

Habitats Regulations Assessment Methodology Paper

Joint Local Plan



Methodology for assessing atmospheric pollution impacts as part of the Habitats Regulations Assessment of the Joint Local Plan for South Oxfordshire and Vale of White Horse

April 2025

Introduction

- 1.1 This proposed methodology paper relates to three of the European Sites located in or close to the districts of South Oxfordshire and Vale of White Horse.
- 1.2 Cothill Fen Special Area of Conservation (SAC) is located to the north-west of Abingdon-on-Thames (within Vale of White Horse district), Oxford Meadows SAC is located to the north of Botley (within Oxford City, Cherwell and West Oxfordshire), and Aston Rowant SAC is located south-east of Lewknor (within South Oxfordshire and Buckinghamshire) as illustrated in **Figure 1** below¹.



Figure 1: European Sites (<https://magic.defra.gov.uk/MagicMap.aspx>)

¹ Little Wittenham SAC is not located within 200m of any roads that are expected to have experience increased traffic as a result of planned growth, so it not covered by this methodology paper

Habitats Regulations Assessment – Current Position

- 2.1 South Oxfordshire and Vale of White Horse District Councils (South & Vale) submitted the Joint Local Plan (JLP) for independent examination on the 9 December 2024. This was accompanied by an HRA report, a draft of which had previously been shared with Natural England and our neighbouring local authorities for review and comment.
- 2.2 A Statement of Common Ground was signed by Natural England and South & Vale on 9 December 2024. This Statement concluded that:
- ‘The parties agree that the South Oxfordshire and Vale of White Horse Joint Local Plan 2041 can be considered compliant with the Conservation of Habitats and Species Regulations 2017 (as amended), with regard to Aston Rowant SAC, Chiltern Beechwoods SAC, Cothill Fen SAC, Hackpen Hill SAC, Hartslock Wood SAC, Kennet & Lambourn Floodplain SAC, Little Wittenham SAC, Oxford Meadows SAC and River Lambourn SAC, for all impact pathways except for atmospheric pollution, on which further work will be undertaken.*
- The parties agree that they have engaged effectively and on an on-going basis during the plan making process, in accordance with the Duty to Cooperate.’*
- 2.3 Of the nine SACs listed above, three (Oxford Meadows, Cothill Fen and Aston Rowant) are located within close proximity of roads likely to experience more traffic as a result of planned development in our emerging Joint Local Plan 2041. They have, therefore, been ‘screened in’ for further assessment in relation to atmospheric pollution impacts.
- 2.4 Natural England is particularly interested in the impact of traffic growth on Oxford Meadows SAC. We understand this is because the Oxford Meadows SAC is situated near to the confluence of four of the five districts in Oxfordshire, as well as having two significant roads which bisect (A34) and extend immediately to the north (A40) of the SAC.
- 2.5 The Oxford Meadows SAC spans across three of the five Oxfordshire local authorities’ administrative areas. Part of the Oxford Meadows SAC is found within Oxford City Council’s administrative boundary, while the remainder lies within Cherwell and West Oxfordshire. However, additional traffic on the A34 and A40 from planned growth in Oxford, South and Vale, West Oxfordshire and Cherwell could increase atmospheric pollution along these road links.
- 2.6 There is no single Oxfordshire transport model available to test the cumulative effect of all the local plans in Oxfordshire. In determining how much housing and employment growth there could be which could generate traffic and affect the amount of atmospheric pollution close to the Oxford Meadows SAC, all five local planning authorities worked together with the County Council to

prepare a draft joint Explanatory Note on the approach to cumulative assessment of traffic flows associated with local plan growth potentially affecting the Oxford Meadows SAC. For this note, all authorities provided average daily traffic flows on the A40 and A34 in the vicinity of the SAC to show the cumulative impact. This information was extracted from the transport modelling prepared to inform each plan.

- 2.7 South and Vale prepared a draft HRA report (December 2024), which assessed the impact of traffic arising from the additional planned growth in the Joint Local Plan 2041, treating our existing allocated sites in both adopted local plans as being included in the baseline. This matched the approach taken for the last round of Oxfordshire local plans, and is consistent with Natural England's own [2018 guidance](#) on the assessment of road traffic emissions under the Habitats Regulations, as well as Defra's guidance on HRA.
- 2.8 Natural England requested in November/ December 2024 that South & Vale take account of all allocated sites in our adopted plans (i.e. the South Oxfordshire Local Plan 2035 and the Vale of White Horse Local Plan 2031 (Parts 1 & 2)) which are yet to come forward in the baseline. Such allocations would then be included within the traffic modelling for our HRA for the JLP 2041. To help us devise a suitable approach to assessing whether or not likely significant air pollution effects can be ruled out for Oxford Meadows, Cothill Fen or Aston Rowant SACs, Natural England pointed us to the 2018 HRA guidance document.
- 2.9 Natural England has also requested a base year of 2021 for the modelling, which ties in with the Air Pollution Information System (APIS) they use to monitor pollutants, but differs from the 2018 base year used for the OSM model in the Joint Local Plan's [transport evidence](#).
- 2.10 This methodology paper explains the revised approach that South and Vale propose to take to address the recommendations from Natural England.

Traffic Modelling (for South & Vale alone and together with South & Vale adopted plan growth)

- 3.1 We are mindful of the advice that Natural England has provided (both in its 2018 guidance and by email exchange following our latest meeting on 4 December – see **Appendix 1**) and we have given careful thought to how we can use the *best available evidence* (as per para 3.7 of the 2018 guidance) to provide the most accurate data from traffic modelling perspective.
- 3.2 We have also borne in mind that traffic modelling, Habitats Regulations Assessments and Air Quality Assessments were produced as key evidence documents to support the preparation of the (now adopted) Local Plans for South Oxfordshire and Vale of White Horse and that these documents were considered to comprise proportionate evidence at the respective

Examinations (see [correspondence from Natural England in relation to the South Local Plan 2035](#)) .

- 3.3 Natural England has advised that the, as yet undelivered, growth from our extant adopted plans needs to be re-assessed alongside any additional planned growth in the emerging Joint Local Plan for our two districts. Natural England has also requested that we model our base year (i.e. a time that represents 'now') on the latest year available in the national Air Pollution Information System, which is the year 2021.

Base year

- 3.4 The Air Pollution Information System (APIS) is a searchable database providing information on pollutants and their impacts on habitats and species in the UK. The data is presented as a 3-year average to reduce the stochasticity of weather conditions that influence air movements, temperature, and precipitation and in turn influence pollution deposition. APIS predicts concentrations and deposition combining a series of models with ambient measurements. The traffic flows which underpin the APIS predictions were often collected many years ago and are adjusted forward in time, based on regional trends. They do not, therefore, represent a precise snapshot of traffic levels in a given year.
- 3.5 South and Vale are working with specialist HRA consultants Urban Edge Environmental Consulting who are supported by Air Quality Consultants (AQC). They advise that the most relevant metrics for the Oxford Meadows SAC in APIS are NO_x pollution and nitrogen deposition to moorland (short vegetation). We understand that the NO_x pollution values are closely related to traffic flows, when compared to some other pollution categories, so we have reviewed the NO_x data over time.

