74	1.51	1.40	1.41	1.41
T9Wa_140m	140m	12.19	8.46	8.57	8.61	0.55	0.55	0.56	0.57	21.09	19.64	19.70	19.72	1.51	1.40	1.41	1.41
T9Wa_150m	150m	12.12	8.44	8.55	8.59	0.54	0.55	0.56	0.56	21.08	19.62	19.69	19.71	1.51	1.40	1.41	1.41
T9Wa_160m	160m	12.07	8.42	8.53	8.56	0.54	0.55	0.56	0.56	21.07	19.61	19.68	19.70	1.50	1.40	1.41	1.41
T9Wa_170m	170m	12.02	8.40	8.51	8.54	0.54	0.55	0.56	0.56	21.06	19.60	19.67	19.68	1.50	1.40	1.40	1.41
T9Wa_180m	180m	11.97	8.39	8.49	8.52	0.54	0.55	0.56	0.56	21.05	19.60	19.66	19.67	1.50	1.40	1.40	1.41
T9Wa_190m	190m	11.94	8.37	8.47	8.51	0.54	0.55	0.55	0.56	21.04	19.59	19.65	19.66	1.50	1.40	1.40	1.40
T9Wa_200m	200m	11.90	8.36	8.46	8.49	0.54	0.54	0.55	0.56	21.03	19.58	19.64	19.66	1.50	1.40	1.40	1.40
T10Ea_1m	1m	58.00	23.39	25.88	26.45	1.69	1.87	2.01	2.04	30.29	27.57	28.49	28.69	2.16	1.97	2.03	2.05
T10Ea_10m	10m	28.76	13.88	14.83	15.05	0.96	1.03	1.08	1.09	24.49	22.51	22.87	22.95	1.75	1.61	1.63	1.64
T10Ea_20m	20m	21.58	11.55	12.12	12.25	0.78	0.82	0.85	0.86	23.03	21.26	21.48	21.53	1.64	1.52	1.53	1.54
T10Ea_30m	30m	18.54	10.56	10.98	11.07	0.70	0.73	0.76	0.76	22.40	20.74	20.90	20.94	1.60	1.48	1.49	1.50
T10Ea_40m	40m	16.88	10.02	10.35	10.42	0.66	0.69	0.71	0.71	22.06	20.45	20.58	20.61	1.58	1.46	1.47	1.47
T10Ea_50m	50m	15.82	9.67	9.95	10.01	0.64	0.66	0.67	0.68	21.84	20.26	20.37	20.40	1.56	1.45	1.46	1.46
T10Ea_60m	60m	15.09	9.44	9.67	9.73	0.62	0.63	0.65	0.65	21.69	20.14	20.23	20.25	1.55	1.44	1.45	1.45
T10Ea_70m	70m	14.55	9.26	9.47	9.52	0.60	0.62	0.63	0.64	21.58	20.04	20.13	20.15	1.54	1.43	1.44	1.44
T10Ea_80m	80m	14.14	9.13	9.32	9.36	0.59	0.61	0.62	0.62	21.50	19.97	20.05	20.07	1.54	1.43	1.43	1.43
T10Ea_90m	90m	13.82	9.02	9.20	9.24	0.59	0.60	0.61	0.61	21.43	19.92	19.99	20.00	1.53	1.42	1.43	1.43
T10Ea_100m	100m	13.56	8.94	9.10	9.13	0.58	0.59	0.60	0.60	21.37	19.87	19.94	19.95	1.53	1.42	1.42	1.43
T10Ea_110m	110m	13.34	8.87	9.02	9.05	0.57	0.58	0.59	0.60	21.33	19.83	19.89	19.91	1.52	1.42	1.42	1.42
T10Ea_120m	120m	13.16	8.81	8.95	8.98	0.57	0.58	0.59	0.59	21.29	19.80	19.86	19.87	1.52	1.41	1.42	1.42
T10Ea_130m	130m	13.01	8.76	8.89	8.92	0.57	0.57	0.58	0.59	21.26	19.77	19.83	19.84	1.52	1.41	1.42	1.42
