

Proposed Mixed Use Development Sandlesford Park, Newbury, West Berkshire

APP/25 Proof of Evidence – Nigel Mann, Air Quality

A106825-1

Bloor Homes and the Sandlesford Farm Partnership

6th April 2021

Prepared by Tetra Tech Limited (Formerly WYG)

Tetra Tech Limited

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1.0 INTRODUCTION

1.01 My name is Nigel Mann. I am currently employed as a Director - Environmental Scientist at the Leicester office of Tetra Tech Limited.

Qualifications and Experience

1.02 I am a Member of the Institute of Environmental Management and I hold the degree of Master of Science in Environmental Science.

1.03 I have twenty-three years' experience in air quality assessment, management and enforcement. I have been employed by Tetra Tech (Tt) formerly WYG Planning Environment and Transport Ltd (WYG) since January 2001, where I currently manage the Acoustics, Air Quality, Lighting and Odour teams nationally for Tetra Tech.

1.04 I have been involved with air quality assessments at the site from 2014 and have been responsible for undertaking the modelling and reviewing the air quality assessments. I am therefore familiar with the appeal site and the surrounding area and have made myself aware of the relevant policy background and issues relating to this appeal.

1.05 The evidence which I have prepared and provide for this appeal is true and has been prepared and is given in accordance with the guidance of my professional institution and I confirm that the opinions expressed are my true and professional opinions.

Instruction

1.06 This statement has been prepared on behalf of Bloor Homes and the Sandleford Farm Partnership (hereafter referred to as "the Appellant") by Tetra Tech Limited (Formerly WYG Environment Planning Transport Ltd). It is submitted in support of an appeal against the decision of West Berkshire District Council to refuse planning permission for the erection of up to 1,000 new homes; an 80 extra care housing units as part of the affordable housing provision; a new 2 form entry primary school; expansion land for Park House Academy School; a local centre to comprise flexible commercial floorspace; the formation of new means of access onto Monks Lane; new open space including the laying out of a new country park; drainage infrastructure; walking and cycling infrastructure and other associated infrastructure works. Planning Application ref: 20/01238/OUTMAJ (Appeal Reference: APP/W0340/W/20/3265460).

Scope

1.07 This proof of evidence provides supporting technical evidence that the effect of the proposed mixed use development at Sandleford Park will be acceptable with regard to air quality and to dispute the reason for refusal number 12 as stated in the notice of decision dated 2nd June 2020 which states:

The proposed development could have potential significant effects on European Designated Special Areas of Conservation (SAC), namely Kennet Valley Iderwoods SAC, Kennet and Lambourn

Floodplain SAC and the River Lambourn SAC. With regard to the Conservation of Habitats and Species Regulations 2017, the proposal provides insufficient information regarding the likely impacts on air quality of the development proposed. The lack of provision prevents the necessary assessment of the potential significant effects on these SACs and any necessary mitigation required. The proposal does not include the information that is necessary to determine the significance of these impacts and the scope for mitigation.

The lack of sufficient information is contrary to the Conservation of Habitats and Species Regulations 2017, Policies CS17 of the West Berkshire Core Strategy Development Plan Document (CS DPD, adopted July 2012) and Policy GS1 of the West Berkshire Housing Sites Allocations Development Plan Document (2006-2026) (HSA DPD, adopted May 2017).

- 1.08 Further to this, additional comments and objections have been raised by third party members and Rule 6 Parties. This proof of evidence seeks to provide supporting evidence in response to these comments on Air Quality grounds.
- 1.09 This evidence shows that the development of the land at Sandleford Park is acceptable regarding Air Quality.

Structure of Statement

- 1.10 I have produced this statement to support the appellant's case and dispute the reasons for refusal number 12. It considers the air quality effects of the proposal and shows that the reason for refusal number 12 is not justified and that the application should not have been refused on grounds of adverse impact on air quality.
- 1.11 This evidence refers to the main technical reports for Air Quality (ref A106825-1 Air Quality Assessment, dated 15th January 2020) [CD1.9] and further supplementary documentation (ref A106825-1 Air Quality Technical Note dated 18th September 2020) Appendix APP/26/A.

2.0 BACKGROUND TO THE APPEAL

The Appeal Site

- 2.01 The appeal site includes land to the south of Monks Lane, to the south of the A343/Andover Road. The site is undeveloped, including open grassed land and Ancient Woodland areas within the site. The site is crossed by a Public Right of Way (PRoW) connecting Warren Road at the western extent of the site to A339 at the eastern extent of the site.
- 2.02 The application site includes an area of land of approximately 114 hectares.