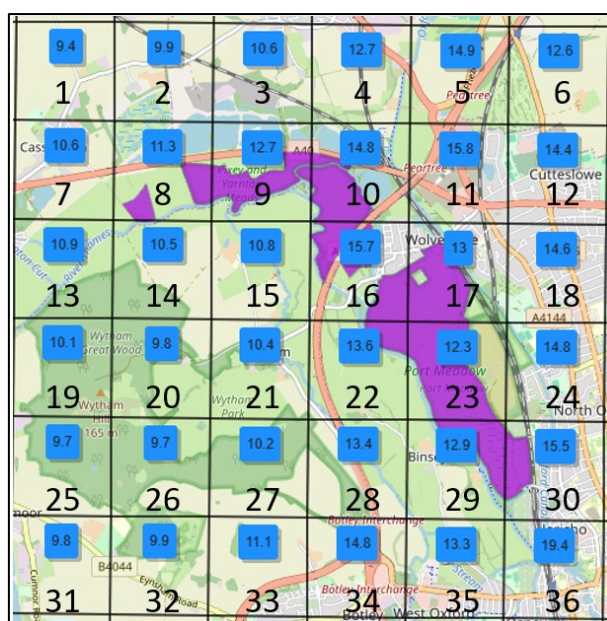


Figure 2: APIS data areas for Oxford Meadows, numbered to assist interpretation
(<https://www.apis.ac.uk/app>)

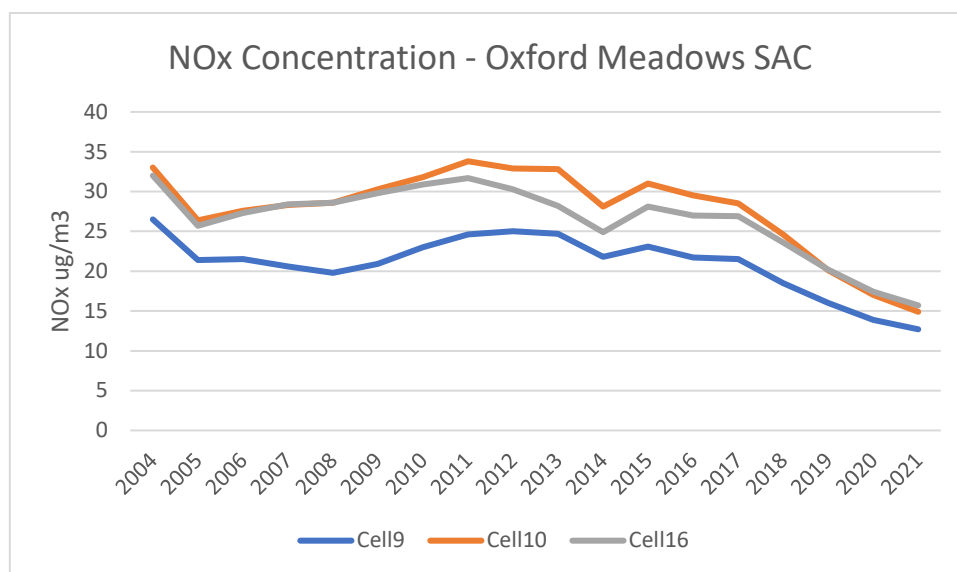
Table 1: NOx levels 2002-2022 (<https://www.apis.ac.uk/app>)

Three year average range	Stated Year	Cell9	Cell10	Cell16
		NOx value	NOx value	NOx value
2003-2005	2004	26.5	33	32
2004-2006	2005	21.4	26.4	25.7
2005-2007	2006	21.5	27.6	27.3
2006-2008	2007	20.6	28.3	28.4
2007-2009	2008	19.8	28.6	28.6
2008-2010	2009	20.9	30.3	29.8
2009-2011	2010	23	31.8	30.9
2010-2012	2011	24.6	33.8	31.7
2011-2013	2012	25	32.9	30.3
2012-2014	2013	24.7	32.8	28.2
2013-2015	2014	21.8	28.1	24.9
2014-2016	2015	23.1	31	28.1
2015-2017	2016	21.7	29.5	27
2016-2018	2017	21.5	28.5	26.9
2017-2019	2018	18.5	24.6	23.6
2018-2020	2019	16	20.1	20.2
2019-2021	2020	13.9	17	17.4
2020-2022	2021	12.7	14.9	15.7

3.6 **Table 1** (which uses the APIS cells numbered as per annotations in **Figure 2**) and **Chart 1** show a decline in the NOx concentrations over time from levels of around 30 ug/m³ in the early 2000s to around half that by 2021. The

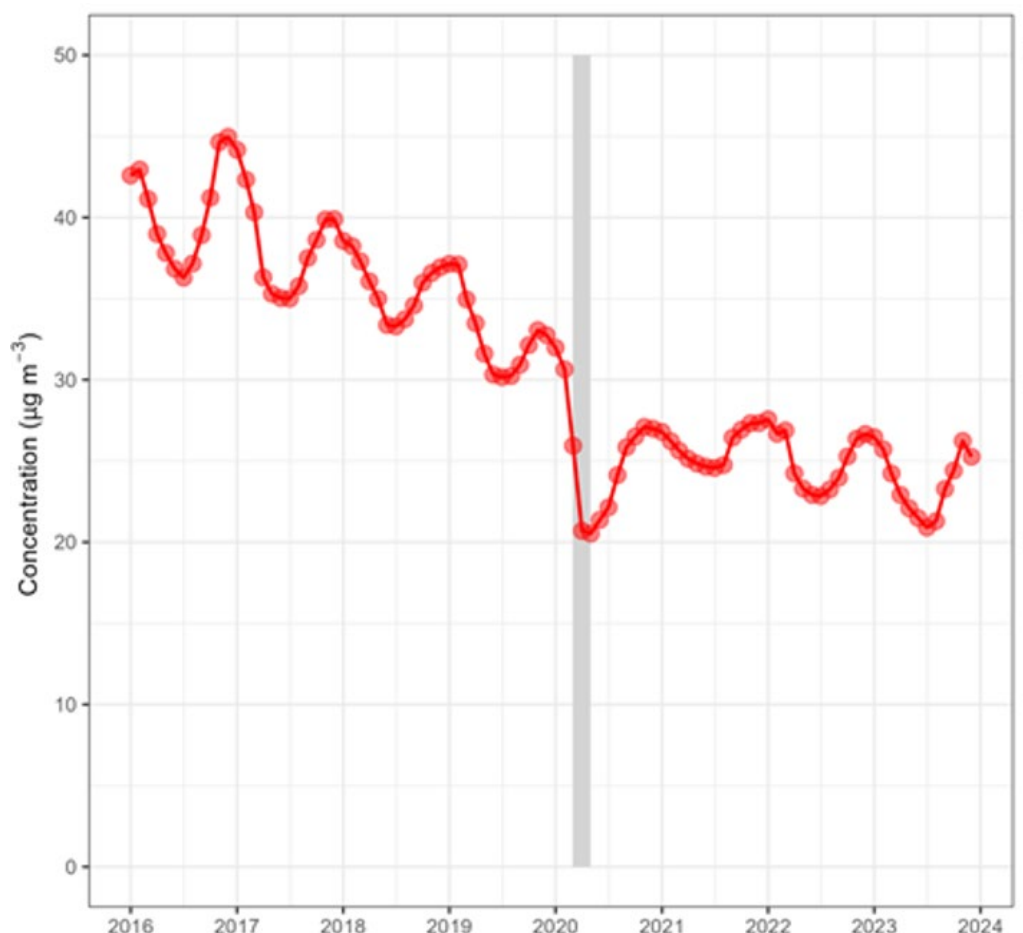
maximum critical load for the Oxford Meadow SAC is 30 ug/m³, this is therefore an improving picture.

