

**The Oxfordshire County Council (A40 Access to Witney)  
Compulsory Purchase Order 2023**

**The Oxfordshire County Council (Highways Infrastructure – A40  
Access to Witney) Side Roads Order 2023**

**PLANNING INSPECTORATE REFERENCE:**

**DPI/U3100/23/25**

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**Summary Proof of evidence of  
THEODORE FRANSCOIS GENIS  
(Traffic Modelling)**

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## **1 INTRODUCTION AND QUALIFICATIONS**

- 1.1 I am Theodore (Theo) Francois Genis and I am a Technical Director in Transport Planning at Stantec since January 2023. I am a Chartered Engineer with 20 years' experience in transport planning and transport modelling, ranging from strategic transport modelling to microsimulation and isolated junction modelling. I have been working in the UK since 2008 for various consulting firms with a technical focus on transport modelling and the interpretation of transport modelling outputs to inform business cases and assessments for transport-related schemes.
- 1.2 My proof of evidence has been prepared regarding the transport modelling assessment of the impact of the proposed East Witney Strategic Development Allocation (EWSDA) on the highway network and the dependency of the development on the A40 Access to Witney Scheme (the Scheme). My evidence further sets out the impact of the Scheme on forecast congestion (with and without the EWSDA development) on the highway network in Witney.

## **2 TRANSPORT MODELLING AND TRIGGER POINT ASSESSMENT**

- 2.1 Stantec was commissioned by Oxfordshire County Council to assess the forecast impact of proposed EWSDA development on the highway network and network operations with and without the Scheme using outputs from Oxfordshire County Council's A40 Corridor Highway model. The A40 Corridor Strategic Highway Model was developed for the Council by transport consultants Pell Frischman and has been validated to 2018 traffic data in accordance with DfT Transport Appraisal Guidance (TAG) calibration and validation guidance criteria.
- 2.2 The commission followed on from an earlier review undertaken by Stantec on behalf of Oxfordshire County Council to review a trigger point assessment undertaken by consultant Glanville on behalf of the EWSDA developer. The Glanville Report concludes that up to 371 units can come forward at EWSDA before any infrastructure improvements at the Shores Green junction are required. Beyond 371 units, the Off-Slip is required to mitigate the development impacts. This assessment was based on a smaller strategic model (the Witney Highway model) and the Stantec review identified a number of potential weaknesses in the approach. The recommendation to the Council was to undertake a new trigger point assessment using a wider area model (Oxfordshire County Council's A40 Corridor Highway model).
- 2.3 This new assessment was undertaken to determine the degree of dependency of the EWSDA on the Scheme, to identify the trigger point of need for the Scheme (or elements of the Scheme) and to identify the benefits of the Scheme in mitigating the traffic impacts of the development. The process included scrutiny of the strategic highway model outputs, including the degree of congestion in the network and associated routing/re-routing in the strategic model. Junction capacity assessments were carried out at 5 key town centre junctions within Witney using industry standard modelling software (Junctions 10 and LinSig).

## **3 CONCLUSION**

- 3.1 The assessment showed that there is a dependency between the EWSDA and the Scheme, and that prior to 248 units (circa 50%) of the EWSDA development coming

forward, there is a need to introduce the west-facing Off-Slip to mitigate the full development's traffic impacts on the local road network. Delivery of the full Scheme (both Off-Slip and On-Slip) would, however, deliver greater benefits and better meet the objectives of the Scheme. The full Scheme would provide substantially greater congestion reduction benefits for trips crossing the town centre (via the A4095 Bridge Street), further reduce demand along A4095 Bridge Street and deliver greater wider road network benefits (by re-routing traffic away from unsuitable minor local roads).

#### **4 STATEMENT OF TRUTH AND DECLARATION**

- 4.1 My statement of truth is contained in full within section 5 of my proof of evidence. I can confirm that the contents of that section apply equally to my summary proof of evidence.



**THEODORE FRANSCOIS GENIS**

**19 FEBRUARY 2024**



**TG2**

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**Proof of evidence of  
THEODORE FRANSCOIS GENIS  
(Traffic Modelling)**

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## 1 INTRODUCTION AND QUALIFICATIONS

1.1 I am Theodore (Theo) Franscois Genis and I am a Technical Director in Transport Planning at Stantec, a role I have held since January 2023. I am a Chartered Engineer, a member of the Engineering Council (UK) and a member of the Chartered Institute of Highways and Transportation. I have Bachelor of Engineering in Civil Engineering and a post-graduate qualification in Transportation Engineering from the University of Pretoria in South Africa.

1.2 I have 20 years' experience in transport planning and transport modelling, ranging from strategic transport modelling to microsimulation and isolated junction modelling. I have been working in the UK since 2008 across various consultancy firms with a technical focus on transport modelling and the interpretation of transport modelling outputs to inform business cases and assessments for transport-related schemes. My work has been in support of local authorities, combined authorities, National Highways and Transport Scotland, working within the Transport Appraisal Guidance set by the Department for Transport. Alongside my technical roles I have held business management roles with responsibility for commercial and team leadership – I am currently the Director of Operations for Infrastructure South within Stantec.

### *Scope of Evidence*

1.3 This proof of evidence has been prepared regarding highways engineering matters relating to:

1.3.1 The Oxfordshire County Council (A40 Access to Witney) Compulsory Purchase Order 2023 (the **CPO**) [CDs A.1 and A.2]; and

1.3.2 The Oxfordshire County Council (Highways Infrastructure – A40 Access to Witney) Side Roads Order 2023) (the **SRO**) [CDs A.3 and A.4],

together the **Orders**.

1.4 The Orders were made to enable the delivery of improvements to the existing A40 Principal Road, the B4022 and the C16886 South Leigh Road at its junction with the B4022, at Shores Green, Witney at the location of the junction of the A40 with the B4022. The scheme is known as the A40 Access to Witney Scheme (the **Scheme**).

