

## Technical Note 01: Watlington Relief Road (WRR): Transport Comment

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**Project:** Watlington Relief Road  
**Subject:** Comment on Environmental Statement  
**Client:** Shirburn Parish Council and The Beechwood Estates Company Limited  
**Prepared by:** Bruce Bamber **Date:** March 2024

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### INTRODUCTION

1. This Technical Note has been prepared on behalf of Shirburn Parish Council (SPC) and The Beechwood Estates Company (BEC). It provides a review of the transport information that has been submitted in support of the Watlington Relief Road (WRR) (Oxfordshire County Council (OCC) planning application ref. R3.0010/24).
2. The author of this report is Bruce Bamber, Director of Railton TPC Ltd. who has over 30 years of experience working within the transport planning industry for both private and public sector clients. He has dealt with the transport and access arrangements for development schemes comprising all land use types and at all scales. He has been involved with numerous local and strategic transport studies and modelling exercises. He has given evidence at many informal hearings and public inquiries, participated in Local Plan Inquiries and at a DCO Hearing. He is a Chartered Member of the Institution of Highways and Transportation and has a Masters Degree in Transport from Imperial College, London.
3. The author has visited Watlington and the various parts of village and surrounding areas affected by the proposals. He has also visited Shirburn and met with representatives of both SPC and BEC to better understand existing transport and highways issues and concerns about the proposals.
4. The documents that have been reviewed include the following:
  - Transport Assessment (TA), Aecom, November 2023 (ref. WRR-ACM-03-ZZZ-RP-N-2600005);
  - Environmental Statement (ES) Volume I Chapter 15: Transport, Aecom, December 2023 (ref. WRR-ACM-02-ZZZ-RP-J-2600115);
  - Environmental Statement Volume III Appendix 2-2: EIA Scoping Responses, Aecom, December 2023 (ref. WRR-ACM-02-ZZZ-RP-J-2600304-A1-P01);
  - Preliminary Design Drawings, WRR-ACM-00-ZZZ-DR-H-0100 001 to 008, Aecom, 2023.
5. The following sections identify a number of significant concerns about the design and function of the WRR and the supporting transport information.

6. These comments are prepared on the basis of currently-available information. However, as explained in these comments, the failure to make public supporting documentation which underlies the modelling and assessment undertaken makes it impossible to adequately assess the impacts of the WRR as proposed or to consider the robustness of the conclusions reached. It is impossible to adequately assess the impacts of the WRR as proposed without this information.

### Design Deficiencies

7. The WRR has been designed primarily as a bypass for Watlington. This is evident from the following:
- The road is designed with a width of 6.75m. This is suitable to accommodate two-way bus movements but is also suitable for two-way heavy goods vehicles (HGVs);
  - The radii of curves along the WRR are between 150m and 200m, far in excess of the desirable minimum of 64m recommended in Manual for Streets 2 (MfS2) for residential streets and far in excess of the 65m identified as the desirable minimum by OCC in its Technical Meeting with developers to agree design parameters<sup>1</sup>. The horizontal alignment provides negligible speed restraint as would be desirable in an urban setting;
  - The WRR is designed without speed moderating features identified as appropriate for Primary Streets in the Oxfordshire Design Guide such as direct driveway access, parallel on-street parking, raised tables or surface changes, horizontal changes of direction and minimum junction geometry to facilitate pedestrian movement. It does not, therefore, meet OCC standards for a residential street;
  - It is designed without features such as visual narrowing, close proximity to buildings, reduced carriageway widths, obstructions in the carriageway, on-street parking and land uses associated with large numbers of people (e.g. shops) as recommended for urban streets at para. 8.2.13 of MfS2.
8. The design of the WRR as a **bypass** is therefore consistent with the layout of the road shown in Aecom's latest drawings. This design, however, is not consistent with OCC's original requirements which were for a road designed to MfS2 standards<sup>2</sup>. MfS2 focuses on residential streets and is driven by principles such as promoting an inclusive environment, placing pedestrians at the top of the hierarchy of users, supporting pedestrian and cyclist desire lines, moving away from hierarchies of standard road types and encouraging innovation (see para. 1.2.1 of MfS2). It is informative that the first illustration included in MfS2 (MfS2 Section 1: Principles) is of a road that displays many of the features of the proposed WRR such as a wide carriageway, long, sweeping curves, buildings set back from the carriageway edge, an absence of on-street parking, few pedestrian crossing opportunities and an absence of any speed reducing features such as changes in vertical and horizontal alignment:

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<sup>1</sup>See Section 2 of Minutes of meeting 19/01/2018 attached as Appendix C of the TA for Land at Britwell Road (Site A)