Site Surroundings and Context

- 2.03 The site is located to the south of Monks Lane, Newbury. The site is located within a greenfield area designated as the Sandleford Strategic Site Allocation (SSSA), with close proximity to facilities and services in Newbury town centre and is also close to other retail and educational facilities. The mixed-use development is proposed to contain a local centre to deliver day-to-day shopping needs, and employment provision will be made at the site to assist in the creation of a sustainable community.
- 2.04 Bus services operate on Andover Road to the west of the site, Monks Lane to the north and Newtown Road to the east. The nearest rail stations are at Newbury (1.5 km to the north) and Newbury Racecourse (1.9 km to the north east).

3.0 RELEVANT POLICY, GUIDANCE AND CRITERIA

3.01 The reason for refusal number 12 references Policy CS17 of the West Berkshire Core Strategy Development Plan Document (CS DPD, adopted July 2012) [CD8.2] and Policy GS1 of the West Berkshire Housing Sites Allocations Development Plan Document (2006-2026) (HSA DPD, adopted May 2017) [CD8.3].

3.02 Policy CS17: Biodiversity and Geodiversity states:

Biodiversity and geodiversity assets across West Berkshire will be conserved and enhanced. Habitats designated or proposed for designation as important for biodiversity or geodiversity at an international or national level or which support protected, rare or endangered species, will be protected and enhanced. The degree of protection given will be appropriate to the status of the site or species in terms of its international or national importance.

Development which may harm, either directly or indirectly,

- *locally designated sites (Local Wildlife Sites and Local Geological Sites), or*
- *habitats or species of principal importance for the purpose of conserving biodiversity, or*
- *the integrity or continuity of landscape features of major importance for wild flora and fauna*

will only be permitted if there are no reasonable alternatives and there are clear demonstrable social or economic benefits of regional or national importance that outweigh the need to safeguard the site or species and that adequate compensation and mitigation measures are provided when damage to biodiversity/geodiversity interests are unavoidable.

In order to conserve and enhance the environmental capacity of the District, all new development should maximise opportunities to achieve net gains in biodiversity and geodiversity in accordance with the Berkshire Biodiversity Action Plan and the Berkshire Local Geodiversity Action Plan. Opportunities will be taken to create links between natural habitats and, in particular, strategic opportunities for biodiversity improvement will be actively pursued within the Biodiversity Opportunity Areas identified on the Proposals Map in accordance with the Berkshire Biodiversity Action Plan.

3.03 In the context of the reason for refusal, GS1: General Site Policy states:

An integrated water supply and drainage strategy will be provided in advance of development to ensure the provision of adequate and appropriate infrastructure for water supply and waste water, both on and off site. Development will be occupied in line with this strategy. All sites that are not connected to the mains sewerage system will ensure there are no deleterious effects to Special Areas of Conservation (SACs) and river and wetland Sites of Special Scientific Interest (SSSIs).

3.04 The issues raised within the reason for refusal reference the potential air quality impact of the development at Sandleford Park on the ecological sites within the vicinity of the development site. However, no definitions

of the terms 'harm', 'conservation' or 'enhancement' are given in either the local plan or any supplementary planning guidance.

- 3.05 I have undertaken a review of relevant guidance and the most relevant guidance with regard to the effects of Air Quality on habitats at the time of the application is IAQM's *A guide to the assessment of air quality impacts on designated nature conservation sites* this guidance document was published in June 2019 [CD16.1], and further updated in May 2020 [CD16.2], which states that there are two categories of pollutants typically assessed within air quality assessment designated sites. These are pollutants that have an effect on vegetation/habitats in a gaseous form and those which have an impact through deposition. Further to this I have also undertaken a review of The Chartered Institute of Ecology and Environmental Management (CIEEM) Advisory Note on the Ecological Assessment of Air Quality Impacts [CD16.3]. This guidance was produced in January 2021 subsequent to the planning application.
- 3.06 I have reviewed the relevant guidance and have determined that the best available guidelines are contained within the IAQM guidance. This document shows the relevant Critical Levels for important gaseous pollutants. The Critical Levels are determined to be the levels below which significant harmful effects are not thought to occur. Critical Levels are described as: *concentrations of pollutants in the atmosphere above which direct adverse effects on receptors, such as human beings, plants, ecosystems or materials, may occur according to present knowledge*. With respect to road traffic emissions, the most dominant emission is Nitrogen Oxides. The annual average Critical Level of Nitrogen Oxides is $30 \mu\text{g}/\text{m}^3$, which I believe is the most relevant criteria to compare any modelled results against. The Critical Levels as found in the IAQM guidance [CD16.1] is displayed below:

Table 3-1. IAQM Critical Levels

Pollutant	Averaging Period	Critical Level
Oxides of Nitrogen (NO _x)	24 Hours	75/200 $\mu\text{g}/\text{m}^3$ *
	Annual	30 $\mu\text{g}/\text{m}^3$
Sulphur Dioxide (SO ₂)	Annual	10 $\mu\text{g}/\text{m}^3$ (for lichens and bryophytes)
	Annual	20 $\mu\text{g}/\text{m}^3$
Ammonia (NH ₃)	Annual	1 $\mu\text{g}/\text{m}^3$ (for lichens and bryophytes)
	Annual	3 $\mu\text{g}/\text{m}^3$
Hydrogen Fluoride (HF)	24 Hours	5 $\mu\text{g}/\text{m}^3$
	Annual	0.5 $\mu\text{g}/\text{m}^3$

*The critical level is generally considered to be $75 \mu\text{g}/\text{m}^3$; but this only applies where there are high concentrations of SO₂ and ozone, which is not generally the current situation in the UK.

- 3.07 As shown in **Table 3-1**, the Critical Level, with respect to NO_x, is $30 \mu\text{g}/\text{m}^3$. The IAQM Guidance *A guide to the assessment of air quality impacts on designated nature conservation sites* [CD16.1] goes on the state in paragraph 5.5.1.5 that the calculated maximum process contribution of the releve Critical Load or Level is used to determine whether the impacts will have an insignificant effect. The IAQM guidance [CD16.1] states in paragraph 5.5.1.6 that *'an increment of 1% (or less) of the relevant long-term critical*

level or critical load alone is considered inconsequential'. Below this the impact of a scheme is considered inconsequential. For many habitats, 1% of the critical load for nitrogen deposition equates to a very small change of less than 0.1 kgN/ha/yr, which it is noted as being well within the expected normal variation in deposition.

- 3.08 The May 2020 update of the IAQM guidance *A guide to the assessment of air quality impacts on designated nature conservation sites* [CD16.2] has been subject to minor alterations for the most part, however, I have reviewed both documents, and the May 2020 updates have removed reference to applying the 1% screening criteria after the assessment of 'in-combination' impacts, and the use of 0.40 µg/m³ as a screening tool in comparison with the maximum predicted increase in NO_x at a modelled ecological receptor. This is located within paragraph 5.5.4.4 in the IAQM guidance *A guide to the assessment of air quality impacts on designated nature conservation sites* April 2019 [CD16.1].
- 3.09 The Chartered Institute of Ecology and Environmental Management (CIEEM) produced an Advisory Note in January 2021, titled *Ecological Assessment of Air Quality Impacts* [CD16.3]. This guidance produced by CIEEM refers to the use of 1% of the Critical Loads or Levels as a screening tool, alone or in-combination. A scheme that will result in an increase of no more than 1% of critical loads or levels, alone or in combination, can be regarded as insignificant from an air quality perspective.

4.0 CASE FOR THE APPELLANT

Response to the Reason for Refusal number 12

- 4.01 The Reason for Refusal related to the impacts on Air Quality is Reason for Refusal number 12 of the Application Decision Notice. The LPA initially alleged that the Appellants did not provide sufficient information regarding the likely air quality impacts of the proposed development on European Designated Special Areas of Conservation. The ecological sites outlined within the reason for refusal, namely Kennet Valley Iderwoods SAC, Kennet and Lambourn Floodplain SAC and the River Lambourn SAC, have been assessed within a supplementary document (ref. A106825-1 Air Quality Technical Note dated September 2020).
- 4.02 The Technical Note (Appendix APP/26/A) was produced in addition to the Air Quality Assessment, dated 15th January 2020 [CD1.9], in relation to the concerns raised by the LPA and Natural England in July 2020 to demonstrate the air quality impacts on these specific European Designated Special Areas of Conservation.
- 4.03 This Technical Note (Appendix APP/26/A) addressed the potential air quality impacts of the development in isolation and in combination with the development at Sandleford Park West. The assessment of the air quality impacts on the Special Areas of Conservation determined that there are 'negligible' impacts as a result of the development.
- 4.04 Detailed modelling was undertaken for two scenarios to determine the effects of air quality on the Special Areas of Conservation. The two scenarios are described as:
- Scenario 1 ('Do Something 1') – With Bloor Homes Development – three accesses, and,
 - Scenario 2 ('Do Something 2') – Strategic Development – four accesses
- 4.05 The Jan 2020 Tt assessment shows that Scenario 1 to have higher impacts as a result of the increased road vehicle movements associated with the development. The maximum predicted increase in the annual average exposure to NO_x at any ecological receptor, due to changes in traffic movements associated with the development, is 0.43 µg/m³ at River Lambourn (E42).
- 4.06 Section 5.5.4.1 of A Guide to the Assessment of Air Quality Impacts in Designated Nature Conservation Sites', IAQM 2019 [CD16.1] states:
- Where the assessment indicates that changes in annual mean NO_x concentrations within a designated site cannot be dismissed as imperceptible (i.e. an increase of over 0.4 µg/m³) and the NO_x critical level is exceeded, then changes in nutrient nitrogen deposition should be calculated as supporting information to further assist in the evaluation of significance.*
- 4.07 The maximum predicted increase in the annual average exposure to NO_x was above the 0.4 µg/m³ threshold, therefore a Nitrogen Deposition Assessment was undertaken. The Nitrogen Deposition