1.5 The Scheme will construct two new west-facing slip roads at the Shores Green junction of the A40; a new eastbound exit slip road from the A40 to a new junction with the B4022; and a new westbound entry slip road onto the A40 from a new junction with the B4022. The Scheme will provide new walking and cycling facilities on the B4022 and alongside the A40, which will improve provision for active travel.

1.6 The SRO will enable Oxfordshire County Council (the **Council**) as acquiring authority to carry out Classified Road works comprising the improvement, by widening and other works, of the A40, to stop up existing highways affected by the Scheme and to improve other highways as a consequence of the Classified Road works.

1.7 The Orders were made by the Council on 27 June 2023 and submitted electronically to the Secretary of State for Transport on 21 July 2021 and in hard copy on 1 August 2023. The Orders are now due to be considered by an Inspector at a Public Inquiry scheduled to open on 12 March 2024. This proof of evidence has been prepared in connection with that Inquiry.

1.8 I confirm that the evidence that I have prepared in respect of this Inquiry is given in accordance with the guidance of my professional institution and I can confirm that the opinions expressed are my true and professional opinions.

1.9 The purpose of my evidence is to set out the technical work undertaken by Stantec on behalf of the Council. I explain the review undertaken of traffic modelling and trigger point assessment completed by other consultants on behalf of the developer of the East

Witney Strategic Development Area (**EWSDA**) and which formed part of the Transport Assessment undertaken in support of its current planning application. I explain the recent traffic modelling and trigger point assessment undertaken on behalf of the Council using the Council's A40 corridor strategic transport model and the conclusions drawn from this study, including the assessed trigger point for the EWSDA development in relation to the infrastructure associated with the Scheme.

- 1.10 My proof of evidence should be read in conjunction with other separate but interrelated proofs of evidence submitted on behalf of the Council, including:
- 1.10.1 Strategic Case and Need, prepared by Nicholas Blades of Oxfordshire County Council [CDs G.1, G.2 and G.3];
  - 1.10.2 Highways and Traffic, prepared by Philippe Nirmalendran of AECOM [CDs G.16, G.17 and G.18];
  - 1.10.3 Planning policy, prepared by Baljinder Tiwana of Stantec [CDs G.10, G.11 and G.12];
  - 1.10.4 Environmental effects, prepared by Alison Morrissy of AECOM [CDs G.19, G.20 and G.21];  
  
Delivery and Funding, prepared by Gareth Slocombe of Oxfordshire County Council [CDs G.4, G.5 and G.6]; and
  - 1.10.5 Negotiations and Acquisition, prepared by Jessica Bere of Gately Hamer [CDs G.7, G.8 and G.9].

## 2 TRANSPORT MODELLING AND TRIGGER POINT ASSESSMENT

- 2.1 This Proof of Evidence sets out the recent transport modelling and trigger point assessment for the EWSDA undertaken by Stantec on behalf of the Council to determine the degree of dependency of the EWSDA on the proposed Scheme, to identify the trigger point of need for the Scheme and the benefits of the Scheme in mitigating the traffic impacts of the development. This is described in the first part of this evidence.
- 2.2 The assessment followed on from an earlier review undertaken by Stantec on behalf of the Council to review a trigger point assessment undertaken by consultant Glanville on behalf of the EWSDA developer. This review is described in the second part of this evidence.
- 2.3 This proof provides technical evidence in relation to the need for the Scheme to mitigate the impact of the proposed development at the EWSDA and its benefits more widely in reducing congestion in the town centre and rendering the highway network more capable of supporting the delivery of new housing in Witney.
- 2.4 The Stantec Transport Modelling and Trigger Point Assessment is provided at Appendix 8 to the Statement of Case [CD A.6].
- 2.5 In this Proof of Evidence, the Scheme is referenced in its entirety or in terms of its key component highway parts - two west facing slip roads at Shores Green (one to the north of the existing A40 carriageways (**the Off-Slip**) and one to the south of the existing carriageways (**the On-Slip**).
- 2.6 The following terms are used within this evidence:
- 2.6.1 'Trigger point' - in transport modelling terms, the 'trigger point' represents the quantum of development that could be delivered at EWSDA prior to the implementation of improvements at the Shores Green junction – either the Off-Slip or the On-Slip, or the Scheme in its entirety. The requirement for an infrastructure improvement at the trigger point is determined by the quantified impact of forecast traffic from the EWSDA on the operation of junctions located within Witney based on calibrated and validated isolated junction models. The operational performance in isolated junctions is measured as the Level of Service.
- 2.6.2 'Actual flows' and 'Demand flows' – these refer to modelled vehicle flows along a link or through a junction in the modelled network. The difference between 'actual' flows (which represent flows that the transport model predicts would make it to a point in a congested network) and 'demand' flows (which represent the total flow which wants to reach a point in a congested network) provides an indication of the level and impact of congestion in the assigned network.

### Part 1 - Transport Modelling and Trigger Point Assessment for the EWSDA

- 2.7 Stantec was commissioned by the Council in July 2023 to assess the forecast impact of proposed development as part of the EWSDA on the transport network and network operations with and without the Scheme using a strategic model – the A40 Corridor Highway model. Through this assessment any degree of dependency of the EWSDA on the proposed Access to Witney Scheme and the trigger point for the Scheme (or elements of the Scheme) was to be identified.
- 2.8 The A40 Corridor Highway model was used instead of the Witney Highway Model (which was used in the Glanville assessment) as this model covers a wider scope of the transport network (including impacts from planned highway infrastructure and land use changes along the A40 corridor). The Oxfordshire County Council A40 Corridor Strategic Highway Model was developed by transport consultants Pell Frischman and has been validated to 2018 traffic data in accordance with DfT Transport Appraisal Guidance (TAG)



calibration and validation guidance criteria and was used to inform the Transport Assessment which supported the planning application for the Scheme.