Chart 1: Nitrogen Oxide concentrations for roads in Oxford Meadows SAC



- 3.7 The last 3 years (as highlighted in grey in **Table 1**) of APIS data available include years where COVID-19 lockdowns impacted traffic flows. It is clear that the 2020 and 2021 data years demonstrate a very significant and abnormal reduction in NOx pollution, which is to be expected from the national lockdowns for COVID-19 during those years (see **Chart 1**). Restrictions of varying degrees of severity that impacted movement were imposed from March 2020 to March 2021.
(<https://www.instituteforgovernment.org.uk/sites/default/files/timeline-lockdown-web.pdf>).
- 3.8 Trends reported on APIS are affected by changes to the underlying modelling methodology over the past 10 years, as well as by the relatively crude assumptions on activity levels and development growth. However, air quality monitoring has clearly shown both the long-term decline in nitrogen oxides concentrations and the temporary effect of the COVID-19 lockdowns. For example, **Chart 2** is reproduced from a report recently prepared on behalf of the Joint Nature Conservation Committee (JNCC), which extends an [analysis](#) previously published by Defra's Air Quality Expert Group (AQEG) highlighting the significant temporary effects of COVID-19 lockdowns on UK air quality.

Chart 2: Mean monthly ‘deweathered’ nitrogen dioxide concentrations from 2016 to 2024 at 175 monitoring sites with sufficient data capture across the UK.²



- 3.9 The latest year available on the APIS website is 2021, which is derived from a 3-year average of pollution data collected between 2020 and 2022. During around half of that time period the nation was under unprecedented pressures not to travel to reduce the spread of the COVID-19 virus. Consequently, it is our view that the validity of using APIS 2021 data for assessing the transport related pollution impact of the Joint Local Plan (and yet undelivered allocation sites) on the European sites is considerably compromised. The existing traffic modelling data we have for 2018 would give a more accurate (and less optimistic) picture for today than Covid-affected data.

Traffic Data

- 3.10 We have extracted data from Oxfordshire County Council’s (OCC) traffic count database and the National Highways (NH) online database (<https://webtris.highwaysengland.co.uk/>) to illustrate the impact of COVID-19

² The vertical grey bar shows the first COVID-19 lockdown

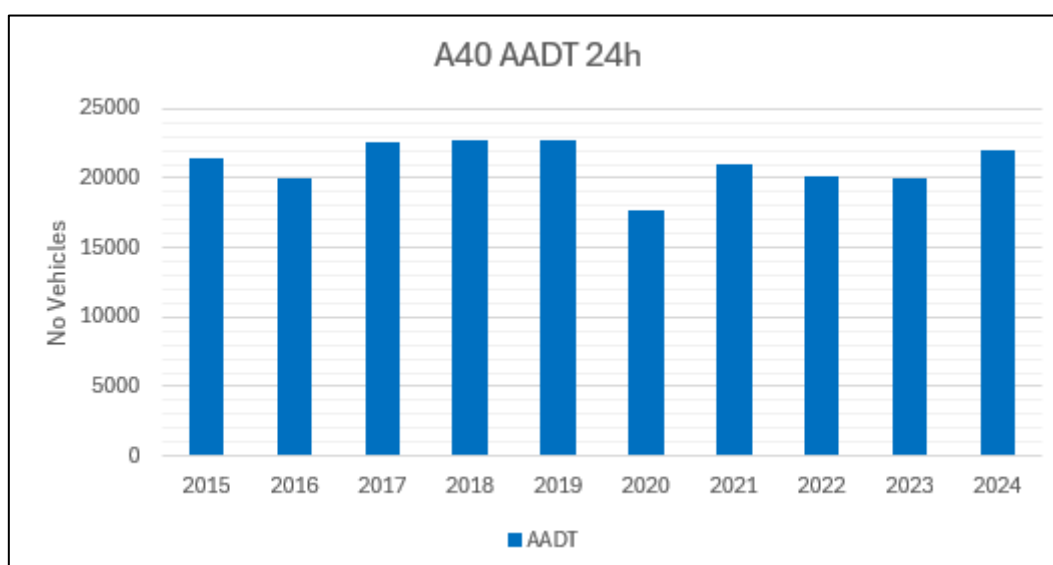
and the wider traffic flow characteristics over time for the three SACs situated within or close to the South and Vale districts.

3.11 Traffic flow data relates to the SACs as follows:

- Oxford Meadows – A40 (OCC data), A34 (NH data)
- Cothill Fen - A420 (OCC data, using the best data available nearest to the SAC)
- Aston Rowant – M40 (NH data)