T10Ea_140m	140m	12.87	8.72	8.84	8.87	0.56	0.57	0.58	0.58	21.23	19.75	19.80	19.82	1.52	1.41	1.41	1.42
T10Ea_150m	150m	12.75	8.68	8.79	8.82	0.56	0.57	0.58	0.58	21.21	19.73	19.78	19.79	1.51	1.41	1.41	1.41
T10Ea_160m	160m	12.65	8.64	8.75	8.78	0.56	0.56	0.57	0.57	21.18	19.71	19.76	19.77	1.51	1.41	1.41	1.41
T10Ea_170m	170m	12.56	8.61	8.72	8.75	0.55	0.56	0.57	0.57	21.17	19.70	19.74	19.75	1.51	1.41	1.41	1.41
T10Ea_180m	180m	12.48	8.59	8.69	8.71	0.55	0.56	0.57	0.57	21.15	19.68	19.73	19.74	1.51	1.41	1.41	1.41
T10Ea_190m	190m	12.41	8.56	8.66	8.69	0.55	0.56	0.56	0.57	21.13	19.67	19.71	19.72	1.51	1.40	1.41	1.41
T10Ea_200m	200m	12.34	8.54	8.64	8.66	0.55	0.56	0.56	0.56	21.12	19.66	19.70	19.71	1.51	1.40	1.41	1.41
T10Wa_1m	1m	43.22	18.58	20.31	20.70	1.32	1.44	1.54	1.56	27.39	25.02	25.66	25.80	1.96	1.79	1.83	1.84
T10Wa_10m	10m	22.54	11.86	12.49	12.63	0.80	0.85	0.89	0.89	23.22	21.43	21.67	21.73	1.66	1.53	1.55	1.55

		Total Annual Mean NOx (µg/m3)				Total Annual Mean Ammonia NH3 (µg/m3)				Total Annual Mean Nitrogen Deposition				Total Annual Mean Acid Deposition			
Road Link	Distance from Road (m)	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Ref	2038 Do Something
T10Wa_20m	20m	17.93	10.36	10.75	10.84	0.69	0.72	0.74	0.74	22.28	20.63	20.78	20.82	1.59	1.47	1.48	1.49
T10Wa_30m	30m	15.99	9.73	10.01	10.08	0.64	0.66	0.68	0.68	21.88	20.29	20.41	20.43	1.56	1.45	1.46	1.46
T10Wa_40m	40m	14.91	9.38	9.60	9.66	0.61	0.63	0.64	0.65	21.65	20.10	20.20	20.22	1.55	1.44	1.44	1.44
T10Wa_50m	50m	14.22	9.15	9.35	9.39	0.60	0.61	0.62	0.63	21.51	19.98	20.06	20.08	1.54	1.43	1.43	1.43
T10Wa_60m	60m	13.74	9.00	9.16	9.20	0.58	0.60	0.61	0.61	21.41	19.90	19.97	19.99	1.53	1.42	1.43	1.43
T10Wa_70m	70m	13.39	8.88	9.03	9.07	0.57	0.59	0.60	0.60	21.34	19.84	19.90	19.92	1.52	1.42	1.42	1.42
T10Wa_80m	80m	13.12	8.80	8.93	8.96	0.57	0.58	0.59	0.59	21.28	19.79	19.85	19.86	1.52	1.41	1.42	1.42
T10Wa_90m	90m	12.90	8.73	8.85	8.88	0.56	0.57	0.58	0.58	21.24	19.75	19.81	19.82	1.52	1.41	1.41	1.42
T10Wa_100m	100m	12.73	8.67	8.78	8.81	0.56	0.57	0.57	0.58	21.20	19.72	19.78	19.79	1.51	1.41	1.41	1.41