- 2.9 A range of modelled forecast scenarios were considered – without the Scheme (Do-Nothing), with the Off-Slip only (described in the Stantec report as 'Half AtW') and with the full Scheme (i.e., both Off- and On-Slips). The forecast scenarios modelled a range of development scenarios – No development at EWSDA, 248 units at EWSDA, 371 units at EWSDA and 450 units at EWSDA. This mimicked the development scenarios tested in the Glanville Report.

#### *Strategic Modelling Outputs and Review of Congestion Impacts*

- 2.10 The strategic model outputs included link and turning flows ('actual' and 'demand'), total junction delay, total junction queue levels (at the end of the modelled period).
- 2.11 The strategic model outputs were carefully scrutinised as part of the assessment in order to evaluate the level of congestion in the strategic model, which was one of the aspects identified as a weakness in the review of the Glanville Report (refer to Part 2 in this evidence).
- 2.12 Due to the significant level of forecast traffic growth in combination with the existing traffic congestion issues, there is a significant level of queued traffic within the forecast Do-Nothing scenario (i.e., without any EWSDA development and without the Scheme) in both the AM (morning) and PM (evening) peak hours. The queued traffic within the transport network is the difference between 'actual flows' and 'demand flows'. The level of queued traffic is highest around the A4095/B4022 double-mini roundabouts, and at the junction of Cogges Hill Road and Jubilee Way. At the double-mini roundabouts there are 271 vehicles not able to pass through the western roundabout junction within the modelled PM peak hour - this represents approximately 11% of the 'demand' through the junction.
- 2.13 The congestion in the strategic model, and in particular at the Cogges Hill Rd/Jubilee Way junction with the Scheme in place, may result in some re-routing in the network that reduces the demand that reaches key junctions in the network. As such, the localised modelling results provide an indication of forecast junction performance across relative scenarios but may not be fully representative of future operational conditions.
- 2.14 The congestion is most severe in the Do-Nothing scenario, and in the EWSDA development scenarios without any mitigation at the Shores Green junction. The assessment of the scenarios shows that when tested in isolation against a Do-Nothing scenario, the full Scheme results in substantially greater congestion reduction to trips crossing the town centre (via the A4095 Bridge Street) compared to other options. However, the delays at the Cogges Hill Rd/Jubilee Way junction do increase significantly because of traffic re-routing through the junction.
- 2.15 The assessment of the introduction of the EWSDA development in combination with the Off-Slip only shows that the delay along the A4095 through the town centre does reduce slightly – however, delays are still high at the A4095 double mini roundabouts. When modelled in combination with the full Scheme, the network shows substantial reduction in delay along the A4095 through the town centre and the at double mini roundabouts. However, the level of delay at the Cogges Hill Rd/Jubilee Way junction is still significantly higher than in the Do-Nothing due to the increased traffic passing through the junction.

#### *Localised Junction Modelling Assessment*

- 2.16 Junction capacity assessments were carried out at 5 junctions within Witney using industry standard modelling software (Junctions 10 and LinSig). Models were calibrated and validated for the following junctions:
- Junction 1: West End / Hailey Road/ Crawley Road Roundabout

- Junction 2: High Street / A4095 Roundabout
  - Junction 3: A4095 / B4022 Double Mini Roundabout
  - Junction 4: High Street / Witan Way Signalised Tee Junction
  - Junction 5: Cogges Hill Road / Jubilee Way/ B4022 Signalised Crossroads
- 2.17 The 'demand' turning flows from the strategic modelling scenarios were applied to the junction models for all the scenarios modelled within the strategic model. The outputs from the junction modelling software considered the Ratio of Flow to Capacity (RFC) for arms on unsignalised junctions/roundabouts, and the Degree of Saturation (DoS) for signalised junctions.
- 2.18 The worst performance of the worst arm on each junction for each scenario was considered in the evaluation, and the results from scenarios were considered relative to each other. In this way the impact of the EWSDA development traffic on the junction performance with and without interventions at the Shores Green junction (either Off-Slip only or the full Scheme) could be compared.
- 2.19 The junction modelling assessment indicates that at Junction 3 (the western mini-roundabout) and Junction 4 (High Street/Witan Way) the introduction of the first 248 development units forming part of the EWSDA represent the trigger point for the requirement for an intervention at the Shores Green junction in some form. The modelling results indicate that – across both AM and PM peaks – the introduction of the Off-slip only as part of the Scheme mitigates the impact of the EWSDA demand.
- 2.20 The modelling results indicate that – across both AM and PM peaks – the A4095 / B4022 Double Mini Roundabout junction performs best with the full Scheme in place.

#### *Summary and Conclusions*

- 2.21 A range of scenarios have been assessed for a 2031 forecast year (aligned with the reference forecast year in the A40 Corridor model) for scenarios with/without different levels of EWSDA development, and for a half Scheme option (west-facing Off-Slip only) and full Scheme option (west facing On- and Off-slips).
- 2.22 Whilst the strategic modelling network is very congested, so that the influence of this on network re-routing creates a degree of uncertainty in the assessment, the modelling and trigger point assessment indicate that there is a dependency between the EWSDA and the Scheme, and that prior to 248 (circa 50%) of the EWSDA development coming forward, there is a need to introduce the west-facing Off-Slip to mitigate the full development's traffic impacts on the local road network.
- 2.23 As the assessment did not include a series of interim scenarios between 0 units and 248 units, the assessment is not able to pinpoint the exact trigger point above 0 units when the requirement for a scheme in some form is required. However, it is concluded that prior to 248 units being reached, an intervention (in the form of either the Off Slip, or else the Scheme in full) is required.
- 2.24 The assessment does indicate that introduction of the west-facing Off-Slip only would mitigate the network impacts of the full EWSDA buildout (i.e., 450 units) and hence indicates that only the west-facing Off-Slip is required to facilitate the EWSDA development.
- 2.25 Delivery of the full Scheme (both Off-Slip and On-Slip) would deliver greater benefits and better meet the wider objectives of the Scheme compared to the delivery of the Off-Slip only. It would provide substantially greater congestion reduction benefits for trips crossing the town centre (via the A4095 Bridge Street), further reduce demand along A4095 Bridge Street and deliver greater wider road network benefits (by re-routing traffic away from unsuitable minor local roads). The introduction of the full Scheme would

provide more routing options for public transport services to serve the current and future residents of the East Witney area.