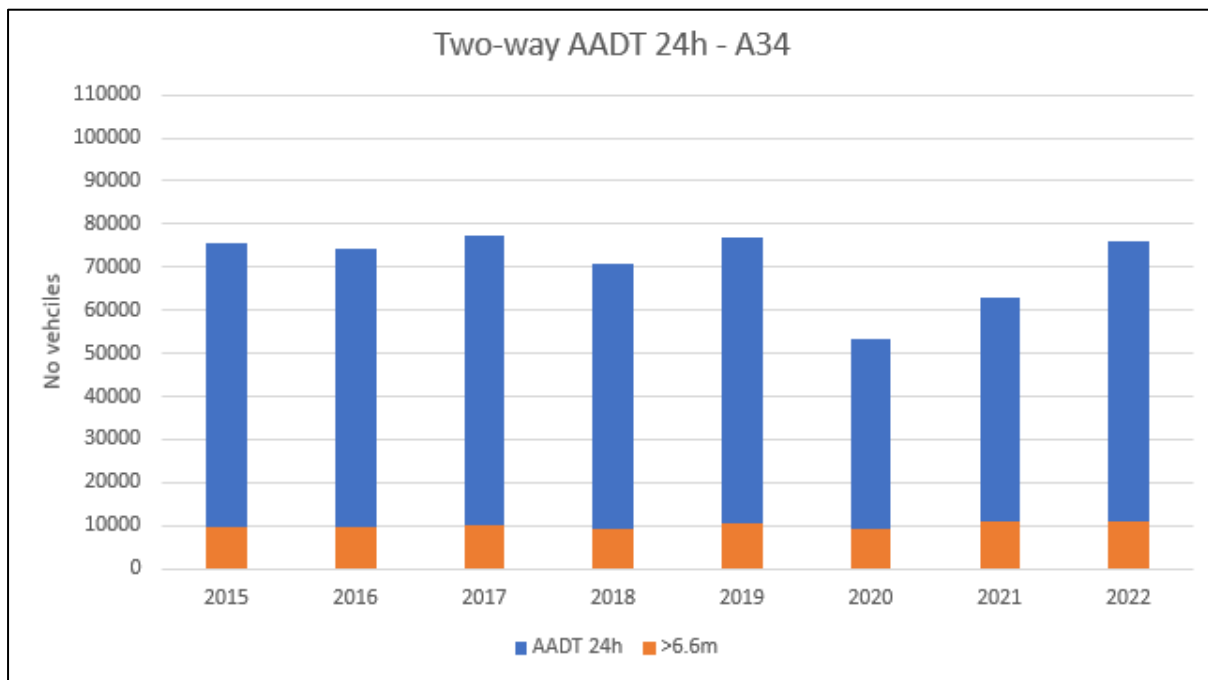
3.12 All traffic data is presented in 24h 7-day Annual Average Daily Traffic (AADT). Where HGV data is available this is shown (see **Chart 4** and **Chart 6** below).

Chart 3: Oxford Meadows – A40 AADT



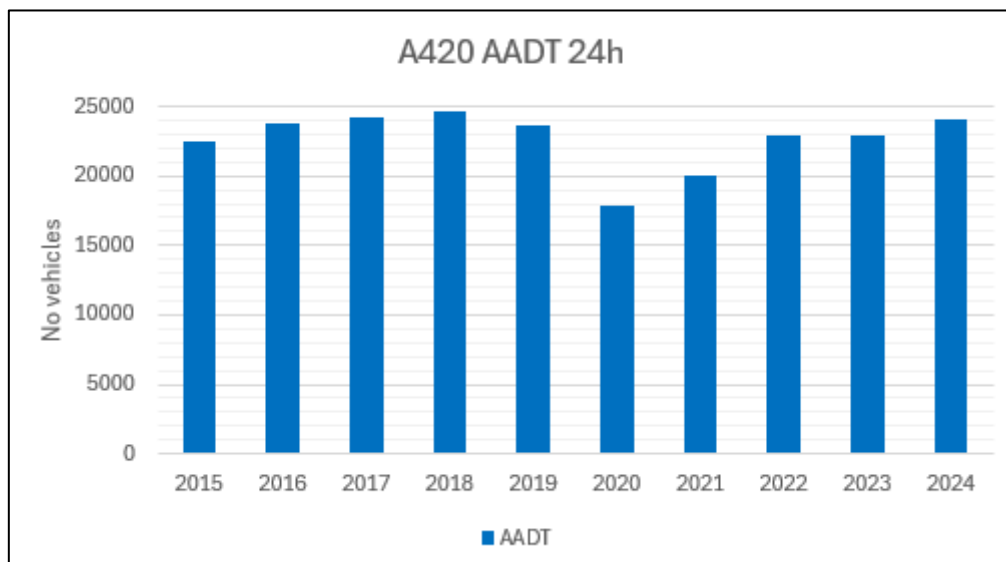
3.13 The OCC traffic flow collection point for the A40 near Cassington is considered the most suitable for reviewing traffic flows for Oxford Meadows SAC (see Excel spreadsheet at **Appendix 3** for further information).

Chart 4: Oxford Meadows – A34 AADT



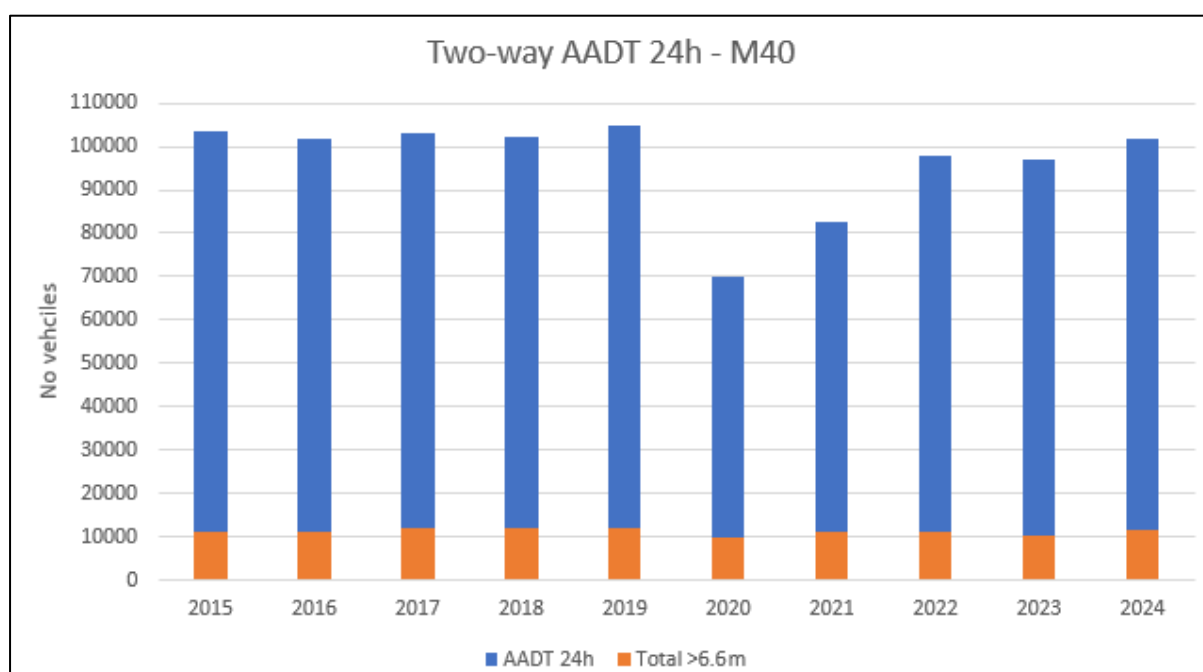
3.14 The NH traffic flow collection point for the A34 near Wytham is considered the most suitable for reviewing traffic flows for Oxford Meadows SAC (see Excel spreadsheet at **Appendix 4** for further information).

