

Transport Review

Loddon Garden Village, Shinfield

On behalf of
Shinfield Parish Council

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- The approach taken to determining the cumulative transport and traffic related environmental impacts; and
- The transport mitigation proposed to support the Proposed Development and in particular, the ability of the mitigation to produce and accommodate a mode shift;

- 1.4 A summary is provided in the final section together with an overall conclusion which is that the Proposed Development fails to demonstrate compliance with national transport policy or the EIA Regulations.
- 1.5 In the absence of a robust assessment of residual and cumulative impacts, the Environmental Statement does not meet the requirements of the EIA Regulations. Planning permission should therefore be withheld pending the submission of adequate assessment work or refused in accordance with paragraph 116 of the NPPF. Granting permission in its current form would expose the decision to a significant risk of legal challenge.

2.0 POLICY CONTEXT

2.1 The Government's planning policies for England are set out in the National Planning Policy Framework ("the NPPF"), published in December 2024 and updated with minor technical corrections in February 2025. The NPPF highlights the need for close coordination between land-use planning and transport planning to support sustainable development.

2.2 Paragraph 110 of the Framework states the following:

'The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making.'

2.3 It is noted that paragraph 110 does not require that every location considered for development must have access to every sustainable mode of travel. It does, however, require that the choice of transport modes should be 'genuine'.

2.4 The NPPF provides no definition of the term 'genuine' with reference to choice of transport modes. The inclusion of the term 'genuine' must logically signal the government's intention that the mere presence of transport modes does not meet the policy requirements. Instead, the choice of transport modes should be sufficiently attractive that people could reasonably be expected to use them. In the alternative, the government could have omitted the word 'genuine' and simply required 'a choice of transport modes'.

2.5 Paragraph 115 of the Framework states the following:

'In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

- a) sustainable transport modes are prioritised taking account of the vision for the site, the type of development and its location;*
- b) safe and suitable access to the site can be achieved for all users;*
- c) the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code; and*
- d) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree through a vision-led approach.'*

2.6 Turning to the National Design Guide, this identifies walkable distances as being:

‘Walkable: Local facilities are within walking distance, generally considered to be no more than a 10 minute walk (800m radius).’¹

2.7 This theme of 800m walkable neighbourhoods is reiterated in mode specific design guidance including ‘Planning for Walking’ published by the Chartered Institution of Highways and Transportation (“CIHT Walking Guidance”), April 2015.

2.8 Subject to demonstrating that a site is sustainable, Paragraph 116 provides guidance regarding the transport related circumstances in which planning permission can be withheld or refused stating:

‘Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network, following mitigation, would be severe, taking into account all reasonable future scenarios.’

2.9 Paragraph 116 is very clear that an applicant, inter alia, needs to demonstrate that the impacts on the road network arising from a specific development proposal would not be severe when considering it isolation and also cumulatively with all other future developments / transport proposals that are reasonably anticipated.

Design Guidance

Walking

2.10 The Chartered Institution of Highways and Transportation (CIHT) ‘Guidelines for Providing Journeys on Foot’ (2000) suggests acceptable, desirable and preferred maximum walking distances (‘acceptable’ walking distances would vary between individuals). These walking distances are applied consistently when assessing the reasonable walking times whether a development is in a rural or an urban location.

2.11 Table 2.1 summarises the suggested walking distances for pedestrians without mobility impairment for some common trip purposes.

	Town Centres	Commuting/ Schools	Elsewhere
Desirable	200	500	400 (5 minutes’ walk)
Acceptable	400 (5 minutes’ walk)	1,000 (12.5 minutes’ walk)	800 (10 minutes’ walk)
Preferred Maximum	800 (10 minutes’ walk)	2,000 (25 minutes’ walk)	1,200 (15 minutes’ walk)
Source: ‘Providing for Journeys on Foot’, CIHT, 2000			

Table 2.1: Reasonable Walking Distances (metres)

2.12 The above guidance, published in 2000, should be read in comparison to the Government’s current guidance regarding walkable neighbourhoods in which services and facilities are within an 800m walk. It is noteworthy that the guidance in table 2.1 broadly aligns with this 800m walkable theme, which is

¹ Page 20 National Design Guide

the Government's current advice and guidance on distances that it can reasonably be expected that people will walk to reach services and facilities.