Part 2 - Stantec Review of the Glanville report (Trigger point assessment for the EWSDA)

- 2.26 Prior to the development of the trigger point assessment reflect in the evidence above, Stantec was commissioned by the Council to review a trigger point assessment undertaken by Glanville on behalf of the developer for the EWSDA. The following documents and outputs (pertaining to the work by Glanville) were reviewed:
- 2.26.1 East Witney Strategic Development Area, Application Ref: 20/02654/OUT, Shores Green Junction Improvements, Trigger Point Assessment, Glanville, 30 November 2021 (the **Glanville Report**) (Appendix TG3.1);
  - 2.26.2 Transport Modelling Brief – Work on behalf of Glanville's - East Witney SDA, Revised 10 May 2021 (the **Transport Modelling Brief**) (Appendix TG3.2); and
  - 2.26.3 Traffic assignment models from Oxfordshire County Council's Witney Highways Model (covering the immediate Witney Area highway network only) as provided by transport consultants Tetrattech which informed the Glanville Report. The traffic assignment models are technical outputs (which can be analysed using specialist modelling software) and hence have not been appended to this proof of evidence.
- 2.27 The Glanville Report sets out that the strategic modelling which informed the trigger point assessment is drawn from the Witney Highway Model. Turning flows were taken from the strategic modelling to inform assessment at a number of junctions within Witney. The trigger points assessment was concentrated upon the Bridge Street / West End / Newland / Woodgreen (Double Mini-Roundabout) junction.
- 2.28 The Glanville Report concludes that up to 371 units can come forward at EWSDA before any infrastructure improvements at the Shores Green junction are required. Beyond 371 units, the Off-Slip is required to mitigate the development impacts.
- 2.29 The Stantec review identified that the Witney Highway Model showed high levels of congestion within the town centre and at the Double Mini-roundabout junction. It was not clear from the Glanville report that the impacts of several aspects associated with this congestion had been considered, and as such represented potential key weaknesses impacting on the accuracy of their assessment:
- 2.29.1 There is no reporting of any wider impacts of development traffic from East Witney Development from the strategic model. This approach creates a risk that potential routing through the town centre and wider network congestion resulting from the EWSDA is under-represented.
  - 2.29.2 Application of modelled turning flows (taken from the strategic model network assignments) are not appropriate to use to inform isolated junction assessments without full consideration of the over-saturated nature of the network and the difference between actual and demand flows. There is a likelihood that junction demand is under-estimated due to this and that the impacts from the development trips (without the infrastructure) are not adequately reflected. It is not clear from the Glanville report if they took the oversaturated network into account and whether the standalone junction modelling applied the 'demand' flows or 'actual' flows as extracted from the Witney Highway Model.
  - 2.29.3 It is not clear that full consideration has been taken of the wider development context and that appropriate levels of background growth (in the absence of NWSDA) are included in the strategic modelling forecast scenarios.

- 2.30 The Stantec review recommended that the Council undertake an updated trigger point modelling assessment using a wider area model (the Council's more recently developed A40 Corridor Highway model) to allow the assessment of strategic re-routing impacts from the EWSDA development and wider network changes. This recommendation resulted in the assessment reported under the first part of this evidence.

### 3 RESPONSE TO OBJECTORS

- 3.1 I have set out in the following section a summary of the grounds of the objections relevant to my evidence and my response.
- 3.2 Jeremy Michael Walker, Paula June Walker and Roger Jeremy Michael Walker (objection 2), John William Kearns and Anne Kearns (objection 3), Susan Caroline Morrish (objection 4) [CDs D.2, D.3 and D.4] have a general objection in relation to the public need for and public benefit of the Scheme which, the objection states, is not proven.
- 3.3 The public need and benefits of the Scheme generally are set out in the Council's Statement of Case [CD A.6] and in the Proof of Evidence of Nicholas Blades of the Council [CD G.2]. My evidence specifically describes the benefits the Scheme will deliver in helping mitigate the impact of the proposed new housing development at the EWSDA and more widely in reducing congestion in Witney town centre. My evidence demonstrates that whilst the Off-Slip only mitigates the impacts of development at the EWSDA, the full Scheme supports substantially greater congestion reduction benefits for trips crossing the town centre (via the A4095 Bridge Street), further reducing demand along A4095 Bridge Street and delivering greater wider road network benefits (by re-routing traffic away from unsuitable minor local roads).
- 3.4 My evidence therefore helps to demonstrate how the Scheme will achieve its objectives of supporting the delivery of new housing in Witney and reducing congestion in Witney Town Centre and supports the compelling case in the public interest for delivery of the Scheme.

#### **4 CONCLUSION**

- 4.1 Stantec has assessed the forecast impact of proposed EWSDA development on the highway network and network operations with and without the Scheme using outputs from the Council's A40 Corridor Highway model. The A40 Corridor Strategic Highway Model was developed for the Council by transport consultants Pell Frischman and has been validated to 2018 traffic data in accordance with DfT Transport Appraisal Guidance (TAG) calibration and validation guidance criteria.
- 4.2 This was undertaken to determine the degree of dependency of the EWSDA on the proposed Scheme, to identify the trigger point of need for the Scheme (or elements of the Scheme) and to identify the benefits of the Scheme in mitigating the traffic impacts of the development. The process included scrutiny of the strategic highway model outputs, including the degree of congestion in the network and associated routing/re-routing in the strategic model. Junction capacity assessments were carried out at 5 key town centre junctions within Witney using industry standard modelling software (Junctions 10 and LinSig).
- 4.3 The assessment showed that there is a degree of dependency between the EWSDA and the Scheme, and that prior to 248 units (circa 50%) of the EWSDA development coming forward, there is a need to introduce the west-facing Off-Slip to mitigate the full development's traffic impacts on the local road network. Delivery of the full Scheme (both Off-Slip and On-Slip) would, however, deliver greater benefits and better meet the objectives of the Scheme. The full Scheme would provide substantially greater congestion reduction benefits for trips crossing the town centre (via the A4095 Bridge Street), further reducing demand along A4095 Bridge Street and delivering greater wider road network benefits (by re-routing traffic away from unsuitable minor local roads).