Chart 5: Cothill Fen – A420 AADT



3.15 The OCC traffic flow collection point for the A420 near Besselsleigh is considered the most suitable for reviewing traffic flows for Cothill Fen SAC. Traffic flow data for the years required is not available on the minor roads which pass near Cothill Fen SAC (see Excel spreadsheet at **Appendix 5** for further information).

Chart 6: Aston Rowant – M40 AADT



- 3.16 The NH traffic flow collection point for the M40 near Stokenchurch is considered the most suitable for reviewing traffic flows for Aston Rowant SAC (see Excel spreadsheet at **Appendix 6** for further information).
- 3.17 All four traffic flow datasets illustrate a marked reduction in traffic in 2020, as well as a part reduction in flows for 2021. This correlates with the aforementioned restrictions in movement associated with the COVID-19 lockdowns.

Annual Monitoring Data for Oxfordshire

- 3.18 Monitoring the delivery of new homes forms part of the Authority Monitoring Report (AMR) for each Oxfordshire district ([Cherwell](#), [Oxford City](#), [Vale of White Horse](#), [South Oxfordshire](#), and [West Oxfordshire](#)). A summary of the housing data is shown in **Table 2**.

Table 2: AMR housing delivery data for all Oxfordshire authorities

Net no. homes delivered	1 April 2014 to 31 March 2015	1 April 2015 to 31 March 2016	1 April 2016 to 31 March 2017	1 April 2017 to 31 March 2018	1 April 2018 to 31 March 2019	1 April 2019 to 31 March 2020	1 April 2020 to 31 March 2021	1 April 2021 to 31 March 2022	1 April 2022 to 31 March 2023	1 April 2023 to 31 March 2024
Cherwell	946	1425	1102	1387	1489	1159	1192	1188	1318	Not yet available
Oxford City	-	-	419	367	358	790	711	581	554	365
Vale of White Horse	739	1132	1575	1556	1258	1598	1109	1211	1360	Not yet available
South Oxfordshire	600	615	722	935	1369	1478	868	972	Not yet available	Not yet available
West Oxfordshire	395	246	518	556	813	1086	868	1002	729	Not yet available
Total per AMR year	-	-	4336	4801	5287	6111	4748	4954	-	-
Total reported since April 2016	-	-	-	-	-	-	-	-	-	40,661

- 3.19 The AMR housing data illustrates that, since April 2014, there have been 40,661 new homes delivered, 19,097 of which are in South and Vale. Employment development will have also occurred in this time. Although these new homes (and employment spaces) may not all generate demand on the roads reviewed under the 'Traffic Data' section, some will, and it is evident that this has not caused an increase in traffic on those roads. This suggests that highway capacity is the limiting factor, as opposed to demand for travel arising from new development.

Available Traffic Forecasting Data

- 3.20 The Oxfordshire Strategic Model (OSM) was used to identify the traffic impact of the proposed Joint Local Plan (JLP) on the road network. The model was validated for the year 2018 (the base year), where traffic flow data from OCC's traffic counts was used to confirm the suitability/accuracy of the model's operation.
- 3.21 To test the traffic impact of planned development arising from new housing and employment sites allocated in the emerging JLP, two OSM future year model runs were completed for 2041:
- The '*do nothing*' scenario - assumes that the JLP is not adopted and the new sites are therefore not developed
 - The '*do something*' scenario - assumes that the JLP is adopted and these sites are developed over the plan period.
- 3.22 **Figure 3** and **Figure 4** below illustrate which sites are included in the 'do nothing' and 'do something' scenarios.