<sup>2</sup>See Section 2 of 19/01/2018 meeting



## Photographic Example in MfS2 of Poor Street Design Contrary to MfS Principles



9. The illustration in MfS2 has a caption that states, '*The cross section and arrangement of buildings mean that [...] the upper photo [shown] segregates two communities*' (emphasis added).
10. The function of the WRR as a bypass is consistent with the oft repeated title of '*Edge Road*'. OCC envisaged an '*Edge Road*' at the time of the Technical Meeting with developers as was made clear in the minutes that state, '*The road will skirt the northern edge of sites B and C*', '*A 3m shared footway/cycleway will be provided on the development side of the Edge Road*' and '*Verge to be provided on the non-developed side of the Edge Road*'. It was clearly, therefore, the expectation that the WRR would form an outer boundary (i.e. edge) of development.
11. The Reports Pack for the 21 September 2021 OCC Committee at which the WRR application was considered also portrays the WRR as an '*edge*' to the development. The plan that was presented to the Committee (Figure 1 on page 558 of the Reports Pack) showed the preferred route of the WRR with side accesses **only on the southern side of the road**. One of the benefits of the preferred alignment was identified as, '*Protects against future infill housing/development*' (Figure 3 on page 560 of the Reports Pack) strongly implying that the WRR was anticipated to run along the northern fringe of development forming a clear boundary to the urban area.
12. This view of the WRR is repeated in the Watlington Neighbourhood Plan 2017-2033 (WNP) that states, '*...a route for a re-aligned B4009 would be better placed further from the existing built form of Watlington in order to create a new edge to the settlement and to integrate new development more effectively into the town*' (Section 2.6 of WNP).
13. Despite OCC clearly expecting that the WRR would run along the northern boundary of the proposed new developments and numerous bodies, committees and reports referring to the WRR as an '*Edge Road*', it is now entirely clear that the WRR will not be an '*Edge Road*'.

14. The latest drawings accompanying the current planning application show three accesses on the northern side of the WRR in sites B and C and school playing fields and public open space are located north of the WRR in site PYR2.
15. The WRR would be embedded within an urban area with residential and other development on both sides of the road. There would be a significant demand for pedestrian and cycle movement across the WRR including from vulnerable highway users such as school children. The width of the road (6.75m) with relaxed curves, high levels of forward visibility and an absence of any speed restraint measures means that although a 30mph speed limit is proposed, in reality the speed of traffic is likely to be significantly higher. Communities north and south of the WRR will suffer severance and all good practice guidance seeking to create accessible, safe and sustainable communities contained in MfS2 and the Oxfordshire Design Guide will not be adhered to.
16. The current design of the WRR is contrary to the Committee Report that states at paragraph 9 (page 556 of the reports pack), '*...it has been recommended to progress through the next stage of the project and consider [sic] **low speed relief road** that will have infrastructure provisions for pedestrians, cyclists and equestrians, such as crossings and cycling routes*' (emphasis added).
17. The confused and conflicting nature of the proposals is likely to lead to a range of amenity and safety deficiencies. For example, the current design relies on the provision of zebra crossings to cater for the movement of pedestrians across the WRR. MfS2 states, '*Zebra crossings are generally only used when the speed limit is 30mph or below, as at higher speeds it may be more difficult for pedestrians to establish precedence*' (para. 9.3.9 of MfS2). The 'open' nature of the WRR with long sweeping curves, no frontage access, no carriageway narrowings, no obstructions and no on-street parking will encourage higher vehicle speeds that are likely to require additional enforcement measures or the retro-fitting of speed reduction features to both facilitate pedestrian movement and deal with inherent highway safety problems.
18. Although the WRR is expected to carry HGV movements that would otherwise travel through the village centre, there has been no swept path analysis of larger vehicles using the road and its junctions. This work should have been included in the TA.

### **Justification of the WRR as a Village Bypass**

19. The emergence of the WRR scheme in Policy was initiated by the proposed strategic allocation at Chalgrove Airfield and it was expected that a significant proportion of the funding for the WRR would come from development at Chalgrove Airfield. The current South Oxfordshire Local Plan 2011-2034 (SOLP, January 2019) includes Policy STRAT7 that makes reference to, '*Improvements to highway infrastructure through direct mitigation or significant contributions to new or improved roads, such as a bypass or edge road [...] around [...] Watlington*'. The requirement is carried over into Policy TRANS3: Safeguarding of Land for Strategic



Transport Schemes. The scheme does not appear in the Local Transport and Connectivity Plan 2022-2050 (LTCP) but it does appear in the South Oxfordshire Infrastructure Delivery Plan (IDP) but again in the context of mitigation for the Chalgrove Airfield development.

20. The Chalgrove development is now not expected to come forward in the foreseeable future<sup>3</sup>. This raises questions about whether the WRR is still required, whether it is justified and how it would be funded.
21. Funding for the WRR is now expected to come from the proposed developments in the north of Watlington (approx. £3 mill) and from Growth Deal funding (approx. £7 mill). The Committee Report refers to Growth Deal funding being re-paid through S106 contributions. On the basis of a contribution of £7,400 per dwelling as applied to the developments currently identified around the WRR, the re-payment would require 950 dwellings in **addition** to those already planned. To justify the contributions, these dwellings would need to generate traffic that would use the WRR. No assessment has been made of the potential impact of these additional 950 dwellings despite their being an essential element of the WRR funding (see further below). Indeed, no proposals have come forward to suggest where this additional development would be located.
22. The Committee Report identified the following justification for the WRR<sup>4</sup>:
  1. To alleviate congestion in the village centre;
  2. To enable future re-prioritisation of road space;
  3. To improve air quality
23. The matter of congestion in the village centre is considered in the 'Consideration of Alternatives' section below.
24. The Watlington Traffic Management Plan (Watlington Parish Council, October 2017) identifies a number of possible schemes to slow traffic, better manage traffic and facilitate pedestrian movement in the village centre. Some of these proposals would be facilitated by a reduction in through traffic but many of the potential schemes would not be dependent on the provision of the WRR. This matter is also discussed in the 'Consideration of Alternatives' section below.
25. The centre of Watlington is designated as an Air Quality Management Area (AQMA). The latest Air Quality Annual Status Report (SODC and Vale of White Horse District Council (VoWHDC), 2023) provides the results of air quality monitoring since 2018. The relevant indicator is the annual mean nitrogen dioxide (NO<sub>2</sub>) level. The threshold identified as the objective is 40µg/m<sup>3</sup>. Table A3 of