T10Wa_110m	110m	12.58	8.62	8.73	8.75	0.55	0.56	0.57	0.57	21.17	19.70	19.75	19.76	1.51	1.41	1.41	1.41
T10Wa_120m	120m	12.46	8.58	8.68	8.71	0.55	0.56	0.57	0.57	21.14	19.68	19.72	19.73	1.51	1.41	1.41	1.41
T10Wa_130m	130m	12.35	8.55	8.64	8.67	0.55	0.56	0.56	0.56	21.12	19.66	19.70	19.71	1.51	1.40	1.41	1.41
T10Wa_140m	140m	12.26	8.52	8.61	8.63	0.55	0.55	0.56	0.56	21.10	19.64	19.68	19.69	1.51	1.40	1.41	1.41
T10Wa_150m	150m	12.18	8.49	8.58	8.60	0.54	0.55	0.56	0.56	21.09	19.63	19.67	19.68	1.51	1.40	1.40	1.41
T10Wa_160m	160m	12.11	8.47	8.55	8.57	0.54	0.55	0.56	0.56	21.07	19.62	19.65	19.66	1.51	1.40	1.40	1.40
T10Wa_170m	170m	12.05	8.45	8.53	8.55	0.54	0.55	0.55	0.55	21.06	19.60	19.64	19.65	1.50	1.40	1.40	1.40
T10Wa_180m	180m	11.99	8.43	8.51	8.53	0.54	0.55	0.55	0.55	21.05	19.59	19.63	19.64	1.50	1.40	1.40	1.40
T10Wa_190m	190m	11.94	8.41	8.49	8.51	0.54	0.54	0.55	0.55	21.03	19.59	19.62	19.63	1.50	1.40	1.40	1.40
T10Wa_200m	200m	11.89	8.40	8.47	8.49	0.54	0.54	0.55	0.55	21.03	19.58	19.61	19.62	1.50	1.40	1.40	1.40
T11Ea_1m	1m	49.89	20.52	22.33	22.82	1.67	1.83	1.99	2.02	29.64	27.19	28.14	28.35	2.12	1.94	2.01	2.02
T11Ea_10m	10m	25.55	12.76	13.46	13.65	0.95	1.01	1.07	1.08	24.18	22.33	22.70	22.78	1.73	1.59	1.62	1.63
T11Ea_20m	20m	20.00	11.00	11.44	11.55	0.78	0.82	0.86	0.87	22.91	21.22	21.45	21.50	1.64	1.52	1.53	1.54
T11Ea_30m	30m	17.65	10.24	10.58	10.67	0.71	0.74	0.77	0.78	22.37	20.74	20.92	20.96	1.60	1.48	1.49	1.50
T11Ea_40m	40m	16.34	9.83	10.10	10.17	0.67	0.70	0.72	0.73	22.07	20.48	20.63	20.66	1.58	1.46	1.47	1.48
T11Ea_50m	50m	15.51	9.56	9.80	9.86	0.65	0.67	0.69	0.69	21.88	20.32	20.44	20.47	1.56	1.45	1.46	1.46
T11Ea_60m	60m	14.94	9.38	9.59	9.64	0.63	0.65	0.67	0.67	21.74	20.20	20.31	20.34	1.55	1.44	1.45	1.45
T11Ea_70m	70m	14.52	9.25	9.44	9.48	0.62	0.63	0.65	0.65	21.65	20.12	20.22	20.24	1.55	1.44	1.44	1.45
T11Ea_80m	80m	14.20	9.15	9.32	9.36	0.61	0.62	0.64	0.64	21.57	20.05	20.15	20.17	1.54	1.43	1.44	1.44
T11Ea_90m	90m	13.95	9.07	9.23	9.27	0.60	0.62	0.63	0.63	21.52	20.00	20.09	20.11	1.54	1.43	1.44	1.44
T11Ea_100m	100m	13.75	9.00	9.16	9.20	0.60	0.61	0.62	0.62	21.47	19.96	20.05	20.06	1.53	1.43	1.43	1.43