**5 STATEMENT OF TRUTH AND DECLARATION**

- 5.1 I confirm that, insofar as the facts stated in my proof evidence are within my own knowledge, I have made clear what they are and I believe them to be true and that the opinions I have expressed represent my true and complete professional opinion.
- 5.2 I confirm that my proof of evidence includes all facts that I regard as being relevant to the opinions that I have expressed and that I have drawn attention to any matter which would affect the validity of those opinions.
- 5.3 I confirm that my duty to the Inquiry as an expert witness overrides any duty to those instructing or paying me, and I have understood this duty and complied with it in giving my evidence impartially and objectively, and I will continue to comply with that duty as required.
- 5.4 I confirm that, in preparing this proof of evidence, I have assumed that same duty that would apply to me when giving my expert opinion in a court of law under oath or affirmation. I confirm that this duty overrides any duty to those instructing or paying me, and I have understood this duty and complied with it in giving my evidence impartially and objectively, and I will continue to comply with that duty as required.
- 5.5 I confirm that I have no conflicts of interest of any kind other than those already disclosed in this proof of evidence.

*TF Genis*

**THEODORE FRANCOIS GENIS**

**19 FEBRUARY 2024**





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**Appendix to Proof of evidence of  
Theodore Franscois Genis  
(Traffic Modelling)**

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**Appendix TG3.1  
The Glanville Report**

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**East Witney Strategic Development Area**  
**Application Ref: 20/02654/OUT**  
**Shores Green Junction Improvements**  
**Trigger Point Assessment**

## **1.0 Introduction and Policy Framework**

### **Introduction**

- 1.1 This Technical Note (TN) has been prepared by Glanville on behalf of The Mawle Trustees and Trustees of the Northfield Life Interest Settlement ('the applicant') with respect to Outline planning application (application ref: 20/02654/OUT) for development proposals on land known as the East Witney Strategic Development Area (SDA) ('the Site').
- 1.2 It seeks to establish the amount of development that could be delivered at East Witney, i.e. the trigger point, prior to the implementation of improvements at the Shores Green junction. The improvements to the Shores Green junction considered herein comprise the delivery of the west facing off-slip only or the west facing off-slip and on-slip in combination.

### **Policy Framework**

- 1.3 East Witney SDA is allocated in the West Oxfordshire Local Plan 2031, as defined by Policy WIT1 therein. With respect to the Shores Green junction, WIT1 sets out the policy requirements for East Witney SDA as follows:

*"development to be phased in accordance with the timing of provision of supporting infrastructure and facilities including the essential improvements to the Shore's Green junction onto the A40 and related highway measures"*

- 1.4 In addition, the wider discussion in the Local Plan regarding East Witney SDA states:

*"The development itself is able to deliver the 'off-slip' through a planning obligation and an appropriate financial contribution will be sought towards the 'on-slip' potentially as part of a wider strategic transport infrastructure fund/package for Witney."*

- 1.5 It is therefore the case that the exact requirements for East Witney as it relates to Shores Green, in terms of potential contribution to the on-slip, the delivery of the off-slip, as well as time scale are not fixed in the Local Plan. As such, it is reasonable that these matters are agreed through the planning application process as set out herein.

## **2.0 Local Highway Authority Consultation Responses**

- 2.1 In response to the planning application, Oxfordshire County Council in their role as Local Highway Authority provided two sets of consultee comments. The first set of comments, dated 15<sup>th</sup> December 2020, states the following with respect to the Shores Green junction:

*"It is thus reasonable to limit development to 225 dwellings until such a time that the SGSR [Shores Green Slip Roads'] junction improvements are in place. Else, the applicant must carry out a further assessment on a scenario where the 50%, 75% or 100% of the East Witney SDA is built out without the SGSR."*

- 2.2 The above assertion is based on the findings of the Transport Assessment that accompanies the application. It is the case that the scenarios assessed in the TA were based on scenarios defined by the Forecasting Report<sup>2</sup> prepared on behalf of OCC following the adoption of the Local Plan. Importantly, the scenarios assume that both the off-slip and on-slip roads would be installed as one piece of infrastructure. As such the nuance regarding the delivery of the off-slip and the 'potential' contribution to the on-slip set out in the Local Plan was not reflected by this assessment.
- 2.3 Further, the modelled scenarios assess the impact of the combination of the traffic generated by East Witney SDA and North Witney SDA. Comprising a development of 1,400 new homes, North Witney SDA, and its associated traffic impacts, dwarf the proposal at East Witney SDA, which is for 495 new homes. The assessment assumes that development at North Witney is progressing at pace, being fully built out by 2031.
- 2.4 However, it is the case that the land at North Witney SDA is owned by several different landowners. An arrangement that is, and will continue to, slow the progress of that development. Whereas the land at East Witney SDA is owned by a single landowner, the applicant, and as such can be built out at the earliest opportunity subject to the normal planning and commercial constraints.
- 2.5 On the basis of the above, it is considered that the results of the assessments undertaken to-date have been unduly influenced by traffic generated by North Witney SDA, whereas in reality East Witney SDA is much more likely to be developed first.
- 2.6 Furthermore, the assessments so far have not separated out the benefits of the off-slip only, instead they have only considered the benefits of the off-slip and on-slip in combination. These matters will therefore be addressed herein.
- 2.7 On the basis of the evidence submitted in the Transport Assessment, the LHA were content that 225 dwellings could be constructed before the SGSR scheme were implemented. For clarity SGSR comprises a new west facing on-slip and a new west facing off-slip.
- 2.8 In their second consultation response dated 27th April 2021, the LHA suggested that a condition be attached to a successful application:
- "Grampian condition limiting development to the amount of development prior to the Shores Green Improvement scheme. The trigger for the permitted amount of development shall be agreed with the HA following modelling assessments."*
- 2.9 The second response from the HA therefore changes tack from their first response, by stating that the trigger point for the Shores Green Improvement scheme shall be agreed with the HA following modelling assessments, rather than by 225 dwellings.