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<sup>3</sup> Chalgrove Airfield is identified as 'proposed to not be retained in the Joint Local Plan' at page 270 of the Joint Local Plan Preferred Options Consultation (Reg. 18 part 2), SODC and VoWHDC, Jan 2024

<sup>4</sup> See para. 5 of Committee Report 21 Sept 2021

Appendix A of the Annual Status Report shows that there have been no exceedances at any of the monitoring locations within the centre of the village since 2018 and that there has been a general downward trend in NO<sub>2</sub> levels year on year. At one site in 2019 an annual mean level of NO<sub>2</sub> of 40µg/m<sup>3</sup> was recorded. This is not, however, identified as an exceedance in the Report since it is not **over** 40µg/m<sup>3</sup>. The latest reported concentration at the same location is identified as 27.9µg/m<sup>3</sup>. After repeated observations of concentrations below threshold levels and clear evidence of a downward trend in pollutant levels, an AQMA is normally revoked. On the basis of evidence it therefore appears likely that the AQMA in Watlington will be revoked in the near future. The 2023 Air Quality Action Plan (SODC and VoWHDC, 2023) also notes the absence of exceedances over recent years and states, '*South Oxfordshire District Council will continue to monitor air quality within the area in accordance with Defra's Local Air Quality Management requirements, with a view to revoking the Watlington AQMA in future*' (p6). The presence of an AQMA in Watlington does not, therefore, constitute a justification for the provision of the WRR.

26. The issue of highway safety is not cited in the Committee Report as a justification for providing the WRR. However, it is a valid aspect of the local highway network that should be taken into account when considering infrastructure changes. The Crashmap website<sup>5</sup> identifies three personal injury road traffic accidents (PIAs) in the last five years on the B480 and B4009 routes through the village that would be bypassed by the WRR. In comparison, there have been eight PIAs on the section of the B4009 between Watlington and the M40 junction. In terms of highway safety issues within the village centre, it appears that there is little justification for the WRR. However, if the WRR leads to increased traffic flows using the B4009 east of the village there appears to be evidence to suggest that the WRR would lead to adverse road safety impacts. Sections below dealing with induced, committed and re-assigned traffic indicate that the WRR is highly likely to increase traffic flows on the B4009 between Watlington and the M40 and thus exacerbate existing highway safety issues.
27. To summarise this section, the original justification for the WRR is no longer relevant. The scheme has been retained on the basis of achieving Growth Deal funding but the impacts of the necessary additional local development have not been assessed. Other justifications, such as the presence of an AQMA in Watlington, when subjected to closer scrutiny, do not provide strong justification for the scheme. Indeed, in highway safety terms, evidence suggests that the scheme could lead to significant adverse impacts on the B4009 between the village and the M40.

### **Lack of Supporting Information**

28. A VISSIM transport model has been used to assess the impact of the WRR. Both Chapter 15 (Transport) of the ES and the TA refer to the modelling and report numerous modelling results. The model itself is not available for scrutiny but details

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<sup>5</sup> <https://www.crashmap.co.uk/>



of the model should be contained within the Local Model Validation Report (LMVR) and the Traffic Forecasting Report (TFR). Both of these reports are referenced in the TA and Transport Chapter of the ES. Neither report is currently available. It is therefore impossible to assess whether the model has been developed and set up correctly and is suitable for the purposes required. For example, the following model parameters and assumptions are unclear:

- **Traffic Survey Data:** At present it is impossible to check whether the traffic surveys are reliable, whether traffic flows have been correctly input to the VISSIM model and whether vehicle type proportions have been correctly input;
- **Highway Network Specification:** It is impossible to check whether the specifications of the existing and future highway networks (including mitigation associated with individual development sites) are accurate and reliable (e.g. speed limits, link capacities, highway constraints, pedestrian crossings and junction parameters);
- **Modelling Periods:** It is impossible to check whether the 'worst case' periods have been actively investigated and applied in the modelling;
- **Pedestrian Crossings:** It is impossible to assess whether the modelling of pedestrian crossings is reliable and reflects observations;
- **Basis for Validation:** The TA states that model validation is based on journey times (Section 8.5 of TA). It is impossible to assess whether the Baseline Model reliably predicts observed link flows and turning movements;
- **Assignment Option:** Section 8.5 of the TA states that '*The model has been assigned statically*'. It is impossible to assess whether traffic using the alternative routes through and past the village has been assigned or reassigned according to user assumptions or on the basis of dynamic route choice based on relative journey costs;
- **Traffic Growth Assumptions:** It is impossible to assess the reliability of the traffic growth assumptions that have been applied to uplift traffic flows from the Base Year to Future Years since no traffic growth factors are provided in Chapter 15 and the TA;
- **Journey Times on WRR:** Neither Chapter 15 nor the TA report journey times for vehicles using the WRR. It is therefore impossible to assess whether the assumed level of reassignment of traffic from the village centre to the route via the WRR is justifiable;
- **Generated Traffic:** Section 8.7 of the TA refers to a number of TAs accompanying the proposed developments that are assumed to generate traffic in the future years. It is impossible to assess how generated traffic has been assigned to the network and what assumptions have been made to ensure that the assignment of all generated traffic consistently reflects the absence or presence of the WRR in the future year situation;
- **Assignment of Development Traffic:** Neither Chapter 15 nor the TA provide any flow diagrams to summarise how the addition of development traffic affects

link flows and turning movements. It is not possible to assess whether traffic has been correctly added to the network;

- **Other Network Mitigation:** Without access to the TFR it is not possible to assess the assumptions that have been made regarding '*alterations implemented as part of the planning development(s)*' (Section 8.9 of the TA).

