APPENDIX 1

Reasons for refusal of planning permission of the scheme by the Planning and Regulation Committee of Oxfordshire County Council on 17th & 18th July 2023.

Town and Country Planning Act 1990

Town and County Planning General Regulations 1992

PLANNING APPLICATION R3.0138/21: Dualling of the A4130 carriageway, construction of the Didcot Science Bridge, road bridge over Appleford railways sidings and road bridge over the river Thames and associated works between A34 Milton Interchange and the B4015 north of Clifton Hampden Oxfordshire.

DECISION BY PLANNING AND REGULATION COMMITTEE OF OXFORDSHIRE COUNTY COUNCIL: 17TH AND 18TH July 2023. REFUSAL OF FULL PLANNING PERMISSION.

The committee voted to refuse full planning permission for the carrying out of this development. [1]

The following notes, prepared by the Neighbouring Parish Council Joint Committee, provide detail to the reasons for refusal.

A Cabon emissions /Net zero

The application will have the effect of undermining legally binding national targets for significant reductions in carbon emissions.

A1 Conflict with Climate Action Framework And NPPF

The potential environmental impacts were not sufficiently considered.

A1.1 The application was not consistent with Oxfordshire's Climate Action Framework 2020. OCC is committed to "an Energy strategy setting out a pathway to reduce carbon emissions by 50% by 2030"[2] For transport this is to be achieved by *"Prioritise digital infrastructure over road building: full fibre broadband across Oxfordshire will replace many journeys; Increase walking and cycling, it will be accessible and normal; Enable safe, convenient electric public transport across and between towns; Accelerate the rise of electric, shared and autonomous travel; Increasingly deprioritise journeys by single occupancy private car[3]"*. **The Application did not demonstrate a clear priority and provision of alternatives to single occupancy car journeys.**

A2 The application was not consistent with the Climate Change Committee 2023 report to parliament "Progress in Reducing Emissions" specifically The CCC states that *"the strategic priority of Net Zero should mean that all scheme appraisals (including road building decisions) must explicitly consider the NRTP (National Road Traffic Projections 2022) decarbonisation scenarios and assess the emissions impacts that they will generate. Where these are detrimental there should be a requirement to develop mitigating actions to reduce these impacts"*[4] **The scheme appraisal for the application showed no strategic objectives towards decarbonisation to achieve net zero.**

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[1] OCC Planning & Regulation Committee minutes of meeting of 17th, 18th July 2023.
[2] OCC Climate Action Framework, 5 Enabling a zero carbon Oxfordshire by 2050 Page 10.
[3] OCC Climate Action Framework What we want to achieve page 13 .
[4] CCC page 128 "To be addressed 3rd bullet.

A3 The application is not consistent with the Climate Change Act (2008) amended 2019 to achieve a 100% reduction in CO2 emission by 2050.

A4 The climate change Position Statement (CCPS) submitted with the application fails to meet the requirements of policy 27 of the LTCP. This requires assessment of embodied, operational & user emissions (and percentage reduction in embodied carbon) in the context of Oxfordshire's carbon budget and net zero transport network by 2040. It fails to confirm the deliverability of mitigation measures in breach of the EIA Regulation 2017. The CCPS fails to allow for additional emissions due to traffic increase induced by the new road.

A5 The scheme undermines the intent of adopted planning polices on CO2 emissions:,

SODLP:

Objective 8 (minimise carbon emissions),

policy Strat 1 (minimisation of need to travel),

STRAT 3 (1vii, address climate change in the development of Didcot Garden Town,)

STRAT 4 (clause 5x, Strategic Development, low carbon emissions,)

DES 7 (Efficient use of resources)

DES 8 (promoting Sustainable Design 1),

DES 10 (3 carbon reduction, energy statements)

ENV 12, (Pollution Human Health, natural environment, local amenity)

VoWHDLP:

Core policy 40 (sustainable design and Construction),

Core policy 45 (Green Infrastructure),

A6 The scheme is not consistent with NPPF paragraph 157 which requires that development should "help to reduce greenhouse gas emissions".

B Transport and Infrastructure

B1 The scheme fails to provide the balance required to incentivise the required future shift from private motoring to public, low emission, and active travel modes.

B2 The scheme does not support the basic principle of the Didcot Garden Town, that it "will reduce reliance on motorised vehicles and will promote a step change towards active and public transport."[5]

B3 Local Transport and Connectivity Plan July 2022

[5] South Oxfordshire District Council, Local Plan 2035 (Dec 2020) Page 34

The application conflicts with the requirements of the adopted LTCP of July 2022.

- Policy 1- prioritise alternatives to travel by private car.
- Policy 2 -comprehensive walking and cycling network
- Policy 16 & 17 - 20minute neighbourhoods model to reduce the need to travel by private car.
- Policy 26 -prioritise bus travel over the private car
- Policy 27 -assess and minimise embodied and operational carbon in infrastructure projects
- Policy 36 -adopt "decide and provide" for infrastructure development.

The scheme if constructed would undermine specific policies in the LTCP Specifically policy 36.

36a requires only consideration of road capacity schemes after all other options have been explored. **The application has not demonstrated detailed assessments of the extent to which public and active transport can meet a proportion of the travel needs arising from existing and proposed housing development in the Didcot area.**

36b requires where appropriate, adopt a "decide and provide" approach to manage and develop the county's road network. **The application does not demonstrate this approach which requires a statement of the future Didcot area transport objective with walking and cycling as first priorities.**

36c requires an assessment of opportunities for traffic reduction as part of any junction or road route improvement schemes. **The application does not assess and build into the transport model reductions in traffic due to priority of alternative transport provisions.**

36d requires that transport assessments to follow the County Council's "implementing decide and provide". **The transport assessment for this scheme did not demonstrate the application of Decide and Provide approach**.

It is now incumbent on OCC to follow a balanced transport and land use strategy that seeks to establish what level of development is compatible with sustainable transport solutions aimed at traffic reduction.

C Traffic modelling

C1 The Environmental Statement on traffic modelling fails the meet the requirements of the DfT Transport Analysis Guidance (webTAG) 2014, due to its failure to consider alternatives to the road and to its alignment, to ensure a balanced transport provision with least impact on existing adjacent communities of Abingdon, Appleford, Didcot, Culham, Clifton Hampden Nuneham Courtenay, Sutton Courtenay.

No traffic modelling has been undertaken on alternative traffic management strategies for existing or modified roads within a plan for future development in the Science Vale. It has been pointed out that traffic forecasts must be clearly influenced by demographics, level of car ownership, fuel costs, provision of public transport, traffic management policies, speed limits, vehicle type mix, active travel incentives, alternative road improvements and the induced traffic arising from a new road.

Presentation of modelled alternative transport strategies are required to reflect these influences and those that also address the climate emergency and the objective to reduce carbon emissions.

The base year figures from 2017 used to project traffic densities thereby exclude subsequent social and economic effects on transport of Covid 19, lockdowns and cost rises in fuel and living expenses in Europe.

C2 Failure to include induced demand within the traffic modelling, leading to over-estimation of the benefits and under-estimation of the harms of the scheme.

The traffic modelling was based on a "TA Paramics" model that does not have the facility to include induced demand.

C3 Omission of affected communities

In addition to these general failures, the undertaken modelling excluded the traffic impacts on Abingdon and Nuneham Courtenay, and are incomplete for other adjacent communities such as Sutton Courtenay.

C4 The submitted Environmental Statement fails to comply with the Environmental Impact assessment regulations 2017.

D Harm v benefits

D1 Insufficient examination and weight afforded to the harm presented by the scheme compared to the benefits cited, to meet the requirements of the NPPF .

National Planning Policy Framework (NPPF) requires that decisions should ensure *"new development is appropriate to its location taking into account the likely effects including cumulative effects of pollution, on health, living conditions and the environment".*

D2 Absence of Health Impact Assessment in conflict with NPPF, LTCP policy 9, SODLP Policy STRAT 4 (Strategic Development, clause (5ii) provision of HIA).

The application is not supported by an Health Impact Assessment. The omission conflicts with the requirement of policy 9 of the LTCP. and fails to comply with the requirements of the NPPF and PPGs on healthy and safe communities as advised in "Health Impact Assessment in Spatial Planning", 2020, published by Public Health England. An HIA is required at option appraisal stage and at full development. The application fails to comply with adopted development plans SODLP; Policy STRAT 4 (Strategic Development, clause (5ii) provision of HIA).

D3 Noise and Health impacts

D3.1 The application does not comply with adopted Local Plan policies:

VoWHDC Development Policy 23 (Impact of Development on Amenity), SO12 (protecting the Environment, minimising pollution , noise) core policy 44 (vi landscape tranquillity, noise) SODC Local Plan 2035, Policy STRAT 4 (Strategic Development (6v) provision of [an adequate] Noise Assessment), Policy ENV12 (pollution (3) noise, air pollution) , DES6 (Residential amenity).

D3.2 The application does not meet the requirement of the NPPF paragraph 185 that it should "*mitigate and reduce to a minimum potential adverse impacts resulting from noise**.... and avoid noise giving rise to significant adverse impacts on health and the quality of life'***

D3.3 The scheme fails to meet the aims of the Noise Policy Statement for England (NPSE) 2010

D3.4 The scheme fails to match the requirements of Government Planning Practice Guidance 2019 on Noise as it fails to take account of "*how the noise (source) relates to the existing sound environment*" and "*the local arrangement of buildings, surfaces and green infrastructure, and the extent to which it reflects or absorbs noise"* and fails to recognise that "*In cases where existing noise sensitive locations already experience high noise levels, a development that is expected to cause even a small increase in the overall noise level may result in a significant adverse effect occurring even though little to no change in behaviour would be likely to occur*"

D3.5 The scheme fails to follow PPG 2019 requiring that "*Noise Action Plans ..Important Areas (NAPIA)..should be taken into account*". The NAPIA at Appleford (ID156) and Clifton Hampden (ID13243) as identified by DEFRA, have been ignored in the assessment of the adverse noise effect of the HIF1 road.

D3.6 No noise assessment undertaken for alternative alignments of the road to demonstrate that the selected alignment produces the least adverse impact on adjacent communities.

D4 Air Quality

D4.1 The application fails to comply with adopted Development Plans:

SODLP

Policy STRAT 4 (Strategic Development (5ii) provision of (an adequate) Air Quality Assessment). Policy EPI (Air Quality), Policy ENV12 Pollution

VoWHDC

Core Policy 33 (sustainable transport (vi) improve air quality) , core policy 34 (monitor air quality) Core policy 43 (Natural resources, air quality).

D4.2 Insufficient air quality measurements used to calibrate the air quality computer model. In locations, such as Appleford, the failure to capture existing airborne emissions results in under-assessment of the air quality impact of the scheme. The adoption of standardised sector emissions rather than measured data in insufficient to inform the predictive model.

D4.3 The predictive air quality model is not representative.

- It does not represent building elevations facing the route of the scheme.
- it is based on unreliable traffic modelling.
- It is insensitive to local conditions, such as vehicles on the gradients to the bridge over Appleford sidings.

D4.4 No comparative air quality analyses of alternative road alignments have been undertaken to demonstrate that the selected alignment produces the least adverse impact on adjacent communities.

D4.5 The Environmental Statement fails to address the World Health Organisation advisory levels of NO_2 PM_{10}, $PM_{2.5}$ as proposed to OCC by the UK Health Security Agency.

E Option Appraisals

E1 No adequate detailed assessment of all infrastructure options and combination has been undertaken either before and during detailed design of the scheme.

E2 The assessments of options undertaken do not comply with DfT optioneering guidance in WebTAG (Transport Analysis Guidance: the transport Appraisal Process January 20124) and with the adopted LTCP July 2022. [6] The scheme is not supported by a detailed analysis of the alternatives to a new road and the comparative impact on communities, landscape, and environment.

The HIF1 road scheme was selected following two option assessment, "Option Assessment Report (OAR) Part 1 March 2018", followed by "HIF1 Design and Access Statement -Option Assessment Report (OAR) Sept 2021.

The 2018 assessment was undertaken using the DfT's Early Assessment & Sifting Tool (EAST). No explanation was presented for the objectivity of the option scoring. No quantitative analysis was undertaken on traffic densities and environmental impacts of the options listed.

The 2021 assessment, within the Design and Access Statement, tabulates scoring for a range of options, including road building, bus networks, park & ride, rail improvements, road improvements, rapid bus transit, light rail. The scores for each are summated. There is no evidence presented on any research and consultation undertaken and on the objectively of the attributed scores.

E3 No quantitative analysis has been undertaken on traffic densities and environmental impacts across the alternative options raised in option appraisals.

[6] Appendix 1, Review of Assessment of alternatives, Didcot HIF1 planning application R3 0138/21, by Alan James Bsc MA MLI January 2023.

There is no committee record of these option appraisals being subject to councillor scrutiny and discussion.

E4 During further analysis of the environmental and traffic impact of the developing road scheme no comparative analysis was undertaken on alternative road alignments to identify and select the alignment with least environmental harm.

F Green Belt policies and harm to landscape

The County Council acknowledges that the proposed scheme is a departure from the Development Plan (13 October 2021)

F1 With reference to NPPF paragraphs 147, 148, 150 the application does not represent "very special circumstance" or provide preservation of openness that would justify its development within the Green Belt.

NPPF para 147-148. prohibit inappropriate development in the green belt.

The prohibition on inappropriate development in the Green Belt can only be overcome by establishing that any harm arising from the scheme is clearly outweighed by other considerations which constitute "very special circumstances".

NPPF para 150 (c) defines as appropriate "*local transport infrastructure which can demonstrate a requirement for a (Green Belt) location provided (it) preserves (the Green belt) openness and does not conflict with the purposes of including land within it.*

F2 The degree of landscape harm is not fully revealed in the Environmental Statement.

- The Landscape and Visual Impact Assessment (LVIA) of the Environmental Statement fails to declare the full extent of impact on Local Landscape Character Areas (LLCA).[7]
- The LVIA fails to adopt the criteria (TAG unit A3 para 5.3.19) of WebTAG landscape appraisal guidance and thereby fails to declare the "Large Adverse" for the scheme as a whole due to this degree of impact on local environments at the river Thames and around Clifton Hampden.
- NPPF 4 (para 150) determines that "openness" of the landscape should be maintained where Green Belt is developed. The Environmental Statement (ES Ch 8) fails to persuade that the "very large Adverse" on the openness of the Thames Path National Trail, as acknowledged initially, will be mitigated in later years. The ES fails to persuade that, for the scheme north of Clifton Hampden, the admitted initial loss of tranquillity will be mitigated in later years.
- The landscape assessment of the effect of the bridge viaduct on the maturing wildfowl wetlands on the south bank of the Thames fails to identify the adverse landscape interruption arising from the proposed structures.
- The full impact of the Appleford sidings bridge on nearby residents (ES ch 8 p 45) is not fully revealed.

[7] Appendix 2 Objection on Landscape Grounds OCC HIF1, Alan James MA MLI January 2023.

F3 The application fails to meet the objectives of adopted Development plans SODCLP: Policy ENV5 Green infrastructure (2) protect & avoid loss of green space and planting.

F4 Planting across the scheme area is considered inadequate to meet NPPF paragraph 131 (maintainable planting), paragraph 180 (harm to biodiversity) and SODC Local plan policies 44 (Landscape), and ENV5 (Green Infrastructure) and is contrary to policies ENV1 (landscape and Countryside), ENV8 (Conservation Areas) DES1 (High quality development), DES2 Enhancing local character.

F5 It was noted that there is no adequate analysis to understand and minimise the impact on the Thames Path and no ensuing proposals for riparian mitigation along the river Thames.

G Bridge Designs

G1 The bridge designs fail to meet the standards and processes required in NPPF (2018) paragraphs 126 (early stage design review), 129 (processes for community engagement) 130 (attractive and sympathetic designs) , 131 (trees and highways).

.NPPF paragraph 134 states that *"Development that is not well designed should be refused".*

VoWHDC planning team have commented that:

G2 the massing, materials and poor visual design of the bridges are contrary to the Didcot Garden town Delivery Plan (SODC) and conflict with VoWHLP 2031.core policies 37 (Design and Local Distinctiveness), 44 (landscape).

The design for the proposed three bridges within the scheme does not meet the required standard for design aesthetics. The Science Bridge does not meet the concept of a "Gateway" statement at the entrance to Didcot Garden Town. The Appleford Siding bridge fails to address the impact on adjacent dwellings. The Thames Bridge fails to offer an acceptable design respond to the landscape corridor of the river.

The Appleford siding bridge has been criticised as excessive, with large redundant areas of concrete deck due to its "skew" design resulting in wasteful use of materials and unnecessary environmental impact. Criticism extends to the visual intrusion on the outlook of adjacent dwellings and the generation of reflected road, rail and industry noise towards these dwellings.

H Heritage assets

H1 The traffic impact of the scheme on the historic centres of Abingdon and Nuneham Courtenay has not been considered.

H2 **Nuneham Courtenay is a historic village of National importance with Grade I & II buildings.**

One of only two of the best preserved "removed" villages in the UK, it is a conservation area with both the Grade 1 listed house, garden and landscape and all the original cottages along the main road having a Grade 2 listing. It is an entity. In addition, development would alter the setting of the Grade 1 Nuneham Courtenay Registered Park and Garden.

H3 **Abingdon Town centre is a designated Conservation Area with over 270 listed grade II buildings**

H4 In failing to examine the traffic impact, the scheme conflicts with VoWHLP core policy 39 (Historic Environment),

As noted by the conservation Officer of SODC:

H5 the scheme conflicts with NPPF paragraph 199 (conservation of Heritage assets) paragraph 200 (harm to assets) and SODC policies ENV6 (Historic environment), ENV7 (Listed Buildings) ENV8 (Conservation Areas).

The decision was declared by the planning committee attended by:

Cllr Geoff Saul Chair

Cllr Richard Webber Deputy Chair

Cllr Robin Bennett

Cllr Yvonne Constance OBE

Cllr Imade Edosomwan

Cllr Mohamed Fadlalla

Cllr Judy Roberts

Cllr Middleton

Cllr Howson

RELEVANT ADOPTED DEVELOPMENT PLAN POLICIES

South Oxfordshire local plan 2035.

Policy DES 2 Enhancing local character

Policy DES 6 Residential Amenity

Policy DES 7 Efficient use of resources

Policy DES 8 Promoting Sustainable Design

Policy DES 9 Renewable and Low Carbon Energy

Policy DES 10 Carbon Reduction

Policy TANS1b Supporting Strategic Transport Investment

Policy DES 1 High Quality Design

Policy ENV1 landscape and Countryside

Policy ENV3 Biodiversity

Policy ENV4 Watercourses

Policy ENV 6 Historic Environment

Policy ENV 7 Listed Buildings

Policy ENV 8 Conservation Areas

Policy ENVH 11 Pollution existing sources

Policy ENV 12 Pollution Human Health, natural environment, local amenity

Policy ENVH 9 Archaeology and Historic Environments

Policy EP1 Air Quality

Policy EP 4 Flood Risk

Policy EP 5 Mineral safeguarding areas

Policy Strat 1 Overall Strategy

Policy STRAT 3 Didcot Garden town

Policy TRANS 1b Supporting Strategic Transport Investment

Policy TRANS 2 Promoting Sustainable Transport and Accessibility

Policy TRANS 3 Safeguarding of land for Strategic Transport Schemes

Policy TRANS 4 Transport Assessments Transport Statements and Travel Plans

Vale of White Horse Local plan 2031

Core policy 1 Presumption in Favour of Sustainable Development

Core policy 8 Spatial Strategy for the Abingdon-on Thames and Oxford Fringe Sub-Area.

Core Policy 12 Safeguarding of Land for Strategic Highway Improvements

Core policy 13 The Oxford Green Belt

Core Policy 15 spatial Strategy for the south East Vale Sub-Area.

Core Policy 17 Transport Delivery for the South East Vale Sub-Area.

Core policy 35 Promoting Sustainable Transport and accessibility

Core Policy 35 Promoting Public transport Cycling and walking

Core Policy 37 design and local distinctiveness

Core Policy 38 Design Strategies for Strategic and major Development Sites

Core Policy 39 The Historic Environment

Core Policy 40 Sustainable Design and Construction

Core Policy 41Renewable energy

Core Policy 42 Flood Risk

Core Policy 43 Natural Resources

Core Policy 44 Landscape

Core Policy 45 Green Infrastructure

Core Policy 46 Conservation and Improvement of Biodiversity.

Vale of White Horse Local Plan 2031 Part 2

Development policies 16 Access (supporting sustainable Transport and accessibility)

Development policies 17 Transport Assessment and Travel Plans

Development Policy 23 Impact of Development on Amenity

Development Policy 25 Noise Pollution

APPENDIX 2

TAB 1

Statement of objection to the planning application on the basis of noise.

A review of the Environmental Statement Volume 1 Chapters 2 & 10 Noise and vibration.

NEIGHBOURING PARISH COUNCILS -JOINT COMMITTEE.
Appleford-On-Thames, Culham, Burcot & Clifton Hampden, Nuneham Courtenay, Sutton Courtenay.

STATEMENT OF OBJECTION (R3.0138/21) ON THE BASIS OF NOISE

Planning Application R3.0138/21, HIF1 road between A34 Milton Interchange and B4015 north of Clifton Hampden.

THIS STATEMENT OF OBJECTION IS BASED ON A REVIEW OF THE ENVIRONMENTAL STATEMENT: VOLUME 1 CHAPTERS 2 & 10, NOISE AND VIBRATION, WHICH ACCOMPANY THE APPLICATION.

1.0 BASIS FOR REFUSAL

The application for the development of the HIF1 road should be refused planning permission for the following reasons.

The proposal fails to comply with the following policies within national, Local and County Plans:

1.1 South Oxfordshire District Council

1.1.1 Local Plan 2035 Policy ENV12 (3) states that:

"Development proposals should be located in sustainable locations and should be designed to ensure that they will not result in significant adverse impacts on human health, the natural environment and/or the amenity of neighbouring uses."

2. The individual and cumulative impacts of development on human health, the natural environment and/or local amenity will be considered when assessing development proposals.

3. The consideration of the merits of development proposals will be balanced against the adverse impact on human health, the natural environment and/or local amenity, including the following factor….s: noise or vibration; …

1.1.2 Local Plan Policy DES6 states :
"*Development proposals should demonstrate that they will not result in significant adverse impacts on the amenity of neighbouring uses…..in relation to (iii) noise and vibration."*

The noise assessment chapter 10 references this policy (in sect 10.2.19, & 10.2.20) No noise assessment has been undertaken to convincingly demonstrate that there are no significant adverse cumulative noise impacts to adjacent communities along the length of the proposed HIF1 road, such as Clifton Hampden and Nuneham Courtenay . In this absence the planning proposal fails to comply with SoDC policies ENV12 & DE26. The proposals will result in significant adverse impacts in terms of operational noise in neighbouring communities.

1.2 Vale of White Horse District Council Local Plan 2031 part2

Development Policy 23 Impact of Development on Amenity states:

STATEMENT OF OBJECTION (R3.0138/21) ON THE BASIS OF NOISE

> "*Development proposals should demonstrate that they will not result in significant adverse impact on the amenity of neighbouring uses when considering both individual and cumulative impacts… in relation to… Dominance or visual intrusion, noise and vibration."*

Policy 23 is not satisfied. The proposals will generate significant adverse noise effect to adjacent neighbouring uses, notably at Appleford, Clifton Hampden and Nuneham Courtenay. Proposed noise barriers to ameliorate the severity will result in an unacceptable visual impact in terms of being overly dominant and intrusive in the landscape.

Development Policy 25: Noise Pollution of the Local Plan 2031 Part 2 Detailed Policies and Additional Sites states:

> "*Noise-generating development that would have an impact on environmental amenity or biodiversity will be expected to provide an appropriate scheme of mitigation that should take account of….. ii) existing levels of background noise… iii)measured to reduce or contain generated noise, hours of operation and servicing ….". Development will not be permitted if mitigation cannot be provided within an appropriate design standard"*

VoWHDC Policy 25 is not satisfied.

The noise assessment Chapter 10 references this policy (in sect 10.2.18), but fails to demonstrate that all existing and proposed background noise sources have been included in the assessment. In the instance of Appleford Sidings, the combination of mainline rail, industrial rail sidings, bridge and road traffic has not been included in the assessment. In regard to Appleford, Clifton Hampden and Nuneham Courtenay, no provision of mitigation, acceptable in noise, landscape and visual terms has been proposed to meet identified adverse noise effects.

1.3 National Planning Policy Framework

Paragraph 185 of the NPPF states that

> *'planning decisions should mitigate and reduce to a minimum, potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life'*. And
>
> *"Identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason;"*

The HIF1 Planning Statement admits that there will be significant noise impacts due to the road. As itemised in this report these impacts on Appleford, Clifton Hampden and Nuneham Courtenay have been under-estimated within the design. Specific tranquil areas impacted by the scheme have not been identified and protected.

The proposal fails to meet the requirements of the NPPF.

STATEMENT OF OBJECTION (R3.0138/21) ON THE BASIS OF NOISE

1.4 Noise Policy Statement for England (NPSE) 2010

The central justification of the noise assessment of the HIF1 road is with reference to the NPSE 2010.
The NPSE has three aims "*within the context of Government policy on sustainable development.*"

1 "*Avoid significant adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise".*

The HIF1 scheme does not meet this aim, (see section 3.9.6 of this report) as significant adverse impacts on health and quality of life are predicted for this road scheme.

2 *"to Mitigate and minimise adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise*".

The HIF1 scheme does not meet this aim (see section 3.9.7 of this report), as the use of noise barriers, as proposed mitigation, cannot be justified for reasons of adverse Landscape impacts and visual intrusion.

3 *"Where possible, contribute to the improvement of health and quality of life".*

The HIF1 scheme cannot meet this aim, as it fails to meet aims 1 & 2.

2.0 ENVIRONMENTAL STATEMENT CHAPTER 2, THE SCHEME

2.1 The effects of Noise -Scheme C ,Didcot to River Crossing

DEFRA, under the obligations of the Environmental Noise Regulations 2006, have mapped road and rail noise corridors throughout the UK. The Noise Action Plan for the Didcot area identified four "Noise Important Areas" where noise has already reached a critical level. One of the these is Appleford, adjacent to main line rail and at the closest point to the proposed road. OCC has a duty to recognise noise critical areas and seek to control future noise.