assessment indicated that the maximum predicted total acid deposition PC at receptor E42 is 0.06 keqN/ha/yr, which is 'no exceedance of Critical Load function' and 1.4 % of Critical Load function. I have concluded that the impact of nitrogen depositions from the road at E42 are 'negligible'.

- 4.08 The Jan 2020 Tetra Tech Technical Note (Appendix APP/26/A) contains a Habitat Regulations Assessment, undertaken in accordance with Natural England guidelines which advise on the assessment of the impacts of road traffic emissions of proposed developments on protected European habitat sites in its guidance *Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations (Version: June 2018)* [CD16.4]. I have concluded, based on the results of the Habitat Regulations Assessment, that the adverse air quality effects on the integrity of any European site from the Sandleford Park scheme can be ruled out both alone and in combination.
- 4.09 A copy of this information was also sent to Natural England, who in turn wrote to the Appellants and the LPA 13th November 2020 confirming that they agree with the conclusions [of the Tt Jan 2020 Technical Note] that air quality impacts on nearby European sites can be ruled out both alone and in combination.
- 4.10 On this basis, the appellant has have provided satisfactory information regarding the likely air quality impacts of the proposed development. The LPA indicated in their Statement of Case [CD5.2] that they were not pursuing this as a Reason for Refusal and it follows that the LPA does not contend that, in these terms, there is a conflict with either Policy CS17 of the Core Strategy or Policy GS1 of the HSA DPD as they relates to the protection of habitats.

5.0 RESPONSES TO THIRD PARTY AND RULE 6 STATUS COMMENTS AND OBJECTIONS

- 5.01 For context and completeness, responses to are provided to Third Party and Rule 6 Comments.
- 5.02 Comments and objections were received by Tt on 9th March 2021. I have read through the combined comments and complaints and have selected those which are determined to be relevant to air quality. I have noted fourteen comments and objections regarding air quality issues. Following review of each of the comments and objection, I have concluded that the Air Quality Assessment (dated January 2020) [CD1.9] and the Technical Note (dated September 2020) [APP/26] contain sufficient information to answer the majority of the concerns. I have outlined the concerns and responses below and my responses are grouped by subject. With regard to comments about construction vehicles on Warren Road, an additional sensitivity test has been included in Appendix APP/26/B of this proof to respond to these points raised.
- 5.03 Further to this, the Rule 6 Party 'Say No to Sandleford' [STNS] have presented a Statement of Case [CD5.4], which I have reviewed, and responded to the concerns regarding air quality issues.

Table 5-1. Comments and Objection Summary

Ref No.	Name	Concern or Objection	Nature of Concern or Objection
1	Trevor and Linsey Sandy	Objection	Pollution
2	Cally Edwards	Objection	Pollution
3	Hilary Gough	Comment	Pollution
4	A C Jarman	Comment	Pollution
5	REDACTED	Comment	Construction Vehicles
6	Stuart Matthews	Objection	Pollution
7	Peter M Norman	Comment	Pollution & Health
8	Mark Grantham	Objection	Pollution & Health
9	HC	Objection	Construction Vehicles & Pollution
10	Paul Jones	Objection	Construction Vehicles
11	G and LM Marcello	Comment	Pollution & Ecology
12	John Owsley	Objection	Pollution & Health
13	Roger Boys	Comment	Construction Vehicles
14	Sally and Tony Fish	Objection	Pollution & Health
15	Say No To Sandleford (SNTS) Rule 6 Party	Statement of Case	Various

Construction Phase

- 5.04 Concerns were raised by A C Jarman regarding the length of the construction phase and the potential effects on human health. The Construction Phase Assessment within the Air Quality Assessment (dated

January 2020) [CD1.9] was undertaken in accordance with IAQM Guidance on the assessment of dust from demolition and construction (February 2014).