29. The current application cannot be determined until this important outstanding information is made available and has been assessed.

### **Consideration of Alternatives**

30. Volume I Chapter 03 Considers the alternatives to the WRR. There is no explanation provided on how the initial six Options A-G were developed. The selected options appear neither comprehensive nor logical. Given that the WRR is directly related to proposed housing development around the north of Watlington, it would be reasonable to assume that one option would be to provide access to these developments but to design the arrangements in such a way that through traffic is deterred. Development traffic could still have the option of travelling either east or west to the B4009 and thus avoid impact on the village centre but the route through the development would be consistent with a residential access road and designed to genuine MfS2 standards. The option could include a package of measures such as that outlined in the latest Air Quality Annual Status Report to reduce congestion in the village centre and the number of HGVs passing through Watlington.

31. National guidance on Environmental Assessment (LA 104, Design Manual for Roads and Bridges (DMRB) states, '*EIA must report on the following alternatives, in accordance with the EIA Directive 2014/52/EU*' (para. 3.16). It goes on to list eleven types of alternatives. These include the following that have not been considered in the context of the WRR:

- technology alternatives: temporary and permanent traffic control measures;
- size and scale alternatives: seeking opportunities to reduce the size and scale of the development where the project objectives would not be compromised;
- demand alternatives: to meet the need through demand management techniques;
- mitigation alternatives: the variety of solutions available to mitigate the adverse consequences of a proposal.

32. The Objectives against which Options are initially assessed appear both biased and vague. Objective 1 (Facilitate local housing growth around Watlington) and Objective 2 (Manage traffic growth across an expanded Watlington) largely overlap. The 'elephant in the room' that is highly relevant but absent as an Objective is 'the facilitation of strategic development', the original reason that the WRR was proposed and included in policy.

33. The scores for each Option against each Objective are not provided, only the total. This is unacceptable. A quick review immediately reveals apparent discrepancies.



For example, Option D, a new, higher speed bypass would presumably score +2 for both Objectives 1 and 2 (bypasses are typically used to provide access to 'infill' development) and could be provided with pedestrian and cycle facilities as well as reducing traffic in the village centre to allow better provision for sustainable travel. Even if the Option achieved maximum negative scores for affordability, feasibility and acceptability, it is impossible for the Option to achieve a total of -5 as shown in the analysis.

34. Justification is required for the High Level Sift Part 1.
35. Overall, the methodology employed to consider 'alternatives' appears as a posteriori justification for a scheme whose original rationale is no longer relevant since Chalgrove Airfield has ceased to be an allocated site.

### **Failure to Assess Induced Traffic**

36. It is a well established fact that the provision of additional highway capacity leads to increases in traffic levels<sup>6</sup>. The effect is known as induced travel or traffic demand. OCC recognises this and states, '*There are situations where new roads, [...] may be necessary, but this is not a sustainable long term solution because we have found that road schemes often generate new demand and quickly reach capacity again*' (LTCP, p. 105)
37. The latest DfT work suggests that the induced traffic has an elasticity of around 0.2 across the whole road network. This would translate as a 2% increase in traffic resulting from a 10% increase in road capacity. In the case of Watlington where the capacity for through traffic would be more than doubled with the construction of the WRR, the level of induced traffic, on the basis of an elasticity of 0.2, would comprise an increase of at least 20%.
38. There are examples of much larger induced traffic effects. A detailed assessment of the situation in Newbury that was provided with a bypass that opened in 1998 identified a 77% increase in traffic levels above that originally predicted (see Sloman, Hopkinson and Taylor, 2017).
39. Despite the body of evidence showing how additional road capacity generates new traffic and the advice that accompanies it, the work that has been undertaken in support of the WRR ignores induced traffic. The scheme provides a significant increase in road capacity that makes car and vehicle use in general easier. This will not only encourage more vehicle use but will also undermine the use of sustainable modes. This is clearly contrary to policy<sup>7</sup>.

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<sup>6</sup> See, for example, Latest Evidence on Induced Travel Demand: An Evidence Review, WSP for DfT, May 2018, Deepening the Understanding of How to Address Induced Travel on the Strategic Road Network, WSP and Rand Europe for DfT, Dec. 2020, The Impact of Road Projects in England, Sloman, Hopkinson and Taylor, March 2017.

<sup>7</sup> See, for example, SOLP Policy TRANS2: Promoting Sustainable Transport Accessibility

40. It is highly likely that traffic flows on the B4009 and A481 both east and west of the village will increase as a result of the additional road capacity. This is particularly likely since the route provides a very convenient and direct connection with the M40. The need for careful assessment is made all the more pressing given the fact that the B4009 east of the village runs along the northern boundary of the highly sensitive Chilterns Area of Outstanding Natural Beauty (AONB), as discussed above, there is a poor accident record on the B4009 east of the village, the road also passes buildings and sites that are listed and the route is highly sensitive in terms of severance and pedestrian amenity (see section on Flaws in Transport Environmental Impact below).