Figure 3: Housing Allocations in OSM

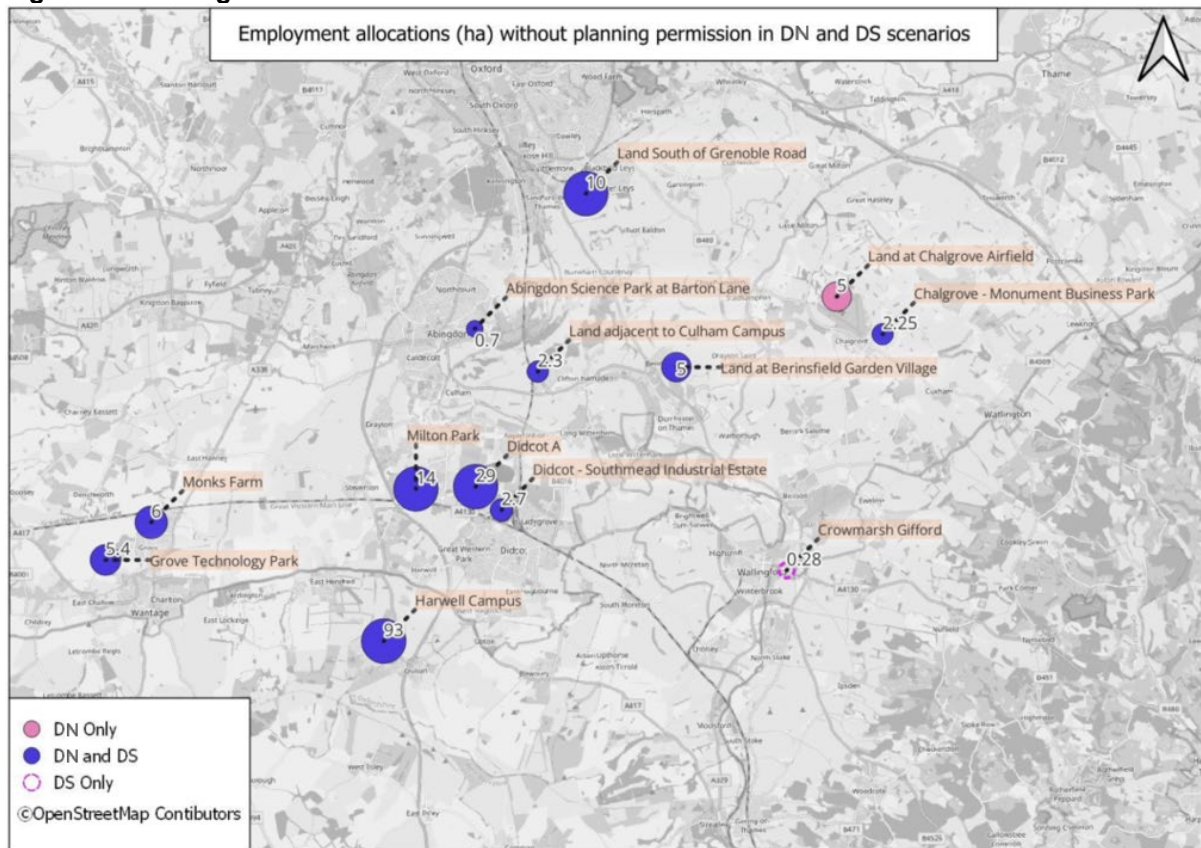
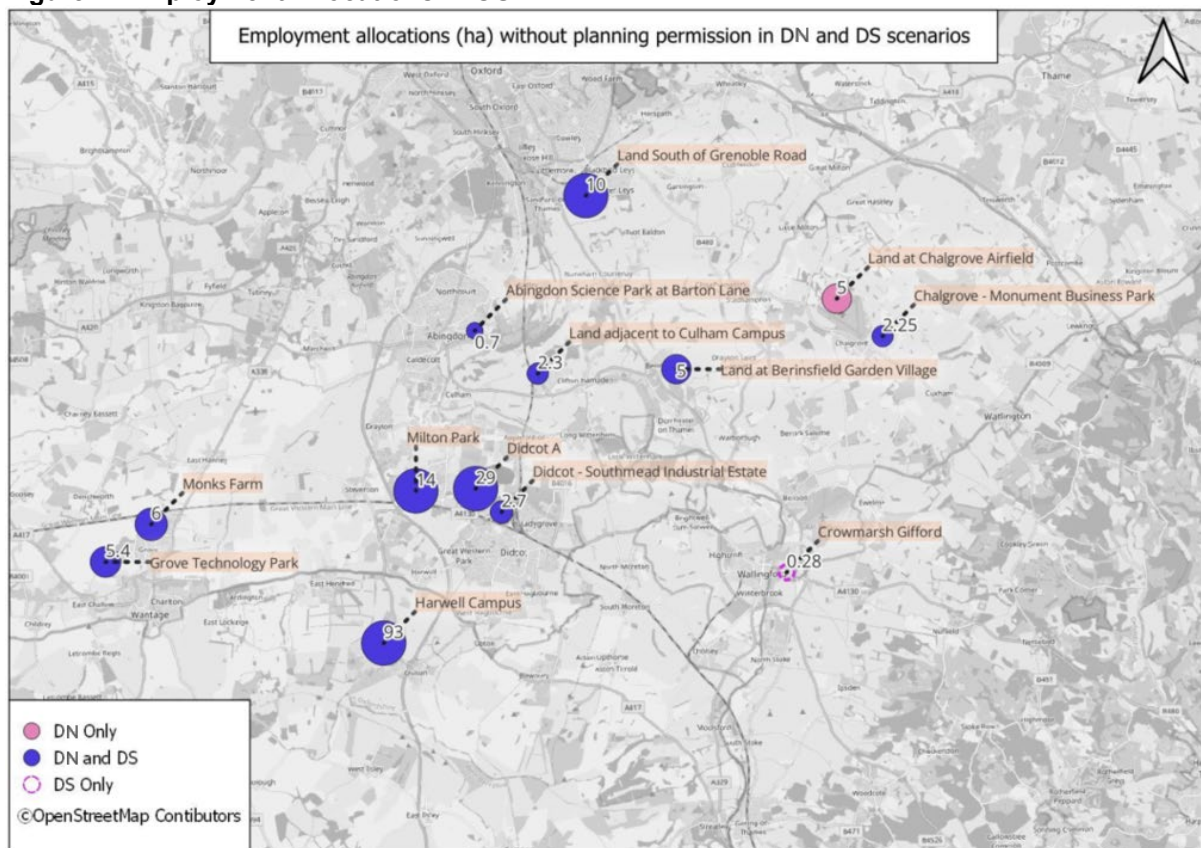


Figure 4: Employment Allocations in OSM



[NB: Crowmarsh Gifford has since been removed as an employment allocation in the JLP]

- 3.23 In accordance with DfT guidance, the OSM model run without the JLP (the '*do nothing*' scenario) includes adopted local plan traffic flow predictions for South Oxfordshire, Vale of White Horse, West Oxfordshire, Oxford City and Cherwell, alongside TEMPRO traffic growth for areas outside of the County.
- 3.24 The '*do something*' OSM model run with the JLP included the planned housing and employment growth in South Oxfordshire and Vale of White Horse contained in the emerging JLP. For modelling robustness we considered that all planned growth in adopted Local Plans and proposed growth in the JLP would be delivered during the plan period (2041), however in reality we do not expect all homes and employment sites to be delivered by 2041, as the build-out trajectories for many of the larger allocations mean that these sites will continue to deliver in the years beyond 2041. Consequently, our approach is likely to over-estimate traffic by 2041, so can be viewed as a precautionary worse-case scenario.

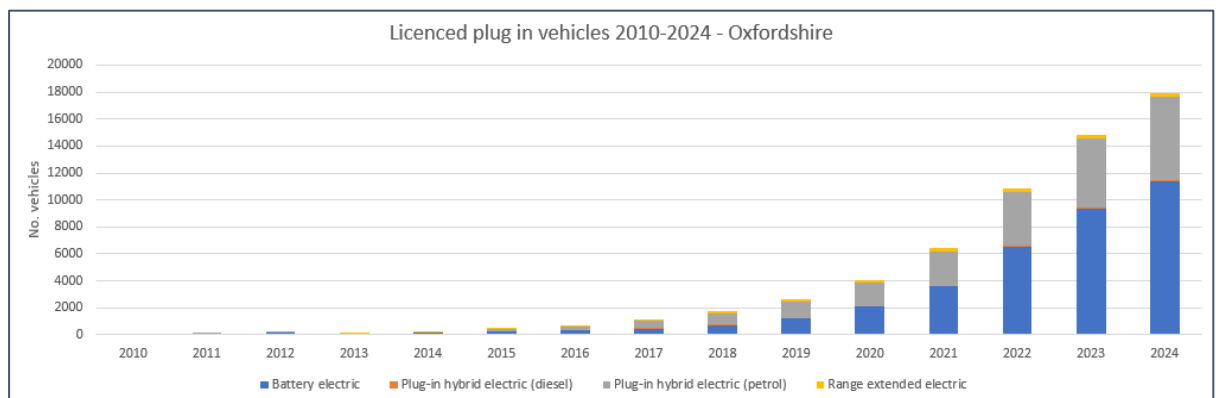
Summary of current approach to traffic modelling

- 3.25 In light of the APIS database, traffic flow data and OSM data available, as well as the request from Natural England to consider undelivered planned growth in adopted plans we consider the following approach to be robust:
1. Given that the flow data in 2018 and 2021/2024 is similar, we propose to use the base year used in the OSM model run for 2018 as the starting year, representing 'today' (so the data is not affected by the dip in traffic during the Covid pandemic).
 2. As we did for the published HRA, we will use the difference between the 'do-something' traffic scenario and the 'do-nothing' traffic scenario to calculate the traffic volumes associated with the JLP alone.
 3. We will also use the JLP 2041 model run as the future year and compare this to the base year (2018) to assess the impacts of an additional scenario which includes the JLP plus South & Vale adopted but undelivered plan growth. In doing so, we are over-estimating the impact of the JLP in two ways:
 - i. we are not discounting developments that have come forward between 2018-2025 (a base year of 2021 would discount the growth in years 2018-2021 from the impact of the JLP); and
 - ii. we assume that all planned growth will be delivered by 2041, although we expect delivery of some development sites to occur over a longer timescale.
- 3.26 Furthermore, if we were to take the 2021 NOx rates from the APIS website and associated suppressed traffic flows, this would artificially suppress the starting point for assessing the impact of the JLP.