Cycling

- 2.13 The Chartered Institution of Highways and Transportation (CIHT) identifies that the bicycle can reasonably be considered a potential mode of transport for most people (subject to suitable infrastructure provision, in particular the level of protection afforded to cyclists from traffic which is set out in the Government's guidance note LTN1/20) for all journeys under five miles (approximately 8 kilometres) (Planning for Cycling, 2015).
- 2.14 Local Transport Note 1/20 (LTN 1/20), Department for Transport, 2020 provides guidance on the design of cycle infrastructure LTN1/20 is the government's current guidance on designing infrastructure for cyclists in order to encourage a greater uptake in cycling in accordance with the Government's adopted policy '*Gear Change A bold vision for cycling and walking*' which was issued in July 2020. This was inspired by and endorsed by the then Prime Minister.
- 2.15 It is clear from the Government's currently adopted cycle policy and design guidance that the outcomes of cycle infrastructure interventions are to:
- Create better streets for cycling and people
 - Put cycling and walking at the heart of transport, place-making, and health policy
 - Enable people to cycle and protect them when they cycle
- 2.16 With regards to design principles '*Gear Change A bold vision for cycling and walking*' states that:
- 'In order to see the increases in cycling we want, the quality of cycling infrastructure installed on our roads must dramatically improve.'*
- and
- 'Cycling is or will become mass transit and must be treated as such. Routes must be designed for larger numbers of cyclists, for users of all abilities and disabilities.'*
- 2.17 Having regard to how critical the creation of a safe and attractive network of cycle is to Government, it is reasonable to expect that cycle infrastructure meets the minimum requirements of LTN1/20, which in many cases are no more onerous than previous versions of the LTN. The substantive change in LTN1/20 is its reflection of Government policy which is that cycling should be accessible by most people irrespective of ability.
- 2.18 For context, LTN1/20², identifies that on roads which have a daily traffic volume in excess of 6,000 vehicles per day, that in order to meet Government policy on encouraging inclusive cycling, the

² LTN 1/20 Figure 4.1 "*Appropriate protection from motor traffic on highways*"

minimum appropriate protection required to make a route attractive to most people is a segregated space.

2.19 In addition to the guidance in Figure 4.1 of LTN1/20, the document provides the following advice:

'7.1.1 Where motor traffic flows are light and speeds are low, cyclists are likely to be able to cycle on-carriageway in mixed traffic, as shown in Figure 4.1. Most people, especially with younger children, will not feel comfortable [cycling] on-carriageways with more than 2,500 vehicles per day and speeds of more than 20 mph. These values should be regarded as desirable upper limits for inclusive cycling within the carriageway.'

'7.1.3 This Chapter also covers single track rural lanes which may have higher speed limits but where the daily traffic flow is typically much less than 2,500 vehicles per day. The requirement for formal Quiet Lanes designation is fewer than 1000 vehicles per day (see paragraph 7.5.3). There is large variation in motor traffic speed, volume and in the geometry of rural lanes, so any design interventions need to be specific to the local context.'

2.20 LTN1/20 also provides the following guidance:

- Paragraph 4.2.12 states: 'Cycle routes remote from roads may have other risks relating to crime and personal security. The risk of crime can be reduced through the removal of hiding places along a route, by providing frequent access points, by providing lighting, and by passive surveillance from overlooking buildings and other users.'
- Paragraph 8.1.2 bullet 4 states: 'For year-round utility cycling, a sealed surface is necessary...., and street lighting should be provided. Where the purpose of the route is primarily for leisure trips, typically in rural areas, these features may be less important. However, loose gravel surfaces can be difficult or inaccessible for people in wheelchairs and some types of adapted cycle.'

Public Transport

2.21 'Planning for Walking' published by the Chartered Institution of Highways and Transportation ("CIHT Walking Guidance"), April 2015 sets out in section 6.4 advice on walking catchments for public transport as follows:

"The power of a destination determines how far people will walk to get to it. For bus stops in residential areas, 400 metres has traditionally been regarded as a cut-off point and in town centres, 200 metres (DOENI, 2000). People will walk up to 800 metres to get to a railway station, which reflects the greater perceived quality or importance of rail services."

2.22 For comparison, the Transport for London (TfL) Passenger Transport Accessibility Level (PTAL) metric was established to determine an individual's accessibility to public transport using a combination of distance to a public transport node, number of services serving the node and the frequency of each. It uses a walk distance of 640m for accessibility to a bus stop and 960m for accessibility to a railway station.

2.23 Considering the above guidance, it is reasonable to assume that a person would walk up to 640m to reach a bus stop and 960m to reach a railway station. This equates to a walk time of 8 and 12 minutes respectively.

- 2.24 Adding to this guidance, the Government has recently indicated that a 15-minute walk can assumed to be a reasonable distance to reach a railway station that provides a regular service. No guidance on what this means in terms of distance is provided and it is noted that the distance that can be walked in 15 minutes is subject to several factors including time spent crossing roads (which can add up to 2 minutes at a traffic signal crossing – even longer on busy roads without active pedestrian crossings), topography, footway width and an individual’s fitness level. However, there is no doubt that 15 minutes includes the upper limit of 960m identified by TfL and could reasonably extend to 1.2km in urban areas where an individual is crossing one or two roads.
- 2.25 There is no industry guidance regarding the distances people will cycle to reach a railway station. However, for an average cyclist, a 15-minute travel time, which is the Government’s current guidance on a reasonable connecting travel time to a railway station, equates to a travel distance of 3km – 4km subject to the provision of suitable infrastructure to support cyclists including priority measures at junctions.