#### **Failure to Allow for Committed Traffic**

41. In the case of the Newbury Bypass, a proportion of the observed induced traffic is associated with new development that has taken advantage of the short-term reduction in traffic flows passing through the town. This has contributed towards peak hour traffic returning to pre-bypass levels. Not only has this significantly reduced the benefit that was originally predicted but has also undermined the opportunity, cited at the time of planning the bypass, of re-allocating road space for sustainable modes within the town.
42. In the case of Watlington it appears not only likely but **necessary** that additional new development will come forward around Watlington since the majority of the funding for the scheme is required to be re-paid through S106 contributions from new development. It is possible that, as was the case at Newbury and other locations, this development will consume the initial benefits arising from the provision of the alternative route.
43. There has been no consideration of where this new development (estimated as at least 950 dwellings) may be located or what implications it would have for the village. It is reasonable to consider that decisions about the WRR are premature before this issue is addressed. The lack of certainty about the location of this additional development is no excuse for ignoring it since, through the funding mechanism, it should be considered as committed future development.

#### **Failure to Allow for Re-Assigned Traffic**

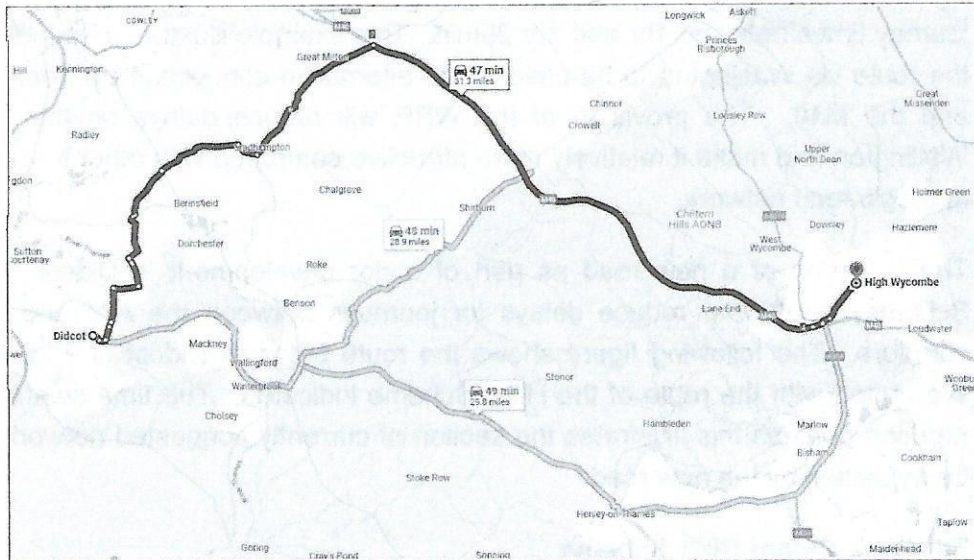
44. In addition to induced and committed development the journey time savings that might be associated with the WRR<sup>8</sup> will lead to some reassignment of existing vehicle trips. An interrogation of Google Maps reveals the existing recommended route between Didcot and High Wycombe. The latter is used as a proxy for destinations accessed via the M40 south. The following shows the result:

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<sup>8</sup> It is not possible to identify the level of time savings resulting from the provision of the WRR since this is one of the items of information that is currently impossible to establish due to the failure to provide the LMVR and TFR.



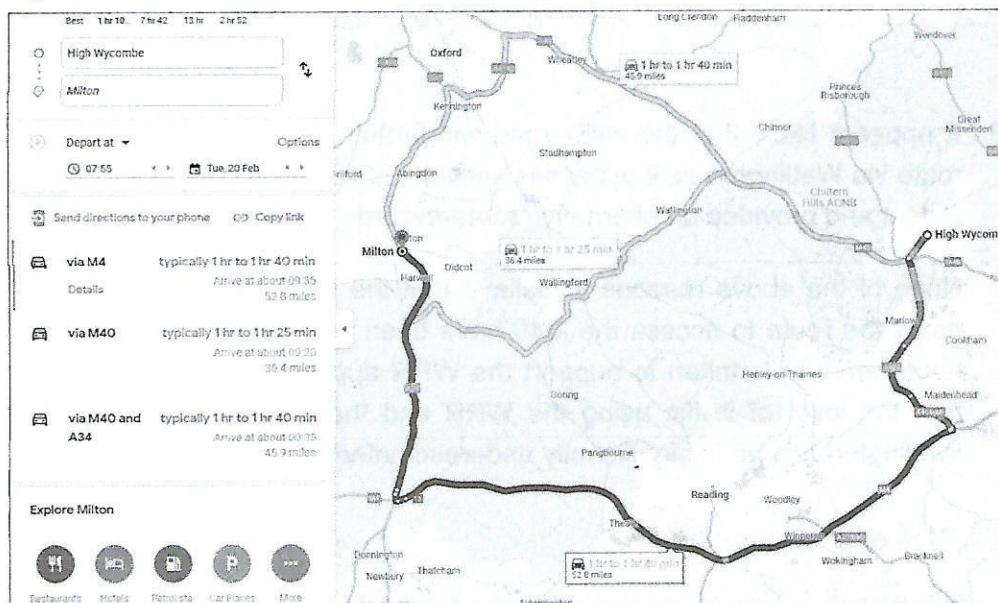
**Figure 1: Google Maps Recommended Routes between Didcot and High Wycombe**



45. It can be seen that the preferred route is via Stadhampton and Junction 7 of the M40 with a time of 47 minutes. The route via Watlington is identified as an alternative but is slightly slower with a time of 48 minutes. The provision of the WRR is likely to reduce the time of the route via Watlington to the extent that it becomes the preferred route. This is just one example of many journeys that are likely to re-assign from other routes to the route using the WRR and Junction 6 of the M40.