- 3.27 For the reasons set out above, we believe this approach uses the best available evidence to support the assessment of atmospheric pollution impacts, which itself forms a critical part of the HRA for the South Oxfordshire and Vale of White Horse Joint Local Plan. This approach also does not take into account the fact that no additional growth in traffic was recorded as a result of significant housing and employment development occurring in Oxfordshire between 2014-2024 (as demonstrated by the AMR and traffic data).

Characteristics of Traffic

- 3.28 From an air quality perspective, we will also assess the local uptake of electric vehicles (EVs), which is expected will influence traffic-related pollution levels through limiting tailpipe emissions, with increasing effect over time. The uptake (licensed plug-in by local authority) of EVs for Oxfordshire is presented below, illustrating the considerable change in licensed EVs from 2010 – 2024.



Approach to 'in-combination' assessment

- 3.29 This methodology paper sets out how South and Vale will establish the potential impacts on air quality at the three SACs 'screened in' to the HRA assessment process. In line with [Government's Transport Analysis Guidance](#) (TAG) our traffic modelling includes the impacts arising from all the Oxfordshire authorities' adopted local plans. We will continue to engage with Natural England and our neighbouring Oxfordshire districts regarding the assessment of in-combination air quality impacts on Oxford Meadows SAC and have a meeting scheduled for 26 February to discuss this matter.

[Note: Additional details of the in-combination assessment can be found in the AQ Modelling Non-technical Briefing Note]

Air Quality Assessment

- 4.1 Concentrations and deposition will be predicted over an area extending 200m from each affected road which passes through a relevant designated site.

Only those roads within 200 m of designated sites will be included in the air quality modelling. Predictions will be made of:

- Annual mean nitrogen oxides concentrations;
- Annual mean ammonia concentrations;
- Annual mean nutrient nitrogen deposition; and
- Annual mean acid deposition.

- 4.2 NO_x emissions from road traffic will be predicted using Defra's latest Emissions Factors Toolkit ([EFT](#)) (currently version 12.1). Ammonia emissions from road traffic will be predicted using AQC's CREAM model. Dispersion modelling will use the ADMS-Roads model, following [guidance](#) published by the Institute of Air Quality Management. Deposition will be calculated using annual mean velocities issued by the Air Quality Technical Advisory Group ('AQTAG06'). Background concentrations and deposition in 2018 and 2021 will be taken from APIS. Future changes to background NO_x concentrations will be predicted using [maps](#) published by Defra. Future changes to background ammonia and deposition fluxes will be predicted using the numerical values which underpin maps published as part of JNCC's [Nitrogen Futures](#) (unless Natural England's update to this modelling is published in time to be used).
- 4.3 The EFT and CREAM both take account of Defra's forecasts of how the road vehicle fleet will change in the future, including the uptake of electric vehicles. This means that the emissions per vehicle change by year. These assumptions will be compared with local reported trends to add context, but the future predictions will be based on Defra and the Department for Transport's official statistics.
- 4.4 Air quality modelling will use the three sets of traffic flows (2018, and 2041 with and without the JLP) to quantify the changes to concentrations and deposition caused by the JLP alone and in-combination with other plans and projects.
- 4.5 In order to define current air quality conditions and to calibrate the model against available measurements, we will use the 2018 baseline dataset which represents 2018 traffic volumes with 2018 emissions per vehicle and 2018 background values. This will allow calibration of the model to take a realistic but precautionary approach.

Appropriate Assessment Methodology

- 5.1 The results of the air quality modelling will inform further screening of the potential for likely significant air pollution effects. Where the air quality modelling shows that, for any of the roads within 200m of a European site, the Process Contribution (PC) of nitrogen oxides, nutrient nitrogen or ammonia

associated with the JLP alone or in combination exceeds 1% of the critical level / load then these roads will be screened in for Appropriate Assessment. Where the PC is less than 1% of critical level / load, those roads will be screened out as likely significant effects are unlikely to occur.

- 5.2 The outputs of the air quality dispersion modelling will then be used to inform an Appropriate Assessment of the potential for the changes in pollutant levels associated with the JLP alone, the JLP plus South & Vale adopted plan growth and the JLP in-combination with emerging plans to have an adverse effect to the integrity of any of the three European sites (Oxford Meadows SAC, Aston Rowant SAC and Cothill Fen SAC).
- 5.3 The Appropriate Assessment will follow a series of steps described below and summarised in **Appendix 2** (at the end of this document).

Consider the European Site's Conservation Objectives

- 5.4 For each of the three pollutants under consideration, the Process Contribution (PC) will be combined with the pollutant baseline to identify the Predicted Environmental Concentration (PEC) which will be displayed on air pollution contour plots. Contour plots will also be provided to map any areas where the 1% threshold is exceeded.
- 5.5 The PEC will be compared to the environmental benchmark for each of the qualifying features of the SAC(s) (critical level / load taken from APIS):
- Where the PEC for a pollutant falls below the critical level / load and the site's conservation objectives are to 'maintain the concentrations and deposition of air pollutants at current levels of below the relevant benchmarks' then adverse effects to integrity will be ruled out at that location.
 - Where the PEC for a pollutant exceeds the critical level / load and the site's conservation objectives are to 'maintain the concentrations and deposition of air pollutants at current levels of below the relevant benchmarks' then further investigation will be undertaken to establish possible adverse effects to integrity.
 - Where the site's conservation objectives are to 'restore the concentrations and deposition of air pollutants to within the relevant benchmark values' then further investigation will be undertaken to establish possible adverse effects to integrity.

Consider whether the sensitive qualifying features of the site would be exposed to emissions

- 5.6 The location of each exceedance will be related to the location of qualifying features at the European site in question. The location of qualifying features will be established using a combination of MAGIC priority habitat mapping and site surveys. Where there is no exposure, adverse effects to integrity will be ruled out.
- 5.7 Where an exceedance of the critical level / load occurs in a location where qualifying features are present, further investigation will be undertaken to ascertain whether, in view of the site's conservation objectives, should the plan go ahead, there will be no adverse effects from it on the site's integrity so that the sites' conservation objectives will not be undermined.