- 5.05 The scheme is determined to be 'high risk', at worst affected receptor locations, regarding the potential impact description of dust emissions associated with the construction phase of the proposed development. However, following the implementation of mitigation measures suitable for a 'high risk' site, the impacts associated with the construction phase of the development will be 'negligible', as stated within the Air Quality Assessment (dated January 2020) [CD1.9]. Therefore, I do not consider this concern to be valid.
- 5.06 A C Jarman raised further concerns regarding the classification of the construction phase effects within the Environmental Statement [CD1.7]. The impacts of the construction phase are determined to be temporary and reversible, as the impacts will only be present through the construction phase. Concerns have been raised regarding the 20-year construction period; however, it should be noted that during the 20-year period where construction will be undertaken, the entirety of the site will not be under construction simultaneously, as shown on the Parcelisation Plan [CD1.23]. The Air Quality Assessment [CD1.9] undertook the Construction Phase Assessment, as a worst case, assuming there is not a phased approach to the construction activities. Therefore, I do not consider this concern to be valid.
- 5.07 Concerns were raised by [REDACTED], HC, and Roger Boys regarding potential construction vehicle haul routes and the associated access to the site. Comments made regarding the construction phase and associated construction vehicle access make reference to a construction vehicle accessing the development site via Warren Road every '4 to 5 minutes' during the initial six years of the development. Further to this, SNTS has raised concerns regarding the use of Andover Road and Warren Road as a construction vehicle access route to the site during the construction phase of the development for the initial six years of works. To consider the potential worst-case effects of construction vehicles a sensitivity test has been undertaken below using ADMS-Roads 5.0. The full sensitivity test presented in Appendix APP/26/B [CD10.26].
- 5.08 Additional construction traffic has been calculated using a worst-case value of an HGV every four minutes across a working day of 08:00 – 18:00. This increase in HGVs is calculated to be 150 Annual Average Daily Trips (AADT). The sensitivity test has predicted a maximum increase in Nitrogen Dioxide of $0.35 \mu\text{g}/\text{m}^3$, a maximum increase in PM_{10} of $0.04 \mu\text{g}/\text{m}^3$ and a maximum increase in $\text{PM}_{2.5}$ of $0.03 \mu\text{g}/\text{m}^3$. The predicted impact as a result of the increase in construction vehicles, with respect to NO_2 , PM_{10} and $\text{PM}_{2.5}$ exposures for existing receptors, is determined to be 'negligible'. Therefore, I conclude the additional construction vehicle entering the development site will not be detrimental to human health.
- 5.09 Concerns were raised by A C Jarman in relation to the concentrations of $\text{PM}_{2.5}$, as the current legal objective for $\text{PM}_{2.5}$ in England is $25 \mu\text{g}/\text{m}^3$, as the World Health Organisation (WHO) recommends an annual mean concentration of $10 \mu\text{g}/\text{m}^3$. It should be noted that the WHO recommended guideline value for $\text{PM}_{2.5}$ is an ambitious target as 92% of the global population currently live in areas that exceed this goal as presented by WHO within Ambient air pollution: A global assessment of exposure and burden of disease in 2016. The

Air Quality Assessment (dated January 2020) [CD1.9] shows the results of detailed air quality modelling, where all but six modelled existing receptor locations were predicted not to exceed the WHO guideline value of $10\mu\text{g}/\text{m}^3$. The six modelled existing receptor locations which were predicted to exceed the WHO guideline value are all also predicted to exceed this guideline value during the baseline year of 2018 without the effects of the development, and thus the impact associated with the development is determined to be 'negligible' at all modelled receptor locations.

- 5.10 It is correct that the UK government is aiming to implement the WHO guideline value of $10\mu\text{g}/\text{m}^3$ as an annual mean for $\text{PM}_{2.5}$. It is also correct that the development (inclusive of the baseline) remains above this value at present and is predicted to be above in the future (both with and without the Sandleford Park Scheme). However, whilst the National Objective is not changing in the assessment year and this is not part of UK law, the current appropriate objective for assessment is $25\mu\text{g}/\text{m}^3$ albeit that the $10\mu\text{g}/\text{m}^3$ guideline value is useful for future context. Therefore, I conclude that there is not an expected health risk associated with the scheme at Sandleford Park.
- 5.11 **Operational Phase – Human Receptors**
- 5.12 Concerns were raised by Tavor and Linsey Sandy, Cally Edwards, Hilary Gough, A C Jarman, Stuart Matthews, Peter M Norman, Mark Grantham, HC, G and LM Marcello, John Owsley, and Sally and Tony Fish regarding the potential increase in road traffic emissions associated with the development, and the potential health effects of air quality.
- 5.13 The Air Quality Assessment (dated January 2020) [CD1.9] has assessed two scenarios at the development site which result in both increases and decreases to traffic flows on the road network surrounding the site at Sandleford Park. The Air Quality Assessment [CD1.9] was informed by and compared against Air Quality Standards, Objectives, Limits and Target Values in place within England. These Air Quality Standards, Objectives, Limits and Target Values are adopted national standards translated into a set of Statutory Objectives within the Air Quality (England) Regulations (2000) SI 928, and subsequent amendments, and are presented in Table 5-2.