The OCC supporting Document "Environmental Statement chapter 2" disregards this obligation. There is no analysis of the cumulative noise environment that will result from the combination of noise from multiple sources, viz: main line rail, freight shunting and unloading at Appleford Sidings, reverberant effect of proposed road bridge over Appleford Sidings and the imposition of road noise with HGV traffic. The document acknowledges that it makes *"no attempt to combine noise levels from different sources*." and that "*ambient noise levels may be higher than indicated".* The conclusions of the Environmental Statement on noise are therefore seriously in error.

Route option appraisals, including noise assessment for each option, are required. For a Sidings bridge option this must include the specific noise contribution of vehicles accelerating and decelerating on the gradients leading to the bridge for both HGV and cars. This assessment must demonstrate that the preferred route has been selected on the basis

of minimizing or avoiding noise impact on dwellings in Appleford and at the other communities with Noise Important Areas. This assessment must be undertaken in the context of a Noise Action Plan as required for DEFRA for this location in Appleford. .

DEFRA recognizes that at Noise Important Areas, such as Appleford *"the population is likely to be at greatest risk of experiencing a significant adverse impact to health and quality of life*" OCC will fail to meet its obligation to seek reduction in future noise in Appleford by deliberately increasing noise to unprecedented levels due to the routing of the HIF1 road..

Therefore, the current planning application for the HIF1 road must be rejected in order to permit an alignment to be investigated that minimises the noise impacts and comply with adopted planning policies.

3.0 ENVIRONMENTAL STATEMENT CHAPTER 10, NOISE AND VIBRATION

3.1 CONSULTATION WITH RELEVANT STAKEHOLDERS

The scoping exercise was deficient and failed to adequately define the scope of the study to meet the requirements of VOWH and SODC.

3.1.1 Section 10.3.2 of Chapter 10, 3rd bullet identifies that " *It was acknowledged that in some areas along the Scheme which are remote from existing main roads, but close to other existing noise sources such as the railway between Didcot and Oxford and industrial operations, ambient noise levels may be higher than indicated by a prediction of existing traffic noise levels. However, whilst the presence of other noise sources will be acknowledged in the assessment, given the different characteristics of railway and industrial noise to road traffic noise, in order to ensure a worst-case approach, no attempt to combine noise levels from different sources will be made."*

This is a fundamental deficiency in the noise assessment for the sector of the scheme between Didcot and Thames River crossing. The study ignores the cumulative noise impact of the road, rail, industrial sidings and road bridge created in the area around Appleford Sidings and alongside Appleford village.

3.1.2 Section 10.3.2 of Chapter 10, 5th Bullet indicates a failure to identify tranquil areas, as referred to in the NPPF, alongside the proposed route of the road. There are a number of such areas along the route, for example the Millennium Common between Sutton Courtenay and Appleford, Appleford recreation ground, the wetlands area on the south bank and the Thames Path on the north bank of the River Thames, the countryside east of the Culham Science Centre and north of Clifton Hampden and the woodland of the adjacent Nuneham Courtenay Estate. These amenity areas crossed by public paths provide recreational value at present undisturbed by noise.

STATEMENT OF OBJECTION (R3.0138/21) ON THE BASIS OF NOISE

3.2 ASSESSMENT METHODOLOGY

3.2.1 Section 10.4.3 of Chapter 10 describes assessment for construction noise. This demonstrates a significant flaw in the assessment methodology. The threshold for significant observed adverse effect level (SOAEL) is dependent on the ambient noise level. This assessment allows areas with high existing ambient noise level to be subject to high additional noise level on top of the ambient noise level. Moreover the selection of LAeq T equivalent continuous A weighed sound pressure level would tend to ignore impulsive and low frequency noise both in the background and in the assessment for the impact of the road. Setting the Lowest Observable Adverse Effect Level (LOAEL) at the existing ambient level fails to recognise that the ambient level may already be above the tolerable level, particularly for a mixed sound environment. Categories A, B, C, of table 10.3 may therefore be inappropriate to define the values of Significant Observed Adverse Effect (SOAEL).

3.3 APPLICATION OF LA111 NOISE AND VIBRATION, HIGHWAYS ENGLAND.

3.3.1 Section10.4.40 describes the magnitude of traffic noise in terms of short and long-term changes in noise level. The report considers short term changes to be the comparison of traffic noise in the opening year with or without the HIF1 road. The assessment, and baseline measurements should relate only to the elevations facing towards the proposed route of the HIF1 road. These elevations do not presently face a road and are not presently subject to road noise. This noise level change should be compared to the magnitude figures, ranging to +5 dB $_{La10,18h}$ quoted in table 3.54a, of LA111.

3.3.2 For Appleford Sidings, it must be emphasised that any offsetting of noise predicted from the HIF1 road due to the modelled traffic density, without the HIF1, on the B4016 (Main Road) through Appleford road cannot be used from the present traffic model. This is because;

- The present traffic model is deficient, as it fails to include induced traffic on the HIF1 road and fails to allow for traffic restrictions on Main Road.
- The relevant façade for dwellings and gardens faces towards the HIF1 Road but away from Main Road. The loss of amenity for, gardens facing the HIF1 route needs to be identified.

3.3.3 In should also be emphasised that the "Acoustic Context" is relevant to dwellings close to Appleford Sidings. LA111 states "*If a proposed scheme changes the acoustic character of an area. If a scheme introduces road noise into an area where road noise is not currently a major source, it may be appropriate to conclude a minor short-term change is a likely significant effect."* In this context the short-term change is likely to be a Significant Adverse effect on all west facing dwelling and gardens in Appleford.

Similarly LA111 states that for "*changes to the landscape or setting of a receptor,…… minor change in the short term and/or long term is a likely significant effect*" , Further in-depth noise assessment is required in Appleford.

STATEMENT OF OBJECTION (R3.0138/21) ON THE BASIS OF NOISE

3.3.4 With reference to the technical information whereas it is stated that daytime SOAEL is not exceeded in the short term for Appleford receptors, no information on the night-time noise levels in relation to SOAEL is provided.

3.3.5 As both the 2024 do-minimum and the 2024 do-something scenarios have not been adequately considered, additional baseline surveys in Appleford are required.

3.3.6 Highways England LA111 and LA104 require that

"EIA, undertaken in accordance with the EIA Directive 2014/52/EU [Ref 1.N], must include:

1) a description of the main difficulties encountered in compiling the required information; and

2) the main uncertainties involved in the forecasting methods or evidence." (…)

"Reporting of uncertainty should address:

1) the availability and validity of baseline data;

2) the effect of the passage of time on the validity of data; and

3) future changes (e.g. project design) that could affect the conclusions of an environmental assessment."

The HIF1 Chapter 10 noise assessment only includes a sensitivity test used in relation to the benefits (or lack of, at low speed) of low noise road surfaces. Additional surveys and assessments are required to examine the sensitivity to numerous influences e.g;

- The proposed noise barrier along embankments and bridge at Appleford Sidings will have the unintended adverse consequence of reflecting railway noise and noise from aggregates freight wagons back across to the dwellings to the east of the railway line. This adverse consequence will be significant.

- The noise and vibration noise chapter provides LA111 thresholds for significant adverse effects at night (>55 dB L_{night}). No baseline night time information has been provided. It is likely that the acoustically reflective noise barrier could result in rail noise levels which exceed this value.

3.4 ASSESSMENT ASSUMPTIONS AND LIMITATIONS

3.4.1 Section 10.5.1 advises that no long-term noise assessment without the HIF1 road has been possible. This is due to the traffic modelling being unable to predict an alternative scenario, without HIF1 road where other road management activities are used to maintain flow on roads with new development advancing up to 2039. This effectively undermines the whole HIF1 road analysis including the noise assessment. The HIF1 road is not demonstrated to be the option, amongst considered alternatives, to deliver the least adverse impact, including the least noise effect on adjacent communities.

3.65 STUDY AREA

STATEMENT OF OBJECTION (R3.0138/21) ON THE BASIS OF NOISE

3.5.1 Section 10.6 describes the study area. Although the area has been extended to encompass the northern extent up to the junction of the B4015 and the A4074 (Golden Balls Roundabout) the study fails significantly to include affected communities.

- The village of Nuneham Courtenay straddles the A4074, 1.5km north of the Golden balls Roundabout on the main road to Oxford. LA 111 requires that "*Where any do-something absolute noise levels are above the SOAEL, a noise change in the short term of 1.0dB or over results in a likely significant effect.*" The very significant effect on this village from increased traffic, noise and air quality due to the HIF1 road proposal is ignored in the environmental statement. Noise measures are required at along the length of the village, and noise predictions produced to show the impact of funnelling HIF1 traffic from its north east end further north through Nuneham Courtenay.-

- Noise monitoring has not been undertaken at significant locations affected by the HIF1 road proposal including the full extent of Main Road & Chambrai Road, Appleford, properties in Sutton Courtenay along the B4016 (Church Street), properties along the Tollgate road at Culham , properties along High Street in Long Wittenham , Home Farm & the Coppice Clifton Hampden , Burcot and surrounding properties on the A415.

In the absence of these important data the noise assessment is incomplete and cannot be used to support the proposed HIF1 road.

3.6 BASELINE CONDITIONS

3.6.1 Section 10.7.15 acknowledges that Noise Important Areas (NIA) will be affected by the HIF1 road proposal:

- In Clifton Hampden, road noise on the A415 near Watery Lane (ID 13243)
- In Appleford, rail noise at Appleford Sidings (ID 564)
- A34 road noise at Milton Height (ID4187)

For all locations the noise assessment dismisses the need to particularise the noise impact of the HIF1 road on these vulnerable locations. The noise assessment is deficient in assessing the impact of the HIF1 road.

3.6.2 Section 10.7.17 indicates a noise baseline survey at a limited number (only 12), monitoring locations. At the one location near Appleford Sidings (M12) it was noted that the noise level was elevated by 6dB above the prediction for road traffic. Whilst it was recognised that train and industrial noise and HGV access to the landfill site was present no attempt was made to distinguish the characteristics of the noise, its impulse and tone or to attribute the various sources of the noise. As this is one of the affected NIAs this is a serious omission and undermines the assessment of the effect of the HIF1 road at this location. The conclusion that "*the noise model developed to estimate traffic noise ….is robust"* cannot be sustained.

STATEMENT OF OBJECTION (R3.0138/21) ON THE BASIS OF NOISE

An extended baseline noise survey should have been provided across all vulnerable locations facing the HIF1 Route, to quantify the current levels. The primary data should have been made available for scrutiny with mapped locations, photographic records, and microphone heights.

3.7 POTENTIAL IMPACTS

3.7.1 Section 10.8.5 describes the potential traffic noise impacts of the HIF1 road. The assertion that "*The scheme will alleviate traffic flows on the existing route,. through Appleford, Sutton Courtenay, Culham, and Long Wittenham, through Burcot and the centre of Clifton Hampden"* is misleading. The statement is premised on traffic modelling that has now been shown to be incapable of representing comparative alleviation of traffic flows in these location for alternatives without the HIF1 road in place.

3.7.2 Baseline noise measurements within Clifton Hampden suggest very low sound levels (M10 Woodfield House, Clifton Hampden) 48 dB LA10,18h. with probable low levels at other dwellings. The proposed scheme could result in a change in the amenity levels within gardens. BS8233:2014 recommends that "*For traditional external areas that are used for amenity space, such as gardens and patios, it is desirable that the external noise level does not exceed 50 dB LAeq,T* (for non-noisier environments). Further baseline measurements and further noise predictions are required throughout Clifton Hampden. It is likely that the HIF1 road will have adverse effects both in terms of changing the character of the area as well as exceeding recommended desirable garden noise standards.

3.8 DESIGN MITIGATION AND ENHANCEMENT MEASURES

3.8.1 Section 10.9.3 states that construction working hours for the Scheme will be 7:30-18:00 hr weekdays 08:00-13:00 hrs Saturday, with limited out of hours working. However elsewhere it is asserted that the bridge at Appleford Sidings will be constructed out of hours to accommodate the industrial operator. This operator has applied for working hours between 6:00hrs -22:30hr weekdays (16.5 hrs) and a Saturday extension (11hrs). The bridge construction will impose industrial noise for 24 hours a day on the affected residents of Appleford.

3.8.2 Section 10.9.6 makes the statement "*Closely aligning* (the Scheme) *to existing noise sources* (the Great Western Railway) *reduces the potential increase in noise levels*". This statement fails to distinguish the different characteristics and quality of road and rail noise. It is quite likely that road noise added to rail noise would result in potentially severe noise effects, and negative impact on the health and wellbeing of residents .

3.8.3 In section 10.9.8, the statement that *"The scheme has been relocated further west away from Appleford and Zouch Farm compared with…. the proposed alignment in 2018"* ignores the proximity of the Scheme at to the southern portion of Appleford which remains within 60m of the Scheme. The noise impact of this proximity has not been examined.

STATEMENT OF OBJECTION (R3.0138/21) ON THE BASIS OF NOISE

3.8.4 Section 10.9.9 refers to moving the *"Clifton Hampden bypass" …..slightly further north away from the Village."* And a speed limit reduction. The following section acknowledges that this is insufficient to reduce noise emissions to acceptable levels.

3.8.5 Section 10.9.12 itemises extensive noise barriers proposed alongside the HIF1 road where it passes close to existing communities. This is a clear admission that the proximity of the road to these communities will generate unacceptable noise levels. The detrimental visual intrusion of the road edge noise barriers indicates an unsatisfactory attempt at a correction to an erroneous alignment of the HIF1 road at the following positions:

- 3.0m barrier to the south and over the bridge at Appleford Sidings (resulting in a total barriers height of 11m above garden level of adjacent dwellings.
- 2.5m barrier between Appleford Sidings and the junction with Appleford Road (B4016).
- 1.5m barrier over the Thames crossing bridge.
- 3.0m barrier at Fullamore Cottages, Clifton Hampden
- 3.0m barrier to the north of Clifton Hampden to the B4015.

There has been no demonstration that the road with noise barriers provides an acceptable noise, visual and landscape solution in any of these locations.

3.8.6 LA 111 requires "*The suitability of each potential mitigation measure for use within the project area shall be determined based on the following criteria:*

3*) the benefit of a measure in terms of elimination of likely significant effects;":*
The HIF1 road does not meet this objective. Likely significant effects of mitigation measures have not been eliminated, e.g. reflectance of train noise at Appleford Sidings.
5) the impact of the measure across other environmental factors, for example the visual impact of a noise barrier."
The HIF1 road proposal has not addressed this objective. There are significant landscape and visual adverse effects.

3.8.7 Section 10.9.13 indicates that low noise road surfacing is proposed for the locations listed above. However elsewhere it is admitted that this not effective for traffic speeds below 75 K/hr. The modelling assumption (Appendix 10.4) for <75 k/hr allows no sound reduction due to low noise surfacing. This measure will be marginal or ineffective. The environmental implications, e.g. particulate emissions from tyres and road surface for this grade of surface has not been explored.

3.9 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

3.9.1 In section 10.10.5, 7th, 8th 9th bullet points describe the construction noise effect resulting from the construction of embankments, bridge and road over Appleford Sidings. This asserts

STATEMENT OF OBJECTION (R3.0138/21) ON THE BASIS OF NOISE

that *"the anticipated duration of the evening and night time Appleford rail sidings bridge work are very low, well below the DMRB criterion of 10 or more working days or evening/weekend or nights in any 15 consecutive days."* This is not substantiated by the complexity of the proposed construction , involving embankments, retaining structures, piles and bridge works and the challenge of construction over an operating industrial site with freight train movements . The construction noise effect is likely to be significant adverse and prolonged with much extended overnight and weekend working.

It is likely that there will be a major impact above the SOAEL, continuously for many months, well above the DMRB criteria. No realist assessment of the noise consequences has been undertaken.

3.9.2 Section 10.10.24ff summarises the short-term change in predicted traffic noise. It must be emphasised that all statements are predicated on:

- A traffic modelling exercise that is shown to be deficient in representing options and in representing the resulting traffic on village roads around the HIF1 road..
- A noise prediction program that is calibrated on a very localised and limited actual measurements.

The predicted noise levels cannot therefore be considered as representing the range of noise disturbance or benefit that will actually occur if the HIF1 road in built.

The statement that *"traffic noise reduction…in the scheme opening year… is due to the diversion of traffic off existing routes through villages …"* is a speculative assertion and cannot be held to be accurate.

3.9.3 Section 10.10.31ff summarises the long term predicted change in traffic noise. The comments on short term predictions apply. No comparison with traffic in 2039 without the HIF1 road was possible, due to strategic and modelling deficiencies.

3.9.4 Table 10.14 provides a summary of operational traffic environmental effects. The short term and long term effects, do not demonstrate that optional appraisals of road alignments and alternative strategies have been undertaken to achieve the objective that avoids significant adverse noise impacts to communities affected by the strategy.
The assertions of "significant benefit" in locations such as "Appleford 79 properties close to the B4026" is a computer prediction based upon the traffic modelling prediction of increased traffic without the HIF1 road. The traffic modelling ignores the alternative strategies of traffic management to reduce traffic across the network. The assertion is therefore not based on any sound evidence and cannot be supported.

However, it is clear that locations currently not facing an arterial road but which will do so under the HIF road proposal will suffer "significant adverse" noise effects as recognised in

STATEMENT OF OBJECTION (R3.0138/21) ON THE BASIS OF NOISE

table 10.14. Listed Appleford properties on southern Main Road, Fullamore Cottages, properties in north and north east Clifton Hampden, properties up to the Golden Balls roundabout, will all suffer more noise due to the proximity of the HIF1 road . The degree of increase is uncertain, since it can only be estimated by monitoring, at all these locations, the current noise characteristics at the elevations facing the HIF1 proposed road alignment and then adding the predicted noise due to the new HIF1 road. This has not been done. The table indicates that in these locations 3m, and 2.5m high noise barriers will be erected. It is recognised in landscape terms barriers will not be an acceptable feature, neither in open fields and woodland at Clifton Hampden nor rising above the 8m high bridge and embankments at Appleford Sidings.

The adverse effects of increased traffic and noise of the proposed HIF1 road on the community of Nuneham Courtenay is not included at all in the noise assessment.

3.9.5 Section 10.10.41 asserts that "*no significant effects have been identified at public open green spaces."* The this ignores the noise impact of the HIF1 road proposal on Appleford Allotments, Appleford Playing field, the Millennium Common, and the wetlands south of the Thames, all located in close proximity to the proposed road. Likewise, the noise assessment fails to judge the scale of the noise from the HIF1 road on the Thames Path on the north bank; the network of Public Rights of Way (PROWs) between Sutton Courtenay and Appleford; the network of Green Belt footpaths around Clifton Hampden and the Nuneham Courtenay Estate. The assessment significantly underestimates the serious intrusion of the HIF1 Road on these tranquil areas.

3.9.6 Section 10.10.54 -10.10.65 seeks to explain that the operation of the road Scheme will meet the aim of the Noise Policy Statement for England 2010 (NPSE) assessed against the guidance of DMRB LA 111. The first aim of the NPSE is to avoid significant adverse noise impacts on health and quality of life. However, as this noise report makes clear, seeking transport management solutions to growth around Didcot, on the basis of avoiding adverse noise was not it's brief. Only 3 alternative scenarios were examined, initially with and without the HIF1 road and again with the road after 15 years. This lack of examination of other solutions to the management of growth appears to be a fundamental failure of the initial briefing by OCC. This is compounded by the limitations of the Paramics traffic model which appears unable to model other influences on car use (e.g., from demography to fuel costs, availability of public transport and traffic management schemes).

The implicit assumption in the noise and traffic modelling is that with or without the HIF1 road, no surrounding roads will have any traffic management schemes put in place in the future to protect adjacent communities. Thus, the solecistic conclusion is reached that the HIF1 road will lead to reductions in traffic and noise on village roads.

In view of the limited scope of the noise assessment in exploring and identifying the preferred development option for traffic management around Didcot to achieve lowest noise levels below the SOAEL, it cannot be said that the scheme meets the requirement to

STATEMENT OF OBJECTION (R3.0138/21) ON THE BASIS OF NOISE

"avoid significant adverse impacts on health and wellbeing" . The scheme does not comply with aim 1 of the NPSE.

3.9.7 Section 10.10.66 seeks to explain that the scheme meets the second aim of the NPSE to mitigate and minimise adverse impacts on health and quality of life. It is apparent that, due to the excessive traffic noise that the HIF1 Road will create at neighbouring communities, noise mitigation measures are needed. The principal mitigation measure of distance, aligning the road away from communities, is not considered. Given the open terrain of much of the route between North Didcot and Clifton Hampden this is unconscionable. The mitigation is limited to low noise surfaces and 3,0m high fence noise barriers. These mitigations do not meet the second aim of the NPSE because:

- The effect of low noise surface is not recognised, in LA 111 2020 as effective for vehicle speeds below 75K/hr. Moreover, this only deals with tyre noise and ignores engine & exhaust noise, aerodynamic noise, air brakes, acceleration / deceleration.
- The height and type of noise barrier is a compromise. Whilst the noise assessment examined the preference for 4.0m high barriers (Section 10.10.68) the reduction to 3.0m was to ameliorate the visual and landscape damage. However, the impact at the locations of Appleford and Clifton Hampden remains intrusive and severe. The noise barriers will dominate the skyline.
- LA111 provides advice on other measures, such as vertical and horizontal alignment of a road, earth bunds, speed limits, restrictions on noisy vehicle types. None of these alternatives has been investigated.

Viewing the total, cumulative impacts of the Scheme in terms of noise, landscape and visual intrusion, the proposed measures do not mitigate the adverse impacts of the HIF1 road and cannot be said to meet the second aim of the NPSE.

3.9.8 The third aim of the NPSE is to contribute to the improvement of health and quality of life. Meeting this aim would require the scheme to have an objective to reduce the level of noise experienced in the area of the scheme. The proposal to build an arterial road increases noise in existing and proposed communities along its length. It has not been demonstrated that the proposed HIF1 road provides an enhancement to the health of those communities. As it has not been demonstrated that the HIF1 proposal meets the first or second aim of the NPSE, it follows that the HIF1 road is not shown to meet the third aim of the NPSE.

3.9.9 Reference in section 10.10.71 & 10.12.4 to reduction in traffic noise due to the HIF1 road fails to acknowledge alternative traffic management schemes in these locations to restrict noise without the imposition of arterial road traffic through and around these neighbourhoods.

APPENDIX 2

TAB 2

Extracts from "Didcot garden town HIF1, EIA Regulation 25 Response, Oxfordshire County Council. dated 14th November 2022. Prepared by AECOM Ltd.

Extracts from "Didcot garden town HIF1, EIA Regulation 25 Response, Oxfordshire County Council dated 14th November 2022. Prepared by AECOM Ltd.

11.Air Quality

"Please respond to the issues raised by Appleford Parish Council, specifically to clarify if and how the Air Quality Assessment complies with national legislation and up to date guidance from the World Health Organisation."

11.1 Clarification on points raised by Appleford Parish Council have been collated within Appendix S. This Appendix contains the original responses from Appleford Parish Council in relation to the Air quality chapter within the ES, and the subsequent responses from AECOM Air Quality specialists.

12.Noise

"The ES concludes there would be residual moderate-major increases in noise at a number of dwellings across the development site as a result of the development during its operational phase. These noise increases would be significant yet no specific mitigation appears to have been considered above and beyond low road noise surfacing. Whilst it is acknowledged that the future use of some (but not most) of these properties may change as a result of third party development, there is currently no certainty over that and therefore very little weight is attached to that possibility. Further information is therefore required in respect of the potential for reducing noise effects at these properties through mitigation above and beyond the low road noise surfacing and noise barriers proposed. Where options for mitigation have been discounted, clear justification should be provided given the significance of the adverse residual effect."

12.1 The Noise Policy Statement for England (NPSE) requires that the control of noise must be considered 'within the context of Government policy on sustainable development'. Whilst measures should always be considered to mitigate adverse effects, the mitigation of noise effects cannot be considered in isolation. In addition to considering the absolute noise levels, and the change in noise levels due to the Scheme, various other factors must also be considered when identifying sustainable noise mitigation measures. These include the cost versus the benefit, engineering practicality, safety considerations, generation of knock-on impacts (such as access issues, vegetation clearance, ecological effects, landscape and visual effects), and consultation and stakeholder engagement responses regarding the Scheme.

12.2 As set out in the ES, low noise surfacing and the five proposed noise barriers are not the only mitigation measures included in the Scheme design. Two properties are identified as likely to qualify for noise insulation, mitigation is embedded in the design in terms of the choice of the final alignment and speed limit.

12.3 With regard to third party developments, it is noted that the traffic generated by such developments is included in the traffic data used in the traffic noise assessment. However, any potential benefits to existing properties due to the screening provided by new buildings within such developments is not included. The assessment has therefore adopted a worst case approach in this regard.