Further investigation to establish adverse effects to integrity

- 5.8 A number of factors will inform further assessment of the potential for adverse effects to integrity. These include:
- The degree of overall change in pollutant levels together with the degree of exceedance above critical level / load;
 - The spatial scale and duration of predicted impact and the ecological functionality of the affected area;
 - Trends in background data for each pollutant and sources of background air pollution, particularly contribution of road transport (APIS data);
 - Site evidence of existing impacts from air pollution from similar sources; and
 - Topography in the areas of exceedance.

Mitigation

- 5.9 Where there is deemed to be a risk of adverse effects to integrity we will work closely with Natural England to develop a mitigation strategy. Measures will need to be capable of preventing adverse effects on site integrity for the duration of the impact.
- 5.10 The A40 and A34 are outside local authority control and therefore the Councils will be more limited in the scope of their interventions.

Appendix 1

Copy of email response from Bella Jack, Natural England – 5 December 2024

Please find below some initial answers that I hope will help with the revised Air Quality Assessment for the joint local plan.

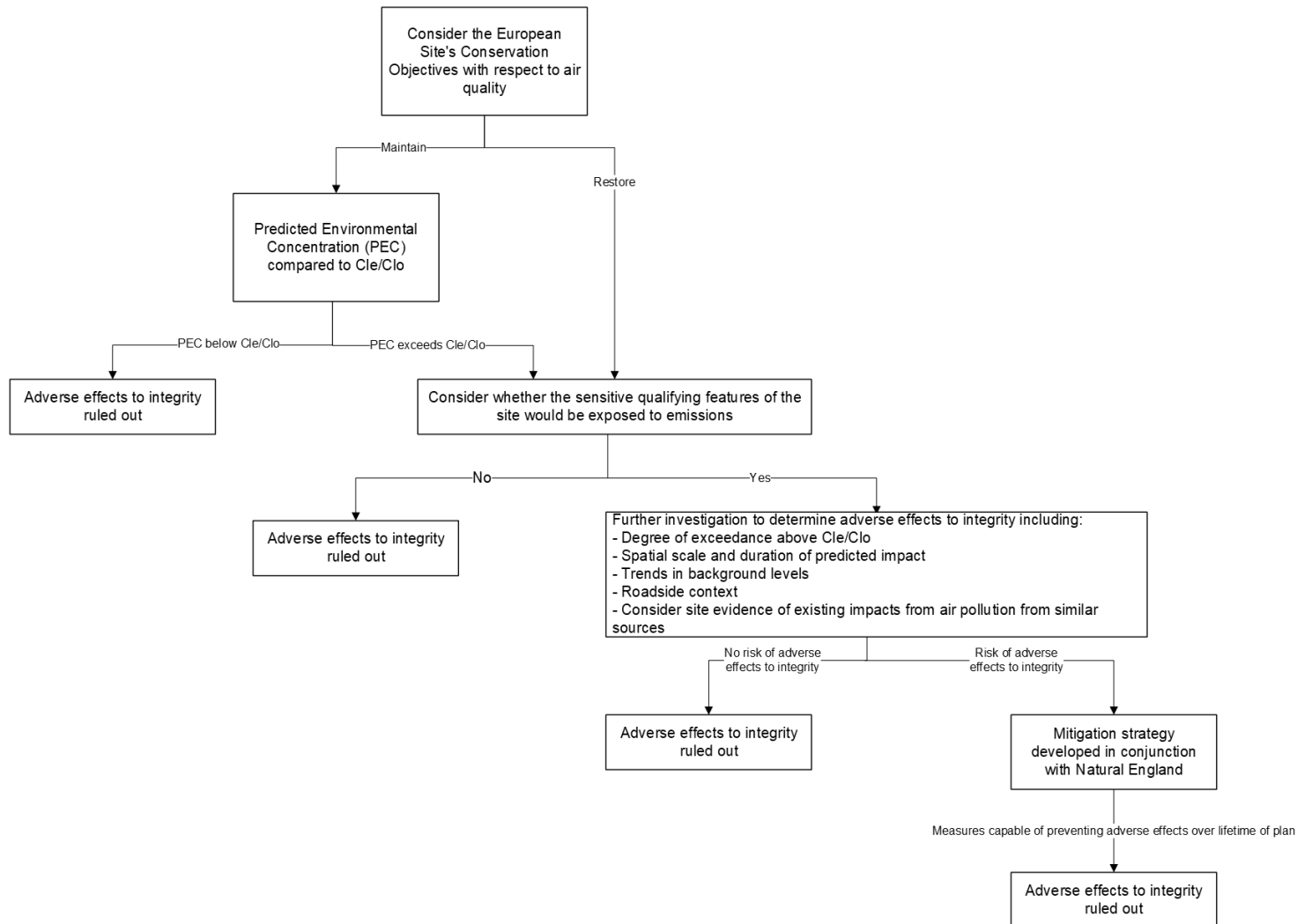
With regards to the reliance on existing HRAs – our understanding is that the guidance doesn't mean a reliance on a previous local plan HRA, but that if a nearby LPA had done an HRA on the same sites and their contribution wouldn't have changed the outcome then this conclusion can be used.

1. What can be included in the baseline? Are they able to include all sites that have permission (regardless of the stage of build out they are at) as part of the baseline? Or can they take this further to include any site allocated within the existing local plan but could be built out anytime before the new plan is adopted? **An AQ model needs to consider the AQ background baseline and that is taken from APIS i.e. APIS run on a 3 year average and recommend using the mid point. Proper dates would need to be checked on APIS but I think they last updated in 2022 (3 year average of 2020 – 2022) so their baseline AQ background would be dated 2021. Basically anything built out up to 2022 would be included in the AQ background. Anything that has not been built out since 2022 would need to be included in their AQ model (roughly – as you could never get this exact).**
2. If the base year of the existing data is 2018, with a future year of 2041, are they able to use the data they already have and break that data down on a per annum basis to reach today (i.e 2024)? **No – there needs to be an up to date AQ model of their Local Plan contributions against the AQ background on APIS. The local plan should not be considered against an out of date scenario.**
3. Are you able to offer any clarification around the meaning of point 4.47 of the 2018 AQ guidance? If S&V redo their AQ assessment and find there is an alone impact which they take to AA, what do they then have to consider as part of the in-combination assessment? **If they have an impact alone then they can do an AA on that. It's only if they could mitigate their entire impact then that there wouldn't be a need to look at in combination. As any residual impacts would need to be part of an in combination assessment. It would be a rare case that could mitigate their entire impact.**

I hope the above helps, please do get in touch with any further questions.

Appendix 2: Summary of Appropriate Assessment Methodology

Appropriate Assessment Flow Chart



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