3.0 TRANSPORT ASSESSMENT APPROACH

- 3.1 The Applicant has not undertaken any traffic survey work to establish baseline conditions for the Transport Assessment (TA). Instead, the Applicant relies solely on traffic forecasts obtained from the Wokingham Strategic Transport Model (WSTM). Forecast traffic flows obtained from the WSTM have then been included in stand-alone junction models
- 3.2 Mode shift away from car use is dealt with in the modelling through a manual adjustment to traffic volumes in the model, based on qualitative judgement that a 7% mode shift away from car use, in addition to the mode share implicit to the trip rates used, is reasonable. The credibility of this adjustment is reliant on the off-site mitigation, which is discussed in more detail later in this report.
- 3.3 Should it be concluded that the off-site mitigation is unlikely to be sufficient to deliver the mode shift away from car use anticipated, this would undermine the traffic modelling such that the identification of the locations and magnitudes of cumulative, residual impacts on the road network would be flawed. This in turn would result in a failure to identify the necessary mitigation measures to support delivery of the Plan.

WSTM

- 3.4 The Wokingham Strategic Transport Model (WSTM) relies on the National Trip End Model (NTEM) to constrain traffic growth within the network. NTEM provides estimates of person travel by purpose across all modes of transport, including walking and cycling, for zones covering Great Britain. While the NTEM zonal system is appropriate for national-level analysis and provides a broad indication of changes in travel patterns over time, it lacks the spatial granularity necessary to understand localised travel demand responses to the distribution of development within individual local authority boundaries. In particular, NTEM assumes that development is distributed uniformly within each zone. The model is managed and maintained by the Department for Transport (DfT) and is primarily informed by Government population and household forecasts.
- 3.5 The NTEM is reviewed on a five-year cycle and was most recently updated in 2022. That update is, inter alia, based on the Office for Budget Responsibility (OBR) 2018-based population projections, using the 0% EU migration variant. In recent years, however, migration from non-EU countries has significantly exceeded the levels assumed in those projections. For example, the 2018 population forecasts predicted that the population of England would increase by approximately 4.1 million people between 2023 and 2043. The closest equivalent period in the current population forecasts is 2022 to 2042, over which the Government now forecasts an increase of 7.1 million people—almost double the previously forecast growth over a comparable 20-year period.
- 3.6 Since 2022 there have been several changes of government. The current Government has stated an intention to address the identified misalignment between median incomes and house prices through the planning system. This is being pursued by applying a multiplier to planned housing requirements based on the ratio between median house prices and median salaries at a local level, as set out in Annex D of the draft National Planning Policy Framework (NPPF) published in December 2025. As a result, the

emerging pattern of housing delivery increasingly departs from that implied by household growth forecasts alone.

- 3.7 Recognising that forecasts and policy priorities can change over time, the DfT provides a range of NTEM-based trip forecast scenarios. These allow transport modelling practitioners to select an appropriate scenario reflecting local circumstances and the purpose of the assessment. In addition to the Core Scenario, which is typically applied as the default, the DfT also provides High Economy and Low Growth Economy scenarios, reflecting alternative assumptions regarding population growth, household formation, and economic performance.
- 3.8 The Council's obligation to allocate land for housing arises from the Government's revised methodology for assessing housing need, which identifies a substantial affordability-driven uplift in required housing delivery. Consequently, housing provision in Wokingham is expected to exceed levels that would be anticipated based solely on forecast household growth.
- 3.9 NTEM8.0 Data Report (dated April 2022) is one of the supporting documents to the current version of the NTEM which is accessed through TEMPro Version 8.1. As explained at section 3.4 of the NTEM8.0 Data Report, the most current planning data available to the DfT at 2022 was used in preparing the model which is confirmed in Appendix E of the NTEM8.0 Data Report as being the Wokingham Core Strategy (WCS), which was adopted in January 2010.
- 3.10 Policy CP17 of the WCS establishes a housing requirement of approximately 661 dwellings per annum (dpa) across Wokingham Borough. This figure forms the basis of the housing input to the version of NTEM relied upon by the Applicant in assessing the cumulative impacts of the Proposed Development.
- 3.11 The Council is currently progressing a draft Local Plan which, if adopted, will set the spatial strategy for the period 2023-2040. The submitted draft Local Plan identifies a housing requirement of 748 dpa across the Borough, representing an increase of approximately 13% over the housing delivery assumed within the current NTEM. Furthermore, should the draft NPPF be adopted in its current form, the Council would be required to demonstrate a five-year housing land supply exceeding 1,300 dpa—approximately double the housing delivery level reflected in the current NTEM assumptions.
- 3.12 When this increased rate of housing delivery is considered alongside the Government's revised population projections—which indicate a substantially higher population by 2040 than assumed in the 2018 forecasts underpinning NTEM—it is clear that, as a minimum, the DfT's High Economy Scenario should be adopted as the basis for traffic modelling in the Wokingham area.
- 3.13 Finally, Wokingham does not exist in isolation. Neighbouring authorities are experiencing similar growth pressures arising from the revised standard method for assessing housing need. The resulting uplift in housing delivery across Berkshire and north Hampshire will contribute to cumulative impacts on the wider road network, including increased cross-boundary travel and traffic displacement, whereby existing traffic reassigns to alternative routes in response to congestion generated by new development. These effects should be appropriately reflected within the traffic modelling framework.
- 3.14 The Proposed Development is therefore contrary to the requirements of NPPF paragraph 116.