12.4 Each of the dwellings/groups of dwellings identified as likely to experience a residual significant adverse effect is discussed in the bullet points below, which demonstrate that the proposed approach is in accordance with national noise policy:

a) **Hill Farm and Hartwright House** – These dwellings are located between Didcot and Appleford where the Scheme follows the alignment of the existing access route to the properties. A very large increase in traffic noise is predicted at these two properties as the Scheme introduces a new road in a location which is remote from existing roads. Mitigation in the form of low noise surfacing is included in the Scheme at this location. The sensitivity test to estimate the likely benefit of low noise surfacing indicates some reduction in traffic noise levels is likely, however, this will not be sufficient to remove the significant adverse effect. Both properties are identified in the ES as likely to qualify for noise insulation under the Noise Insulation Regulations 1975 (amended 1988), therefore they would benefit from this additional mitigation measure. However, as noise insulation can only reduce internal noise

levels, a conservative approach has been adopted in the ES and qualification for noise insulation is not considered to remove a significant adverse effect.
As identified in the ES, further mitigation, such as noise barriers, is not considered to be practicable or sustainable in this location. In any situation a barrier to protect a single property will have a poor cost/benefit ratio. Any barrier must also allow for access to be maintained to the property. At Hartwright House the access is directly off the Scheme therefore the necessary gap in the barrier would compromise the benefit of a barrier. Two further factors are also considered relevant. As demonstrated by the baseline noise survey, the existing noise climate includes the Didcot-Oxford rail line (Cherwell Valley Line) - including trains to the Hanson site private rail sidings, the former Wood Recycling Business and the access route into the FCC and Hanson sites. Therefore, ambient noise levels in this location are higher than indicated by the predicted Do-Minimum traffic noise levels, and the change in overall noise levels due to the Scheme will be lower than indicated by the increase in traffic noise alone. It is also noted there is some uncertainty over whether these properties will remain residential in the future due to the proposed D-Tech commercial development. Hill Farm is within the development boundary and Hartwright House just outside the boundary. Taking into account all of these factors further mitigation such as noise barriers, in addition to low noise surfacing and qualification for noise insulation, is not considered to constitute sustainable mitigation.
b) **Level Crossing Cottage, Appleford** - Large increases in traffic noise are predicted at the rear façade of the property, which faces the Scheme. Mitigation in the form of low noise surfacing is included on this section of the Scheme, the sensitivity test indicates potential reductions of up to around 2 dB. Additional mitigation in the form of a 3 m noise barrier along the Scheme to the west of Appleford is also included in the Scheme design and extends past this dwelling, the barrier provides up to around 8 dB reduction in traffic noise from the Scheme at the property. As set out in the ES, increasing the barrier height to 4 m was considered but 3 m was concluded to be an appropriate balance between noise and landscape/visual impacts. It is also noted that, as demonstrated by the baseline noise survey, the existing noise climate in this location includes the Didcot-Oxford rail line (Cherwell Valley Line) - including trains to the Hanson site private rail sidings to the east, the access route into the FCC and Hanson sites to the west and the operation of the FCC landfill and Hanson quarry site. Therefore, ambient noise levels at this property are higher than indicated by the predicted Do-Minimum traffic noise levels and the change in overall noise levels due to the Scheme will be lower than indicated by the increase in traffic noise alone.
c) **B4016 Appleford 19 properties south of allotments** – A reduction in traffic on the B4016 through the centre of Appleford results in a major decrease on eastern facades in the short term, this reduces to a minor decrease in the long term. Increases on the western facades due to the introduction of the Scheme are predicted in both the short term (minor/moderate/major) and long term (minor/moderate). Low noise surfacing is included on this section of the Scheme, the sensitivity test indicates potential reductions of up to around 2 dB. Additional mitigation in the form of a 3 m noise barrier along the Scheme to the west of Appleford provides up to around 5 dB reduction in traffic noise from the Scheme, reducing the number of properties anticipated to experience a moderate or major increase. As set out in the ES, increasing the barrier height to 4 m was considered but 3 m was concluded to be an appropriate balance between noise and landscape/visual impacts. It is also noted that the existing noise climate in this area includes the Didcot-Oxford rail line (Cherwell Valley

Line) to the west, including the Hanson site private rail sidings, which may reduce residents perception of the increase in traffic noise at the rear facades.

Appleford Parish Council

12.11 Although not raised within the formal Regulation 25 letter, OCC (as planning authority) has requested that the following comment be addressed as part of this submission.
“Appleford Parish Council has provided comments regarding other developments in the Appleford area with regard to a mapped Noise Special Area at or around the Appleford Level Crossing. The PPG advises that these areas are a material considerations at Para 006, Ref ID 30-006-20190722: Noise Action Plans (where these exist), and, in particular the Important Areas identified through the process associated with the Environmental Noise Directive and corresponding regulations should be taken into account. Defra’s website has information on Noise Action Plans and Important Areas. Local authority environmental health departments will also be able to provide information about Important Areas.
Please confirm if this was included within the baseline for the noise assessment for HIF 1.”

12.12 As set out in the ES, under the Environmental Noise Directive (END) Defra has completed strategic noise mapping of major roads, railways, airports and agglomerations across England. The mapping includes the A34, the A4130 between the A34 and the B4493, the A415 between Abingdon and Clifton Hampden, the Great Western mainline railway and the Didcot-Oxford rail line (Cherwell Valley Line). In the study area a single 'Noise Important Area' (NIA) (those areas most exposed to noise) for rail noise and two for road noise were identified in round three of the Defra noise mapping. NIAs are a material consideration in the planning process.

12.13 The rail NIA (ID 564) encompasses two houses at the southern end of Appleford. Responsibility for assessing the potential for implementing cost effective noise mitigation measures within rail NIAs is the responsibility of the DfT and the rail operator. The number of trains operating on the railway through the rail noise NIA (ID 564) which encompasses two houses at the southern end of Appleford is unrelated to the Scheme.

12.14 The two road noise NIAs are located on the A415 in Clifton Hampden to the west of the junction with Watery Lane (ID 13243) and on the A34 to the south of the junction with the A4130 at Milton Interchange (ID 4187). Responsibility for assessing the potential for implementing cost effective noise mitigation measures within road NIAs rests with either National Highways or the local Highways Authority, depending on who is responsible for the road. The NIA on the A415 (ID 13243) is the responsibility of OCC. The ES identifies that this NIA is anticipated to experience a major reduction in traffic noise in both the short and long term as this section of the A415 is bypassed by the Scheme. Responsibility for the NIA on the A34 (ID 4187) lies with National Highways. This NIA is anticipated to experience a negligible change in the short and long term, as traffic on the A34 is not significantly affected by the Scheme.

APPENDIX 2

TAB 3

Reply from the NPC-RC to the Regulation 25 Response issued by Oxfordshire County Council on the 14th November 2022 in respect of Noise.

Planning Application R3.0138/21, HIF1 road between A34 Milton Interchange and B4015 north of Clifton Hampden.

Reply from the Parish Councils to the Regulation 25 Response issued by Oxfordshire County Council on the 14th November 2022 in respect of Noise.

20th May 2022

A statement of objection to the road proposal was submitted on 20th May 2022 by Appleford Parish Council on behalf of the Joint Committee of Neighbouring Parish Councils of Appleford, Clifton Hampden & Burcot Culham, Nuneham Courtenay and Sutton Courtenay (NPC-JC). This addressed the deficiencies in the Environmental Statement Chapter 2 & 10 on Noise and Vibration. It was established that the application fails to comply with Local and County planning policies, namely SODC policy ENV12 (3) & DE26; VoWH Dev Policies 23 & 25 and NPPF paragraph 185 in regard to noise, amenity and health.

14th November 2022

A response to this statement of objection, prepared by AECOM, was lodged on the planning portal on the 14th of November 2022, "Didcot Garden Town EIA Regulation 25 Response" (file name: *"Additional Information EIA Regulation 25 Response(1). Pdf)".*

Section 12 of this statement deals with Noise.

This response fails to address the specific objections raised by the Parishes NPC-JC in regards to noise.

Planning application R3.0138/21**,** remains non-compliant with local and County planning policies for the following reasons:

1 The scheme fails to meet the aims of the Noise Policy Statement for England (NPSE) 2010.

2 The ES noise assessment fails to take into account the "Noise Important Area" as identified by DEFRA mapping at the southern end of Main Road, Appleford.

The Regulation 25 response of 14th November claims that the rail noise source *"is unrelated to the Scheme*". This response fails to meet the need to assess the cumulative effect of different noise sources impinging on this NIA and surrounding locations.

3 No further noise monitoring in Appleford has been undertaken in the period May to November 2022 to address the deficiency in base line assessment of the noise environment. NPC-JC has pointed out that noise contributors include main line rail, industrial aggregate handling at Appleford Sidings, HGV movements at the Portway and traffic on Main Road.

The Regulation 25 response admits *"ambient noise levels in this location (Appleford Level Crossing) are higher than indicated by the predicted Do-Minimum traffic noise levels*", due to these contributors not being adequately assessed.

Modelling of the predicted noise environment is deficient as it fails to incorporate the characteristics of noise sources, e.g., Tonal, low frequency and impulsive nature of the industrial noise, periodicity of the main line rail noise, and continuity of imposed traffic noise from the HIF1 road scheme. It also fails to acknowledge and represent the noise impact of the proposed elevated road over Appleford railway sidings, i.e., rail noise below the arching bridge structure and the roadside noise screens reflected towards adjacent dwellings in Appleford. It fails to represent the specific noise contribution of vehicles accelerating and decelerating on the gradients leading to the road bridge.

4 No noise monitoring has been undertaken in Nuneham Courtenay, and no further monitoring undertaken at Culham, Clifton Hampden or Sutton Courtenay to correct the deficiency.

Baseline noise assessment and predictive modelling are an inadequate basis to assess the impacts of the scheme.

5 There are no noise assessments for alternative alignments of the route of the road. It cannot be demonstrated that this alignment has been chosen as the one causing least adverse impact on adjacent communities.

The consultation response dated 22nd December 2022, of the Vale of White Horse District Council, recommends realigning the road in the section Didcot-to-River Crossing, to reduce the "significant adverse effects" of the road on adjacent dwellings. This comment recognises that the adverse environmental impacts, in terms of noise, air quality and visual intrusion were not adequately assessed at the route selection stage of the scheme.

6 The need for noise mitigation measures demonstrates an inappropriate alignment of this road scheme. The proposed mitigations are inadequate and inappropriate. The proposed low noise road surface addresses only tyre noise and is ineffective for speeds below 75km/hr. Noise from engines, acceleration and aerodynamic sources are not mitigated. The response from the planning team of the Vale of White Horse District Council (22 December 2022 ref P22/V2475/CM) confirms that the proposed *"acoustic barriers are visually intrusive*". Moreover "*a Green barrier,"* as proposed to soften the appearance "*will be viewed against the sky and will stand out making it more intrusive*".

6 NPC-JC's objection of 20th May 2022 cited a long list of unresolved deficiencies in the Environmental Statement, Chapter 10, Noise and Vibration including:

- Failure to identify impacts on "tranquil areas"
- Lack of monitoring/modelling of elevation/ gardens facing the HIF1 road
- Limited traffic modelling, excluding induced HIF1 traffic & alternative traffic management strategies for village roads.
- No consideration of the intrusive landscape impact of 3m high noise barriers. Failure to examine alternative LA111 mitigation measures.

- Failure to assess noise impact on Nuneham Courtenay, properties in Sutton Courtenay, Culham, Clifton Hampden & Burcot, and Milton Heights.
- Misleading statements on construction impact, e.g. Appleford sidings bridge.

These concerns remain, despite the further information provided by OCC/AECOM.

NPC-JC 17 January 2023

APPENDIX 2

TAB 3

Reply from the NPC-RC to the Regulation 25 Response issued by Oxfordshire County Council on the 14th November 2022 in respect of Noise.

Planning Application R3.0138/21, HIF1 road between A34 Milton Interchange and B4015 north of Clifton Hampden.

Reply from the Parish Councils to the Regulation 25 Response issued by Oxfordshire County Council on the 14th November 2022 in respect of Noise.

20th May 2022

A statement of objection to the road proposal was submitted on 20th May 2022 by Appleford Parish Council on behalf of the Joint Committee of Neighbouring Parish Councils of Appleford, Clifton Hampden & Burcot Culham, Nuneham Courtenay and Sutton Courtenay (NPC-JC). This addressed the deficiencies in the Environmental Statement Chapter 2 & 10 on Noise and Vibration. It was established that the application fails to comply with Local and County planning policies, namely SODC policy ENV12 (3) & DE26; VoWH Dev Policies 23 & 25 and NPPF paragraph 185 in regard to noise, amenity and health.

14th November 2022

A response to this statement of objection, prepared by AECOM, was lodged on the planning portal on the 14th of November 2022, "Didcot Garden Town EIA Regulation 25 Response" (file name: *"Additional Information EIA Regulation 25 Response(1). Pdf)".*

Section 12 of this statement deals with Noise.

This response fails to address the specific objections raised by the Parishes NPC-JC in regards to noise.

Planning application R3.0138/21**,** remains non-compliant with local and County planning policies for the following reasons:

1 The scheme fails to meet the aims of the Noise Policy Statement for England (NPSE) 2010.

2 The ES noise assessment fails to take into account the "Noise Important Area" as identified by DEFRA mapping at the southern end of Main Road, Appleford.

The Regulation 25 response of 14th November claims that the rail noise source *"is unrelated to the Scheme*". This response fails to meet the need to assess the cumulative effect of different noise sources impinging on this NIA and surrounding locations.

3 No further noise monitoring in Appleford has been undertaken in the period May to November 2022 to address the deficiency in base line assessment of the noise environment. NPC-JC has pointed out that noise contributors include main line rail, industrial aggregate handling at Appleford Sidings, HGV movements at the Portway and traffic on Main Road.

The Regulation 25 response admits *"ambient noise levels in this location (Appleford Level Crossing) are higher than indicated by the predicted Do-Minimum traffic noise levels*", due to these contributors not being adequately assessed.

Modelling of the predicted noise environment is deficient as it fails to incorporate the characteristics of noise sources, e.g., Tonal, low frequency and impulsive nature of the industrial noise, periodicity of the main line rail noise, and continuity of imposed traffic noise from the HIF1 road scheme. It also fails to acknowledge and represent the noise impact of the proposed elevated road over Appleford railway sidings, i.e., rail noise below the arching bridge structure and the roadside noise screens reflected towards adjacent dwellings in Appleford. It fails to represent the specific noise contribution of vehicles accelerating and decelerating on the gradients leading to the road bridge.

4 No noise monitoring has been undertaken in Nuneham Courtenay, and no further monitoring undertaken at Culham, Clifton Hampden or Sutton Courtenay to correct the deficiency.

Baseline noise assessment and predictive modelling are an inadequate basis to assess the impacts of the scheme.

5 There are no noise assessments for alternative alignments of the route of the road. It cannot be demonstrated that this alignment has been chosen as the one causing least adverse impact on adjacent communities.

The consultation response dated 22nd December 2022, of the Vale of White Horse District Council, recommends realigning the road in the section Didcot-to-River Crossing, to reduce the "significant adverse effects" of the road on adjacent dwellings. This comment recognises that the adverse environmental impacts, in terms of noise, air quality and visual intrusion were not adequately assessed at the route selection stage of the scheme.

6 The need for noise mitigation measures demonstrates an inappropriate alignment of this road scheme. The proposed mitigations are inadequate and inappropriate. The proposed low noise road surface addresses only tyre noise and is ineffective for speeds below 75km/hr. Noise from engines, acceleration and aerodynamic sources are not mitigated. The response from the planning team of the Vale of White Horse District Council (22 December 2022 ref P22/V2475/CM) confirms that the proposed *"acoustic barriers are visually intrusive*". Moreover "*a Green barrier,"* as proposed to soften the appearance "*will be viewed against the sky and will stand out making it more intrusive*".

6 NPC-JC's objection of 20th May 2022 cited a long list of unresolved deficiencies in the Environmental Statement, Chapter 10, Noise and Vibration including:

- Failure to identify impacts on "tranquil areas"
- Lack of monitoring/modelling of elevation/ gardens facing the HIF1 road
- Limited traffic modelling, excluding induced HIF1 traffic & alternative traffic management strategies for village roads.
- No consideration of the intrusive landscape impact of 3m high noise barriers. Failure to examine alternative LA111 mitigation measures.

- Failure to assess noise impact on Nuneham Courtenay, properties in Sutton Courtenay, Culham, Clifton Hampden & Burcot, and Milton Heights.
- Misleading statements on construction impact, e.g. Appleford sidings bridge.

These concerns remain, despite the further information provided by OCC/AECOM.

NPC-JC 17 January 2023

APPENDIX 2

TAB 4

Response dated 27 October 2022, from OCC in response to comments on Air Quality Assessment submitted by NPC-JC (Appleford) on 7th February 2022.

AECOM memo.

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T: +44 20 8639 3500
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Project name:
Didcot Garden Town Schemes

Project ref: 60606782

To: Oxfordshire County Council (OCC)
Local Planning Authority

From:
AECOM

Date:
27th October 2022

Memo

Subject: Appleford Parish Council - Air Quality Comments Response

This note provides AECOM's response to the comments dated 7th February 2022 from Appleford Parish Council relating to the Air Quality Assessment for Planning Application R3.0138/21, HIF1 road between A34 Milton Interchange and B4015 north of Clifton Hampden.

AECOM's responses are provided in blue text below each point and relate to the Air Quality Chapter 6 and Population and Health Chapter 13 of the Environmental Statement (ES) volume 1, with reference to the scheme's Transport Assessment.

1.0 Basis for Refusal

The application for the development of the HIF1 road should be refused planning permission for the following reasons.

The proposal fails to comply with the following parts of Local and County Plans:

1.1 South Oxfordshire District Council

SOLP – Policy EP1 Air Quality; In so far as the Air Quality Assessment for this significant development is inadequate and fails to account for cumulative impact in the sector, Didcot to River Crossing.

SOLP – Policy ENV12 Pollution – (Impact of Development on Human Health, the Natural Environment and/or Local Amenity (Potential Sources of Pollution)); The development will result in significant cumulative impact on health and amenity in the sector Didcot to River Crossing.

Response to 1.1:

The air quality assessment includes the cumulative impacts of committed schemes within the study area as the impact of these on traffic flows are included within the modelled traffic data which was used as the basis to model the HIF1 scheme. The air quality impacts of the scheme are not significant and as such the scheme is in line with relevant planning policy.

1.2 Vale of White Horse District Council

VoWHLP – Development Policy 23: Impact of Development on Amenity. In so far as the development will result in significant adverse cumulative -impacts on Appleford Village in respect of visual intrusion, noise, emissions and road lighting .

VoWHLP – Development Policy 26 Air Quality. The Air Quality Assessment for this development is inadequate and has not demonstrated that it has been design to minimise the impact on air quality in the adjacent community of Appleford.

Response to 1.2:

The air quality assessment of the scheme concluded that there will be no exceedances of the air quality objectives and no significant impacts are reported. Therefore, there is no requirement to put in place any scheme specific mitigation to improve air quality.

1.3 Health Impact Assessments

District Council policies identify the need for Health Impact Assessments (HIA) to be conducted for all strategic developments to determine how the development will improve health and wellbeing.

OCC , LTCP 2021 policy 12 states : *12 – Oxfordshire County Council will require transport plans and infrastructure schemes to deliver health benefits and to mitigate any negative impacts by:*

a. Requiring all major schemes or plans where potential health issues are likely to arise, to screen for possible health and wellbeing impacts.

b. Requiring a Rapid or Full HIA to be submitted for larger-scale infrastructure proposals."

The HIF1 scheme has not been subject to a Health Impact Assessment (HIA) as required in District Council policies, LTCP 2021 and as suggested by Oxfordshire's Director of Public Health.

The proposal is not based on analyses to minimize pollution and emissions at existing communities adjacent to the proposed road, to be demonstrated through an HIA.

Response to 1.3:

The Oxfordshire Local Transport and Connectivity Plan was adopted in July 2022. Whilst a specific HIA was not conducted, Chapter 13: Population and Human Health of the ES has followed Design Manual for Roads and Bridges (DMRB) guidance to consider air quality, noise and visual impacts on the human health of nearby sensitive receptors, such as residents. This chapter has considered numerous health determinants such as average life expectancy, average wealth and deprivation as well as data on hospital admissions for lung diseases and deaths from respiratory diseases within the study area.

2.0 Environmental Statement Chapter 6, Air Quality

This document (Didcot HIF1 ES Chapter 6 Air Quality) submitted to accompany the application contains inaccuracies and limitations that renders it unreliable to assess the impact of the proposal on public health for reasons as explained below.

2.1 Section 6.2 makes no reference to the air pollution guidelines produced by the World Health Organisation (WHO).

In their response to this planning application, the UK Health Security Agency has advised OCC that :

"Reducing public exposures to non-threshold pollutants (such as particulate matter and nitrogen dioxide) below air quality standards has potential public health benefits. UKHSA support approaches which minimise or mitigate public exposure to non-threshold air pollutants."

Recently updated WHO guidelines (2021) are based on the evidence that toxic particles and gases harm human health at much lower concentrations than previously thought. Current WHO guidelines for annual emissions limits pollutant concentrations to 5 $\mu g/m^3$ for particulates $PM_{2.5}$ and 10 $\mu g/m^3$ for nitrogen dioxide NO_2. It is now recognised that UK legislation is no longer adequate to assess the impact of new road proposals. The permitted emissions assumed in the HIF1 Air Quality Assessment exceed the current WHO guidelines by 500% for $PM_{2.5}$ and 400% for NO_2. Whilst there are difficulties in reducing current emissions for

existing roads there are no such difficulties in assessing a new road proposal in an area where existing emission are low. The highest standard for AQ needs to be adopted for new sections of the HIF1 road. Appleford village is one community lying closest to a new section of the proposed road. It is reasonable to position the road in relation to Appleford to ensure that the road does not, in itself, create toxic emissions in excess of the WHO guidelines. If more punishing level of emissions are to be considered to facilitate the road, this must be through consultation and agreement with the communities that will be affected. OCC undertook no consultation with affected Parish Councils and residents of parishes like Appleford to agree emission standards to assess the road proposal.

Response to 2.1:

The air quality assessment has followed the methodology and guidance set out in the Design Manual for Roads and Bridges (DMRB) LA 105 Air Quality[1] guidance document for highways schemes as outlined in the scheme scoping report.

The DMRB guidance sets out the requirements for assessing air quality in line with the EU Air Quality Directive[2] and whether there is a risk of the scheme's impacts will affect the UK's reported ability to comply with the directive. The assessment has therefore taken into account the current UK air quality objectives as set out in the legislation and the EU limit values in the Directive. The results of the assessment show that predicted NO_2 and PM_{10} concentrations are below the annual mean and short-term air quality objectives as set out in the UK legislation.

Published 2019 annual mean background pollutant concentrations range from 12.4- 12.7 µg/m^3 for NO_2, 15.7-15.8 µg/m^3 for PM_{10} and 9.7 µg/m^3 for $PM_{2.5}$ around Appleford. These concentrations are well below the annual mean air quality objectives of 40 µg/m^3 for NO_2 and PM_{10} and 25 µg/m^3 for $PM_{2.5}$ and below the 2005 WHO air quality guidelines[3] of 20 µg/m^3 and 10 µg/m^3 for PM_{10} and $PM_{2.5}$ respectively. The WHO guidelines are aimed at informing legislation and policy but are not legally binding in the UK which means there is no requirement to assess pollutants against these guideline levels.

Since the publication of the ES, the WHO guidelines have been tightened and more stringent targets for $PM_{2.5}$ are likely to be set under the Environment Act 2021[4]. However, no new targets in UK legislation have been set nor any consultation started on what thresholds the government may adopt in the future.

OCC has undertaken consultation on the scheme. The HIF1 Scoping Opinion Report which set out the methodology for the air quality assessment was sent to all statutory consultees, including the Parish Council. Comments were received back from the district councils and other Parish Councils, but not Appleford Parish Council. OCC has also had a number of meetings with the Parish Council. For example, at the meeting 1st July 2021, OCC presented the baseline air quality survey data and emerging results from the air quality assessment for the draft ES.

2.2 In so far as the change to air quality, due to the proximity of the proposed HIF1 road close to communities like Appleford, has not been properly assessed, the road scheme does not follow the Planning Policy Guidance of the NPPF.

Response to 2.2:

The National Planning Practice Guidance has been followed for the assessment. Considerations have been given to potential trends in air quality in the presence and absence of development, as well as any impacts and mitigation / improvement opportunities arising from the scheme.

2.3 The document makes no attempt to model $PM_{2.5}$ (as section 6.4.17 confirms). There is increasing awareness that smaller particulates have a critical effect on respiration. The Air Quality Analysis is therefore incomplete.

Response to 2.3:

[1] Highways England, Design Manual for Roads and Bridges, Sustainability & Environment Appraisal, LA 105: Air quality, 2019.
[2] DIRECTIVE 2008/50/EC OF THE EUROPEAN PARLIAMENTAND OF THE COUNCIL of 21 May 2008 on ambient air quality and cleaner air for Europe.
[3] WHO global air quality guidelines Global update 2005. https://www.euro.who.int/_data/assets/pdf_file/0005/78638/E90038.pdf
[4] Environment Act 2021. https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted

The assessment has followed the DMRB LA 105 guidance for highways schemes. This document states the following in terms of $PM_{2.5}$ modelling:

"*2.21.4 There should be no need to model $PM_{2.5}$ as the UK currently meets its legal requirements for the achievement of the $PM_{2.5}$ air quality thresholds and the modelling of PM_{10} can be used to demonstrate that the project does not impact on the $PM_{2.5}$ air quality threshold."*

National Highways has not published any plans for the DMRB to include $PM_{2.5}$ within its methodology.

As stated in the response to 2.1, background concentrations are well below current air quality objectives for PM_{10} and $PM_{2.5}$. The air quality assessment has followed the DMRB guidance and has predicted PM_{10} concentrations at selected receptors in a baseline year and future opening year with and without the HIF1 scheme. Levels are predicted to be below the UK air quality objective of 40µg/m^3, with a maximum concentration of at selected receptors of 18.8 µg/m^3 in the 2019 baseline year across the study area and a maximum of 16.7 µg/m^3 within the Appleford area. Concentrations in the future year with and without the scheme are predicted to decline compared to the baseline. As $PM_{2.5}$ is a component of PM_{10}, predicted concentrations will be lower than this, and therefore will be well below the $PM_{2.5}$ air quality objective value of 25 µg/m^3.

2.4 There have been no adequate measurements of the current levels of NO_2 and $PM_{2.5}$ at property boundaries for critical areas in Appleford. A single roadside measurement at a junction of the village Main Road and Church Street (table 6.10 location RIV3) indicated an annual NO_2 mean of 25.5 µg/m^3. Unfeasibly this appears to exceed all roadside values measured at the busy A4130 between the A34 and Didcot. This single measurement, possibly in error, cannot be relied upon to characterise the current air quality in Appleford. The Air Quality Assessment has no reliable basis to predict the change to Appleford's air quality

2.5 With insufficient local air quality monitored data for Appleford, the air quality dispersion model, as described in paragraph 6.4.25) cannot be calibrated to real data. The output from the dispersion model for Appleford is therefore unreliable.

Response to 2.4 and 2.5:

Monitoring of NO_2 was carried out at 27 locations near the HIF1 scheme for a period of 6 months, using triplicate tubes. Along with RIV3, there were 3 other monitoring locations within 1km of Appleford Village (RIV2, RIV4 and RIV5). These data were used to supplement the existing local authority monitoring data to verify the performance of the air quality model. It is highly unusual to do any baseline monitoring of $PM_{2.5}$ for highways schemes, especially in rural areas with low pollutant concentrations. Vale of White Horse District Council do not currently monitor levels of particulates within their district.