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<sup>1</sup> SGSR comprises the both the west facing off-slip and on-slip.

<sup>2</sup> Witney Highways Model, Future Year Forecasting Report, December 2018, Prepared by WYG Environment Planning Transport Limited. Document reference: RT101212-1-003.

- 2.10 This report has therefore been prepared to consider the trigger point for the provision of improvement measures at the Shores Green junction. It also considers whether the off-slip only, or the off-slip and on-slip in tandem, would be required to mitigate the impact of the development as set out by the Local Plan policy framework, and therefore whether a financial contribution is required.

### **3.0 Methodology**

- 3.1 It is noted that since the preparation of the Core Strategy, Oxfordshire County Council in its role as Local Highway Authority have commenced design work on the Shores Green junction improvements, which have been rebranded as 'Access to Witney' (AtW). AtW is therefore referred to throughout the remainder of this report, with 'AtW Full Scheme' comprising both west facing off-slip and on-slip roads, and 'AtW Off-Slip Only' comprising just the west facing off-slip road component of the AtW scheme.
- 3.2 The assessments undertaken herein are based on traffic flows taken from the Witney Highway Model, which is an area wide model encompassing Witney and maintained by the transport consultants Tetra Tech on behalf of the County Council. Furthermore, the scenarios that have been considered were agreed in consultation with the Local Highway Authority.
- 3.3 The methodology of this assessment is as follows:

1. Identification of Materially Affected junctions

This step comprises a high-level assessment using the stand-alone traffic models and traffic modelling study area agreed as part of the Transport Assessment that accompanied the planning application for East Witney SDA. It seeks to determine those junctions anticipated to be materially affected by the traffic generated by East Witney SDA, assuming that the Shores Green junction is retained in its current arrangement. The assessment compares the future performance of the junctions for the 'without' and 'with' East Witney SDA scenarios for all assessment years.

2. Justification for Improvements at Shores Green

The junctions identified by Step 1 are assessed to determine whether AtW Off-Slip Only, or AtW Full Scheme, would be justified to mitigate the impact of East Witney SDA.

3. Determination of Trigger Points for Improvements

The traffic flow changes anticipated as a result of the development, at the junctions identified in Step 1, are assessed against commonly accepted thresholds on an arm-by-arm basis, in order to determine the trigger point for the improvements identified in Step 2.

#### **Assessment Years**

- 3.4 In their December 2020 consultation response, the Local Highway Authority requested that the impact of the development be assessed when 50%, 75% and 100% of it is built out. The following modelling assessment years and development quantum for this modelling exercise have been agreed with the Local Highway Authority:

- 248 dwellings would be built by 2024, as such it would be reasonable to use an assessment year of 2024 to be consistent with the assessment years in the TA;
- 371 dwellings would be built by 2028; and
- 495 dwellings would be built by 2031.

### Scenarios

- 3.5 For the reasons set out in Section 2.0, the scenarios considered herein include Local Plan growth but exclude North Witney SDA and its associated infrastructure requirements, i.e. West End Link, Northern Distributor Road and Bridge Street improvements. The scenarios considered herein are summarised in Table 1.

Table 1: Modelled Scenarios

No.	Year	AtW Scheme		No. of Units at EWSDA
		AtW Off-Slip Only	AtW Full Scheme	
<b>Shores Green Junction: as Existing</b>				
1	2024	No	No	0
2	2024	No	No	248
3	2028	No	No	0
4	2028	No	No	371
5	2031	No	No	0
6	2031	No	No	495
<b>Shores Green Junction: Including AtW Off-Slip Only</b>				
7	2024	Yes	No	248
8	2028	Yes	No	371
9	2031	Yes	No	495
<b>Shores Green Junction: Including AtW Full Scheme</b>				
10	2024	No	Yes	248
11	2028	No	Yes	371
12	2031	No	Yes	495

## 4.0 Step 1: Identification of Materially Affected junctions

- 4.1 Step 1 seeks to establish how the network is anticipated to operate without the delivery of Access to Witney in any form, with varying levels of development at East Witney SDA.
- 4.2 The traffic flows for Scenarios 1 to 6 have been input into the stand-alone traffic models set out in the Transport Assessment. Outputs for the traffic modelling undertaken in this TN is available on request. The results of this exercise are summarised in Table A1 at Appendix A, which uses the following traffic light system:
- Green: Junction operating within capacity;
  - Amber: Queuing is likely on some arms, i.e. a Ratio of Flow to Capacity (RFC) of  $>0.85 < 1.00$ ; and
  - Red: Junction is over capacity, i.e. some arms have an RFC  $> 1.00$ .

- 4.3 Junction 5, the Bridge Street / West End / Newland / Woodgreen double mini roundabout has been modelled using simulation mode, so no RFCs are given, only queue lengths. As such there is no easily agreed threshold, such as an RFC of > 0.85, at which the impact could be seen as significant. Table A1 therefore compares queue lengths in the 'without' and 'with' development scenarios. Increases in queues of >5<10 vehicles are identified as amber and >10 vehicles as red. Although it is accepted that this rating system is somewhat arbitrary, it nevertheless helps to quantify the impact of the development, especially bearing in mind that in the Transport Assessment the development was expected to result in a change of less than 5 vehicles for all but one movement, for all scenarios considered therein.
- 4.4 The results for each of the junctions summarised in Table A1 are discussed below.