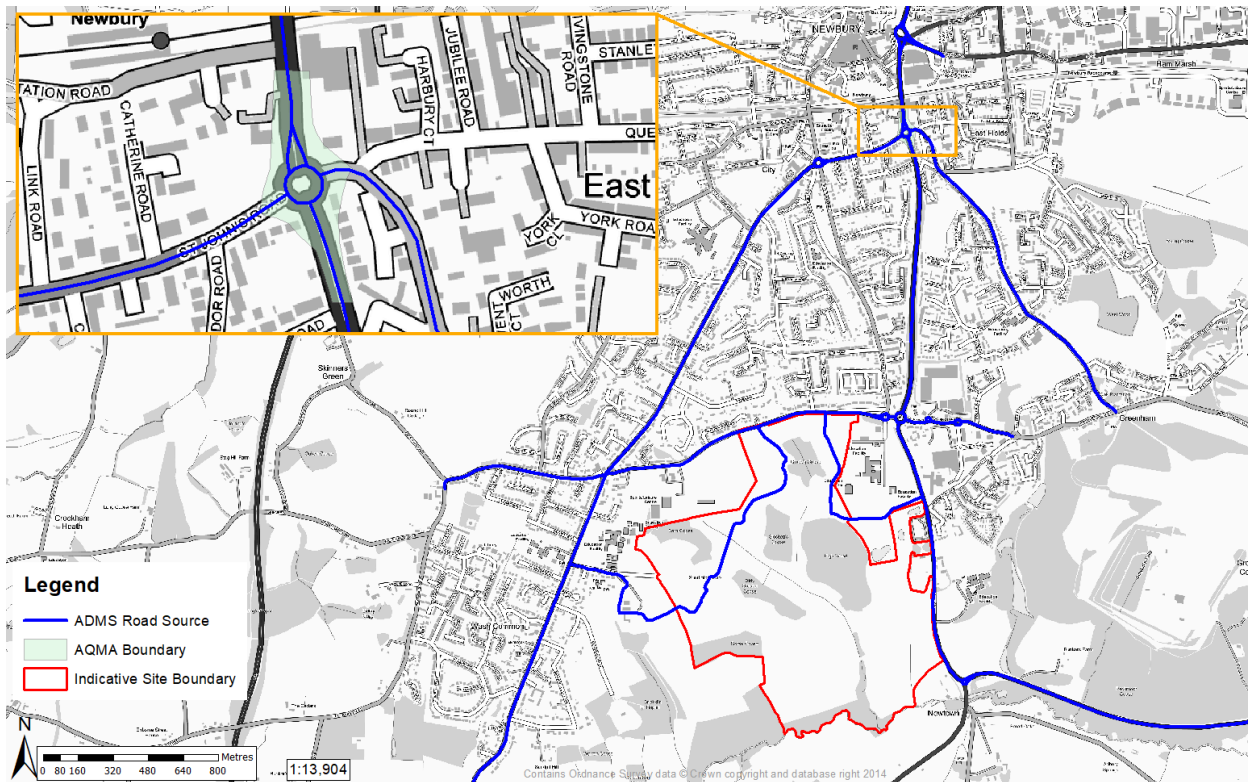
Table 5-2. Air Quality Standards, Objectives, Limits and Target Values

Pollutant	Applies	Objective	Concentration Measured as ¹⁰	Date to be achieved and maintained thereafter	European Obligations	Date to be achieved and maintained thereafter	New or existing
PM ₁₀	UK	50 $\mu\text{g}/\text{m}^3$ by end of 2004 (max 35 exceedances a year)	24-hour Mean	1 st January 2005	50 $\mu\text{g}/\text{m}^3$ by end of 2004 (max 35 exceedances a year)	1 st January 2005	Retain Existing
	UK	40 $\mu\text{g}/\text{m}^3$ by end of 2004	Annual Mean	1 st January 2005	40 $\mu\text{g}/\text{m}^3$	1 st January 2005	

PM _{2.5}	UK	25µg/m ³	Annual Mean	31 st December 2010	25µg/m ³	1 st January 2010	Retain Existing
NO ₂	UK	200µg/m ³ not to be exceeded more than 18 times a year	1-Hour Mean	31 st December 2005	200µg/m ³ not to be exceeded more than 18 times a year	1 st January 2010	Retain Existing
	UK	40µg/m ³	Annual Mean	31 st December 2005	40µg/m ³	1 st January 2010	