- 3.15 The traffic modelling relies on NTEM assumptions that are demonstrably out of date and no longer reflect current demographic trends or national planning policy. Population growth, housing delivery, and cross-boundary development pressures now materially exceed the levels embedded within the NTEM Core Scenario. In this context, continued reliance on those assumptions significantly understates future travel demand and network impacts. At a minimum, the DfT's High Economy Scenario should be adopted to provide a realistic and reasonable assessment of cumulative traffic effects.
- 3.16 This approach is required by paragraph 116 of the National Planning Policy Framework, which mandates that assessments consider all reasonable future scenarios. By failing to do so, the Applicant's current transport assessment does not comply with national planning policy and should therefore be refused.

Local Junction Models

- 3.17 A transport model is a tool that converts readily available data and assumptions into a forecast of demand and supply on the transport network.
- 3.18 All models, whether transport or other, are underpinned by a large number of assumptions. In the case of transport models, TAG Unit 1.1³ identifies these as including:
- that the structure of the model is a sound representation of human behaviour and based on sound theoretical principles
 - that any necessary simplifications within the model do not have a materially adverse effect on the required quality and assurance of the results with regards their ultimate use
 - numerical parameters used in the model, many of which cannot be observed directly and therefore need to be estimated using a sample of data and statistical principles (a process known as calibration).
- 3.19 There is always a risk that a model may not be realistic due to the error around the model parameters used, or limitations in the extent to which the model can represent relevant human behaviour. Before using any model, it is therefore essential to check that it produces credible outputs consistent with observed behaviour. TAG Unit 1.1⁴ identifies that this is done by constructing a model base year (either the current year or a recent year, depending on the data available), and:
- comparing the outputs (after it is run) with data independent from its construction (validation);
 - checking that its response to changes in inputs is realistic, based on results from empirical evidence (realism testing); and
 - checking that the model responds appropriately to all its main inputs (sensitivity testing)
- 3.20 In summary, TAG guidance reiterates that transport models, as with all mathematical representations of human behaviour, must be calibrated against the data used in their development and then validated

³ TAG Unit 1.1, Paragraph 2.1.2

⁴ TAG Unit 1.1, Paragraph 2.1.6

against alternative data in order to have confidence that the model will produce credible outputs. This calibration and validation process is an essential part of building a credible and realistic model.

- 3.21 In this context, a review of the Applicant's submitted transport evidence identifies the following fundamental omissions:
- No observed traffic data has been provided.
 - No observed queue length data has been provided.
 - No observed queue delay data has been provided.
 - No reference to either calibrating or validating the junction models is made.
- 3.22 On this basis, it is concluded that the Applicant has failed to undertake appropriate calibration and validation of the junction models. TAG is explicit that calibration and validation are essential in order to have confidence that a model produces credible and reliable outputs. In the absence of observed data and documented calibration, no weight can be attached to the modelling results presented.
- 3.23 The provision of transport assessment data that establishes the likely effect of development is a requirement of the NPPF (paragraph 118) and this assessment work demonstrates a developments compliance with the tests in Paragraph 116. By failing to provide credible, calibrated, and validated junction modelling, the Applicant's transport assessment does not meet national policy requirements and should therefore be refused.

4.0 TRIP FORECASTING

Benefits of a Comprehensive Masterplan

- 4.1 The benefits of a comprehensive masterplan in reducing the impacts of new development on the existing highway network are well established. The careful integration of a balanced mix of everyday land uses alongside residential development, connected through a robust and sustainable movement framework, can make a significant contribution to:
- Retaining a proportion of new trips entirely within the development area, thereby avoiding additional pressure on the existing highway network; and
 - Increasing the proportion of trips per dwelling undertaken by sustainable modes of transport. By locating everyday facilities in close proximity to residential areas, connected by appropriate supporting infrastructure, residents are more likely to choose sustainable modes of travel, particularly active travel modes.
- 4.2 While this approach has considerable potential to limit the number of journeys undertaken by private motor vehicles on the surrounding highway network, it is important to recognise that comprehensive masterplanning:
- Reduces the rate of growth in vehicular traffic on the existing highway network when compared with alternative development patterns, such as multiple smaller-scale schemes that lack on-site everyday facilities. However, a residual increase in vehicular traffic on the surrounding highway network remains unavoidable; and
 - Requires a development scale sufficient to sustain the proposed mix of land uses. As a consequence, the residual increase in vehicular traffic may still be substantial and, if not appropriately mitigated, could give rise to significant adverse environmental effects at a local level, as well as material operational impacts on the existing highway network
- 4.3 It is therefore essential that a robust and realistic forecast of residual vehicular trip generation (referred to in the TAR as “external trips”) is undertaken. This enables the identification and delivery of proportionate and targeted infrastructure interventions necessary to mitigate any significant adverse environmental and highway network impacts arising from increased road traffic. Through this approach, the benefits of comprehensive masterplanning can be fully realised while ensuring that the development remains sustainable, resilient, and acceptable in transport terms.
- 4.4 The Applicant’s approach to determining the residual external trips arising from the Proposed Development is considered in detail below.

Development Traffic

- 4.5 The Applicant has relied on data contained within the TRICS database to forecast peak-hour trips associated with the land uses that form the Proposed Development. Appendix C of the TA sets out the developments used to derive the person trip rates (PTRs), expressed per unit of development (e.g. PTR per dwelling or per 100sqm of floorspace).