#### **Junctions 1, 2, 3 & 7: Various Locations<sup>3</sup>**

- 4.5 Table A1 shows that these junctions are anticipated to operate within their design capacities in both the 'without' and 'with' development scenarios, for all scenarios assessed. This would indicate the network would continue to operate satisfactorily despite the addition of the traffic arising from East Witney SDA. As such there would be no requirement for the delivery of any junction improvements at Shores Green to mitigate the impact of the development at Junctions 1, 2, 3 & 7.

#### **Junction 4: Jubilee Way / A4095 (Priority Junction)**

- 4.6 This junction is identified as having an amber rating in the PM peak only; the junction only just experiences an RFC of over 0.85 without East Witney, a situation that is not anticipated to be exacerbated materially as a result of the addition of traffic generated by East Witney. As such there would be no requirement for the delivery of any junction improvements at Shores Green to mitigate the impact of the development at Junction 4.

#### **Junction 5: Bridge Street / West End / Newland / Woodgreen (Double Mini-Roundabout)**

- 4.7 As noted earlier in this section, this junction has been modelled in simulation mode. As such its performance has been primarily assessed by comparing the queue lengths for the 'without' development scenarios to those of the 'with' development scenarios. However, as established in the Transport Assessment, it is objectively known that this junction already currently experiences peak hour queuing and congestion.
- 4.8 The assessment undertaken herein and summarised in Table A1 shows that without East Witney the performance of this junction would be expected to deteriorate as a result of the growth in background traffic and the addition of traffic generated by East Witney would be expected to result in a material worsening of this congestion.
- 4.9 It is therefore the case that junction improvements at Shores Green would be justified if they helped to mitigate the impact of East Witney at Junction 5.

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<sup>3</sup> Refer to Table A1 for the location of these junctions

### **Junction 6: Bridge Street / High Street / Mill Street (Roundabout)**

- 4.10 The modelling shows that this junction would be anticipated to be operating beyond its design capacity without any development at East Witney. However, the modelling reveals that the addition of traffic generated by East Witney is anticipated to result in only a relatively modest increase in RFC of up to 0.07, on the worst affected arms, for all assessment years. As such it is considered that there would be no requirement for the delivery of any junction improvements at Shores Green to mitigate the impact of the development at Junction 6.

#### **Summary**

- 4.11 It has been demonstrated that the principal constraint on the network is Junction 5, the Bridge Street / West End / Newland / Woodgreen double mini-roundabout junction, hereinafter referred to as the 'Staple Hall junction'. The assessment also shows that this junction is expected to be materially affected by additional traffic generated by East Witney.
- 4.12 The following assessment in Step 2 therefore focuses on the Staple Hall junction, exploring if AtW Off-Slip Only or AtW Full Scheme would be justified to mitigate the impact of East Witney at this junction.

## **5.0 Step 2: Justification for Improvements at Shores Green**

- 5.1 Table A2 at Appendix A shows the difference in queue lengths at the Staple Hall junction for the 'without development' and 'with development plus infrastructure' scenarios, for all assessment years.
- 5.2 The same traffic light system employed in the previous table has been applied, with increases in queues of >5<10 vehicles shown amber and >10 vehicles shown red<sup>4</sup>.
- 5.3 Table A2 shows that with AtW Off-Slip Only, there would be modest increases in the queue lengths up to and including 2028, whilst by 2031 more significant queue increases would be expected. The table also shows that with the inclusion of AtW Full Scheme, the operation of the junction would be improved for all years. On first blush this would seem to suggest that AtW Off-Slip Only would be sufficient to mitigate the impact of East Witney up to 2028, at which point AtW Full Scheme would be required. However, as will be explained below, a more detailed examination of the modelling results for the 2031 scenarios shows that, although the development plus AtW Off-Slip Only is expected to generate an increase in queueing on one arm of the junction, it nevertheless reduces the queueing on the majority of the other arms.
- 5.4 Table A3 at Appendix A shows the queue lengths generated by the models for Scenario 5 (2031 no development no infrastructure) and Scenario 9 (2031 full development plus AtW Off-Slip Only). It reveals that although the development plus AtW Off-Slip Only would be expected to increase the queueing on the Newland arm of the junction, it would nevertheless reduce it on almost all other arms.

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<sup>4</sup> It is recognised that the results here differ marginally from those presented at Step 1. This is a result of the fact that the model is a simulation model, which was re-run for Step 2 with a different random seed.



- 5.5 Furthermore, referring to Table 2, a comparison of the traffic flows running through the junction<sup>5</sup> shows that it would be anticipated to serve a lower total traffic flow in the 'with development plus AtW Off-Slip' scenario (Scenario 9) than in the 'without development no improvements at Shores Green' scenario (Scenario 5).

Table 2: Total Flows Through Junction 5

Scenario	Total Flows Through Junction (PCU)	
	AM	PM
Scenario 5 (Without Development No Improvements at Shores Green)	2,825	2,659
Scenario 9 (With Development Plus AtW Off-Slip Only)	2,794	2,557

### Summary

- 5.6 On the basis of the above, it is considered that the development at East Witney would be reliant on the implementation of AtW Off-Slip Only to mitigate its impact at the Staple Hall junction, not the delivery of AtW Full Scheme.
- 5.7 The following assessment in Step 3 therefore considers what quantum of development would trigger the requirement for AtW Off-Slip Only.

## 6.0 Step 3: Determination of Trigger Point for Improvements

- 6.1 Two thresholds are commonly used to determine if the level of traffic generated by a development would have a material impact; the development would be expected to increase the two-way traffic flow on a link by more than 30 two-way vehicle movements per hour, or by more than 5%. The charts at Appendix B help to consider the impact of the development for Scenarios 1 to 6 at the Staple Hall junction, which do not include improvements to the Shores Green junction, against these thresholds on an arm-by-arm basis. The key to the charts is as follows:

- Blue: No Development;
- Orange: No Development +30 Trips;
- Grey: No Development +5%; and
- Yellow: With Development.