- 5.14 The Air Quality Standards, Objectives, Limits and Target Values are generally considered to be the levels below which concentrations are considered to be acceptable in terms of what is known about the effects of each pollutant on health and on the environment. With regard to Nitrogen Dioxide, the principle road traffic pollutant, the objective levels are based on the level relating to the onset of health effects in the most sensitive members of the population. As such there are no observable health effects below these values.
- 5.15 The Air Quality Assessment [CD1.9] has determined that the impact description of the effects of changes in traffic flow as a result of the proposed development, with respect to NO₂, PM₁₀ and PM_{2.5} exposures for existing receptors, is 'negligible', in accordance with EPUK & IAQM guidance.
- 5.16 All modelled existing and proposed receptor locations are below the relevant Air Quality Objective for NO₂, PM₁₀ and PM_{2.5}, therefore I have determined that there are no significant health effects at or as a result of the scheme at Sandleford Park.
- 5.17 Health concerns were raised by Cally Edwards, A C Jarman, Peter M Norman, Mark Grantham, HC, and Sally and Tony Fish, specifically regarding the existing school locations, and the proposed school sites within the scheme, and other areas of public access within the vicinity of the scheme.
- 5.18 I have reviewed the West Berkshire Council (WBC) Annual Status Report [CD16.5], within which WBC publish monitored pollutant levels within Newbury to ensure that levels are kept below the national air quality objective. WBC has declared an Air Quality Management Area for Nitrogen Dioxide (NO₂) in areas where the objective may be exceeded in Newbury (Newbury AQMA: An area encompassing the roundabout junction of the A339, A343 and Greenham Road in Newbury) and in Thatcham (West Berkshire Thatcham AQMA: Part of the A4 in Thatcham from the Harts Hill Road junction to the junction with the Broadway).

Figure 5-1. Newbury AQMA in relation to the Sandleford Park Development Site



- 5.19 Within the Air Quality Assessment produced by Tetra Tech (formerly WYG) (dated January 2020) [CD1.9] the local air quality pollution concentrations have been modelled and verified against the WBC monitoring locations within the study area.
- 5.20 The Tt Air Quality Assessment [CD1.9] has considered this level for observable health effects and I have determined that the maximum predicted increase in the annual average exposure to NO₂ at any existing receptor, due to changes in traffic movements associated with the development in Scenario 1 (With Bloor Homes Development – three accesses) is 0.84 µg/m³ at The Annex at New Warren Farm (R4) and that worse case levels are 23.39 µg/m³ which is below the objective of 40 µg/m³. Scenario 2 (Strategic Development – four accesses) shows a maximum predicted increase in the annual average exposure to NO₂ at any existing receptor due to changes in traffic movements associated with the development in Scenario 1 (With Bloor Homes Development – three accesses) is 0.84 µg/m³ at The Annex at New Warren Farm (R4) and that worse case levels are 23.46 µg/m³ which is below the national objective of 40 µg/m³.
- 5.21 The effects of any increase in NO₂ levels from this proposed development is considered (using the EPUK guidance Land-Use Planning & Development Control: Planning for Air Quality) to fall into the category 'negligible'.
- 5.22 Due to the availability of traffic data for both Sandleford Park and Sandleford Park West, both sites have been assessed in combination within the respective Air Quality Assessments for each application site. I do not believe that there will be harm to the health and safety of users of the site and surrounding area as the

impact description of the effects of changes in traffic flow as a result of the proposed developments, in combination, with respect to NO₂, PM₁₀ and PM_{2.5} exposures for existing receptors, is determined to be 'negligible' based on the guidance issued by the Institute of Air Quality Management (IAQM).