T11Ea_110m	110m	13.59	8.95	9.10	9.14	0.59	0.60	0.62	0.62	21.43	19.93	20.01	20.03	1.53	1.42	1.43	1.43
T11Ea_120m	120m	13.46	8.91	9.05	9.09	0.59	0.60	0.61	0.61	21.40	19.91	19.98	20.00	1.53	1.42	1.43	1.43
T11Ea_130m	130m	13.35	8.88	9.01	9.04	0.58	0.59	0.61	0.61	21.38	19.88	19.96	19.97	1.53	1.42	1.43	1.43
T11Ea_140m	140m	13.26	8.85	8.97	9.01	0.58	0.59	0.60	0.61	21.35	19.87	19.93	19.95	1.53	1.42	1.42	1.42
T11Ea_150m	150m	13.18	8.82	8.94	8.98	0.58	0.59	0.60	0.60	21.34	19.85	19.92	19.93	1.52	1.42	1.42	1.42
T11Ea_160m	160m	13.10	8.80	8.92	8.95	0.58	0.59	0.60	0.60	21.32	19.83	19.90	19.91	1.52	1.42	1.42	1.42
T11Ea_170m	170m	13.04	8.78	8.90	8.93	0.57	0.58	0.59	0.60	21.30	19.82	19.89	19.90	1.52	1.42	1.42	1.42
T11Ea_180m	180m	12.99	8.76	8.88	8.91	0.57	0.58	0.59	0.59	21.29	19.81	19.87	19.89	1.52	1.41	1.42	1.42
T11Ea_190m	190m	12.93	8.74	8.86	8.89	0.57	0.58	0.59	0.59	21.28	19.80	19.86	19.87	1.52	1.41	1.42	1.42
T11Ea_200m	200m	12.89	8.73	8.84	8.87	0.57	0.58	0.59	0.59	21.27	19.79	19.85	19.86	1.52	1.41	1.42	1.42

		Total Annual Mean NOx (µg/m3)				Total Annual Mean Ammonia NH3 (µg/m3)				Total Annual Mean Nitrogen Deposition				Total Annual Mean Acid Deposition			
Road Link	Distance from Road (m)	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Ref	2038 Do Something
T11Wa_1m	1m	55.55	22.33	24.36	24.93	1.84	2.02	2.20	2.24	30.88	28.31	29.39	29.63	2.21	2.02	2.10	2.12
T11Wa_10m	10m	27.85	13.50	14.29	14.50	1.01	1.09	1.16	1.17	24.70	22.79	23.21	23.30	1.76	1.63	1.66	1.66
T11Wa_20m	20m	20.93	11.29	11.77	11.90	0.81	0.85	0.89	0.90	23.12	21.40	21.66	21.71	1.65	1.53	1.55	1.55
T11Wa_30m	30m	17.88	10.32	10.66	10.75	0.72	0.75	0.78	0.78	22.42	20.79	20.97	21.01	1.60	1.49	1.50	1.50
T11Wa_40m	40m	16.17	9.77	10.04	10.11	0.67	0.69	0.71	0.72	22.03	20.45	20.59	20.62	1.57	1.46	1.47	1.47
T11Wa_50m	50m	15.10	9.43	9.65	9.70	0.64	0.65	0.67	0.68	21.78	20.24	20.35	20.38	1.56	1.45	1.45	1.46
T11Wa_60m	60m	14.37	9.20	9.38	9.43	0.61	0.63	0.65	0.65	21.61	20.09	20.19	20.21	1.54	1.43	1.44	1.44
T11Wa_70m	70m	13.84	9.03	9.19	9.23	0.60	0.61	0.63	0.63	21.49	19.98	20.07	20.09	1.54	1.43	1.43	1.43