A thorough review of the performance of the air quality model at each of the monitoring sites was conducted to analyse the reasons for under and over predictions at the monitoring sites and to determine whether a more zonal verification was appropriate. The model performance was found to vary across the network. The model was found to perform particularly well along the A4130 dual carriageway. Apart from this section of the road network, there were no other individual areas where it was judged appropriate to put into a separate verification zone. Therefore, the verification and adjustment process was applied to two separate domains. The first deals with the majority of the road network, (zone A which includes Appleford and RIV3) and the second (zone B) deals with the conditions along the A4130 dual carriageway alone.

2.6 Contrary to paragraph 6.4.28, as there is insufficient local air quality monitored data for Appleford, existing pollutant concentrations from specific local activities have not been included in the assessment, e.g. rail aggregate handling at Appleford Sidings, asphalt works at Appleford Sidings, landfill and HGV movements immediately south west and upwind from Appleford.

Response to 2.6:

Background concentrations were combined with the model outputs to obtain total pollutant concentration at receptors. The background concentrations (published by Defra and the Devolved Administrations) provide an estimated breakdown of the relative sources of pollution. These include emissions from various sectors, including industrial emissions (combustion in industry, energy production, extraction of fossil fuel and waste) and rail emissions. No site specific information was available to include the above mentioned activities explicitly in the air quality model so their estimated emissions were included within the background concentration as part of the model predictions. HGV movements to the industrial processes south of Appleford are captured within the traffic and air quality model.

In addition, the monitoring data will be influenced by emissions from other sources as well as road traffic. These data were used to verify the performance of the air quality model and so will have been captured in the assessment.

2.7 The modelled pollutant concentrations at "public exposure receptors" along Main Road in Appleford, (locations R107, R26, R90, R69, R24, R100, R66, R74, in table 2 of ES vol III Appendix 6.2) are not based on credible traffic flows. Restrictions on HGV will continue to apply through Appleford village. Speed restrictions will apply and be tightened with or without the HIF road. The modelled reduction in NO_2 along Main Road due to the HIF is not credible. The only location of monitored real data, (location R107, matched to location RIV3), shows modelled values from the road well below the present measured value. The contribution from HIF1 and also local road traffic on top of other sources of pollution is not explored or explained.

Response to 2.7:

The air quality assessment has used modelled data from the Paramics transport model which is used for the transport assessment. The model is based on traffic count data conducted in 2017 to verify the baseline situation and forecast to future years. The traffic model predicts that there will be a significant reduction in traffic flow along Appleford Main Road with the scheme in place. As a result, there are improvements in air quality predicted at properties situated close to Main Road.

Modelled NO_2 concentrations at Receptor R107 are lower than those measured at RIV3. This is because site RIV3 is a kerbside location (approx. 0.8m from the kerb) and R107 is located further back from the road on the façade of the building (approx. 6m from the kerbside). The levels of pollutant concentrations drop significantly with increasing distance from the road which is why concentrations are lower at the property façade.

2.8 THE HIF1 Planning statement. para 7.11.2 asserts that "*the Site is not considered particularly sensitive in terms of air quality"*. And *"there will be no exceedance of the objective for annual mean NO_2 ".* [HIF ES Chapter 6 Air Quality, section 6.9] confirms "that no specific, essential or enhanced air quality mitigation measures have been incorporated into the Scheme design." And "*no monitoring of significant effects is proposed*" para 6.11.2

There is no justification for these statements moreover they conflict with the following statement.

[HIF1 ES Chapter 6 Air Quality] states ". *Higher traffic flows and average speeds are expected on the new proposed roads and bridges when compared (to) a do minimum situation without these roads. This could lead to higher emissions and higher annual mean concentrations of NO_2, NOx, and PM_{10} at sensitive receptors close to these new roads in the opening year with the Scheme when compared to the opening year without the Scheme."*

Due to extensive errors and omissions in the Air Quality Assessment the true magnitudes of the resulting emissions in communities close to the proposed road have not been established and are likely to be under reported.

Response to 2.8:

The Parish Council's first paragraph relating to para 7.11.2 in the ES refers to the fact that air quality levels are well below the objective values and are therefore considered to be good. This statement relates to the impact of the Scheme after the detailed modelling was conducted. Therefore, no mitigation is required as per the conclusions of the assessment. The air quality assessment was conducted in line with the DMRB Guidance using the available traffic data and has been peer reviewed and accepted by Oxfordshire County Council and Vale of White Horse and South Oxfordshire District Councils. Therefore, we do not accept that there are errors and omissions in the assessment.

The Parish Council's second paragraph is taken from Section 6.8 'Potential Impacts' of the report. This section is written prior to conducting the modelling to provide a general overview of the objective of the scheme and the potential to affect air quality.

2.8 [HIF1 ES Chapter 6 Air Quality. Para 6.10.16] refers to modelled levels of NO_2 and states "*The largest increase in annual mean NO2 concentration is predicted at a residential property north of Hall Farm (R75, Appleford). With the Scheme in operation, the annual mean NO_2 concentration predicted at this receptor in the Scheme opening year is 16.0µg/m^3, an increase of 3.3µg/m^3 from 12.7µg/m^3*". This statement is likely to

be the nearest reflection of the effect of the HIF road on the dwellings along Main Road in Appleford. However this assessment fails to include existing emissions from the adjacent industrial activities around Appleford sidings. Moreover, the modelling is for a ground level road, at this location. Pollutants will distribute more widely from the proposed elevated HIF road which will be above roof level as it passes Appleford dwellings. The total pollution load and extend of distribution is likely to be well in excess of these figures.

Response to 2.8:

The annual mean concentrations presented in report includes background concentration which take into account the contribution from emissions from various sectors such as industrial processes (see response to point 2.6).

The new HIF road was modelled at ground level which is a worst case assessment to assess the impacts at sensitive receptors at breathing height (1.5m) than if the road was modelled at an elevated level (between 5m and 10m). If this elevation had been modelled for the ES, emissions would be released at a height above the nearest properties, which would have a lower impact at those properties nearest to the HIF1 road, due to greater dispersion and reduction in pollutant concentrations. The results of a sensitivity test to model elevation are given in Table 1 in Appendix A to demonstrate that the scheme ES has presented a worse case.

2.9 [HIF1 ES Appendix 6.2 Local Air Quality Assessment Results] states at paragraph 1.2.12 "*Along the Didcot to Culham River Crossing on the east side there are 12 receptors (R24, R25, R26, R27, R66, R68, R69, R74, R90, R100, R107 and R116) in Appleford which are predicted to experience decreases in annual mean NO_2 concentrations of 0.5µg/m^3 to 2.8µg/m^3 resulting in predicted concentrations of 12.9µg/m3 to 14.9µg/m3. This improvement is due to a predicted reduction of approximately 4,000 AADT on Main Road through Appleford.*"

This statement does not represent the actuality of the relationship between traffic on Main Road, Appleford and traffic on the proposed HIF1 road adjacent to Appleford. Main Road has weight restrictions prohibiting HGV traffic now and in the future. Traffic calming measures or vehicle restriction for commuter cars on Main Road must be in place if there is a future traffic growth, either due to the HIF1 road or other road scenarios. There should be no substantial increase in traffic on Main Road (B4016) for future scenarios. The Air Quality Assessment is therefore in error. The HIF1 road will not create a reduction in NO_2 concentrations through Appleford village. However, the siting of HIF1 as an arterial road, will bring many HGVs within 60m of dwellings in Appleford. This is unprecedented and poses a substantial increase in all forms of traffic emissions close to Appleford, which is not represented in the Air Quality Assessment.

Response to 2.9:

The air quality assessment has used traffic data from the transport assessment. The traffic model data has been provided with and without the scheme. As noted in response 2.7, the traffic model for the HIF1 scheme predicts that there will be a reduction in traffic flows through Appleford Main Road with the scheme in place, and in particular there is a substantial reduction in the numbers of HGV on this road as these vehicles will use the HIF1 road. The air quality model has taken into account the emissions from both of these roads. Due to the distance of the HIF1 road from many of the residential properties in Appleford and the fact that emissions drop off quickly from the road, the reduction in traffic flow along Main Road is the primary reason for the reduction in air quality predicted at many properties located close to Main Road.

A sensitivity test was carried out to assume that the HGV restriction is enforced in Appleford. For the Do Minimum scenario, this would mean that there are fewer vehicles travelling along the B4016 where the restrictions apply. The results of this sensitivity test are given in Table 2 in Appendix A. There is no change to the results with the scheme in place, but there is a slightly lower benefit due to the scheme as the predicted reduction in HGVs as presented in the ES would not be seen. In both the ES and the HGV restriction sensitivity test the concentrations predicted are well within the air quality objective for NO_2. This means that that the benefits of the scheme are not significant in this HGV restriction sensitivity test or the scheme ES.

2.10 [HIF1 ES Appendix 6.2 Local Air Quality Assessment Results] states at paragraph 1.2.13 "*There are three receptors (R23, R65 and R75) close to the new road which are predicted to experience increases in annual mean NO2 concentrations of 1.5µg/m3 to 3.3µg/m3 resulting in predicted concentrations of 14.3µg/m3 to 16.0µg/m3. This deterioration is due to a predicted flow of around 12,000 - 13,000 AADT with a speed of approximately 65 km/h on this section of the Didcot to Culham River Crossing.*"

This statement fails to recognise the particular circumstances of the traffic flow on the HIF1 road at the closest position to Appleford, and under-estimates the resultant NO_2 concentration.

• The road is elevated above the roof level of dwellings that lie downwind and within 60-70m of the road. This will result in a widespread distribution of the emissions from the road. The uninterrupted spread of emissions from the road at this distance is not specifically recognized in the modelling.

• The HIF1 road is at a gradient at both approaches to the road bridge over Appleford Rail Sidings. The changes of gear and engine speed, particularly for loaded HGVs will result in an increase in emissions. This is not specifically recognized in the modelling.

Response to 2.10:

The HIF1 road was modelled at ground level with receptors modelled at breathing height (1.5m) with no gradient. This is a standard practice in highways assessments and provides a worst case assessment. Gradients greater than 2.5% can influence HDV emissions, although increases uphill are general balanced by reductions downhill.

2.11 [HIF1 ES Chapter 6 Air Quality paragraph 6.8.5] states the objective of reducing emissions on the A4130 between Milton Interchange and Didcot will be achieved by reducing congestion, slow moving and idling traffic. This is inaccurate. The net result, on this stretch of road, will be an overall growth in the amount of traffic, attracted from the A34 by the HIF new route to east Oxford and the M40. The document recognises this, as it is stated that the HIF will relieve congestion on the A34 (and by implication, on the Oxford Ring Road). Overall emissions on this part of the A4130 will rise, not fall. Moreover, much higher levels of emissions will now be generated close to settlements, not currently experiencing high flows of passing traffic, e.g. the parishes of Appleford, Sutton Courtenay, Culham, Clifton Hampden, Nuneham Courtenay and Long Wittenham.

Response to 2.11:

The future flows show modest increases in annual average daily traffic flow on the A4130 between Milton interchange and the new Science Bridge Link roundabout. To the east of the new roundabout the flows on the A4130 reduce significantly (see Table 16.14 of the traffic & transport chapter). The air quality assessment predicted that there would be improvements in air quality at sensitive receptors as a result of a reduction in traffic flow and congestion through villages including Clifton Hampden, Sutton Courtenay, Long Wittenham as well as in Appleford.

3.0 Conclusion

The concluding statement in para 6.10.17 of ES Chapter 6 : *"Therefore, a conclusion of no likely significant air quality effects for human health is recorded"* is in error. For communities that will be close to the proposed road alignment there will be serious health implications. Not only will the pollution levels for NO_2 and $PM_{2.5}$ clearly exceed current WHO guidelines, proper measurement and analysis of the actual circumstances of the dwellings close to the road is likely to show that the concentrations will exceed even the more harmful thresholds taken as acceptable for the study.

The NPPF National Planning policy framework States *"planning Policies and decisions should aim to achieve healthy inclusive and safe places."* The Environmental Impact Analysis fails to demonstrate that the HIF1 proposal will meet this objective.

The lack of investigation of alternative alignments for the HIF1 road indicates that the current planning application is not based on analyses to minimize pollution and emissions at existing communities adjacent to the proposed road. This planning application should therefore be rejected.

Response to 3.0

The air quality assessment predicted that NO_2 and PM_{10} (and therefore $PM_{2.5}$) do not exceed the air quality objective values in the 2019 baseline year or opening year and there was no risk of non-compliance with the EU Limit Values. Following the DMRB guidance, a conclusion of no significant air quality effects due to the scheme can therefore be made. Therefore, scheme air quality is consistent with relevant planning policy.

Appendix A Modelling Sensitivity Tests

Elevation of HIF1 Road

The results of the test to model the HIF1 road at an elevation between 5m and 10m above the existing road are given in Table 1. These results show that the modelled NO_2 concentrations at receptors in Appleford would be the same (to 1 decimal place) or slightly lower in the Do Something scenario (DS) if the new road had been modelled at height. In both instances the concentrations predicted are well within the air quality objective for NO_2.

Table 1: Predicted NO_2 concentrations for road elevation sensitivity test

Receptor ID	X	Y	Modelled NO_2 concentration ($\mu g/m^3$)		
			ES DS (with HIF Scheme)	DS Elevation Sensitivity Test	Change in DS with Sensitivity Test
R23	452440	192812	14.7	14.5	-0.2
R24	452574	193232	13.9	13.9	<0.1
R25	452617	193693	14.4	14.4	<0.1
R26	452648	193566	13.5	13.5	<0.1
R27	452382	193721	13.0	12.9	<0.1
R54	452480	192878	14.2	14.0	-0.2
R57	451162	194340	14.5	14.5	<0.1
R65	452450	192816	14.3	14.1	-0.2
R66	452502	192951	14.1	13.9	-0.2
R67	452480	192950	13.7	13.5	-0.3
R68	452550	193214	12.9	12.9	-0.1
R69	452609	193366	14.4	14.4	<0.1
R74	452495	192883	14.9	14.8	-0.2
R76	452516	193082	13.1	13.0	-0.1
R77	452516	193488	12.2	12.1	<0.1
R90	452664	193482	12.9	12.9	<0.1
R99	452516	193082	13.1	13.0	-0.1
R100	452536	193086	13.8	13.7	-0.1
R107	452657	193633	13.4	13.4	<0.1
R116	452399	193722	13.0	13.0	<0.1
R117	452510	193296	12.4	12.3	-0.1
ND-1617A*	451201	194336	16.0	16.0	<0.1

*New development receptor

HGV Restriction on Main Road

The extent of the existing HGV restriction along the B4016 Main Road, Appleford is indicated in Figure 1.

Based on traffic count data used to validate the Paramics traffic model, there is evidence that HGVs still travel along the road, which meant that there were around 100 HGVs assumed across a 24h period in the Do Minimum (DM) scenario (i.e. without the HIF scheme) reported in the ES. A sensitivity modelling test was conducted to consider the impact if the HGV restriction was enforced in the DM scenarios. To do this, the same number of HGVs as in the Do Something (DS) scenario was assumed for the DM scenario. The results of this sensitivity test are given in Table 2.

Figure 1: HGV Restrictions on B4016 in Appleford

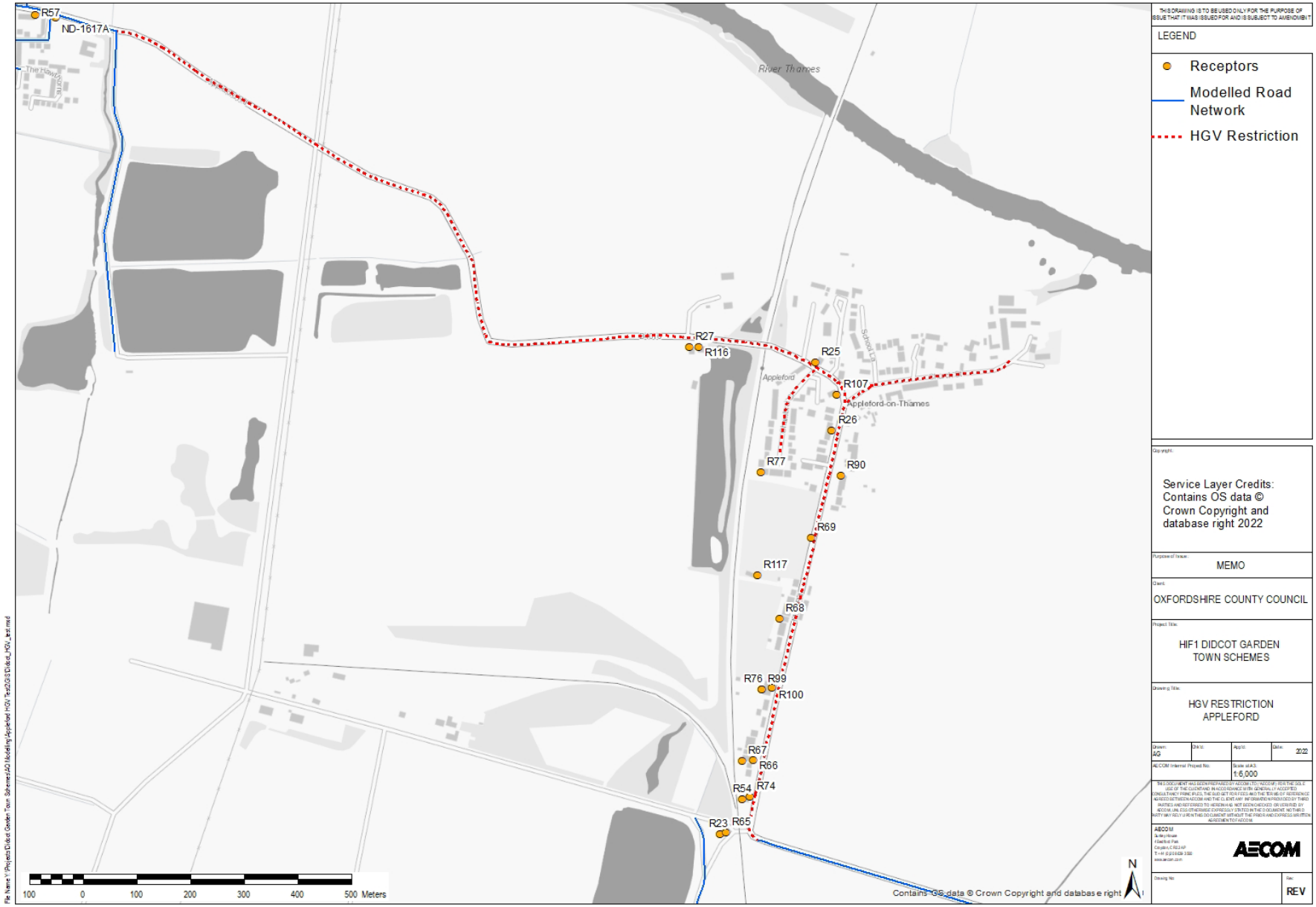


Table 2: Predicted NO_2 concentrations for HGV restriction sensitivity test

Receptor ID	X	Y	Modelled NO_2 concentration and change ($\mu g/m^3$)				
			ES DM without scheme	DM with HGV Restriction Sensitivity Test	ES DS	Change ES DS-DM	Change DS- DM with HGV Restriction Sensitivity Test
R23	452440	192812	12.7	12.7	14.7	2.0	2.0
R24	452574	193232	15.8	15.6	13.9	-1.9	-1.7
R25	452617	193693	16.8	16.5	14.4	-2.4	-2.1
R26	452648	193566	15.4	15.2	13.5	-1.9	-1.7
R27	452382	193721	13.6	13.6	13.0	-0.6	-0.6
R54	452480	192878	14.1	14.0	14.2	0.1	0.2
R57	451162	194340	14.3	14.3	14.5	0.2	0.2
R65	452450	192816	12.8	12.8	14.3	1.5	1.5
R66	452502	192951	14.6	14.5	14.1	-0.5	-0.4
R67	452480	192950	13.4	13.3	13.7	0.3	0.4
R68	452550	193214	13.6	13.5	12.9	-0.7	-0.6
R69	452609	193366	17.1	16.8	14.4	-2.8	-2.5
R74	452495	192883	16.1	15.9	14.9	-1.2	-1.0
R76	452516	193082	13.5	13.4	13.1	-0.4	-0.3
R77	452516	193488	12.2	12.1	12.2	<0.1	<0.1
R90	452664	193482	14.0	13.9	12.9	-1.1	-1.0
R99	452516	193082	13.5	13.4	13.1	-0.4	-0.3
R100	452536	193086	15.1	14.9	13.8	-1.3	-1.1
R107	452657	193633	15.2	15.0	13.4	-1.7	-1.5
R116	452399	193722	13.8	13.7	13.0	-0.7	-0.7
R117	452510	193296	12.4	12.3	12.4	<0.1	<0.1
ND-1617A	451201	194336	15.4	15.4	16.0	0.6	0.6

The results from the HGV restriction sensitivity test show that predicted annual mean NO_2 concentrations in the DM would be the same or slightly lower than the ES DM results. This is due to a reduction in the number of HGVs on the road which results in a reduction in in overall traffic flow (by approx. 100 vehicles) from the roads where the HGV restriction applies. There is no change to the results with the scheme in place, but there is a slightly lower benefit due to the scheme as the predicted reduction in HGVs as presented in the ES would not be seen. In both the ES and the HGV restriction sensitivity test the concentrations predicted are well within the air quality objective for NO_2. This means that that the benefits of the scheme are not significant in this HGV restriction sensitivity test or the scheme ES.

APPENDIX 2

TAB 5

Item 1

Reply dated 17th January 2023 from NPC-JC to the Regulation 25 Response by OCC on 14th November 2022 in regard to Air Quality.

Item 2

Air Quality report Main Road Appleford from public Source “Central office of Public Interest”

Item 3

Letter dated 8th December 2021 from UK Health Security Agency to OCC in response to the planning application for the HIF1 scheme.

Planning Application R3.0138/21, HIF1 road between A34 Milton Interchange and B4015 north of Clifton Hampden.

Reply from the Parish Councils to the Regulation 25 Response issued by Oxfordshire County Council on the 14th November 2022 in respect of Air Quality and Population and Health.

7th February 2022

A statement of objection to the road proposal was submitted on 7th February 2022 by Appleford Parish Council on behalf of the Joint Committee of Neighbouring Parish Councils of Appleford, Clifton Hampden & Burcot , Culham, Nuneham Courtenay and Sutton Courtenay (NPC-JC). . It was established that the application fails to comply with Local and County planning policies, namely SODC policy EP1, ENV12, VoWH Dev Policies 23 & 26 in regard to air quality, pollution and amenity. The scheme also fails to follow NPPF guidance.

14th November 2022

A response to this statement of objection, prepared by AECOM, was lodged on the planning portal on the 14th November 2022, file name: *"Reg 25 Appendix S Air Quality Technical Note (1). Pdf"*

January 2023

The following statement is the reply on behalf of the NPC-JC to AECOM's Air Quality Technical Note (AQTN) of 27th October 2022.

SUMMARY

S1 Inadequate measurement of existing air quality

The AQTN response indicates that no opportunity was taken in the period February to November 2022 to take additional air quality measurements along the proposed section Didcot-to-River crossing, and to undertake the required Health Impact Assessment in answer to the Regulation 25 request. The NPC-JC objection (para 2.4-2.6) highlighted that only a single measurement site of existing air quality was used to represent the whole of Appleford Village. This remains wholly inadequate to assess existing air quality and fails to capture the principal sources of airborne emissions in Appleford close to the HIF1 route. These are the aggregate handling and landfill activities around Appleford sidings and adjacent rail main line. The subsequent air quality modelling, used to justify the road, has not been calibrated to real-world data. This inadequacy renders the modelling unrepresentative.

S2 Lack of comparative assessments of alternative routes

The applicant is required to demonstrate that the chosen road alignment has been selected as the route with least air quality detriment on adjacent communities.

Contrary to the requirements of local planning policies e.g. VOWHLP Dev policy 26 , the lack of air quality investigations of alternative alignments for the HIF1 road indicates that the current route of the planning application is not based on route analyses to minimize pollution and emissions at existing communities. This planning application therefore remains non-compliant with planning policy.

The consultation response dated 22nd December 2022 submitted by the Vale of White Horse District Council, recommends realigning the road in the section Didcot-to-River Crossing, to reduce the adverse impact of the road on adjacent dwellings. This comment recognises that the adverse environmental impacts, in terms of noise, air quality and visual intrusion have not been given sufficient weight in this scheme.

S3 Inadequate standards

The Environmental Statement fails to address concerns regarding levels of emissions of NO_2 PM_{10} $PM_{2.5}$ as identified by the World Health Organisation in 2021 and as identified by the UK Health Security Agency in its response to the HIF1 road.

S4 Unreliable traffic modelling

Apparent failure to include induced traffic on the proposed HIF1 road and over-reliance on expected reduction in village traffic has skewed the air quality assessment.

S5 Insensitive air quality assessment

The AQTN confirms that critical aspects of vehicle emissions, such as those created by the gradient of the flyover at Appleford sidings have not been modelled. The assessment also shows insensitivity to the presence of HGV traffic and proximity of the HIF1 route and properties in Appleford. The model ignores the impact (noise and tail pipe emissions) of fully laden HGVs and LGVs accelerating up the steep elevated section past Appleford (DN) and similarly HGV and LGV traffic heading south accelerating up the other side. This latter will not only affect Appleford but also properties in Sutton Courtenay (old Amy site area).

The Environmental Statement therefore remains deficient and not in compliance with the applicable EIA Regulations 2017.

REPLIES TO RESPONSES WITHIN AECOM'S AQTN OF 27TH OCTOBER 2022.

The following paragraph numbers refer to the numbering of the Statement of Objection and subsequent AQTN response.

1.1 & 1.2 The air quality assessment is deficient in measured existing data and is derived from deficient modelled traffic data. The scheme remains non-compliant with local and county planning policies.`

1.2 The AQTN confirms that a Health Impact Assessment, as required in District Council policies and the LTCP, has not been undertaken for this scheme. The specific local combination of existing noise and air pollution sources, together with the proposed road, at sensitive locals such as Appleford have not been assessed. The scheme remains in conflict with District and County planning policies.