46. For vehicles travelling between the Milton Interchange on the A34 and High Wycombe the recommended route during the morning peak hour is as shown below:

**Figure 2: Routes between Milton Interchange and High Wycombe (AM Peak)**

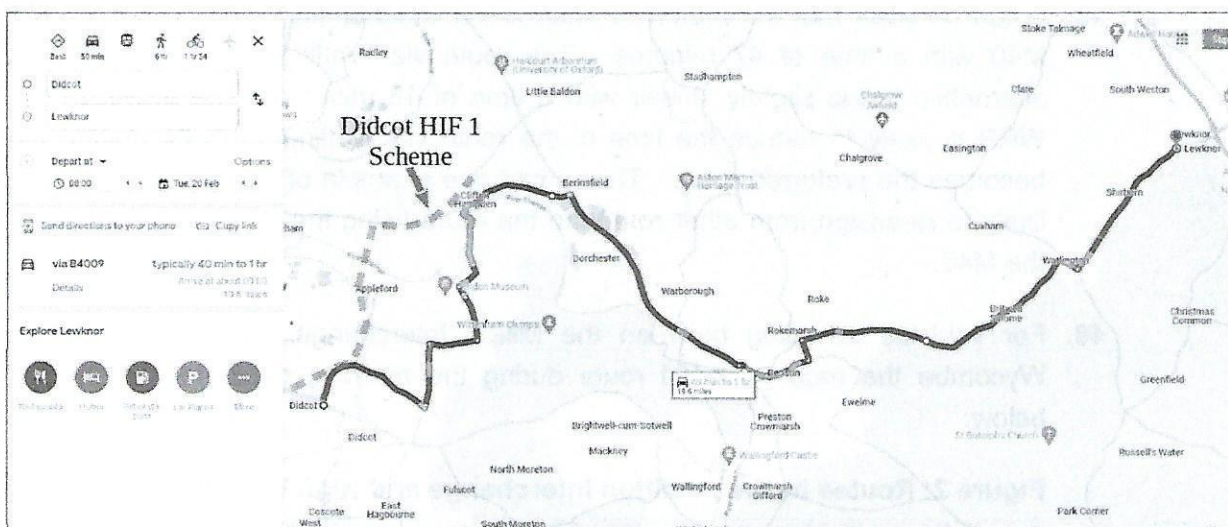


47. The preferred route via the M4 and A404 is shown to be congested with a journey time between 1hr and 1hr 40 min. The route via Oxford Ring Road is shown to be

highly congested with the same range of journey times. The route via Didcot and Watlington is shown to be much less congested (and therefore more reliable) with journey times between 1hr and 1hr 25min. This example illustrates the potential for the route via Watlington to be used as an alternative connection between the A34 and the M40. The provision of the WRR will reduce delays on the route via Watlington and make it relatively more attractive compared with other routes via the strategic road network.

48. The provision of a new road as part of major development in Didcot (the HIF1 Scheme) will further reduce delays for journeys between the A34 and the M40 corridors. The following figure shows the route between Didcot and the M40 via Watlington with the route of the HIF1 Scheme indicated. The time selected is the morning peak as this illustrates the section of currently congested network that will be bypassed by the new road:

**Figure 3: Didcot HIF1 Scheme**



49. It appears likely that the HIF1 road will further increase the attractiveness of the route via Watlington as it bypasses sections of currently congested network north of Didcot and provides an alternative route towards the B4009.
50. None of the above reasons to believe that the WRR will lead to increasing traffic using the route to access the M40 have been considered in the assessments that have been undertaken to support the WRR application. There is therefore a risk that the level of traffic using the WRR and the associated routes either side of Watlington has been significantly underestimated.

### **Use of WRR by HGVs**

51. The B4009 provides a direct link to the M40 that constitutes an important part of the national Strategic Road Network. It is therefore likely to attract longer distance HGV movements that may have origins or destinations west of the M40 (e.g. Didcot, Harwell, Milton, Culham) or may be seeking to travel between the M40 and



A34 corridors. The high level of congestion around Oxford in the peak periods makes the use of the ‘standard’ connection between the M40 and A34 unattractive and alternative routes, such as that via Junction 6 of the M40 and via Watlington, relatively more attractive.