- 5.23 Modelling at Park House School, represented by R7 in the Air Quality Assessment (dated January 2020) [CD1.9] show that the concentrations of NO₂, PM₁₀, and PM_{2.5} are significantly below the relevant Air Quality Objectives. The predicted concentrations at Park House School following construction of the development at Sandleford Park are predicted to be 10.62 µg/m³ for NO₂, 13.68 µg/m³ for PM₁₀, and 9.05 µg/m³ for PM_{2.5} in both modelled scenarios. Therefore, I believe that the objections made, regarding air quality and health, at the education facilities are not valid.
- 5.24 Despite the favorable assessments, operational phase mitigation measures are proposed through the implementation of a Travel Plan [CD1.5], to help reduce the potential impacts of road traffic emissions associated with the development. The Travel Plan [CD1.5] seeks to reduce the reliance on private, single person vehicle movements, by promoting sustainable travel methods such as public transport, walking, cycling and car sharing.
- 5.25 SNTS and Peter M Norman have raised concerns regarding the non-exhaust emissions, primarily sourced from brakes and tyres of vehicles. These emissions are the main constituent of the PM₁₀ and PM_{2.5} emissions as discussed in paragraphs 5.09 to 5.10 above. The concerns are raised amid national interest in the potential emissions from brakes and tyres, as there is predicted to be an increase in the uptake of electric vehicles in the future thus switching the relative focus on vehicle emissions from NO₂ to PM₁₀ and PM_{2.5}. Similarly, Electric vehicles, and SUVs, may have increased emissions of Particulate Matter associated with tyres and brake wear, as a result of the increased weights associated with these vehicle types, when compared against other road vehicles.
- 5.26 Further to this, there is no current legislation to introduce vehicle emission standards for the non-exhaust emissions associated with brake and tyre wear. However, the Emissions Factor Toolkit (EFT) has incorporated brake and tyre wear and road abrasion into emissions calculation since EFT version 4.1. The emissions calculations used within EFT are updated by Defra in each version of the toolkit. Our Air Quality Assessment, dated January 2020 [CD1.9], used EFT v9.0, the latest available at the time. Therefore, I have determined that this concern has been assessed and is therefore not valid.
- 5.27 **Operational Phase – Ecological Receptors**
- 5.28 Concerns have been raised by A C Jarman and Peter M Norman regarding the air quality impacts on the ancient woodland sites within the boundary of the scheme at Sandleford Park. These Ancient Woodland sites are of concern regarding the potential change in Nitrogen Oxides (NO_x) associated with any change in traffic flows associated with the development at Sandleford Park. I acknowledge that whilst a minimum buffer of 50m is to be installed around the Ancient Woodland sites, there are concerns that a buffer zone of 150m should be implemented. The impact description of the effects of changes in traffic flow as a result

of the proposed developments, in combination, with respect to NO_x exposures for all modelled ecological receptors, is determined to be 'negligible', for both Scenario 1 and Scenario 2 (see paragraphs 5.20, CD1.9 and Appendix APP/26/A [CD10.26]).

- 5.29 All modelled ecological receptors are predicted to be significantly below the Critical Level (30µg/m³) when assessed in combination with both Sandleford Park and Sandleford Park West schemes. See Section 6.5 of the Air Quality Assessment (dated January 2020) [CD1.9]. Therefore, I do not expect there to be a significant impact on any ecological sites within the vicinity of the scheme at Sandleford Park.
- 5.30 SNTS has referenced the Wealden Judgement (February 2017) which ruled in favour of Wealden District Council that a neighbouring Local Authority had failed to take into account in-combination effects from developments in the protection of the Ashdown Forest Special Area of Conservation in the development of its Local Plan.
- 5.31 The Technical Note (dated September 2020) (Appendix APP/26/A [CD10.26]) was produced by Tetra Tech (formerly WYG) which assessed the impacts of the development in isolation, and in combination with the development at Sandleford Park West. The Technical Note (Appendix APP/26/A [CD10.26]) addressed concerns over potential impacts on the Special Areas of Conservations (SACs) which determined that the impacts on all ecological receptor locations is 'negligible' as a result of the development.

6.0 CONCLUSIONS OF THIS PROOF OF EVIDENCE

Reason for Refusal Number 12

- 6.01 The Reason for Refusal number 12 of the Application Decision Notice states that *'the proposal provides insufficient information regarding the likely impacts on air quality of the development proposed'* However, the ecological sites outlined within the reason for refusal, namely Kennet Valley Iderwoods SAC, Kennet and Lambourn Floodplain SAC and the River Lambourn SAC, have been assessed within a supplementary document (ref. A106825-1 Air Quality Technical Note dated September 2020 (Appendix APP/26/A [CD10.26])). This Assessments concludes that whilst NO_x concentrations are predicted to increase at the Ecological Receptor locations cited within the reason for refusal, this increase does not exceed the limit at which 'harm' is determined to have been caused. As such I do not consider this reason for refusal to be valid.
- 6.02 Furthermore, despite the favorable assessments, operational phase mitigation measures are proposed through the implementation of a Travel Plan [CD1.5], to help reduce the potential impacts of road traffic emissions associated with the development. The Travel Plan [CD1.5] seeks to reduce the reliance on private, single person vehicle movements, by promoting sustainable travel methods such as public transport, walking, cycling and car sharing. Mitigation will reduce any impact the development is predicted to have on modelled receptor locations. This is therefore in line with the policies set out in the reason for refusal and the application should not have been refused on air quality grounds.
- 6.03 As a result of the above conclusions, I consider that the development is acceptable with regards to air quality.

Third Party and Rule 6 Party Comments and Objections

- 6.04 For additional context and completeness, the comments and concerns raised by third parties have been reviewed and responded to. The comments and concerns are considered to have been addressed within the Air Quality Assessment (dated January 2020) [CD1.9] and this proof of evidence and I conclude that none of these comments are valid or would have provided evidence to support a reason for refusal of the application on grounds of Air Quality.