2.1 The air quality assessment for this scheme is out of date. AQTN para 2.4 & 2.5 confirms that no monitoring of existing particulate index PM $_{2.5}$ has been undertaken for this scheme. In recognition of the growing concern on the effect of these particles on human health (see World Health guidelines 2021), the Environment Act 2021 gives the Secretary of States power to set a target for PM $_{2.5.}$

All statements in the scheme's ES on emissions of NO_2, PM_{10} PM $_{2.5}$ are based on computer predicted values. As these are not adequately calibrated, these is no evidence that these values represent the local distribution of pollutants throughout the community of Appleford.

No programme of baseline air monitoring was discussed and agreed between OCC and Appleford Parish Council. The scheme applicant did not take the opportunity to undertake monitoring either during the consultation period or during the Regulation 25 response period.

It is noted that the Environment Act 2021 recognises the need for environmental monitoring and considers the duty of local authorities to identify emissions to secure an air quality standard.

2.4 & 2.5 discrepancies between *"under and over prediction"* in the computer model were acknowledged. No justification has been offered for ignoring the local discrepancies and applying the standard *"verification and adjustment process*" to Appleford. This ignored both the proximity of the proposed road to dwellings and the need for $PM_{2.5}$ measurement.

2.6 The AQTN admits that *"No site specific information was available* " to include the emissions from the particular industrial activities at Appleford sidings and their effect on Appleford within the air quality assessment. Residents currently experience excessive dust under certain wind and climate conditions. The constant traffic movement on the proposed road alignment with attendant particulate emissions will increase the risk of harm to the health and well-being of local residents. The adoption of standardised sector emission is insufficient to represent the combined and cumulative effects of the proposed road scheme in addition to existing emissions.

2.7 The Parish Councils have documented objections on the basis of deficiencies in the traffic modelling. Air quality predictions based upon the transport model are not reliable. Specifically for Appleford, the model assumes that dominant emissions are derived from the existing road (B4016) and traffic on this road will diminish due to the HIF1 road scheme. The emissions within

Appleford due to induced and diverted traffic flow on the adjacent HIF1 road are not adequately assessed. The application of traffic restrictions on the B4016, curtailing emissions, regardless of the HIF1 road are not assessed.

2.8 The Parish Councils consider that the benign impact of the HIF1 road on air quality in adjacent communities, as asserted in the Environmental Statement, has not been demonstrated. If the road proceeds it would be unconscionable to deny, as the ES does, the need for ongoing monitoring of the air and noise emissions from the HIF1 road and the need for mitigation measures as required. However, it is recognised that there are no mitigation measures available once the road is built in the current alignment.

In response to the Parish Councils criticism that the air quality predictions ignore the elevated HIF1 flyover at Appleford, the AQTN presents further modelled values for a road at 5 & 10m above ground. The tabulated comparative NO_2 values show no sensitivity to the road elevation. More tellingly the predicted values along the entire length of the B4016 (Main Road) are all insensitive to the proximity of the HIF1 road. This appears to be because the predictions are focussed on the traffic on the B4016 and not on the building elevations facing the proposed HIF1 road. The issue of the elevated HIF1 flyover relates to the emissions due to traffic climbing and descending the gradients of the proposed flyover adjacent to properties in Appleford. The air quality assessment fails to address this. Moreover, the assessment is limited to NO_2. There is no reporting of the PM_{10} and $PM_{2.5}$ implications of the adjacent HIF1 road.

2.9 The AQTN explains the insensitivity of the NO_2 air quality assessment to proximity of the HIF1 road to Appleford by suggesting that emissions fall rapidly by distance. Further comparative modelling of HGV traffic on the B4016 (Main Road), as described in Para 2.9 also shows insensitivity within the air quality assessment. In view of the necessity to set lower emission standards (WHO recommendations for public health) this lack of sensitivity of the air quality model is of particular concern.

2.10 The AQTN acknowledges that the vehicle emissions due to the gradient of the flyover at Appleford Rail sidings have not been included in the assessment.

2.11 The AQTN denies that substantial traffic will be induced onto the A4013 due to its connection to the A34. It further denies that this traffic, and its associated emissions will pass by and impact on the communities adjacent to the road. The Parish Councils consider this response undermines the credibility of the air quality assessment.

Date: 17th January 2023

On behalf of the (NPC-JC).

Home - Central Office of Public Interest

addresspollution.org

addresspollution.org. This website has been constructed based on an attempt to model the spatial variation in the major air pollutants over the UK, combining hard data with theory. The project is the result of co-operation between the Central Office of Public Interest (COPI) and Imperial College London. The resulting 'map' provides estimates of pollution at a resolution of 20 x 20 m^2, and shows only the estimated vales for $PM_{2.5}$, PM_{10} and NO_2, the most common and potentially the most harmful. All you do is **input your postcod**e, and its long-term pollution levels are indicated, crucially, compared to WHO AQGs.

World Health Organisation (2021), **What are the WHO Air quality guidelines**?

The 2005 and 2021 WHO guidelines for selected air pollutants

Pollutant	Averaging Time	2005 AQGs	2021 AQGs
$PM_{2.5}$, $\mu g/m^3$	Annual	10	5
	24-hour[a]	25	15
PM_{10}, $\mu g/m^3$	Annual	20	15
	24-hour[a]	50	45
O_3, $\mu g/m^3$	Peak season[b]	-	60
	8-hour[a]	100	100
NO_2, $\mu g/m^3$	Annual	40	10
	24-hour[a]	-	25
SO_2, $\mu g/m^3$	24-hour[a]	20	40
CO, mg/m^3	24-hour[a]	-	4

'Annual' indicates the mean annual tolerated value, and '24-hour', average exposures not to be exceeded more than 3-4 days per year (the 99th percentile).

AddressPollution authoritatively identifies levels of air pollution – for particulates from vehicle emissions, domestic heating emissions, wood burning, industry and farming – at every property address in Britain.

These days the main threat to clean air in built-up areas is traffic, according to the UK Air Quality Archive. Petrol and diesel fuelled vehicles emit a variety of pollutants, principally carbon monoxide (CO), oxides of nitrogen (NOx), particulates (PM10) and volatile organic compounds (VOCs) such as the carcinogen benzene. Road vehicles are responsible for over half the nitrogen dioxide emissions and over 75 per cent of carbon monoxide in the UK.

AIR QUALITY REPORT

FOR MAIN ROAD, APPLEFORD, ABINGDON

HIGH AIR POLLUTION

62

This address is in
the 62nd national percentile
?

Every address in the UK has been ranked according to its air pollution levels, relative to other addresses in the country. This number, the percentile ranking, makes it easy to compare addresses.

Percentile groups (0th-99th)
Each percentile represents 1% of addresses in the UK

LEVELS & HEALTH EFFECTS

Pollutant one: PM2.5

At this address, the annual average of the pollutant PM2.5 is 10.61mcg/m3. The World Health Organization limit is 5mcg/m3.

This study shows 19.9% of strokes were attributed to exposure (for a year or more) of PM2.5 concentrations exceeding 10mcg/m3.

PM2.5 can also cause asthma, jeopardize lung functions and promote cancer.

Pollutant two: PM10

The reading for PM10 at this address is 17.08mcg/m3. The limit is 15mcg/m3.

Cardiovascular mortality increases by 0.76% and respiratory mortality by 0.58% for every 10mcg/m3 increase of PM10.

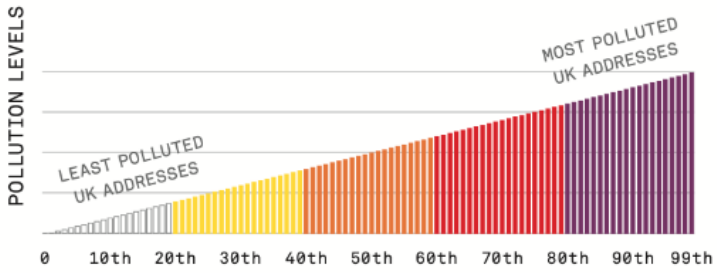
PM10 can cause wheezing, bronchitis and reduce lung development.

Pollutant three: NO2

The reading for N02 at this address is 18.58mcg/m3. The limit is 10mcg/m3.

Exposure (for a year or more) to 30mcg leads to a 5.5% increased risk of disease related mortality.

Every address in the UK has been ranked according to its air pollution levels, relative to other addresses in the country. This number, the percentile ranking, makes it easy to compare addresses.



Percentile groups (0th-99th)

Each percentile represents 1% of addresses in the UK

UK Health Security Agency

Environmental Hazards and Emergencies Department
Seaton House, City Link
London Road
Nottingham, NG2 4LA

T +44 (0)300 303 3049

CRCE-EHE@phe.gov.uk
www.gov.uk/ukhsa
Our Ref: CIRIS 58500
Your Ref: R3.0138/21

Dr Adam Briggs
Oxfordshire County Council,
County Hall,
New Road,
Oxford,
OX1 1ND

8th December 2021

Dear Dr Briggs,

Planning Application for: Didcot Garden Town

We have reviewed the relevant planning application documents and agree that a Dust Management Plan (DMP) is required at this stage of the planning application. The DMP should take into consideration the proposed route proximity to sensitive receptors. For instance, in *Appendix 3.1: Extract from OCC, WebTAG Preliminary Environmental Impact Appraisal Report 2018* notes that a day nursery is located within 200 m of the proposed route and may be affected by the planned works.

Reducing public exposures to non-threshold pollutants (such as particulate matter and nitrogen dioxide) below air quality standards has potential public health benefits. UKHSA support approaches which minimise or mitigate public exposure to non-threshold air pollutants, address inequalities (in exposure), and maximise co-benefits (such as physical exercise) and encourage their consideration during the design, environmental and health impact assessment, implementation, and post-implementation monitoring stages.

Should you have any further queries , please do not hesitate to contact us.

Yours sincerely

Onyeka Uche
Environmental Public Health Scientist

APPENDIX 2

TAB 6

Results of a survey of noise disturbance in Appleford, February 2022.

APPLEFORD-ON-THAMES

NOISE SURVEY FINDINGS

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Survey conducted by Appleford Parish Council - FEB 2022.

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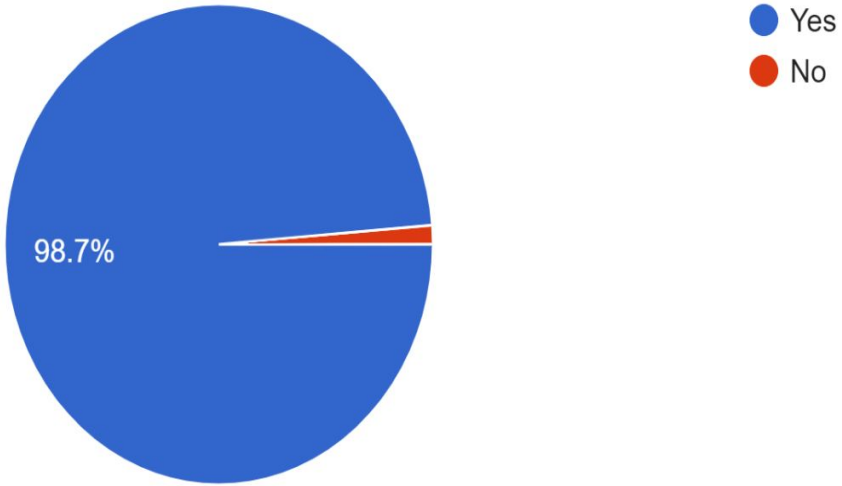
Appleford Village Noise Survey

Q1. Have you ever noticed noise coming from Appleford sidings?

78 responses



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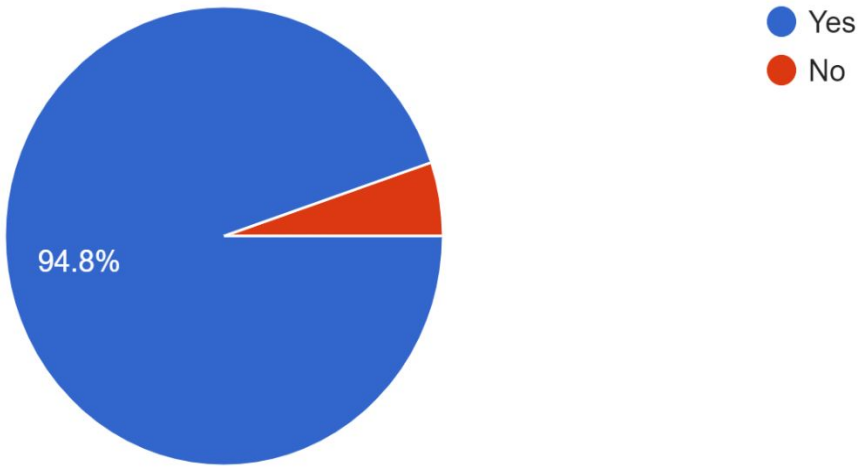
Appleford Village Noise Survey

Q2. If you have noticed noise from Appleford sidings, has the frequency or volume increased over the last six months? (if you answered No in Q1 go straight to Q16.)

77 responses



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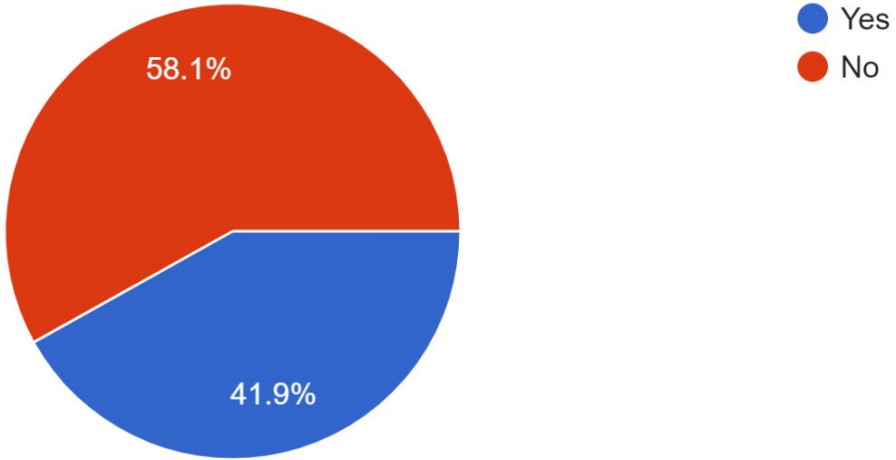
Appleford Village Noise Survey

Q3 Is the noise comparable to rail movements on the main Didcot to Oxford line beside the village?

74 responses



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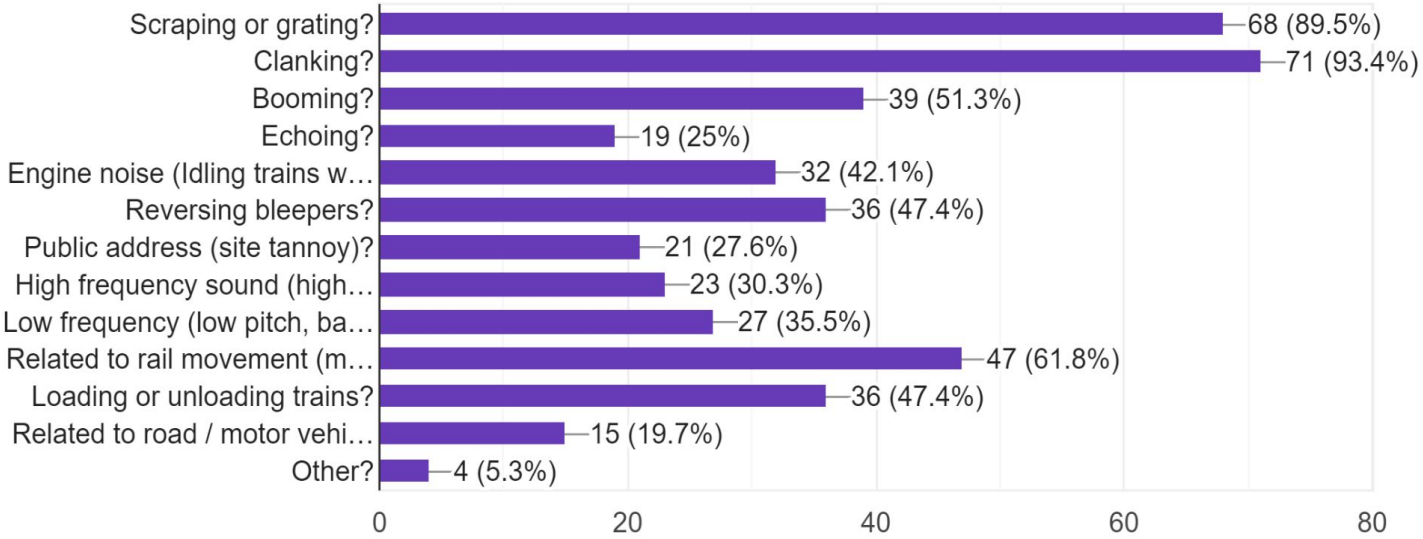
Appleford Village Noise Survey

Q4. Please describe the noise or what you believe is the source of the noise? (tick any that apply)

76 responses



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Appleford Village Noise Survey

Q5. Other - If you selected 'other' please describe the noise.

6 responses

Groaning, shunting, squeaking & squealing noise

General heavy construction works

Don't know if noises come from 0xford rails or sidings and only hear noises upstairs when indoors

Sounding of engine horn within early hours of morning or very late at night. Screeching brakes and prolonged engine noise

some of these noises are accompanied by a vibration that seems to shake the house

Dragging (noted added to Q3 - WORSE meaning worse than main line rail noise)

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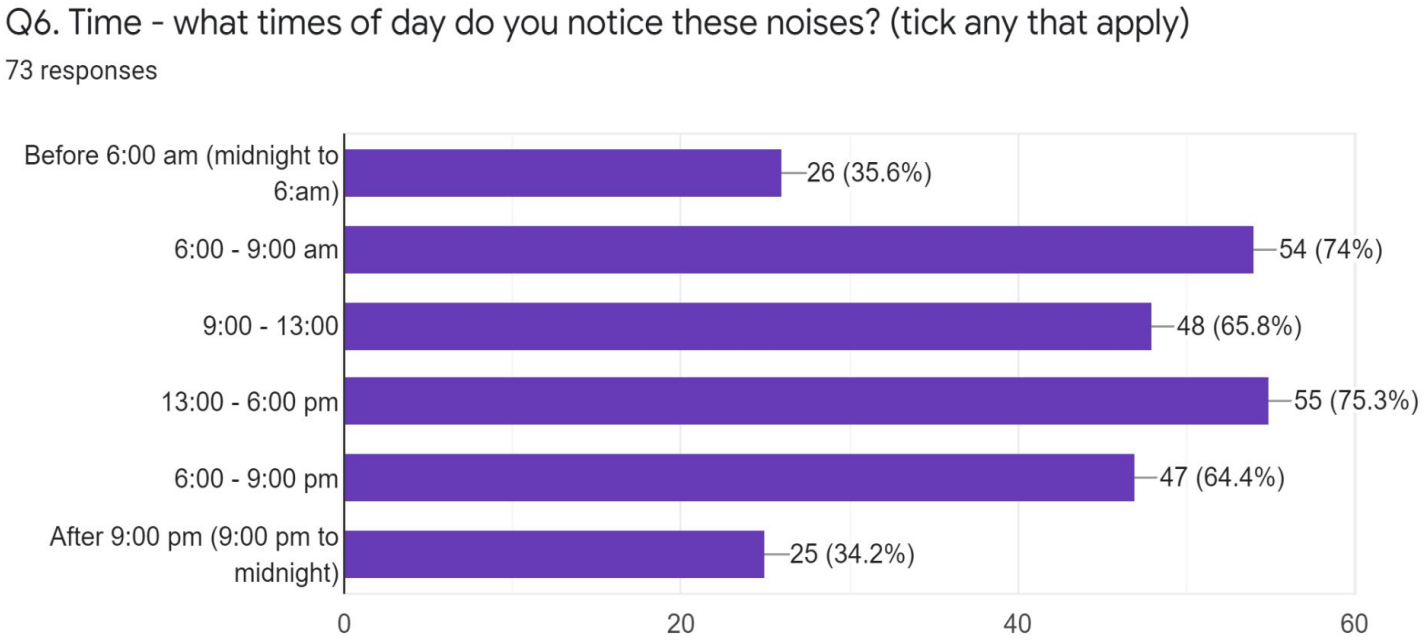
Appleford Village Noise Survey



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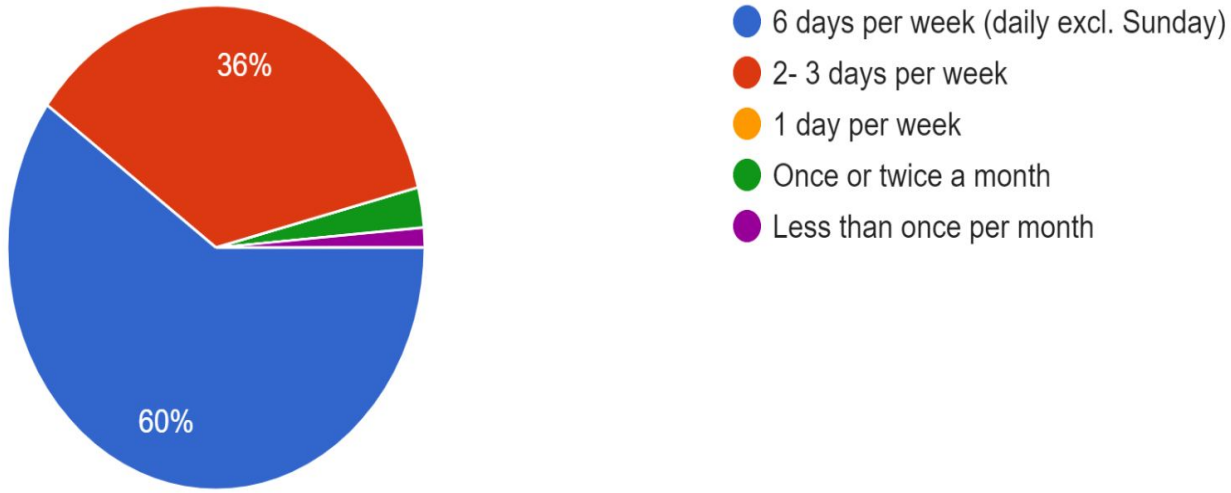
Appleford Village Noise Survey

Q7. Frequency - on average how often do you hear the noise? (Tick any that apply)

75 responses



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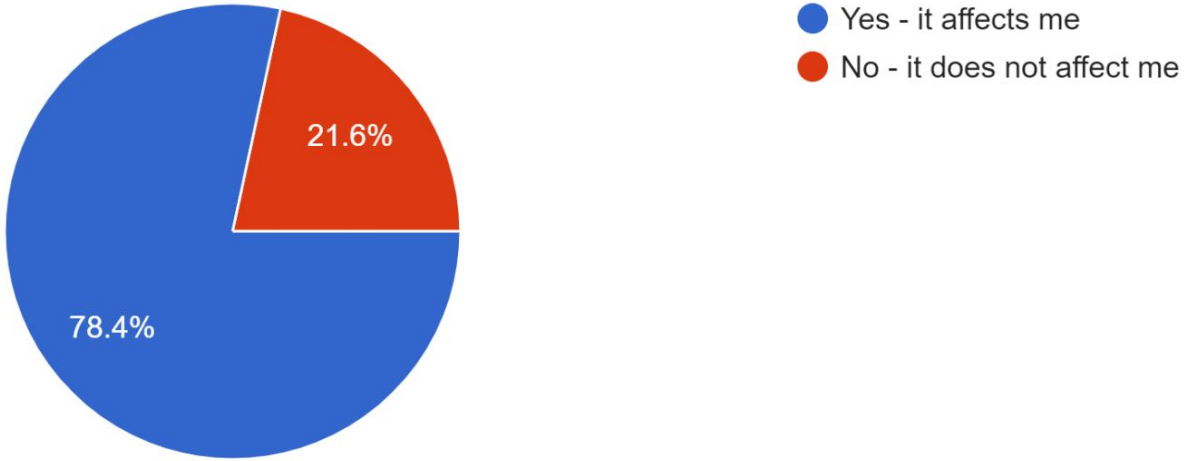
Appleford Village Noise Survey

Q8. Does the noise affect you negatively, either mentally or physically?

74 responses



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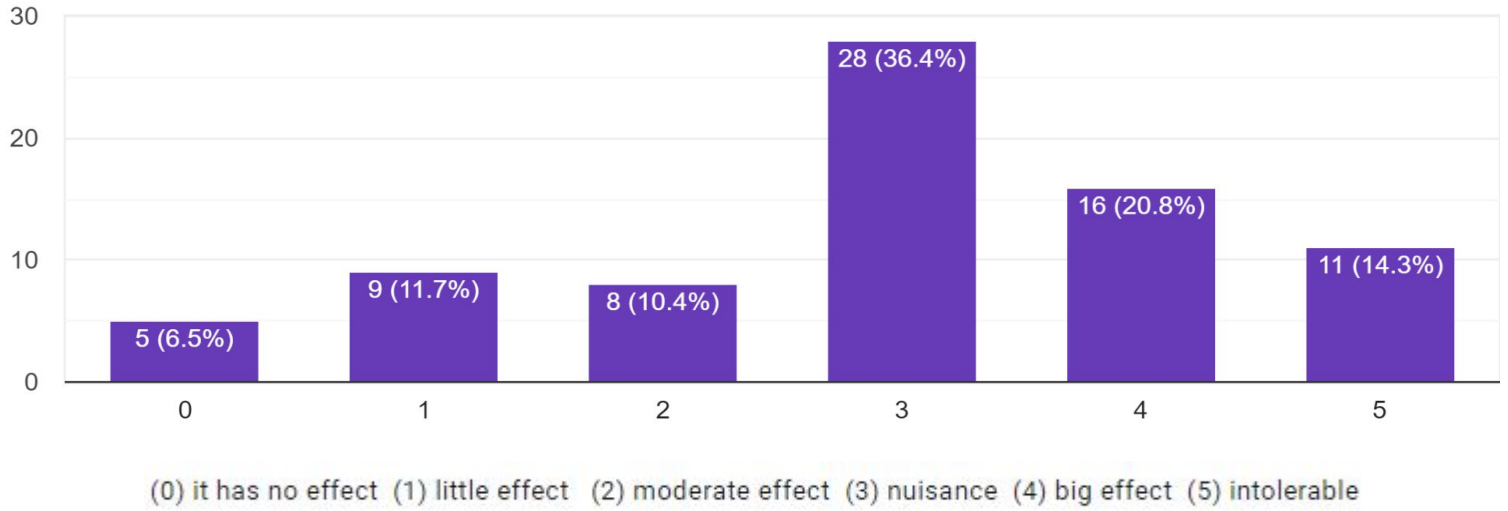
Appleford Village Noise Survey

Q9. Please rate on the 1 - 5 scale below, how noise from the sidings affects you or members of your household?