T11Wa_80m	80m	13.45	8.91	9.04	9.08	0.59	0.60	0.61	0.61	21.40	19.90	19.98	20.00	1.53	1.42	1.43	1.43
T11Wa_90m	90m	13.15	8.81	8.93	8.97	0.58	0.59	0.60	0.60	21.33	19.84	19.91	19.92	1.52	1.42	1.42	1.42
T11Wa_100m	100m	12.91	8.73	8.85	8.88	0.57	0.58	0.59	0.59	21.27	19.80	19.86	19.87	1.52	1.41	1.42	1.42
T11Wa_110m	110m	12.71	8.67	8.77	8.80	0.56	0.57	0.58	0.58	21.23	19.76	19.81	19.82	1.52	1.41	1.42	1.42
T11Wa_120m	120m	12.55	8.62	8.72	8.74	0.56	0.57	0.58	0.58	21.19	19.72	19.78	19.79	1.51	1.41	1.41	1.41
T11Wa_130m	130m	12.42	8.58	8.67	8.69	0.56	0.56	0.57	0.57	21.16	19.70	19.75	19.76	1.51	1.41	1.41	1.41
T11Wa_140m	140m	12.30	8.54	8.63	8.65	0.55	0.56	0.57	0.57	21.13	19.67	19.72	19.73	1.51	1.41	1.41	1.41
T11Wa_150m	150m	12.20	8.51	8.59	8.61	0.55	0.56	0.56	0.56	21.11	19.65	19.70	19.71	1.51	1.40	1.41	1.41
T11Wa_160m	160m	12.12	8.48	8.56	8.58	0.55	0.55	0.56	0.56	21.09	19.64	19.68	19.69	1.51	1.40	1.41	1.41
T11Wa_170m	170m	12.05	8.46	8.53	8.55	0.54	0.55	0.56	0.56	21.07	19.62	19.66	19.67	1.51	1.40	1.40	1.41
T11Wa_180m	180m	11.98	8.44	8.51	8.53	0.54	0.55	0.55	0.56	21.06	19.61	19.65	19.66	1.50	1.40	1.40	1.40
T11Wa_190m	190m	11.92	8.42	8.49	8.50	0.54	0.55	0.55	0.55	21.05	19.60	19.63	19.64	1.50	1.40	1.40	1.40
T11Wa_200m	200m	11.87	8.40	8.47	8.48	0.54	0.55	0.55	0.55	21.03	19.59	19.62	19.63	1.50	1.40	1.40	1.40
T12Wa_1m	1m	85.55	32.02	34.45	34.83	2.62	2.92	3.16	3.19	35.24	32.12	33.53	33.74	2.52	2.29	2.39	2.41
T12Wa_10m	10m	40.18	17.44	18.45	18.60	1.34	1.46	1.56	1.57	25.74	23.48	24.07	24.15	1.84	1.68	1.72	1.73
T12Wa_20m	20m	29.00	13.85	14.49	14.59	1.02	1.10	1.16	1.17	23.31	21.34	21.72	21.77	1.66	1.52	1.55	1.56
T12Wa_30m	30m	24.01	12.25	12.72	12.79	0.88	0.94	0.98	0.99	22.21	20.39	20.66	20.70	1.59	1.46	1.48	1.48
T12Wa_40m	40m	21.11	11.32	11.70	11.75	0.80	0.84	0.88	0.89	21.57	19.83	20.05	20.08	1.54	1.42	1.43	1.43
T12Wa_50m	50m	19.23	10.72	11.03	11.08	0.75	0.78	0.81	0.82	21.15	19.47	19.65	19.68	1.51	1.39	1.40	1.41
T12Wa_60m	60m	17.89	10.29	10.55	10.59	0.71	0.74	0.77	0.77	20.85	19.21	19.37	19.39	1.49	1.37	1.38	1.39
T12Wa_70m	70m	16.90	9.97	10.20	10.23	0.68	0.71	0.73	0.73	20.63	19.02	19.16	19.18	1.47	1.36	1.37	1.37