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- 4.6 It is disappointing that, for a strategic development of the scale and ambition of the Proposed Development the transport framework has been derived primarily from historic trip rate data collected at sites that did not benefit from such an approach. While TRICS provides a recognised and useful tool for estimating trip generation, it is not the only available methodology, nor is it necessarily the most appropriate starting point for a development of this nature.
- 4.7 However, having elected to base trip generation on historically collected TRICS data, it is fundamental to the reliability of the resulting forecasts that this data is subject to rigorous scrutiny. In particular, the selected TRICS sites must be carefully analysed to ensure that they provide a close and defensible match with the anticipated characteristics, scale, location, and transport context of the Proposed Development.
- 4.8 TRICS allows data to be filtered by location, accessibility, and a range of contextual variables. The database contains hundreds of surveyed sites nationwide, enabling statistically meaningful analysis that can account for environmental, locational, and socio-economic differences between areas. Such filtering and analysis are essential to ensure that the resulting PTRs are robust and appropriate for application to a specific development.
- 4.9 A review of Appendix C of the TAR indicates that little meaningful filtering or statistical analysis of the TRICS data has been undertaken. Instead, the Applicant has selected an apparently unrelated sample of sites including sites with just 8 dwellings. None of the sites selected as proxy sites are located in Wokingham and none are located even in Berkshire.
- 4.10 Furthermore, TRICS data is collected at the edge of a development rather than at individual dwellings. This means that a degree of trip internalisation is already embedded within the TRICS trip rates. Without careful consideration of this factor, there is a further risk that the Applicant's forecasts underestimate actual trip generation.
- 4.11 Most importantly, the Shinfield area has been the subject of strategic development over the years which would have served as an excellent basis for establishing a trip rate that reflects the local geography and demographics and yet the Applicant makes no reference to this existing, significant new development that has been delivered adjacent to the Site.
- 4.12 These methodological issues in determining peak hour trip rates per dwelling are compounded by applying data from the National Travel Survey (NTS) to the TRICS data. While the NTS provides valuable insights into national travel trends, it lacks the granularity necessary to reflect travel characteristics at District or County levels; the lowest level of granularity available is regional.
- 4.13 Applying NTS data without comparing the household characteristics of NTS respondents to those of the Proposed Development can result in significant misalignment. No comparison is made between the daily trips per person per dwelling in TRICS and the daily trips per person per household size in NTS.
- 4.14 As an example, larger households are more likely to have school-aged children and therefore generate more education or escort trips. Yet as an example, the TAR assumes that all dwellings, regardless of household size, type, or tenure, will result in the same proportion of education/escort purposes. This is an overly simplistic and flawed approach for a development of this scale and varied housing mix.
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- 4.15 While errors in forecasting trip generation may cause only minor differences in per-dwelling rates, when applied across several thousand dwellings, these errors result in changes to external travel demand of sufficient magnitude to potentially produce severe residual impacts.

Summary

- 4.16 Comprehensive masterplanning can reduce the impact of new development on the highway network by retaining trips within the site and encouraging sustainable travel. However, residual vehicular traffic is unavoidable, and robust forecasting of “external trips” is essential to identify targeted mitigation measures and ensure sustainable development.
- The Applicant’s transport assessment relies primarily on historic TRICS trip rate data, supplemented by National Travel Survey (NTS) information. For a strategic development of this scale, this approach is inadequate:
 - The TRICS sites selected are poorly matched, including very small developments, and none are located in Wokingham or Berkshire.
 - Little or no filtering, statistical analysis, or consideration of local context has been undertaken to ensure the trip rates reflect the characteristics of the Proposed Development.
 - Existing strategic developments in the Shinfield area, which could provide locally relevant data, have been ignored.
 - The application of NTS data lacks sufficient granularity and is not adjusted to reflect household size, composition, or likely trip purposes, leading to oversimplified and potentially inaccurate trip forecasts.
 - Embedded trip internalisation within TRICS data is not accounted for, further risking underestimation of external trips.
- 4.17 These methodological shortcomings undermine the credibility of the Applicant’s trip forecasts. While small errors in per-dwelling rates may seem minor, when applied across thousands of dwellings, they can materially affect external traffic demand and result in severe residual impacts.
- 4.18 In its current form, the trip forecasting does not provide a sound or reliable basis for assessment or decision-making. A revised assessment is required, using properly filtered and statistically analysed TRICS data, locally relevant proxy sites, and robust justification for all assumptions. Only then can the benefits of comprehensive masterplanning be realised and the transport impacts of the Proposed Development be credibly assessed.

5.0 ENVIRONMENTAL STATEMENT

Establishment of Baseline Conditions

- 5.1 Planning Practice Guidance (PPG) sets out clear expectations regarding the baseline evidence that must underpin a Transport Assessment (TA). This includes:
- Existing levels of transport use and the availability, accessibility, and quality of public transport; and
 - Current traffic flows on highway links and at junctions within the study area, disaggregated by mode and vehicle type, together with identification of critical links and junctions.
- 5.2 The need for a robust and defensible baseline is reinforced by Institute of Environmental Management and Assessment (IEMA) guidance on the Environmental Assessment of Traffic and Movement, which emphasises that baseline data must be accurate, representative, and specific to the site and its immediate context. In particular, paragraph 2.10 provides advice on undertaking surveys.