77 responses



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Appleford Village Noise Survey

Q10. If you are affected by the noise, please describe how the noise affects you?

63 responses

Cant enjoy my garden. Very annoying sounds

Loud bangs and clangs remind me of industrial noises and power facility accident that claimed lives in Didcof. There's never any peace here.

It continues to catch my by surprise. We live a reasonable distance from the sidings and are surprised by how far and easily commercial noises travel to us: particularly beeping, booming and tannoy announcements

I have been woken early by banging noises.

Irritating.

It is really unpleasant to live here and was a shock to us after moving into the area last year. We thought we were moving to a quiet Riverside village! It's kept us awake at nights and with a baby due I am very worried to disturbance to my child's sleep pattern.

The Trains sit on idle waiting to leave the junction for sometimes over an hour. The noise and air pollution

Sample comments above

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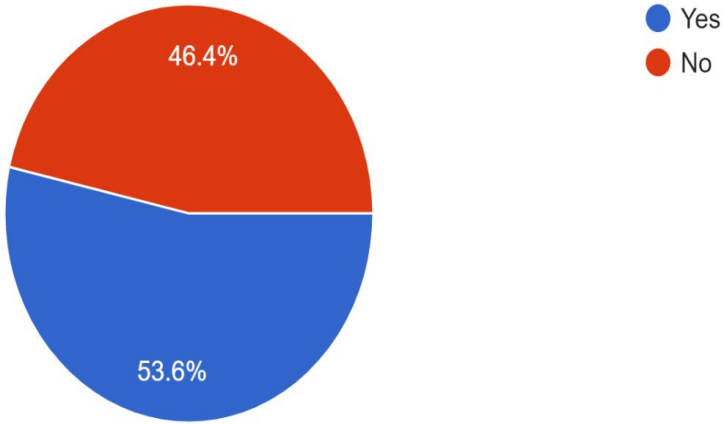
Appleford Village Noise Survey

Q11. If you have children in your household less than 16 years of age, do you think they are affected by the noise? (ignore if no children)

28 responses



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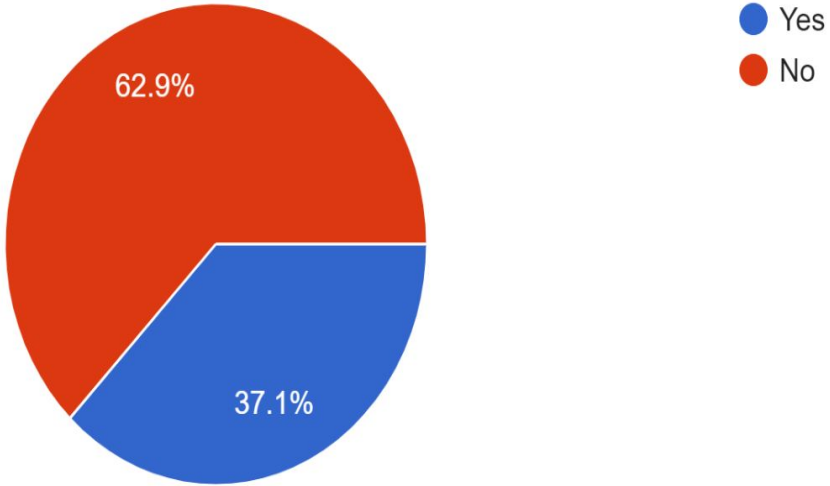
Appleford Village Noise Survey

Q12. Do you know where to report noise issues?

70 responses



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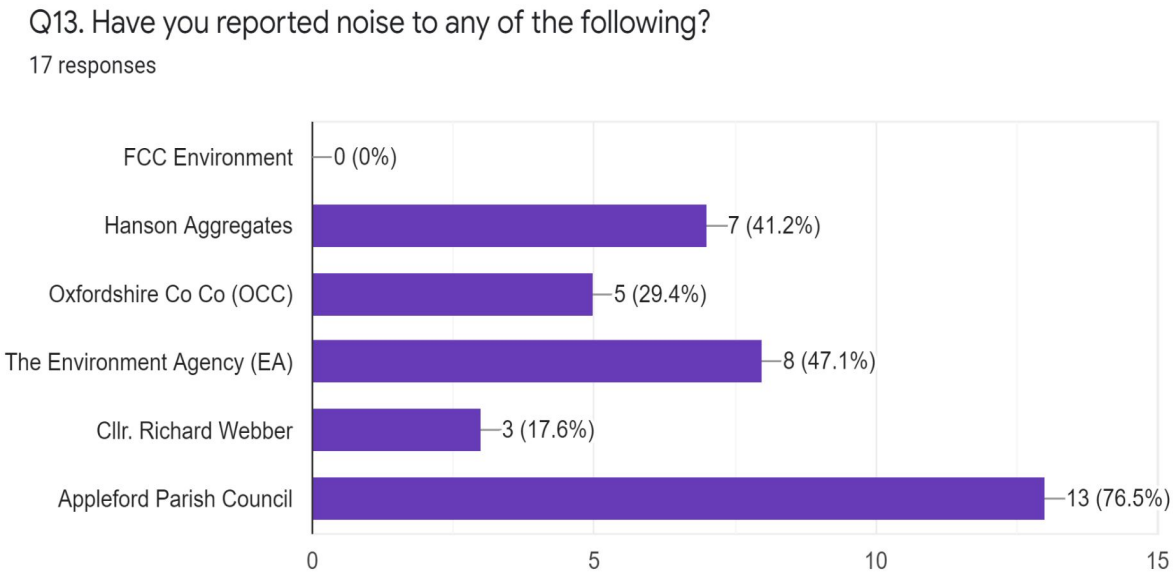
Appleford Village Noise Survey



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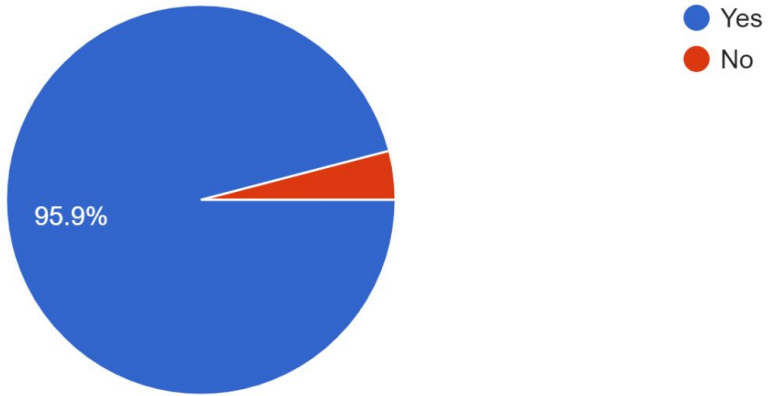
Appleford Village Noise Survey

Q14. Do you think the new HIF1 Relief Road will adversely affect noise levels in the village?

74 responses



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Appleford Village Noise Survey

Q15. If yes, (HIF1 will adversely affect noise levels) please explain how?

Unsure

A fast road with an expected high number of vehicles will produce a fairly constant level of noise

Yes. Although the current noise levels from the Hansen site may be reduced by any flyover banking this will be more than made up for by the noise from traffic (particularly HGVs) using the new relief road once built. Residents at the southern end of the Main Road will of course have the added noise of siding activities funnelled through the flyover tunnel.

This will be a continuous drone of traffic, including HGV which will destroy our background peace

Increase in noise, pollution, vibration the flyover will be so high I will be able to see it from each window as it will be higher than the house.

Building noises when the road is being built. No doubt reversing beeps and lots of shouting from the workers and clanking from the equipment.
Then road noise when it's built and being used .

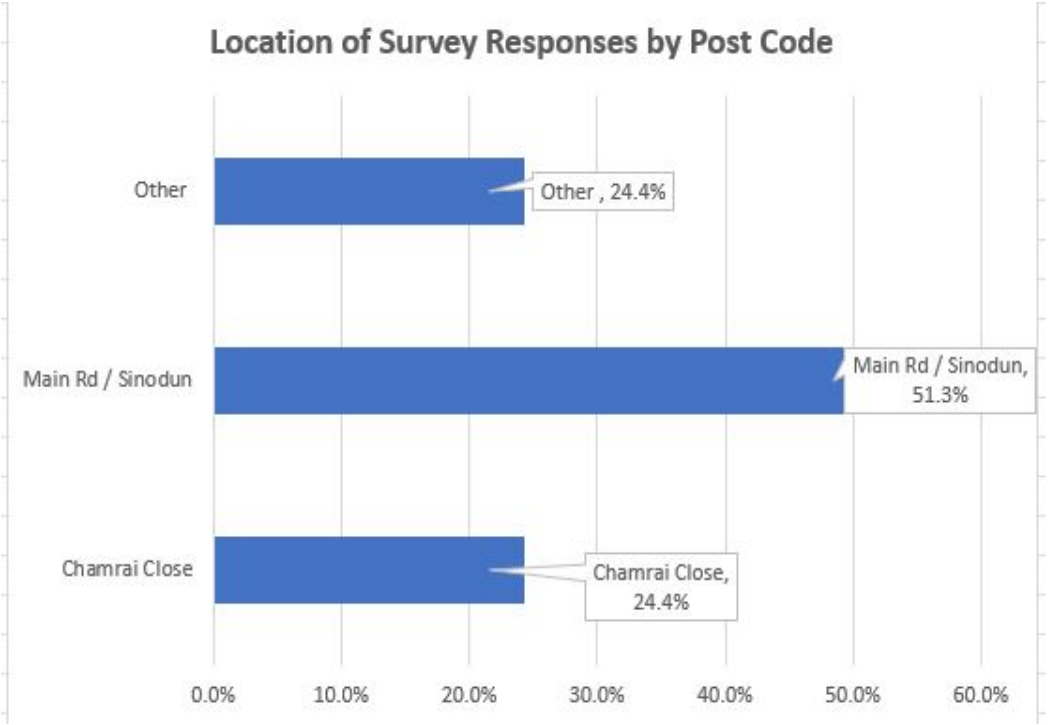
Sample comments - 68 responses

next slide -->

Appleford Village Noise Survey

Q16. What is your postcode? (Enter full postcode)

78 responses



⟵Adjacent to rail line

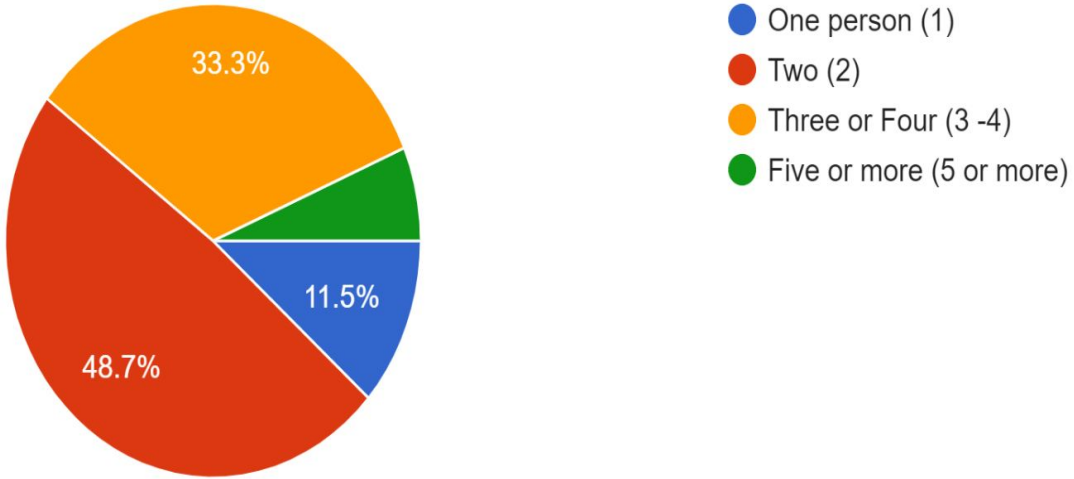
⟵ Railside or adjacent

next slide -->

Appleford Village Noise Survey

Q18. Please tick number of people (adults & children) in your household ?

78 responses



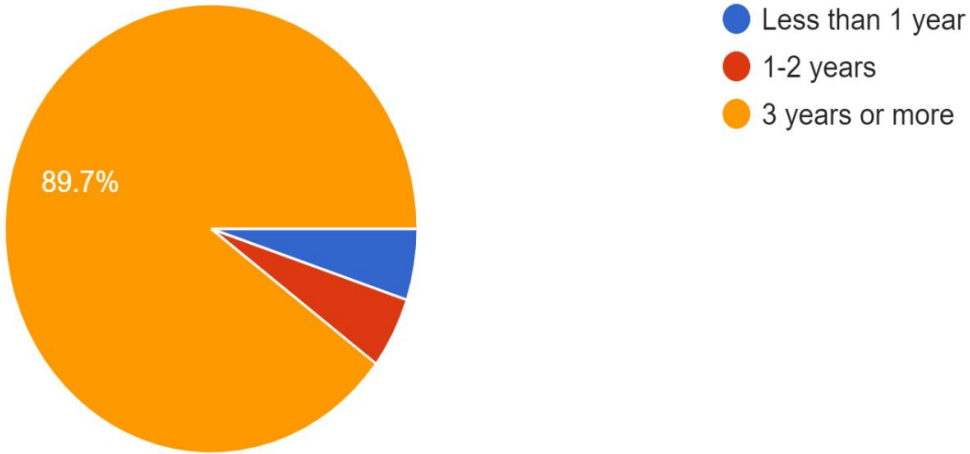
Sample comments - 68 responses

next slide -->

Appleford Village Noise Survey

Q19. How long have you lived in Appleford?

78 responses



Sample comments - 68 responses

next slide -->

APPLEFORD-ON-THAMES

👏 THANK YOU 👏
for
PARTICIPATING IN THE NOISE SURVEY

YOUR SUPPORT IS IMPORTANT TO US

END

Appleford-on-Thames Parish Council - Mar 2022.

APPENDIX 2

TAB 7

Statement of objection on noise submitted by NPC-JC dated 7th May 2023 to OCC in response to revisions to Environmental Statement Volume 1 Chapter 10, Noise and Vibration dated April 2023 .

NEIGHBOURING PARISH COUNCILS -JOINT COMMITTEE (NPC-JC).
Appleford-On-Thames, Culham, Burcot & Clifton Hampden, Nuneham Courtenay, Sutton Courtenay.

STATEMENT OF OBJECTION (R3.0138/21) ON THE BASIS OF NOISE

Planning Application R3.0138/21, HIF1 road between A34 Milton Interchange and B4015 north of Clifton Hampden.

THIS STATEMENT OF OBJECTION IS BASED ON A REVIEW OF THE ENVIRONMENTAL STATEMENT: VOLUME 1 CHAPTERS 10, NOISE AND VIBRATION, Revision dated April 2023 uploaded to OCC planning portal on 26th April 2023 .

As revealed in the revised document of 26-04-2023, additional Paragraphs 10.10.67 to 10.10.69, the applicant knowingly and deliberately proposes to impose severe, permanent and unmitigated noise damage to residents of a large number of dwellings, exceeding 20 properties, in Appleford.

The applicant has not contacted affected residents with this information and has not undertaken analysis of alternative road alignments to consult with them and to select a route with least noise impact on existing communities.

The NPC-JC submitted a critique, dated 5th May 2022 of the scheme's noise report dated September 2021. The responses by the applicant, dated April 2023, to this criticism fail to address the errors in the assumptions underpinning the noise assessment and the deficiencies in the measured baseline data. In the intervening period 2022-2023, The applicant has failed to undertake the additional ambient noise measurements, and to correct the traffic model as required to properly assess the noise impact of the HIF1 road at Appleford.

The errors in the noise assessment remain. The major deficiencies remain as detailed in the NPC-JC objection report dated 5th May 2022. The noise report of the Environmental Statement is an unsafe basis for granting planning approval to the HIF1 road scheme.

1 BASIS FOR REFUSAL

1.1 The HIF1 Scheme remains none-compliant with local plan policies of the Vale of White Horse District Council and South Oxfordshire District Council.

SODC Local Plan 2035 Policy ENV12 (3) and Local Plan Policy DES6

VoWH Development Policy 23 Impact of Development on Amenity

These policies require that a development should not result in significant adverse impact on human health.

No adequate noise assessment has been undertaken to convincingly demonstrate that all significant adverse cumulative noise impacts to adjacent communities along the length of the proposed HIF1 road have been identified. Where significant adverse impact has been identified, such as at Appleford, the true severity has not been admitted and no alternative road alignment has been investigated to select the least harmful.

1.2 The HIF1 scheme fails to meet the requirements of national planning policy and guidance.

1.2.1 The scheme does not meet the requirement of National Planning Policy Framework at paragraph 185 that it should "*mitigate and reduce to a minimum potential adverse impacts resulting from noise…. and avoid noise giving rise to significant adverse impacts on health and the quality of life'*

1.2.2 The scheme , and it's noise assessment, fails the meet the requirements of the DfT Transport Analysis Guidance (webTAG) 2014 due to it's failure to consider alternatives to the road and to it's alignment to ensure a balanced transport provision with least impact on existing communities.

1.2.3 The HIF1 scheme fails to meet the three aims of the Noise Policy Statement for England (NPSE) 2010 . These aims are the fundamental basis for noise assessments and require a scheme to "*Avoid significant adverse impacts on health and quality of life…"; Mitigate and minimise adverse impacts on health and quality of life; ," contribute to the improvement of health and quality of life";*

1.2.4 The scheme fails to match the requirements of Government Planning Practice Guidance 2019 on Noise as it fails to take account of "*how the noise (source) relates to the existing sound environment*" and "*the local arrangement of buildings, surfaces and green infrastructure, and the extent to which it reflects or absorbs noise"* and fails to recognise that "*In cases where existing noise sensitive locations already experience high noise levels, a development that is expected to cause even a small increase in the overall noise level may result in a significant adverse effect occurring even though little to no change in behaviour would be likely to occur*"

1.2.5 Specifically the scheme fails to follow PPG 2019 requiring that "*Noise Action Plans ..Important Areas (NAPIA)..should be taken into account".* The NAPIA at Appleford as identified by DEFRA, has been ignored in the assessment of the adverse noise effect of the HIF1 road.

2 RESPONSE TO APPLICANT'S ADDITIONAL COMMENTS

A specific response, to the additional comments provided by the applicant in the revised (April 2023) issue of the noise report, is provided in the following notes.

The noise assessment is flawed and misrepresents the noise impact of the operation of the road .

2.1 It is based on traffic modelling that fails to recognise "induced" traffic, i.e. additional vehicles attracted by a fast new highway, and is based on the false premise that in the absence of the new HIF1 road the predicted traffic will use village roads and thereby increase traffic noise in the villages. This ignores the HGV and traffic restraints already present on village roads and anticipated wider traffic reduction measures introduced by OCC and others to encourage alternative transport. To

support the road proposal the noise assessment under-estimates the noise impact of the proposed road and over-estimates the traffic noise in residential communities if the road is not built.

2.2 No further noise monitoring at critical locations has been undertaken since the absence of representative ambient noise levels was pointed out in by NPC-JC in May 2022.

2.3 The noise report fails to emphasise the increased traffic noise, that will be generated by the scheme, for properties at the eastern end of the proposed route. Para 10.10.64[1] in describing the significant increase in noise for properties along the B4015 upto the Golden Balls Roundabout , dismiss it as *"remote from the scheme*" and "*due to anticipated traffic growth on the B4015 from other developments in the area, not the scheme directly*". The assessment fails to acknowledge the encouragement that a new fast highway and HGV route linked to the A34, will have at the eastern end joining the B4015 at the existing road network. The detrimental noise effect, as this traffic passes through the middle of the village of Nuneham Courtenay enroute to Oxford, is ignored. There is no provision in this scheme to assess and ameliorate the impacts on such noise damaged communities.

2.4 The noise report para 10.10.65 wrongly asserts that "*it is considered that the first NPSE aim to avoid exceedances of the SOAEL as a result of the scheme within the context of sustainable development has been met".* Furthermore proposed mitigation measures such as 3m noise barriers mounted an 8m high bridge parapets at Appleford, will block residential outlooks and when applied to the bridge crossing the Thames and north of Clifton Hampden will all compromise landscape amenity. The scheme fails the 2nd aim of the NPSE.

2.5 The noise report at para 10.10.68 & 10.10.69 in the revision of April 2023 now acknowledges that more than 20 properties in Appleford close to the proposed road alignment will suffer increase in road noise which will not be adequately mitigated. However the assessment underestimates the increased effect of HIF1 road noise by overestimating the reduction in predicted traffic through Appleford due to the HIF1 road.

2.6 Moreover the noise assessment fails to assess the particular noise impact of forming a tunnel bridge taking the proposed road over a commercial railway sidings, directly facing dwellings in Appleford. The cumulative effect of noise from rail shunting, bridge reflection and funnelling of train noise and superimposed road traffic has not been investigated. The reflection of rail noise back to dwelling from the noise barrier proposed as a parapet to the bridge has not been investigated. Comparison with noise generated by an alternative road alignment and bridge position has not be undertaken to determine the alignment with least noise impact

2.8 British Standard BS 8233:2014 'Sound Insulation and noise Reduction' recommends that "*For traditional external areas that are used for amenity space, such as gardens and patios, it is desirable that the external noise level does not exceed 50 dB LAeq,T, with an upper guideline value of 55 dB LAeq,T which would be acceptable in noisier environments.* No attempt has been made to assess the total noise environment in Appleford in comparison to recommended limits.

[1] Environmental Statement Vol 1 Chptr 10 Noise and Vibration revised Apr 2023

2.9 No attempted has been made to assess the noise impact on dwelling comparing alternative road alignments to select a route with least impact on the existing communities, of Appleford and Clifton Hampden.

NPC-JC 07-05-2023

APPENDIX 2

TAB 8

Statement of objection on the basis of Health and wellbeing submitted by NPC-JC (Appleford) dated 25th March 2022 to OCC in response to Environmental Statement Volume 1 Chapter 13, Population and Human Health.

STATEMENT OF OBJECTION (R3.0138/21) ON THE BASIS OF HEALTH AND WELLBEING

Planning Application R3.0138/21, HIF1 road between A34 Milton Interchange and B4015 north of Clifton Hampden.

THIS STATEMENT OF OBJECTION IS BASED ON A REVIEW OF THE ENVIRONMENTAL STATEMENT: VOLUME 1 CHAPTER 13, POPULATION AND HUMAN HEALTH, accompanying the application.

1.0 Basis for Refusal

The application for the development of the HIF1 road should be refused planning permission for the following reasons.

The proposal fails to comply with the following policies within Local and County Plans:

1.1 South Oxfordshire District Council

1.1.1 SO District Council Local Plan Policy EN12 which states that *"the merits of development proposals will be balanced against the adverse impact on human health the natural environment and/or local amenity from factors* (such as) *noise and vibration, smell, dust, odours artificial light… air Pollution.*"

The Environmental Statement for the road fails to adequately investigate and present the impact of noise, air pollution on local communities living close to the proposed path of the road. The communities of Appleford, Sutton Courtenay, Culham, Clifton Hampden, and Nuneham Courtenay will be particularly impacted by increased traffic, noise and pollution generated by the proposal. Local factors in relation to cumulative noise and pollution in these communities have been ignored in the Environmental Statements.

1.1.2 The South Oxfordshire District Corporate plan 2020-2024 recognises the Climate Emergency and pledges to support a district target of net zero carbon by 2030 and to "*take positive action on air quality improvement measures and sustainable transport"* and commit to *"Active travel including walking public transport and cycling infrastructure to reduce car dependency and air pollution*. " The proposal to develop the HIF1 road fails to meet the objectives of this corporate plan as it will:

- Contribute to increased carbon emissions, both embodied in the construction and by facilitating increase in vehicle journeys in south Oxfordshire, making the 2030 zero carbon target less reachable.
- Fails to prioritise sustainable transport modes (a modal shift). Fails to actively discourage car dependency by failing to providing infrastructure exclusively for zero emission public vehicles and active travel modes.
- Fails to prioritise development of existing rail services between Didcot, Oxford and beyond including the commuter link to Culham Science Centre

STATEMENT OF OBJECTION (R3.0138/21) ON THE BASIS OF HEALTH AND WELLBEING

1.2 Vale of White Horse District Council Local Plan 2031 part2

Core policy 16b refers to the Didcot Garden Town masterplan which aim to "*reduce reliance on motorised vehicles and promote a step change towards active and public transport".* The HIF1 road proposal, ultimately providing a dual carriageway arterial link between the A34 and east Oxford/ M40 will increase reliance on vehicle use for both commuting and freight handling. It does not provide a step change to give exclusive access for active travel, zero carbon modes and public transit systems. It fails to integrate the existing rail connection between Didcot Oxford and intermediate stations. For these reasons the HIF1 scheme fails to meet the objectives of Core policy 16b.

1.3 Oxford Health and Wellbeing board

The Oxfordshire Health and Wellbeing Strategy 2018-2023 (2019) seeks to promote community health and wellbeing, by encouraging active travel and protection from the impact of poor air quality (amongst other factors) on health. The development of the HIF1 by facilitating more vehicle use is counter to the health and wellbeing objectives of Oxfordshire.

In particular elevating the HIF1 road over the rail sidings at Appleford will increase the distribution of road emissions downwind over the dwellings in Appleford.

2.0 Environmental Statement Chapter 13, Population and Human Health

The effects of the road on public health issues is reported in **the Environmental Statement , Chapter 13 "Population and Human Health**". All following references to Sections refer to this document.