T12Wa_80m	80m	16.13	9.72	9.92	9.96	0.66	0.68	0.70	0.71	20.46	18.87	18.99	19.01	1.46	1.35	1.36	1.36
T12Wa_90m	90m	15.52	9.52	9.71	9.73	0.64	0.66	0.68	0.68	20.32	18.76	18.86	18.88	1.45	1.34	1.35	1.35
T12Wa_100m	100m	15.02	9.36	9.53	9.56	0.63	0.65	0.66	0.67	20.21	18.66	18.76	18.77	1.44	1.33	1.34	1.34
T12Wa_110m	110m	14.61	9.23	9.38	9.41	0.62	0.63	0.65	0.65	20.12	18.58	18.67	18.68	1.44	1.33	1.33	1.33
T12Wa_120m	120m	14.27	9.12	9.26	9.28	0.61	0.62	0.64	0.64	20.04	18.52	18.60	18.61	1.43	1.32	1.33	1.33
T12Wa_130m	130m	13.98	9.03	9.16	9.18	0.60	0.61	0.63	0.63	19.98	18.46	18.53	18.55	1.43	1.32	1.32	1.32
T12Wa_140m	140m	13.73	8.95	9.07	9.08	0.59	0.61	0.62	0.62	19.92	18.41	18.48	18.49	1.42	1.32	1.32	1.32
T12Wa_150m	150m	13.52	8.88	8.99	9.01	0.59	0.60	0.61	0.61	19.87	18.37	18.44	18.45	1.42	1.31	1.32	1.32
T12Wa_160m	160m	13.33	8.82	8.92	8.94	0.58	0.59	0.60	0.60	19.83	18.34	18.40	18.40	1.42	1.31	1.31	1.31
T12Wa_170m	170m	13.16	8.77	8.86	8.88	0.58	0.59	0.60	0.60	19.80	18.30	18.36	18.37	1.41	1.31	1.31	1.31
T12Wa_180m	180m	13.02	8.72	8.81	8.83	0.57	0.58	0.59	0.59	19.76	18.28	18.33	18.34	1.41	1.31	1.31	1.31

		Total Annual Mean NOx (µg/m3)				Total Annual Mean Ammonia NH3 (µg/m3)				Total Annual Mean Nitrogen Deposition				Total Annual Mean Acid Deposition			
Road Link	Distance from Road (m)	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Do Min	2038 Do Something	2017	2017 Future Base	2038 Ref	2038 Do Something
T12Wa_190m	190m	12.89	8.68	8.77	8.78	0.57	0.58	0.59	0.59	19.73	18.25	18.30	18.31	1.41	1.30	1.31	1.31
T12Wa_200m	200m	12.78	8.64	8.72	8.74	0.57	0.58	0.58	0.58	19.71	18.23	18.28	18.28	1.41	1.30	1.31	1.31
T14Ea_1m	1m	17.41	10.10	10.32	10.42	0.68	0.71	0.73	0.74	20.95	19.32	19.43	19.49	1.50	1.38	1.39	1.39
T14Ea_10m	10m	13.85	8.96	9.06	9.11	0.59	0.60	0.61	0.62	20.20	18.68	18.73	18.76	1.44	1.33	1.34	1.34
T14Ea_20m	20m	12.83	8.63	8.70	8.73	0.56	0.57	0.58	0.58	19.98	18.50	18.53	18.55	1.43	1.32	1.32	1.33
T14Ea_30m	30m	12.38	8.49	8.54	8.56	0.55	0.56	0.56	0.57	19.88	18.42	18.45	18.46	1.42	1.32	1.32	1.32
T14Ea_40m	40m	12.13	8.41	8.45	8.47	0.55	0.55	0.56	0.56	19.83	18.37	18.40	18.41	1.42	1.31	1.31	1.31