Existing Baseline

- 5.3 A review of the application documents demonstrates that the Applicant has failed to establish or assess the existing baseline conditions, which is a fundamental requirement of Environmental Impact Assessment (EIA). Rather than grounding the assessment in observed traffic conditions, the Applicant has relied entirely on future-year modelled traffic forecasts, with no attempt to relate these forecasts to current traffic conditions on the road network. As a result, both the TA and the Environmental Statement (ES) constitute largely academic exercises, lacking any meaningful basis in observed data.
- 5.4 A fundamental requirement of an ES is to reliably describe the *“likely evolution of the environment without the development”*. Absent establishing current baseline conditions, the Applicant has failed to meet this requirement.

Future Year Baseline

- 5.5 The Applicant has assessed the following future baseline years:
- 2040, representing the anticipated year of completion of the Proposed Development; and
 - 2032, representing an interim assessment year.
- 5.6 Traffic forecasts for these assessment years are derived from the WSTM, a capacity-constrained weekday peak-hour traffic model. However, this model does not produce the daily traffic flow data relied upon within the ES for the purposes of assessing environmental effects.
- 5.7 There is no evidence demonstrating how the Applicant has converted peak-hour model outputs into daily traffic volumes for use in the ES. In particular, the Applicant has failed to explain or justify:
- Mode choice assumptions across the day, noting that off-peak mode choice frequently differs from weekday peak-hour behaviour and varies by journey purpose;
 - Peak spreading effects. As congestion increases, users often adjust journey times to avoid the peak, leading to disproportionately high traffic growth in the shoulder periods either side of the peak

hour. Analysis of the peak-hour-to-daily traffic ratios presented in Tables 17.4 and 17.5 shows that these ratios remain broadly consistent between 2032 and 2040, despite eight years of forecast traffic growth. This strongly suggests that peak spreading has not been accounted for; and

- Seasonality effects. The ES requires annual average traffic flows. Forecasts derived from a “neutral month” model must therefore be interrogated and adjusted to reflect seasonal variations in traffic demand. No such analysis has been provided.

- 5.8 In the absence of this information, it cannot be demonstrated that the Applicant has undertaken a robust or reliable assessment of the environmental impacts arising from changes in road traffic. Consequently, it cannot be concluded that significant adverse effects have been appropriately avoided, reduced, or mitigated to an acceptable level.

Comparison with Observed Traffic Data

- 5.9 Notwithstanding the Applicant’s failure to establish a current baseline, Table 5.1 below compares observed daily traffic flows obtained from the Department for Transport (DfT) traffic count database with the future baseline scenarios presented in the ES. See Figure 1.1 for locations.

Location	2032 Baseline	2040 Baseline	Observed
A33 north of Mere oak signal junction	47,922	52,031	51,374 ⁵ (2024 count)
A33 Swallowfield bypass	27,396	30,359	33,151 ⁶ (2024 count)
Whitley Wood Lane	9,433	10,511	9,305 ⁷ (2019 count)

Table 5.1: Comparison of Future Modelled Baseline Daily Traffic Volumes and Current Observed Daily Traffic volumes

- 5.10 Based on the Applicant’s ES, the future baseline forecasts imply that, in the absence of the Proposed Development:
- Traffic on the A33 between Mere oak Junction and the M4 is expected to reduce by approximately 7% between 2024 and 2032, with daily flows broadly stagnating between 2024 and 2040;
 - Traffic on the A33 Swallowfield Bypass is expected to reduce by approximately 21% between 2024 and 2032, and by 9% between 2024 and 2040;
 - Traffic on Basingstoke Road north of Imperial Way is expected to reduce by approximately 13% between 2019 and 2032, and by 5% between 2019 and 2040; and

⁵ DfT census point reference 46352. 2024 traffic volumes

⁶ DfT census point reference 26349. 2024 traffic volumes

⁷ DfT census point reference 807243. 2019 traffic volumes

- Traffic on Whitley Wood Lane is expected to stagnate between 2019 and 2032, increasing by approximately 11% between 2019 and 2040.

5.11 While modest growth on Whitley Wood Lane may be plausible, the forecast reductions in daily traffic volumes on the A33 and Basingstoke Road are not credible. These results strongly indicate fundamental flaws in the modelling approach and/or in the conversion of peak-hour, capacity-constrained model outputs into daily traffic flows. As a consequence, none of the traffic forecasting presented in the ES can be relied upon to assess the magnitude of road traffic effects. Actual daily traffic flows can reasonably be expected to be materially higher than those reported.

5.12 Given the absence of a credible baseline and the unreliability of the traffic forecasts, appropriate mitigation in relation to:

- community severance;
- pedestrian fear, intimidation and safety;
- non-motorised user (NMU) amenity; and
- cycle safety

has not been properly identified or assessed.

5.13 This failure risks unacceptable highway safety impacts and the potential for severe adverse residual effects on the road network.

6.0 MITIGATION

On-site

- 6.1 The application documents provide extensive detail on the internal design of the Site to facilitate movement by non-car modes. While this is welcomed, it largely demonstrates the Applicant's intention to design the Proposed Development in accordance with existing national planning policy and guidance, including paragraphs 115 and 117 of the NPPF.