2.1 This document follows the assessment procedure of the Design Manual for Roads and Bridges (DMRB) sections LA 104 environment and LA112 Human health. It fails to acknowledge and follow the guidance of a Health Impact Assessment as stated as a requirement in the OCC policy document LTCP 2021.

2.2 As Sections 13.4.7 to 13.4.14 make clear this document was not developed in consultation with all the Parish Councils from Didcot, and Abingdon through to Nuneham Courtenay that would be affected by the proposals. It is clear that this Statement has been written with little direct information or understanding of local issues within the communities close to and affected by the road proposal. The following comments exemplify this.

2.3 With reference to table 13.3, the Environmental Statement fail to meet the requirements of the Scoping opinion in particular "*The health and socio-economic impacts on residents. Adjoining the scheme… including Sutton Courtenay, Appleford Culham and Clifton Hampden, this includes the impact of the development proposed on the Appleford Sidings including the proposed crossing of the railway line."* The HIF1 planning application cannot be given consent while the impact on these communities is so poorly understood.

STATEMENT OF OBJECTION (R3.0138/21) ON THE BASIS OF HEALTH AND WELLBEING

2.4. Section 13.7.6 lists existing businesses "commercial receptors" that could be affected by the road proposal. This list is incomplete and fails to acknowledge access restrictions that the HIF1 road may bring to:

- Businesses at Manor Farm Appleford
- Shops, filling station, public houses, primary school ,music school, Church and businesses at the Nursery, Sutton Courtenay
- Public house and BB businesses at Burcot and Clifton Hampden

2.5 Section 13.7.32 makes the statement "*The two BOAT* (Byway open to all traffic) *in the study area connect Sutton Courtenay to a byway with restricted traffic, which leads to but terminates before the Appleford Level Crossing."* The Termination of the BOAT at Appleford Level Crossing is disputed. There is no evidence that the existing byway continuing onto the B4016 was ever truncated by the intersection of the railway line.

Section 13.10.38 describes the impact of the HIF1 road on Public Right of Ways in the area of Appleford Level Crossings. This section omits to include the large adverse effect of the HIF1 road on the BOAT/PRoW number 4 crossing Appleford level crossing to join with the B4016 Appleford Road. This route is an Historic and continuous byway known as the Old Wallingford Way. It provides a direct connection between Appleford and Sutton Courtenay and will be adversely compromised by the alignment of the proposed HIF1 road. Section 13.10.46 fails to recognise the permanent dislocation and potential closure of this BOAT due to the alignment of the HIF1 road.

2.6. Section 13.10.5 examines the effect of the road on Appleford community assets. This fails to include the permanent disruption to the following journeys:

- from Abingdon and Sutton Courtenay direction to access Appleford Recreation ground, playground, football field, allotments and village hall.
- access between Appleford and the community assets in Sutton Courtenay, such as church, school, shops, nursery, petrol station, pubs and village hall.
- access between Appleford and the facilities of the market town of Abingdon.
- access from Appleford to the Millenium Common, a jointly administered community asset shared between Appleford/Sutton Courtenay.
- Access between Appleford and Sutton Courtenay via Appleford Level Crossing and the BOAT following the Portway/Old Wantage Way path.

The sensitivity of these assets is very high as they form daily links for many residents in Appleford and surrounding communities. The road will have a significantly adverse effect due to the density of traffic on the proposed HIF1 road and the complexity of access from the north and south of Appleford via the HIF1 road.

2.6 Section 13.10.14 states that to minimise any disruption to the operator of Appleford Sidings (Hanson) *"the construction of the bridge (will be undertaken) during non-working hours (as the railway operations at Appleford Sidings are not 24 hours, 7 days a week) ."* This statement fails to grasp the significance of activities at Appleford Sidings. Currently the 6 days a week operating hours of the sidings are proposed to be extended to between 6.00am and 10:30pm subject to planning approval. Any attempt to construct a road and bridge at

Appleford sidings between 10:30pm-:00am will subject nearby dwelling to 24 hour noise and pollution. This is a major adverse impact. This will cause an intolerable and severe impact on an extremely sensitive area. This area is classified by DEFRA as a Noise Action Plan Important Area.

2.7 . Section 13.10.39 states that the effect of the proposed road on PRoW 12 from Sutton Courtenay to Appleford will be neutral and not significant. This assessment fails to appreciate that this is the only viable footway between Sutton Courtenay and Appleford. The existing road link B4016, has no pavement and has a number of hazardous bends. The construction of the HIF1 Road will have severely adverse effect on access to this PRoW.

2.8 Section 13.10.52 declares that "*no accessibility or severance issues have been identified for community educational recreational or health facilities*" . this fails to recognise the strong dependance in Appleford on convenience access to these facilities in Sutton Courtenay and Abingdon. The HIF1 will impede existing convenient access along the B4016 Appleford road by splitting this road with two junctions intercepting with the HIF1 route. This HIF1 has a severe adverse effect on accessibility as a community health indicator. In this respect the conclusion of section 13.10.66 is misleading. No sizable access benefits accrue to the communities of Appleford, Culham, Clifton Hampden and neighbouring parishes to outweigh the impact on community assets. The conclusion of section 13.10.74 is also false and misleading. This states that residents living in proximity to the Scheme will see "improved access to healthcare and social infrastructure" The proposed road, ultimately designed as a dual carriageway regional link road between the A34 and east Oxford/M40, is not primarily intended to meet local connectivity needs. Health benefits attributed to the Scheme, such as public transport infrastructure (section 13.10.75) and footpath cycleway networks (section 13.10.76) are achievable without the necessity of constructing an arterial road.

2.9. Section 13.10.57 & 58 refers to air quality. Examination of the submitted ES Chapter 6 on Air Quality has demonstrated that this document is defective in the analysis of the impact of air pollution on communities close to the proposed road.

2.10 . Section 13.10.77 anticipates "*no likely significant air quality effects on human health*". Examination of the ES Chapter 6 on Air Quality has shown a paucity of baseline measured data and conclusions on air pollution based upon suspect traffic modelling. Exposure limits of NO_2 do not use the most recent advisory limits (WHO) and $PM_{2.5}$ is not assessed. The conclusion that "the scheme is assessed to have a neutral health outcome" is therefore not based on robust evidence and is defective.

2.11 Section 13.10.79 to 82 in respect noise and vibration, recognizes negative health outcome for some properties in Appleford, Sutton Courtenay, Culham and Clifton Hampden. It also states " *a residual positive health outcome"* in respect of noise for some properties in these locations. The ES noise assessment fails to encompass local noise sources, and forecasts noise outcomes on the basis of suspect traffic data and modelling. The ES noise assessment fails to address the impact of an expected high proportion of HGV and elevating the proposed road, above adjacent dwellings in Appleford. The conclusion of a positive outcome is not based on robust evidence.

STATEMENT OF OBJECTION (R3.0138/21) ON THE BASIS OF HEALTH AND WELLBEING

2.12 . Section 13.10.79 to 82 admits that the Scheme will result in *"impacts on local landscape character areas*" particularly the Thames floodplain and Clifton Hampden farmland. This will have a "*negative health outcome on people who live in and regularly access and use*" these areas. This section concludes that "*by operational year 15 the Scheme's proposed landscaping will have established*" and the adverse effects "*will be effectively mitigated".* This fails to admit salient condition:

- mitigation measures must be incorporated at the completion of any scheme, and not reliant on uncertain future provision.
- the intrusive scale and height of the viaduct approach to the Thames and the Thames river bridge could not be mitigated by tree planting. These structures would remain dominant in the Green Belt landscape and local viewpoints.
- The height of the structure, and lack of separation ground between the Appleford Sidings bridge and adjacent dwellings in Appleford severely limit the ability to use landscape to mitigate the dominance of this structure over the dwellings.

2.14 . Section 13.11 declares that no monitoring, after construction, will be required as no severe impact have been identified. Many of the assessments on noise and vibration and air quality are based on unreliable traffic forecasting and lack cumulative assessment in the case of noise and vibration. To ensure that the road, in whatever revised form it is developed, abides by agreed limits on noise and air quality, there is a need for ongoing monitoring, against standards agreed by local communities, to assess the impact on the lives of residents close to the road.

3.0 Conclusion

The NPPF National Planning Policy Framework States "*planning Policies and decisions should aim to achieve healthy inclusive and safe places*." (Section 8, Paragraph 92 a),).
The Environmental Impact Analysis for the HIF1 road fails to demonstrate that the HIF1 proposal will meet this objective of the NPPF. The Planning application for the HIF1 road should therefore be refused.

It is now widely recognised that any benefits of new roads on traffic congestion is transitory . For the HIF1 road average traffic speed across the road network are predicted to drop back to the pre-road-construction traffic speed within 10 years.(1) The overall increase in traffic that this result implies will make achieving net zero transport in OXfordshire much harder to achieve.

(1) Traffic forecasts within the Didcot Paramics model, 2020 to 2034,

C. J. Hancock

G. O' Broin

On behalf of Appleford-on-Thames Parish Council

APPENDIX 2

TAB 9

Item 1

Bridge Design. Extract from consultation letter from SODC to OCC Environment & Place dated 23rd December 2022

Item 2

Reply from NPC-JC, on 20th January 2023 to Regulation 25 response issued by OCC on 14th November 2022 on bridge and road design and landscaping.

Appendix 2 Tab 9

BRIDGE DESIGNS

Extract from consultation letter from SODC to OCC Environment & Place, 23rd December 2022 Re: R3.0138/21 "Notice of Submission of Further Information"

"Previous comments provided by this council in its response dated 21 January 2022 remain applicable and this council's further observations on the proposals are set out in the table below:

Bridges
In response to this council's comment that the Science Bridge should be a landmark feature as envisaged in the Didcot Garden Town Delivery Plan (the DGTDP), paragraph 3.3 of the Aecom EIA Regulation 25 response states *"Given the recent plans for large monolithic data centres and warehousing immediately north of the Science bridge the appropriateness of a 'spectacular bridge' structure may now be inappropriate"*

.Perceived *"large monolithic"* structures do not then justify a monolithic bridge design. On the contrary, this authority considers that a 'spectacular bridge' design is all the more appropriate and important to enhance the approach to Didcot.

The design of the River Thames Crossing between Didcot and Culham is not revised. Appendix G (Oversized bridge examples) of the Reg 25 response, provide little confidence that the bridges will be attractive features or sensitive to its rural setting.
The NPPF places great weight on good design. Paragraph 126 of the NPPF expects *"The creation of high quality, beautiful and sustainable buildings and places is fundamental to what the planning and development process should achieve. Good design is a key aspect of sustainable development, creates better places in which to live and work and helps make development acceptable to communities".*

The bridge designs by reason of their concrete materials, massing, unbroken grassed banks, lack of vertical landscaping on the approaches to the Science Bridge and on the banks of the bridge will result in them being an unspectacular and visually intrusive feature comprising poor design contrary to paragraphs 126, 130 and 131 of the NPPF, and the Didcot Garden Town Delivery Plan.

Acoustic Barriers and Noise
Acoustic barriers of unspecified height but possibly 2 or 3 metres in height, beside the road leading from Didcot to the River Thames Crossing will be visually intrusive in this primarily rural area.Given the comments made by the council's Environmental Protection Team (see below), whereby a number of residents of affected dwellings will experience significant adverse effects despite acoustic barriers and given the visually intrusive appearance of the acoustic barriers, this authority questions the suitability of the road alignment between Didcot and the Thames Crossing and consideration should be given to moving the road further west.

Bridges and Acoustic Fences

The design of the bridges does not necessary minimise their visual impacts, the viaduct supports are visually bulky, and there is minimum space to soften the northern side of the Science Bridge.

While planting is proposed to soften the acoustic fencing, this will take time to establish and a good maintenance regime to be successful. Can a softer approach to the acoustic fencing be used? A green barrier will be prominent in views where seen against the sky, such as on bridges, alternative colours should be explored.

Care is needed with regards to the proposed sedum treatment of some of the bridge areas. This will require bespoke maintenance to allow establishment to be successful. The cost/ benefit of this approach needs to be fully understood.

Planning Application R3.0138/21, HIF1 road between A34 Milton Interchange and B4015 north of Clifton Hampden.

Reply from the Parish Councils to the Regulation 25 Response issued by Oxfordshire County Council on the 14th November 2022 on bridge and road design and landscaping .

The acceptability of engineering interventions in the landscape are dependant on the quality of the design.

1 NPPF requirements

The National Planning Policy Framework (NPPF) July 2011 recognise the importance of good design. Paragraph 126 of the NPPF expects:

"*The creation of high quality, beautiful and sustainable buildings and places is fundamental to what the planning and development process should achieve. Good design is a key aspect of sustainable development, creates better places in which to live and work and helps make development acceptable to communities. Being clear about design expectations, and how these will be tested, is essential for achieving this. So too is effective engagement between applicants, communities, local planning authorities and other interests throughout the process.*"

The NPPF also advises that development should contribute to mitigating climate change. Paragraph 157 requires new development should be planned for in ways that *" can help to reduce greenhouse gas emissions, such as through its location, orientation and design. Any local requirements for the sustainability of buildings should reflect the Government's policy for national technical standards."*

Paragraph 134 of the NPPF advises that **"** d*evelopment that is not well designed should be refused, especially where it fails to reflect local design policies and government guidance on design"* .

2 The HIF1 road scheme

The HIF1 road scheme involves 3 bridge structures, and associated embankments and viaduct structures.

The generally poor and unsympathetic design of these landscape interventions have been cited by the Planning Team of the Vale of White Horse District Council in their comments, dated 22 December 2023 to the Regulation 25 response.

"*The design of the River Thames Crossing between Didcot and Culham is not revised. Appendix G (Oversized bridge examples) of the Reg 25 response, provide little confidence that the bridge will be an attractive feature or sensitive to it's rural setting. … The bridge designs by reason of their concrete materials, massing, unbroken grassed banks, lack of vertical landscaping on the approaches to the Science Bridge and on the banks of the bridges will result in them being an unspectacular and visually intrusive feature comprising poor design contrary to paragraphs 126,*

130 and 131 of the NPPF, core policies 37 and 44 of the Local Plan 2031 Part 1 and the Didcot Garden Town Delivery Plan. The design of the bridges does not necessary minimise their visual impacts, the viaduct supports are visually bulky, and there is minimum space to soften the northern side of the Science Bridge."

3 Bridge over the River Thames

The bridge over the River Thames also requires a 330m long raised viaduct to span the wetlands on the south bank. This was not included in the original assessments of 2018 (nor included in the cost budgets of 2021). A commentator (1) has described the viaduct as a "*low, squat, functional concrete structure, anything but the image of a soaring bridge allowing the landscape to flow effortlessly beneath."* The impact on the viaduct and bridge on the riverbanks and overwise tranquil area of the wetlands has not been properly examined. The wetland is an emerging wild fowl habitat and observation resource. The bridge and viaduct will be a severe intrusion into this environment.

The road is accompanied by a footpath and cycleway alongside. However, the design of the combined width of the bridge across the Thames is dedicated solely for 50mph motor vehicles. The resulting design denies the opportunity for pedestrians and cyclists to experience and savour the qualities of the river setting and riverbanks on the journey across the Thames.

4 Bridge over Appleford Sidings

The proposed alignment of the HIF1 road as it crosses private rail sidings at Appleford requires a bridge structure to form a very acute angle with the rail lines below. Whilst originally conceived to cross a single rail track, the design had to be enlarged when two more rail tracks were added. The design of this bridge is now wholly inappropriate as observed by a local bridge engineer (3)

"*This bridge has a large area of redundant deck due to its very simplistic design. It has been designed as an almost "square" deck which means that approximately 1/3rd of the deck area is not used and almost 1/2 of the substructure and piles are only needed to support the redundant deck area (the two large triangles either side of the road).*

If a slightly more sophisticated design were employed the bridge could be reduced in scale and the large redundant triangle of deck projecting approximately 12m towards the homes in Appleford would be significantly reduced. There are approximately 11 exposed concrete columns in this part of the bridge which will be very unsightly to look at.

A more sophisticated "skew" design would significantly reduce the visual impact on Appleford residents and also enable a much more pleasant and aesthetic design overall. Although this would be slightly more complicated to design it would be a much more efficient structure and reduce an enormous amount of wasted concrete and piling into the bargain.

With OCC's drive for green initiatives this design is extremely lazy and wasteful of resources which could be significantly reduced by an improved design. The two large red triangles on the sketch below are completely redundant and could be designed out by a better design.

The amount of concrete in the bridge could probably be halved by changing to a skew design from this very simplistic and lazy "square" design."

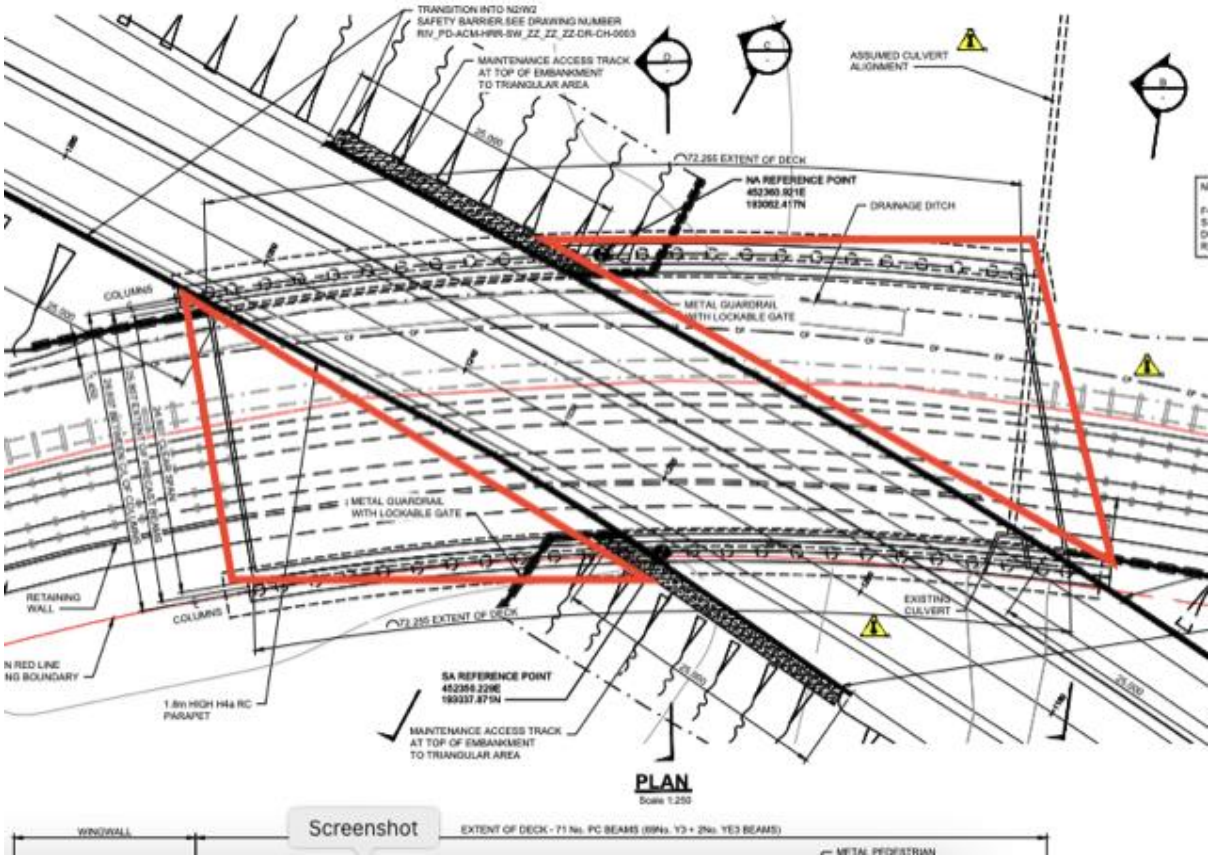


Figure 1 Plan view of the proposed bridge over Appleford sidings showing wasteful areas of structure either side of the road.

It is clear that this Bridge fails to meet the requirement for design (NPPF para 126) and for sustainability (NPPF par 157).

This bridge will occupy the main western field of view for windows in dwellings in Main Road, Appleford. The height of the structure, at more than 10m above adjacent gardens, will dominate the skyline for these dwellings. The significant increase in rail and road noise and air pollution caused by this road alignment has been raised in other objections. However a particular feature of the design is the concrete tunnel over the rail tracks and embankment abutments all facing towards the adjacent dwelling in Appleford (see figure 3). As the tracks are used for shunting aggregate wagons the bridge and abutments could reflect the shunting noise back towards the dwellings, amplifying the total noise severity experienced by these dwellings.

To excuse the impoverished design of the proposed bridge over the private rail sidings at Appleford, AECOM issued a document illustration "Oversized Bridge Examples" (2). This shows bridge structures for acute intersections that qualify for the above criticism. This design should never be

contemplated, particularly for positions with critical landscape and outlook requirements. The photograph in Figure 1 shows one of the examples cited.

Figure 2 Photograph (c Google Earth) of one "Oversized Bridge example" offered by AECOM as a precedent for the proposed Bridge over Appleford Sidings.

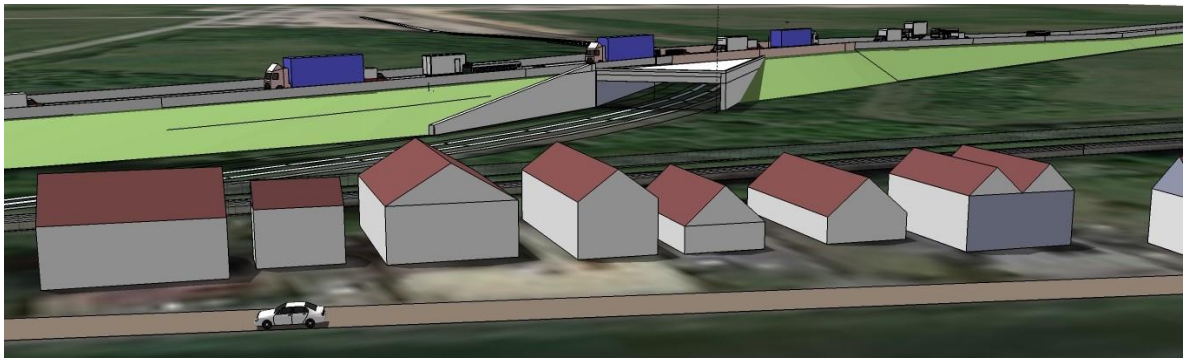


Figure 3 Modelled Image of the proposed Appleford rail sidings bridge overlooking dwelling in Main Road Appleford.
(Prepared by Appleford Parish Council for discussions with OCC, January 2021).

5 Acoustic Barriers and Road alignment

In addition to the deficiencies of the basic design of the road bridges, their intrusion of the road will be more severe by the use of noise barriers alongside bridges and sections of road. These barriers are a recognition that the alignment of the road incurs excessive damage to adjacent communities.

The Planning team of Vale of White Horse also criticise *"Acoustic barriers of unspecified height but possibly 2 or 3 metres in height, beside the road leading from Didcot to the River Thames Crossing will be visually intrusive in this primarily rural area.*

Given the comments made by the council's Environmental Protection Team, whereby a number of residents of affected dwellings will experience significant adverse effects despite acoustic barriers

and given the visually intrusive appearance of the acoustic barriers, this authority questions the suitability of the road alignment between Didcot and the Thames Crossing and consideration should be given to moving the road further west."

The designed alignment and elevation of the road has other intrusive consequences alongside existing communities, notably Clifton Hampden and Appleford as well as on open green belt land,

The VoWH comments . "*The road should not be located on embankment simply to achieve a balance of cut and fill, but should be kept as low as possible in the landscape to limit the adverse impact. Surplus fill can be accommodated through appropriate creation of false cuttings. Acoustic fencing,* (even as a) *green barrier it will be prominent in views where seen against the sky, such as on bridges. The proposed acoustic noise barrier to the west of the Clifton Hampden and the edge of the village conservation area is an unfortunate solution and it does not appear to be supported by justification or alternatives that would have less potential visual impact".*

Due to the poor quality of the design of this scheme and it's resulting impact on the landscape, the HIF1 Road scheme should be refused planning permission in accordance with paragraph 134 of the National Planning Policy Framework.

NPC-JC

20th January 2023

On behalf of the Parish Councils of Appleford, Culham, Clifton Hampden & Burcot, Nuneham Courtenay, Sutton Courtenay.

(1) Objection on Landscape Grounds by A James January 2023 as Appendix 2 to Further Objection following receipt of Regulation 25 further information.
(2) Regulation 25 Response, Didcot HIF1 Appendix G, Oversized Bridge Examples, October 2022.
(3) Private comments received by A.P.C. from retired OCC bridge engineer Dec 2021.

APPENDIX 2

TAB 10

Item 1

Review of assessment of alternatives dated January 2023

By Alan James landscape consultant submitted to OCC on behalf of NPC-JC

Item 2

Comments by OCC dated March 2018 on

Access to Science Vale, Option Assessment Report (OAR) part 1.

APPENDIX 1

OXFORDSHIRE COUNTY COUNCIL (OCC): DIDCOT HIF 1

PLANNING APPLICATION R3 0138/21

REVIEW OF ASSESSMENT OF ALTERNATIVES

JANUARY 2023

Alan James BSc MA MLI (retired)

This submission is made on behalf of the five Parish Councils of Appleford-on-Thames, Burcot and Clifton Hampden, Culham, Sutton Courtenay, and Nuneham Courtenay (the Neighbouring Parish Councils – Joint Committee) and covers the assessment of alternatives to the preferred option of the major new road proposal in the above planning application. The part of the application with direct impact on the five parishes includes sections C (Didcot to Culham) and D (Clifton Hampden bypass).

SUMMARY

The assessment of alternatives to HIF1 are covered in the ES Ch3, summarising the history of scheme development since 2014. The need for the scheme was purportedly established by the Vale of White Horse and South Oxfordshire District Council Local Plans, later supported by an Option Appraisal Report (OAR) in two parts in 2018 and 2019, and a further 'updated' OAR in 2021. The last of these underpins the current HIF1 proposal's status as the preferred option in the planning application.