52. At present there is a 7.5 tonne ‘access only’ restriction applied to the B4009 and other roads in the vicinity of Watlington. It has been noted that this restriction is sometimes contravened and stronger enforcement has been cited as one way to improve traffic conditions within Watlington<sup>9</sup>. The Atkins Report, *Understanding of HGV Issues and Approach to Area-based Weight Restrictions in Oxfordshire* (August 2023) identified Watlington as the location generating the most comments on HGV issues from workshops and the online consultation tool. Despite the concern over HGVs using inappropriate route through and around Watlington, the evidence that is presented in the Atkins Report suggests that the majority of HGV movements in and around Watlington are associated with trips to and from local destinations (i.e. those exempt from the restriction). This makes it difficult to deliver consistent enforcement of prohibitions.
53. The Atkins Report did point out the attractiveness to HGV drivers of the north-south route between Henley-on-Thames and Junction 6 of the M40 via the B480 and B481 through Watlington. Any reductions in delays within the village could increase the attractiveness of the route and HGVs would then travel through the village as the route does not benefit from the WRR.
54. If the WRR comes forward, many HGV movements will be removed from the centre of the village. HGV movement will therefore be subject to fewer constraints and the routes around Watlington will become relatively more attractive for HGVs. At the same time, the pressure on authorities to implement measures to deter HGVs from using the surrounding routes will decrease. This is likely to lead to an increase in HGV movements that will have adverse impacts on sensitive areas, such as Shirburn, on routes around Watlington.

#### **Inadequate Spatial Extent of EIA**

55. The extent of the VISSIM model that forms the basis of the assessment of transport environmental impact is strictly limited to the network within Watlington itself extended to include the route of the new road. No modelling has been undertaken to assess the impacts of induced traffic, re-assigned traffic on the wider network or committed traffic as described above. For major infrastructure that has a significant effect on journey times it is standard practice to use a strategic transport model to explore how the resulting changes in journey times may lead to drivers re-assigning from other existing routes. The Oxfordshire Strategic Model (OSM) is available to allow this kind of assessment to be undertaken yet the approach that has been adopted is strictly ‘blinker’ to exclude any possibility of changes in traffic flows beyond the immediate Watlington network.

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<sup>9</sup> See, for example, measures proposed in Table 2.2.2 of LAQM Annual Status Report, 2023

56. It is noted that in response to consultation comment expressing concern that the WRR will have impacts far beyond Watlington itself Aecom states, 'OCC does not envisage the proposed relief road as serving a strategic role resulting in significant traffic flow changes beyond the vicinity of Watlington' (ES Volume III Appendix 2-2: EIA Scoping Opinion Responses). This runs counter to the original rationale for the WRR that was to cater for the **strategic** allocation at Chalgrove Airfield and directly conflicts with SOLP Policy TRANS3: Safeguarding of Land for Strategic Transport Schemes. The SOLP views the scheme as fulfilling a strategic role and the fact that the document has been scrutinised and adopted confirms its credibility on this point.

### **Flaws in Transport Environmental Impact Assessment**

57. OCC, in its comments on the scope of the ES states, 'The EIA should identify sensitive receptors, for example residential properties within close proximity, and consider the impacts on these' (ES, Vol. III, Appendix 2-2, p.5). This requirement is consistent with the Guidelines for Environmental Assessment of Road Traffic (EIA Guidelines) (Institute of Environmental Assessment, 1990). The EIA Guidelines state:

*'2.5 At an early stage, it is useful to identify particular groups or locations which may be sensitive to changes in traffic conditions. The following check-list identifies groups and special interests which should be considered, but others could be added if the assessor considered it appropriate.'*

#### *Affected groups and special interests*

- *people at home*
- *people in work places*
- *sensitive groups including children, elderly and disabled*
- *sensitive locations, e.g. hospitals, churches, schools, historical buildings*
- *people walking*
- *people cycling*
- *open spaces, recreational sites, shopping areas*
- *sites of ecological/nature conservation value*
- *sites of tourist/visitor attraction'* (EIA Guidelines pp8-9)

58. There are clearly many highly sensitive receptors, as defined by the EIA Guidelines that should be considered as part of the ES Transport Chapter. These would include, but be limited to, Icknield Community College, Watlington Primary School, the proposed new school fields, the proposed public open spaces, the care home adjacent to the B4009 junction, users of the proposed pedestrian and cycle facilities, users of the local bridleway and Pyrton Lane, users of the public right of way that passes through the PYR2 site, users of the Watlington Recreation Ground and skate park and numerous sensitive receptors within the village centre.



59. Chapter 15 of the ES fails to identify **any** vulnerable transport user groups and instead adopts a link-based approach. In relation to severance, pedestrian and cycle delay, pedestrian and cycling amenity and fear and intimidation the approach adopted by Aecom defines 'rural roads with no pedestrian/cycle facilities provided' as having very low sensitivity, a '*strategic vehicular route in a rural setting with pedestrian/cycle facilities*' as having low sensitivity and so on (see para. 15.4.34 of Chapter 15). **This approach is inherently flawed, contrary to guidance and leads to unreliable results.** For example, a rural road with no pedestrian/cycle facilities may be highly sensitive to changes in traffic flows because it is used by pedestrians, cyclists and equestrians, it may have a very poor safety record in relation to vulnerable highway users and it may display a number of clear risk factors such as a lack of verges and poor forward visibility. Similarly a strategic vehicle route may be highly sensitive if there is significant crossing demand from vulnerable groups and would be potentially far more sensitive than lower standard roads in terms of community severance. Sensitivity to transport environmental impacts is primarily a function of **people**, not a function of **roads**. Aecom's approach is sloppy, deficient and unjustifiable.
60. Chapter 15 only assesses transport environmental impacts for the existing highway network through Watlington. The effect of restricting the spatial scope in this way is to focus primarily on the benefits of the scheme and ignore all those areas that may experience adverse impacts. For example, the potential severance of communities north and south of the WRR, the potential impacts on school children using the WRR and crossing the WRR to access the proposed playing fields, the potential impacts on users of the public right of way that connects with the WRR and the potential impacts of HGVs on vulnerable highway users around the WRR are all neglected.
61. It is concluded that Chapter 15 cannot be deemed acceptable and should be revised in a way that meets appropriate guidance and standards.