By contrast, it is the external trips to and from the Site that are likely to give rise to the greatest magnitude of harm to the existing transport network and the surrounding environment. It is therefore the effectiveness of off-site connectivity that is of critical importance.

Off-site Active Travel

- 6.2 Section 7 of the TA sets out the Off-Site Active Travel Strategy, the stated focus of which is to improve connectivity between the Site and surrounding settlements, including Shinfield to the west.

Walking

- 6.3 The Proposed Development ties the Site into the existing footway network. However having regard to the remoteness of the Site to existing centres of activity, undertaking journeys on foot to and from the Site, for any journey purpose other than leisure walks, is simply not a realistic prospect.

Cycling

- 6.4 The provision of a shared pedestrian and cycle link along Arborfield Road between its junction with Observer Way and the SERR is welcomed.
- 6.5 Notwithstanding this, the Applicant fails to demonstrate how the Proposed Development would be safely and suitably connected to the existing communities of Shinfield and Spencer's Wood. The active travel strategy assumes that, once the SERR has been crossed, cyclists will be able to continue their journeys safely without further intervention. This assumption is not supported by the evidence.
- 6.6 In particular paragraph 7.7.9 of the TA claims the following:

Pedestrians and cyclists can then utilise the 3m wide shared use link which is to be provided by the residential development being promoted to the south of Cutbush Lane or alternatively continue westwards along Cutbush Lane West to access the Hollow Lane corridor and then onwards to facilities in Shinfield.

- 6.7 Having regard to LTN1/20⁸, Table 6.1 below assesses the minimum appropriate level of cyclist protection required for routes between the Site and destinations in Shinfield and Spencer's Wood in order for cycling to be suitable for most people. The existing level of provision is also identified. Daily

⁸ LTN 1/20 Figure 4.1 "Appropriate protection from motor traffic on highways"

traffic flows are taken from Table 17.5 of the Applicant's Environmental Statement, noting that these are considered to significantly underestimate actual traffic volumes.

Route	Speed Limit	Motor Traffic Flow (vehs)	Minimum appropriate protection	Current protection
Hollow Lane between Brookers Hill and Church Road	40mph	12,824 AADT	Fully kerbed cycle track.	Limited sections where cyclists may use the western footway.
Basingstoke Road	30mph	11,776 AADT	Fully kerbed cycle track / Stepped Cycle Track/Light segregation	None
Church Lane / Brookers Hill between Hollow Lane and Hyde End Lane	40mph	9,045 AADT	Fully kerbed cycle track	Cyclists permitted to share narrow footway; sections too narrow.
Church Lane between Hyde End Lane and Basingstoke Road	30mph	11,767 AADT	Fully kerbed cycle track / Stepped Cycle Track/Light segregation	None

Table 6.1 - Assessment of Appropriate Protection

- 6.8 The assessment above demonstrates that, due to a combination of high traffic volumes and traffic speeds, none of the identified routes within Shinfield provide conditions that are conducive to safe and inclusive cycling in accordance with LTN 1/20. The locations of these roads are illustrated on the Figure below:

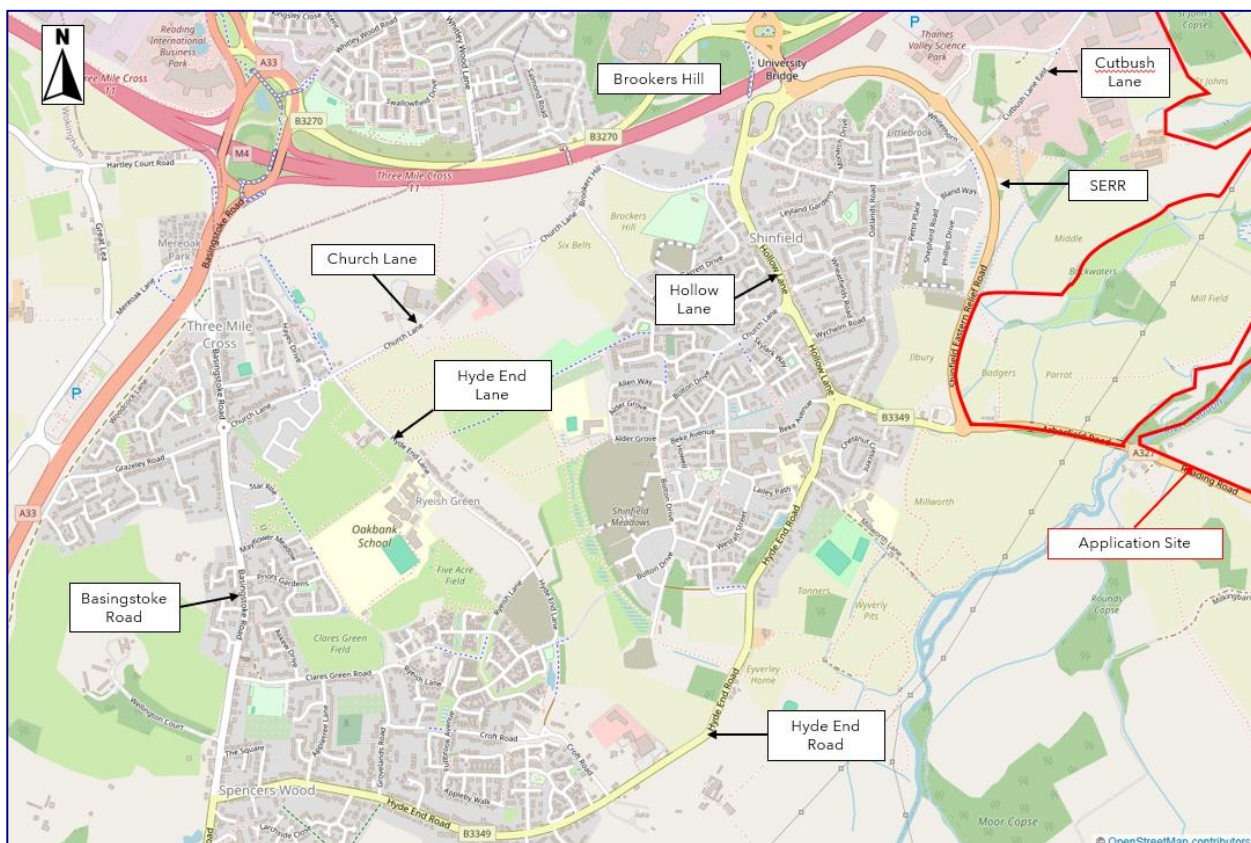


Figure 6.1: Local Roads

- 6.9 While the Applicant has proposed improvements to cycle infrastructure between the Site and the periphery of Shinfield, the absence of safe and suitable cycle routes within Shinfield and Spencer's Wood fundamentally undermines the effectiveness of the active travel strategy.
- 6.10 As a consequence, cycling in this location would be suitable only for a small minority of confident users and would exclude most potential cyclists. The Site therefore does not offer genuine or inclusive opportunities for travel by cycle, and cycling is unlikely to represent a meaningful alternative to car-based travel for the Proposed Development.

7.0 SUMMARY AND CONCLUSION

Summary

- 7.1 This Transport Review has been prepared on behalf of Shinfield Parish Council in respect of planning application reference 252498 for the proposed Loddon Garden Village, comprising up to 2,800 dwellings at Hall Farm, Church Lane, Shinfield.
- 7.2 The Review has examined the Applicant's Transport Assessment (TA) and Environmental Statement (ES) against national planning policy, transport guidance, and the requirements of the EIA Regulations. In doing so, it has considered the credibility of the traffic forecasting, the robustness of the modelling approach, the assessment of cumulative and residual impacts, and the effectiveness of the proposed mitigation in supporting a genuine mode shift away from private car use.
- 7.3 The principal findings of this Review can be summarised as follows:
- The Applicant's transport modelling relies on the Wokingham Strategic Transport Model constrained by outdated NTEM assumptions, which no longer reflect current population projections, housing delivery rates, or cross-boundary growth pressures. The failure to test reasonable future scenarios, including the DfT High Economy scenario, is contrary to paragraph 116 of the NPPF.
 - No observed traffic, queue length, or delay data has been provided, and there is no evidence that the local junction models have been calibrated or validated in accordance with TAG guidance. As a result, no weight can be attached to the modelling outputs.
 - The trip forecasting methodology is flawed. Poorly matched and weakly filtered TRICS data, inappropriate application of National Travel Survey data and failure to consider household composition, all combine to materially understate external vehicular trip generation.
 - The Environmental Statement fails to establish a current baseline, relying instead on future modelled scenarios that are demonstrably inconsistent with observed traffic data. The conversion of peak-hour model outputs into daily traffic flows is unexplained and not credible, rendering the assessment of environmental effects unreliable.
 - Given the absence of a credible baseline and reliable forecasts, the ES fails to properly assess impacts relating to community severance, pedestrian amenity, fear and intimidation, cycle safety, and highway safety, and therefore does not meet the requirements of the EIA Regulations.
 - While on-site movement is well considered, off-site mitigation is fundamentally inadequate. In particular, the proposed active travel strategy fails to provide safe and suitable cycling routes to destinations in Shinfield and Spencer's Wood. As a consequence, cycling would only be attractive to a small minority of confident users and would exclude most potential cyclists, contrary to Government policy.

Overall Conclusion

- 7.4 Taken as a whole, the Applicant has failed to demonstrate that the Proposed Development would not give rise to severe residual cumulative impacts on the transport network, as required by paragraph 116 of the National Planning Policy Framework.
- 7.5 The Transport Assessment and Environmental Statement are underpinned by outdated assumptions, lack essential baseline data, rely on unvalidated modelling, and materially understate future traffic demand. In these circumstances, it is not possible to conclude that the impacts of the Proposed Development have been properly identified, assessed, or mitigated.
- 7.6 The Environmental Statement therefore does not comply with the EIA Regulations, and the application fails to demonstrate compliance with national transport policy.
- 7.7 Planning permission should accordingly be withheld pending the submission of a fundamentally revised and robust transport and environmental assessment or refused outright. To grant permission on the basis of the current evidence would expose the decision-maker to a significant risk of legal challenge.