The assessment of alternatives fails at a very basic level, in relation to both guidance in the form of WebTAG (DfT standard transport appraisal guidance since 2004, current version 2014 with later updates), and Oxfordshire County Council (OCC) policy most recently set out in the Local Transport Connectivity Plan July 2022 (LTCP). The central problem of the option assessment is that there has not been adequate consideration of alternatives to road building at the earliest stages in the project development, either as standalone packages of options or in conjunction with a lower level of highway provision. The full HIF1 highway scheme, with a smattering of active travel facilities that do not contribute significantly to the scheme's core provision, has been the required option since at least 2014, and as such it was inevitably the preferred outcome of the HIF1 appraisal.

Furthermore, it is now very clear that HIF1 is in fundamental conflict with the LTCP's core target to remove or replace one in four car journeys in the County by 2030, and with OCC's policy on option appraisal. Policy 36 of the LTCP states that OCC *"will only consider road capacity schemes after all other options have been explored"*, and that transport schemes should move away from 'predict and provide' to 'decide and provide'. The justification for HIF1 is entirely predict and provide – a given amount of development is going to happen in the area, which will require this scheme, rather than a balanced transport and land use strategy that seeks to establish what level of development is compatible with sustainable transport solutions aimed at traffic reduction.

The main failures in appraisal of alternatives are summarised below, and detailed more fully, with references, in the main report.

1. WebTAG requires assessments to start with as wide a range of identified options as possible, without preconceptions of a preferred outcome: with HIF1, the requirement for the whole scheme had been 'established' by the Local Plan development targets from 2014 onwards,

so by the time of the first OAR in 2018 it was impossible to start without a preferred outcome and with a dispassionate appraisal of non-road or low-road options.

2. WebTAG also requires a range of future scenarios to be evaluated, not just a 'with-development' scenario that may or may not happen. It is already clear that the housing targets of the Local Plans have been reduced considerably, and may be reduced further.
3. Both WebTAG and the LTCP set out a sequential appraisal process, which begins with a full range of options, including all transport modes, regulation, pricing, demand management, and infrastructure measures, sifted to arrive at a preferred option which could be a mix of several types of measure. As LTCP makes clear, highway infrastructure should be a last resort, but HIF1 has throughout its existence been the first resort.
4. In the option selection process in the 2021 OAR, the scheme proponents took four 'options' out of 16 forward, the four being the four sections of HIF1. This is disingenuous, since at most only one of the four sections (A4130) could exist as a standalone option, and it was already known that the full HIF1 was the preferred option.
5. There is little if any environmental assessment input into the option appraisal process, only an incorrect statement that all options (that is, the four sections of HIF1) have similar levels of environmental impact. A particular problem is that at the time of the 2018 and 2019 OARs the 330m viaduct across the gravel lakes south of the Thames crossing was not part of the scheme[1]: this is one of the most significant areas of environmental impact, and had it been known about at the time it would – or should - have been a factor in route assessment.
6. As long ago as 2014, OCC Science Vale Strategy was not to provide a new road crossing of the Thames, since it would release suppressed demand arising from capacity restrictions on the existing bridges. The HIF1 Thames crossing directly conflicts with the LTCP's traffic reduction objective, but the scheme promoters appear to be in denial over induced traffic effects that have been a recognised consequence of increased road capacity since at least 1994.
7. The absence of a worked-up, rail-led option throughout the selection and appraisal of alternatives is testimony to the lack of serious consideration of non-highway solutions. The one high quality Thames crossing between Abingdon and Wallingford is the railway line, with a station adjacent to the Culham Science Park which is one of the main traffic generators in the area. The purported rail option in the 2018 OAR was anything but an integrated rail-based strategy and was summarily dismissed from that point onwards.
8. The LTCP target to remove or replace 1 in 4 current car trips is contradicted by the HIF1 modelling, which assumes that there will be no reduction in current car trip generation.
9. The conflict between the scheme and the LTCP is neatly summarised by comparing the LTCP policy 36 objective with the stated HIF1 objective. In the LTCP, OCC *"will only consider road capacity schemes after all other options have been explored"*: in HIF1 *"one of the main objectives of the Proposed Development is to provide additional highway capacity"*.

WebTAG and the LCTP are fully aligned on the need to move away from 'predict and provide' to what the LTCP terms 'decide and provide'. The essence in both cases is that instead of assuming a particular level of development or traffic growth in the study period, a more dynamic approach should be adopted in which the ability of a study area to accommodate various levels of development and transport provision is as important as any aspirations to achieve a given level of development. The clear objective of OCC transport policy is traffic reduction, which requires active decisions to make it happen instead of a meek acceptance of trends in the opposite direction. HIF1 instead represents acceptance and promotion of significant traffic growth.

[1] The viaduct was not costed as part of the business case in 2018, but appeared in the scheme description and drawings in the 2021 planning application. Its omission led to a £23 million cost increase in the report to committee in March 2022.

REVIEW OF ASSESSMENT OF ALTERNATIVES

The scheme appraisal failings are considered in relation to two elements of planning guidance:

1. Non-compliance from the outset with guidance on 'optioneering', in particular the DfT WebTAG document 'Transport Analysis Guidance: the Transport Appraisal Process' January 2014
2. Conflict with Oxfordshire County Council (OCC) Local Transport Plan policies, updated and distilled in the new Local Transport Connectivity Plan (LTCP) adopted in July 2022

The central problem of the option assessment in the supporting documents for the planning application is that there has not been adequate consideration of alternatives to road building at appropriate stages in the project development, either as a standalone package of options or in conjunction with a lower level of highway provision. The full HIF1 highway scheme, with a smattering of active travel facilities that do not contribute significantly to the scheme's core provision, has been the required option since at least 2014, and as such it was inevitably the preferred outcome of the HIF1 appraisal.

Assessment of alternatives and WebTAG

1. The relevant sections on identification and appraisal of a possible range of alternatives are in the Transport Appraisal Document (see above) Section 2. It should be read as a whole, but key messages are (references are to TAG unit paragraph numbers):

    - Stage 1 involves identifying the need for intervention and developing options to address a clear set of locally developed objectives. It involves generating a broad range of options, which reflect a range of modes, approaches and scales of intervention. (2.1.2)
    - Analysts should identify a range of scenarios for the future against which options and subsequent further appraisal would be undertaken ... This is important as the **need** for a project … should be clearly apparent across a range of scenarios. (2.4.2, emphasis in original)
    - The traditional transport planning approach has been to assume a particular land-use pattern for the future planning year as a starting point … However, at the micro-level, studies should examine the interaction of transport and planning decisions and may consider land-use planning based solutions. (2.4.5)
    - The 'without scheme' case needs careful consideration and should involve specifying a **core scenario** based on standard assumptions of economic growth and other trends, and several **sensitivity tests** or **alternative scenarios**. (2.4.5 emphasis in original)
    - When identifying objectives at an early stage, they should avoid indications of preferred solutions and be drawn up to enable more specific targets to be developed as the project proceeds and options are refined. (2.6.2)
    - The purpose of option generation is to develop a range of alternative measures or interventions that look likely to achieve the objectives identified in Step 4a. Analysts should start with a wide range of possible measures, and then narrow these down … in a robust, transparent and auditable manner. (2.8.1)
    - It is important that as wide a range of options as possible should be considered, including all modes, infrastructure, regulation, pricing and other ways of influencing behaviour. Options should include measures that reduce or influence the need to travel, as well as those that involve capital spend. (2.8.2)
    - Studies should not start from an assertion about a preferred modal solution, or indeed that infrastructure provision is the only answer. Following the Eddington Transport Study 2, Sponsoring Organisations will be looking to encourage the better use of existing infrastructure and avoiding "solutions in search of problems". (2.8.3)

- Where highway solutions are being considered, options should include a consideration of different link/junction standards and other alternatives to address the problems in the area, such as public transport provision, demand management policies, traffic management measures and strategies. (2.8.5)

2. ES Chapter 3 affirms the need (3.1.2 to 3.1.5) for option identification and appraisal in relation to EIA regulations, the NPPF, and DMRB (Design Manual for Roads and Bridges), but surprisingly fails to mention WebTAG. It has sometimes been argued by scheme promoters that WebTAG is applied only to Value for Money assessments, but there is no substance to such claims. WebTAG makes clear its applicability to schemes like HIF1, and outlines its congruence with the three stages of DMRB (TAG unit A5.5 para 1.1.4). There is no question that WebTAG guidance is applicable to the whole of the HIF1 scheme, not just the environmental assessment.

3. ES Ch3 sets out the sequence of option appraisal in section 3.2, the key elements of which were as follows (reference are to ES Ch 3 paragraph numbers unless otherwise stated):

    - The Vale of White Horse DC Local Plan *"as early as"* 2014 'established' that new highway infrastructure would be required, confirmed by the South Oxfordshire DC Local Plan 2017; and *"Consequently, options selection has generally been focused on either a new road connection across the River Thames or improvements to existing infrastructure that provides a link between Didcot and Culham,"* (3.2.3)
    - Two Science Vale Option assessment reports (OAR) were produced in March 2018 and September 2019. The first of these (3.3.1 to 3.3.4) identified two major road options (MR1 comprised sections A/B of HIF1, and MR2 sections C/D, so in reality they were two sections of a single option), three public transport options (bus improvements, rail improvements, and autonomous vehicles), and two low-cost options (traffic management and cycle/pedestrian facilities). Apart from the autonomous vehicle proposal, the non-road options were rather more ill-defined than the road options. This report concluded (for reasons discussed below) that the three preferred options to take forward were MR1, MR2 or a combination of both.
    - OAR2 (3.3.5 onwards) considers these three options plus do-minimum, and unsurprisingly concludes that the combined scheme was the preferred option and do-minimum was unworkable. There was no attempt to reconsider non-road options either standalone or in conjunction with highways improvements.
    - In 2021 there was a belated further OAR *"reflecting the updated evidence base and options, including multi-modal options"* (3.3.20), though it is unclear what 'new evidence' was introduced. This identified 16 options. For the first time, each section of HIF1 was treated as a discrete option, all disingenuously described as 'multi-modal'. Seven options are presented as 'previously defined' from the public transport and low-cost options in OAR1: and four/ five are new public transport options. Again unsurprisingly, the four 'options' taken forward were the four sections of HIF1. Since the HIF1 horse had bolted long before 2021, this should be regarded as rather cynical window-dressing.

4. It is very clear that the HIF1 optioneering failed at the first hurdle to comply with WebTAG 2.8.3 (see above), since *"Studies should not start from an assertion about a preferred modal solution, or indeed that infrastructure provision is the only answer"*, but HIF1 started from the Local Plan dictate that new highway infrastructure would be required, with a new road connection across the Thames the clear intention.

5. OAR1 confirmed that the only options to be taken forward would be major road construction. The reasoning behind this is extraordinary. The rail option was lumped together with the road options as having the most significant environmental impacts, when all that was proposed

was an increase in rail services, upgrades of Didcot and Culham station, and a new station at Grove. By implication the rail option is discarded because of environmental impact. The ES then quotes OAR1 as stating that *"it is unlikely that increased cycling and walking alone will be able to resolve the problems associated with connections from the town to the wider national transport network"*, so any recognition of the contribution of walking and cycling to a strategic sustainable transport mix is deemed irrelevant. Then, without further ado, it is concluded that only highway infrastructure will meet the development needs. This is a long way from the above quote from WebTAG 2.8.2; *"It is important that as wide a range of options as possible should be considered, including all modes, infrastructure, regulation, pricing and other ways of influencing behaviour. Options should include measures that reduce or influence the need to travel, as well as those that involve capital spend."*. It is also a long way from the option sifting being done in a *"robust, transparent, and auditable manner"* (WebTAG 2.8.1)

6. The 2021 OAR, on which the planning application is predicated, is a post-rationalisation of what had clearly been the intended transport solution for at least the previous seven years. It is there to support and justify HIF1, and there is no indication whatever that an option making maximum use of more sustainable transport options and demand management, as called for in WebTAG, has been seriously considered.

7. WebTAG 2.4.2 and 2.4.5 are often overlooked, and require consideration of a range of future scenarios against which to test options, and a move away from the assumption of a particular land use pattern as the starting point for transport planning. The latter is close to the evolving policy away from 'predict and provide' towards 'decide and provide'. This is important, because the future invariably turns out to be different from what is forecast at any given moment, and a transport strategy has to be based as far as possible on interventions that remain valid and justified – in other words sustainable - in any emerging context. This suggests a step-based strategy, in which lower cost and lower impact measures are taken first, and the level of intervention may be scaled up only as and when the need becomes clear. HIF1 is the opposite of this, with the blockbuster intervention selected from the outset.

8. The need to consider a range of scenarios is already being demonstrated, with the Vale of White Horse DC having announced that it is reducing its housing targets by 32%. Further uncertainty surrounds housing provision over the coming years, with the apparent government decision to scrap mandatory targets for local authorities, which in turn will nullify the requirement to meet a five-year supply of housing land.

9. A further implication of WebTAG 2.4.5 is that decisions that link housing and land use may lead to the conclusion that the level of development that may be desired by housing authorities may not be possible if it causes serious strains on the transport system. Instead of saying "we want to build 15,000 houses, so need this much new transport capacity" it is possible to say that "we can sustainably provide this level of transport capacity which only supports this amount of development". Strategic transport policy is heading in that direction (see discussion below on the LTCP) and it is essential for transport practice to catch up.

10. Environmental impact is a key element in option assessment, and some options may be ruled out or adversely affected on environmental grounds. There is some environmental input, but it is generally weak and flawed. The equating of the impact of rail improvements against road improvements in OAR1 has already been mentioned. A worse example occurs in OAR2, where it is claimed that *"Overall, all options will have very similar impacts".* The options are DS1 (HIF sections A and B), DS2 (HIF1 sections C and D), and DS3 (DS1 and 2 combined). It is nonsense to claim that DS1 has similar impacts to DS2 or 3, since DS1 as a standalone has no impact on the areas with the most important environmental constraints along sections C and D. There

is no suggestion that any part of HIF1 should be ruled out or modified as a result of significant adverse environmental impact.

11. The 2018 HIF1 business plan did not include the 330m viaduct across the gravel 'finger' lakes south of the Thames crossing, for which £23 million had to be added to the scheme costs in March 2022 (Report to OCC Cabinet). The reason for this may have been that the largest lake had not yet been formed, and the area was unaccountably not within the reserved route corridor for the road. The viaduct appears on the plans submitted with the 2021 planning application. This means that the environmental impacts of the viaduct, which could and should have had a bearing on route selection, had not been assessed at the time of OAR1 so did not feed into the selection process.

Regulation 25 response, Appendix K and the LTCP

12. Further issues relating to the assessment of alternatives arose in the Regulation 25 request for further information, covered in AECOM's Appendix K 'Climate Change Position Statement'. This response also considered the emerging policy context of OCC's LTCP, which was adopted in July 2022 and is a material consideration in the HIF1 planning application.

13. Although this section of the review is with reference to Appendix K and the LTCP, it should be noted that in many respects HIF1 sat uncomfortably alongside previous OCC transport policies in the LTPs that preceded LTCP. The problems are typified by para 15 of the 'Science Vale Strategy Update' (May 2014):

    "Improvements to the Culham and Clifton Hampden road river crossings or implementation of a new bridge are not identified projects within the Transport Strategy … the strategy to accommodate movement north/south is focussed on rail and the A34. Capacity problems are not only created by the bridges themselves but also by the surrounding road network and junctions. The capacity issue acts as a deterrent to some drivers and aids commuters to make a choice about how/when they travel"

    This approach is far more in tune with the LTCP than is the 'predict and provide' philosophy of the new Thames crossing in HIF1`.

14. The key LTCP policies with a bearing on option assessment are in Policy 36. OCC will:

    - *Only consider road capacity schemes after all other options have been explored*
    - *Where appropriate, adopt a decide and provide approach to manage and develop the county's road network*
    - *Assess opportunities for traffic reduction as part of any junction or road route improvement schemes*
    - *Require transport assessments accompanying planning applications for new development to follow the Council's 'Implementing Decide and Provide: Requirements for Transport Assessments'*
    - *Promote the use of the 'decide and provide' approach in planning policy development to support site assessment*

15. In addition, the LTCP has a target to "*replace or remove 1 out of every 4 current car trips in Oxfordshire"* (LCTP pdf p6). The modelling of HIF1 is in unambiguous conflict with this target, as it assumes no reduction in current car trips, alongside an arbitrary reduction of 20% in car trips generated by future development. Whilst transport modellers often characterise this as

'robust', it can equally be characterised as over-inflating demand and boosting the case for the scheme as it is then argued that nothing else would cope with the forecast traffic volumes.

16. The gulf between OCC policy and HIF1 intention is succinctly expressed in Appendix K:

    - The LTCP policy 36, as quoted in Appendix K para 3.5 final bullet, is that OCC will "*Only consider road capacity schemes after all other options have been explored"*
    - Appendix K para 3.8 states that *"one of the main objectives of the Proposed Development* (HIF1) *is to provide additional highway capacity"*

    It is futile to pretend that the scheme promoters only moved on to a road capacity scheme having exhausted all other possibilities. The starting point was that a there was a presumption in favour of new highway capacity, purportedly established by earlier Local Plans that have since been revised to reduce the levels of potential development. At best, HIF1 was only ever assessed ***alongside*** imprecise and half-hearted non-road options: there was never any suggestion that the alternatives were considered ***sequentially***, with the road scheme as a last resort. There was also little if any attempt to harness the synergies of non-road options with or without some new highway infrastructure, to present genuine multi-modal options: it is not a multi-modal option simply to provide footways, cycleways, or improved road crossings.

17. In the entire approach to HIF1, there is very little mention of the one high quality bridge across the Thames – the main line railway between Oxford and Dicot – or the presence of a railway station adjacent to Culham Science Centre. Appendix K makes no mention of railways other than as geographical locators. In contrast, the LTCP has several pages (pdf pp75-78) devoted to rail strategy, and a separate policy (21). It is almost beyond belief that no rail-led transport option was considered, without needing a major new bridge across the Thames.

18. It appears that the promoters of HIF1 are in denial that a major new road with a significant increase in road capacity across the Thames is fundamentally incompatible with a council policy to reduce car trips by 25%. A new river crossing is one of foremost examples where induced traffic may be expected because it facilitates car trips that were previously either not possible or at best slow and congested. At the Thames crossing at Culham , the low capacity of the old bridges throttles the ability of traffic to cross the river and thereby suppresses demand. A great deal more demand is triggered if the river crossing by car becomes easier, and as a result many people are more likely to use their cars in preference to alternative modes of travel. In contrast, difficult road crossings in conjunction with significantly upgraded rail services to Culham Science Park, will encourage more people to use the train.

19. In summary, HIF1 was predicated on Local Plans that are 5-8 years old, at least one of which has been reviewed and development demands downgraded. The scheme is based on 'predict and provide' concepts that were discredited almost 30 years ago (PPG 13 1994), but which seem to take a long time to disappear from project practice. It appears that the LTCP has finally caught up, and supplanted 'predict and provide' with 'decide and provide'. The approval or rejection of HIF1 will be a test of whether this policy evolution has translated into project practice.

Alan James
January 2023

Comment on document

Access to Science Vale, Option Assessment Report (OAR) Part 1

Dated March 2018, OCC.

"4.6. Movement within Didcot is heavily dominated by private car travel, as is travel by Didcot residents. This is self-re-enforcing since the high level of vehicular traffic makes walking and cycling less attractive. This has repercussions in terms of health and fitness, as well as making action on the air quality issue more difficult. "

"Air Quality is below the national standard along the line of the railway west of the station…. However, as the area between the town and the A34 become developed the number of residences which are exposed to this level of air pollution could increase. "

"

6.2.3. A problem with the Major Road package comes from the potential of the strategy to encourage more road traffic and thereby increase the amount of emissions produced by travel. To some extent this would be mitigated by allowing for more free flowing traffic, particularly with regard to river crossing traffic, but detailed modelling would be required to determine the extent of any balance. This problem would be likely to reduce in the future with the move to low and eventually zero emission vehicles but it is an undoubted short term problem with this strategy

(a) Major Road Schemes

6.3.2.3. The major road options generally score well in the strategic case, the exception being with regard to the degree of consensus over its outcomes particularly for the Science Bridge which have been through local plan consultation, examination and adoption, and been agreed in principle with the Highway Authority, but have yet to be tested as standalone proposals. On the economic case there are also generally good scores with the exception of carbon emissions where both schemes are seen as being likely to generate additional travel, and therefore carbon. However, the national plan to de-carbonise travel may mean that this is less of an issue by the time the scheme is implemented and may only be a short term disadvantage.

6.4.2. MR2 – the new river crossing and Clifton Hampden bypass scheme is likely to meet some of the operational objectives but at the cost of potential environmental costs. The new river crossing has the potential for increased costs until the parameters for its provision and the standards to which it needs to be designed are established. There is potential for opposition to the building of a new road in open country and the attraction of additional traffic onto the A4074.

While the transport network of the town has been upgraded over the last few decades with the construction of the Northern Perimeter Road (Stages 1-2), Milton Heights Link Road (Stages 1 & 2) and Manor Bridge this has not been sufficient to eliminate all the transport issues in the town. The proposed future schemes in the town (Northern Perimeter Road Stage 3, Harwell Relief Road Stages 1 and 2) are similarly unlikely to fully deal with the consequences of

additional development in the town. The consequence of this is that unless additional transport capacity is provided there is likely to be increasing congestion both within the town and on the main routes into/out of the town such as to the A34 and crossing the River Thames.

7.13. The Part 2 Options Assessment Report will need to include, inter alia:

initial route alignment options and costs

modelling of the impact of the options and any consequences of the strategy

preliminary economic appraisal

completing an Option Assessment Framework

Initial options are assessed using the DfT EAST.
This notes

Strategic Case and Fit with objectives
EAST offers a 1-5 grading for impact of a development option, but indicates.
"The description provides a guide to how the evidence is interpreted but it is for the respondent to judge the overall scale of impact, and fit providing a justification in the space provided." Any grading of the impact and appropriateness of a development option is subjective and dependant on individual judgement.

Economic case
"2.10 The Red/Amber/Green (RAG) scores for each question are intended to provide a visual guide to the respondent as to the option's impact and a record for future reference. It is not intended that they are aggregated or averaged to provide a final RAG status for each economic indicator."

2.13 Because of the varying potential uses of EAST, decisions will need to be made on a case by case basis by those using the tool regarding the most appropriate base year for comparison.

Carbon emissions
2.19 The decision tree on carbon emissions is consistent with the Transport Business Case and takes account of the fact that carbon is valued differently depending on whether it is in the traded sector, and so covered by the EU Emissions Trading System, or in the non-traded sector. The respondent is asked to provide an overall assessment by considering:

- *what impact the option could have on carbon emissions either through changes in activity, an increase in embedded carbon, changes in the carbon content of fuel or changes in efficiency; and,*
- *whether the change in carbon emitted is associated with the traded or non-traded sectors.*

Socio-distributional Impacts and the Regions Social and distributional 2.25 Social and distributional impacts need to be considered when assessing the impact of options on noise, air

quality, severance, accessibility, security, accidents, user benefits and personal affordability. Respondents will need to consider whether the expected impact of their option (both positive and negative) is either significant in extent or concentrated in terms of the people groups or spatial areas affected, or both.

2.20 When assessing what impact the option will have upon transport activity, and what impact this will have on carbon emissions, it is important to consider how vehicle-km would change as a consequence of the option being implemented. This may involve commenting on changes in the number of vehicle trips, the number of public transport services being provided, changes to journey length and shifting vehicle occupancy levels, in both private and public transport. The respondent should use their judgement and evidence on the relative magnitudes of impacts to assess the net impact the option will have upon activity, noting impacts working in opposite directions in the comments box.

2.21 Embedded carbon should also be considered when assessing the carbon impact of a project. Though this impact will tend to be less significant, building new infrastructure could have a notable effect on carbon emissions.

Socio-distributional Impacts and the Regions

Social and distributional

2.25 Social and distributional impacts need to be considered when assessing the impact of options on noise, air quality, severance, accessibility, security, accidents, user benefits and personal affordability. Respondents will need to consider whether the expected impact of their option (both positive and negative) is either significant in extent or concentrated in terms of the people groups or spatial areas affected, or both.

Local environment

Air Quality

the Air Quality Strategy for England, Scotland, Wales and Northern Ireland sets health based objectives for nine air pollutants and two for the protection of ecosystems. The objectives are the same or similar to mandatory limit values set in European Directives, which the UK Government is legally obliged to meet.

Noise

respondents are asked to refer to the DEFRA noise action plan http://www.defra.gov.uk/environment/quality/noise/environment/actionpl an/index.htm to assess whether their option is likely to impact on a noise problem area

Natural environment, heritage and landscape

landscape refers to both the physical and cultural (ie use and management) characteristics of the land. Physical characteristics include fields, hedges, trees and streams. Cultural characteristics include stone walls, water meadows and field barns

Severance

severance issues relate primarily to pedestrians though they can affect all non-motorised modes including cyclists and equestrians.

respondents should consider the impact on pedestrian movement, for example, whether there will be hindrance to pedestrian movement, whether some people (particularly children and old people) are likely to be dissuaded from making journeys on foot, or they will be less attractive to others or whether people will be deterred to the extent that they reorganise their activities?

Biased and partial.

7.11. It is recommended therefore that the OAR Part 2 should take as it base or reference case ("do minimum") a network which has the improved walking and cycling network plus improved rail connections, particularly to Oxford. On top of this the road building options can be tested to assess the additional benefits to the town and the wider area that they could provide. Three alternative strategy ("do something") options should be tested:

(i) the dualling of A4130 plus Science Bridge
(ii) New River Crossing plus Clifton Hampden Bypass
(iii) a combination of (i) and (ii).

Comments on Design and Access Statement Appendix xx Option assessment report (OAR) dated September 2021

OAR part 2

Option Appraisal Report (OAR)

Section 6.1.1 indicates that the long list options were assessed against the criteria of "scheme objectives" plus affordability. Deliverability, acceptability, feasibility.

Development options were scored on a 2 to -3 scale . the Sift results are tabulated in appendix 2.

No objective link between the scoring and the characteristics of each option is described. It is clear that the scoring is a subjective matter of personal judgement. There is no indication of a consensus view from individuals from different disciplines or with different viewpoints.
The lack of objectivity renders the results highly questionable.

The report admits that "affordability" refers only to already identified/secured funding. This is a

skewed criteria ,as at the date of the OAR only the 4 component road option had identified HIF1 . Thus all non-road options (e.g. public transport options) were declared unadffordable.