### **Impact on AONB**

62. The northern junction of the WRR with the B4009 is located immediately adjacent to the Chiltern Hills AONB. The B4009 runs along the AONB boundary. The Chilterns Conservation Board (CCB) has objected to the proposals on the grounds that the proposed lighting of the B4009 roundabout junction is '*unnecessarily urban and creates a glow and glare that harms the setting of the AONB, when viewed from higher ground to the south including the panorama from Watlington Hill*' (CCB Comment on planning application dated 02/02/24).
63. The setting of the AONB and the AONB itself may also be adversely affected by increases in traffic or increases in HGVs using the B4009 adjacent to the AONB. Since the work that has been submitted in support of the application identifies no traffic increases associated with the WRR itself, the CCB has not raised any objection on the grounds of increased traffic generation.

64. It is evident from the discussion above that the WRR is likely to be associated with increased use of the B4009 route due to the induced traffic effect, the re-assignment of trips due to reduced journey times to and from Junction 6 of the M40 and due to the significant amount of additional traffic associated with the committed development required to meet the conditions of Growth Deal funding.
65. It is concluded that the failure of the ES to properly account for increases in traffic flows in the future year situations and the failure to set an appropriate geographical boundary for transport environmental assessment has resulted in a situation where potential adverse impacts on highly sensitive locations and landscapes have been overlooked.

### **Summary and Conclusion**

66. This Technical Note reviews the transport information that has been submitted in support of the Watlington Relief Road (WRR).
67. Key supporting documentation which underlies the modelling and assessment work is not currently available for scrutiny. This makes it impossible to adequately assess the impacts of the WRR or to consider the robustness of the conclusions that have been reached.
68. The WRR emerged as a means of mitigating the highways impact of the strategic allocation at Chalgrove Airfield and funding for the scheme was expected to be provided by the Chalgrove development. This strategic allocation is now not expected to come forward in the foreseeable future thus removing the original rationale for the WRR.
69. The current justification for the WRR is to access and mitigate the impact of proposed development around the north of Watlington and to accommodate traffic associated with further development around Watlington. The majority of the cost of the WRR is now expected to be met by Growth Deal funding.
70. To repay Growth Deal funding further development comprising around 1,000 dwellings is required in the vicinity of Watlington. No allowance has been made for this additional development in the transport modelling and other transport assessments undertaken in support of the application.
71. The WRR is likely to lead to journey time savings and increased predictability of journey times for many existing trips using the M40. This, in turn, will cause the reassignment of existing traffic onto the B4009. The effect is likely to be reinforced by the provision of the Didcot HIF1 new road scheme. The transport modelling does not allow for re-assigned traffic and therefore under-estimates the future year flows on the WRR and on the B4009. Another significant implication is that impacts on other sensitive areas and settlements such as Shirburn have been both scoped out of the areas assessed.



72. The WRR more than doubles highway capacity through Watlington. There is a significant and well documented body of evidence to show that increased highway capacity leads to induced traffic. This effect has been ignored.
73. The combined effects of the additional development required to fund the WRR, the reassignment of trips to and from the M40 and the induced traffic effect will together lead to significant increases in traffic that have not been assessed and are likely to lead to adverse impacts in sensitive areas such as through Shirburn village and in relation to the adjacent Chiltern Hills AONB.
74. The WRR is designed primarily as a by-pass rather than as a residential road as would have been the case if designed to MfS2 standards in accordance with OCC's original requirements.
75. Despite the design of the WRR prioritising through traffic and seeking to divert HGVs from the village centre, it has not been demonstrated that the WRR and its junctions can safely accommodate larger vehicles. This work should have been included in the TA.
76. The WRR has been given the misnomer of 'edge road'. It will not form a northern boundary of the Watlington urban area but instead will sever communities and land uses north and south of the road. The function and purpose of the road are confused and conflicting and reflect a flawed development process.
77. It is impossible to undertake an informed review of the transport modelling work since both the Local Model Validation Report (LMVR) and the Traffic Forecasting Report (TFR) have not been made available. It is therefore impossible to claim that the current consultation is legitimate.
78. The consideration of alternatives to the WRR is not consistent with relevant guidance, is biased and fails to set out key assumptions that have been made in arriving at the preferred solution.
79. The spatial extent of the transport environmental assessment is inadequate since it incorrectly assumes that the WRR will have no effect on traffic movements beyond the edges of Watlington.
80. The transport environmental assessment fails to consider the possibility of any adverse impacts on and around the WRR.
81. The methodology employed in the Transport Chapter of the ES is sloppy, deficient and unjustifiable and is not consistent with relevant guidance.
82. Overall, the design and function of the scheme itself is confused and conflicting and the road will act as a barrier between communities and land uses located on its northern and southern sides. The transport supporting work is deficient as it fails to allow for additional development required for funding purposes, it fails to take account of the reassignment of existing trips that will take advantage of the resulting journey time savings and it fails to consider induced traffic, the inevitable effect of

providing significant additional highway capacity. There is a failure to provide essential reports providing key information and setting out important assumptions, the spatial extent of transport environmental assessments is inadequate and the methodology for assessing transport environmental impacts is fatally flawed.