T14Ea_50m	50m	11.97	8.36	8.40	8.41	0.54	0.55	0.55	0.55	19.79	18.34	18.37	18.37	1.41	1.31	1.31	1.31
T14Ea_60m	60m	11.86	8.32	8.36	8.37	0.54	0.54	0.55	0.55	19.77	18.32	18.34	18.35	1.41	1.31	1.31	1.31
T14Ea_70m	70m	11.78	8.29	8.33	8.34	0.54	0.54	0.54	0.55	19.75	18.31	18.33	18.33	1.41	1.31	1.31	1.31
T14Ea_80m	80m	11.72	8.27	8.31	8.32	0.53	0.54	0.54	0.54	19.74	18.30	18.31	18.32	1.41	1.31	1.31	1.31
T14Ea_90m	90m	11.67	8.26	8.29	8.30	0.53	0.54	0.54	0.54	19.73	18.29	18.31	18.31	1.41	1.31	1.31	1.31
T14Ea_100m	100m	11.63	8.25	8.28	8.28	0.53	0.54	0.54	0.54	19.72	18.28	18.30	18.30	1.41	1.31	1.31	1.31
T14Ea_110m	110m	11.60	8.24	8.26	8.27	0.53	0.54	0.54	0.54	19.71	18.28	18.29	18.30	1.41	1.31	1.31	1.31
T14Ea_120m	120m	11.57	8.23	8.25	8.26	0.53	0.53	0.54	0.54	19.71	18.27	18.29	18.29	1.41	1.30	1.31	1.31
T14Ea_130m	130m	11.55	8.22	8.25	8.25	0.53	0.53	0.54	0.54	19.70	18.27	18.28	18.29	1.41	1.30	1.31	1.31
T14Ea_140m	140m	11.53	8.21	8.24	8.25	0.53	0.53	0.54	0.54	19.70	18.26	18.28	18.28	1.41	1.30	1.31	1.31
T14Ea_150m	150m	11.51	8.21	8.23	8.24	0.53	0.53	0.54	0.54	19.70	18.26	18.27	18.28	1.41	1.30	1.31	1.31
T14Ea_160m	160m	11.50	8.20	8.23	8.23	0.53	0.53	0.53	0.54	19.69	18.26	18.27	18.27	1.41	1.30	1.30	1.31
T14Ea_170m	170m	11.48	8.20	8.22	8.23	0.53	0.53	0.53	0.54	19.69	18.25	18.27	18.27	1.41	1.30	1.30	1.31
T14Ea_180m	180m	11.47	8.20	8.22	8.22	0.53	0.53	0.53	0.53	19.69	18.25	18.27	18.27	1.41	1.30	1.30	1.30
T14Ea_190m	190m	11.46	8.19	8.22	8.22	0.53	0.53	0.53	0.53	19.69	18.25	18.26	18.27	1.41	1.30	1.30	1.30
T14Ea_200m	200m	11.45	8.19	8.21	8.22	0.53	0.53	0.53	0.53	19.68	18.25	18.26	18.26	1.41	1.30	1.30	1.30
T15Wa_1m	1m	16.81	9.97	10.27	10.15	0.67	0.69	0.72	0.71	20.82	19.21	19.38	19.32	1.49	1.37	1.38	1.38
T15Wa_10m	10m	13.15	8.78	8.90	8.85	0.57	0.58	0.59	0.59	20.05	18.56	18.63	18.60	1.43	1.33	1.33	1.33
T15Wa_20m	20m	12.29	8.50	8.57	8.55	0.55	0.56	0.56	0.56	19.87	18.40	18.45	18.43	1.42	1.31	1.32	1.32
T15Wa_30m	30m	11.93	8.38	8.44	8.42	0.54	0.55	0.55	0.55	19.79	18.34	18.37	18.36	1.41	1.31	1.31	1.31
T15Wa_40m	40m	11.73	8.31	8.36	8.35	0.54	0.54	0.55	0.54	19.75	18.30	18.33	18.32	1.41	1.31	1.31	1.31
T15Wa_50m	50m	11.60	8.27	8.31	8.31	0.53	0.54	0.54	0.54	19.72	18.28	18.31	18.30	1.41	1.31	1.31	1.31
T15Wa_60m	60m	11.52	8.24	8.28	8.27	0.53	0.53	0.54	0.54	19.70	18.27	18.29	18.28	1.41	1.30	1.31	1.31
T15Wa_70m	70m	11.45	8.22	8.26	8.25	0.53	0.53	0.54	0.54	19.69	18.25	18.27	18.27	1.41	1.30	1.31	1.31
T15Wa_80m	80m	11.41	8.21	8.24	8.24	0.53	0.53	0.53	0.53	19.68	18.25	18.26	18.26	1.41	1.30	1.30	1.30
T15Wa_90m	90m	11.37	8.20	8.23	8.22	0.53	0.53	0.53	0.53	19.67	18.24	18.26	18.25	1.41	1.30	1.30	1.30
T15Wa_100m	100m	11.34	8.19	8.21	8.21	0.53	0.53	0.53	0.53	19.67	18.23	18.25	18.25	1.40	1.30	1.30	1.30
T15Wa_110m	110m	11.31	8.18	8.21	8.20	0.52	0.53	0.53	0.53	19.66	18.23	18.25	18.24	1.40	1.30	1.30	1.30
T15Wa_120m	120m	11.29	8.17	8.20	8.20	0.52	0.53	0.53	0.53	19.66	18.23	18.24	18.24	1.40	1.30	1.30	1.30
T15Wa_130m	130m	11.28	8.17	8.19	8.19	0.52	0.53	0.53	0.53	19.65	18.22	18.24	18.24	1.40	1.30	1.30	1.30
T15Wa_140m	140m	11.26	8.16	8.19	8.18	0.52	0.53	0.53	0.53	19.65	18.22	18.23	18.23	1.40	1.30	1.30	1.30
T15Wa_150m	150m	11.25	8.16	8.18	8.18	0.52	0.53	0.53	0.53	19.65	18.22	18.23	18.23	1.40	1.30	1.30	1.30
T15Wa_160m	160m	11.24	8.15	8.18	8.18	0.52	0.53	0.53	0.53	19.64	18.22	18.23	18.23	1.40	1.30	1.30	1.30

		Total Annual Mean NOx (µg/m3)				Total Annual Mean Ammonia NH3 (µg/m3)				Total Annual Mean Nitrogen Deposition				Total Annual Mean Acid Deposition			
Road Link	**Distance from Road (m)**	**2017**	**2017 Future Base**	**2038 Do Min**	**2038 Do Something**	**2017**	**2017 Future Base**	**2038 Do Min**	**2038 Do Something**	**2017**	**2017 Future Base**	**2038 Do Min**	**2038 Do Something**	**2017**	**2017 Future Base**	**2038 Ref**	**2038 Do Something**
T15Wa_170m	170m	11.23	8.15	8.17	8.17	0.52	0.53	0.53	0.53	19.64	18.21	18.23	18.23	1.40	1.30	1.30	1.30
T15Wa_180m	180m	11.22	8.15	8.17	8.17	0.52	0.53	0.53	0.53	19.64	18.21	18.23	18.23	1.40	1.30	1.30	1.30
T15Wa_190m	190m	11.21	8.14	8.17	8.17	0.52	0.53	0.53	0.53	19.64	18.21	18.22	18.22	1.40	1.30	1.30	1.30
T15Wa_200m	200m	11.21	8.14	8.16	8.16	0.52	0.52	0.53	0.53	19.64	18.21	18.22	18.22	1.40	1.30	1.30	1.30

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