- 6.2 To interpret the charts, the year when the yellow line crosses the grey line is when the +5% threshold would be expected to be exceeded, whilst the year when the yellow line crosses the orange line is when the +30 trip threshold would be expected to be exceeded. The exceedance of one or both of these thresholds can be used to determine when the development would be expected to have a material impact and therefore when mitigation measures at the Shores Green junction would be justified.
- 6.3 To summarise these charts, Table 3 sets out the year when the 'With Development' line crosses the 'No Development +30 Trips' and 'No Development +5%' lines.

<sup>5</sup>Area wide traffic model outputs are available on request.

Table 3: Junction 5: Bridge Street / West End / Newland / Woodgreen (Double Mini-Roundabout) – Trigger Point by Arm

Threshold	Year of Threshold Exceedance by Arm			
	A4095 Woodgreen	B4022 Newland	A4095 Bridge Street	B4022 West End
	<b>AM Peak</b>			
Exceeds +30	2030	2029	2029	Never
Exceeds +5%	Never	2029	Never	Never
	<b>PM Peak</b>			
Exceeds +30	Never	2024	2024	Never
Exceeds +5%	Never	2024	Never	Never

- 6.4 Referring to Table 3, if AtW Off-Slip Only were to be implemented by 2029, no arms of the junction would be expected to experience an exceedance of the +30 trip or the +5% thresholds during the AM Peak. Whilst during the PM peak, only Newland would exceed both thresholds and Bridge Street would only exceed the +30 trip threshold.
- 6.5 As such, if AtW Off Slip Only were to be implemented by 2029, the modelling anticipates that there would be no significant impact during the AM peak. Whilst during the PM Peak, a short-term temporary impact would be expected on the Newland and Bridge Street arms of the junction, which would be resolved in 2029 by the implementation of AtW Off-Slip Only. Given the short-term temporary nature of this impact, its temporal limitation to the PM peak only, and the fact that only two arms of the junction are anticipated to be affected, it cannot be considered to be severe in the context of the NPPF.
- 6.6 On the above basis, AtW Off-Slip Only would be required in 2029. As such the trigger point would be the level of development anticipated to be delivered by one year prior (2028), that is 371 units. It is therefore assessed that the trigger point for the requirement of AtW Off-Slip Only is set at 371 units.
- 6.7 For clarity, the assessment shows that there is no requirement for the full AtW scheme to mitigate the impact of the development at East Witney SDA.

## 7.0 Summary and Conclusion

- 7.1 It has been demonstrated that the principal constraint on the network is the Bridge Street / West End / Newland / Woodgreen double mini-roundabout junction (the Staple Hall junction). Furthermore, this junction is expected to be materially affected by additional traffic generated by East Witney. As such improvements to the Shores Green junction would be justified if they mitigate the impact at the Staple Hall junction.
- 7.2 This assessment has shown that the development at East Witney would be reliant on the implementation of a new west facing off-slip onto the A40 at Shores Green to mitigate the impact of the development at the Staple Hall junction; however, it would not be dependent on the delivery of the full 'Access to Witney' scheme, which comprises both a new west facing off-slip and on-slip onto the A40 at Shores Green.
- 7.3 The trigger point assessment herein shows that the off-slip would be required in 2029. As such the trigger point would be the level of development anticipated to be delivered by 2028, that is 371 units.

- 7.4 On the basis of the above, it is assessed that the trigger point for the requirement of the provision of a new west facing off-slip at Shores Green is set at 371 units. Furthermore, that the contribution package attributable to East Witney, for measures at the Shores Green Junction, should be commensurate with the requirement identified herein for the provision of the off-slip only, not the full 'Access to Witney' scheme.

**Appendix A**  
**Tables A1 to A3**

**East Witney Strategic Development Area**  
**Application No: 20/02654/OUT**  
**Shores Green Junction Improvements**  
**Trigger Points Assessment**

Table A1: High Level Assessment of Entire Modelling Study Area (Step 1)

Junction		2024 Scenario 1 (without dev) vs Scenario 2 (with dev)				2028 Scenario 3 (without dev) vs Scenario 4 (with dev)				2031 Scenario 5 (without dev) vs Scenario 6 (with dev)				Comment
		AM		PM		AM		PM		AM		PM		
		No Dev	+ Dev	No Dev	+ Dev	No Dev	+ Dev	No Dev	+ Dev	No Dev	+ Dev	No Dev	+ Dev	
1	A40 On Slip (Priority Junction)													Similar to TA. OK for all scenarios
2	A40 Off Slip (Priority Junction)													Similar to TA. OK for all scenarios
3	Cogges Hill Road / Oxford Hill / Jubilee Way (Signalised)													Similar to TA, All OK, based on the mitigation option
4	Jubilee Way / A4095 (Priority Junction)													Similar to TA. Only just over 0.85 with only very minor increases in RFC due to development
5	Bridge Street / West End / Newland / Woodgreen (Double Mini-Roundabout)													Performance of the junction is generally much worse than in the TA. It is congested in 2024 without the development, which is exacerbated by the development. Could be related to the difficulty in modelling a congested double mini.
6	Bridge Street / High Street / Mill Street (Roundabout)													Performance of the junction is generally much worse than in the TA. It is at capacity in 2024 without the development however the development only results in modest increase in RFC
7	High Street / Witan Way / Gloucester Place (Signalised)													Similar to TA. OJ for all scenarios

**East Witney Strategic Development Area  
Application No: 20/02654/OUT  
Shores Green Junction Improvements  
Trigger Points Assessment**

Table A2: High Level Assessment of performance of AtW Off-Slip Only and AtW Full Scheme for all Assessment Years

<b>Junction 5: Bridge Street / West End / Newland / Woodgreen (Double Mini-Roundabout)</b>		
Scenarios	AM	PM
<b>Without Dev No Infrastructure Vs With Dev + AtW Off-Slip Only</b>		
2024: Scenario 1 (without dev) vs 7 (with dev + AtW Off-Slip Only)		
2028: Scenario 3 (without dev) vs 8 (with dev + AtW Off-Slip Only)		
2031: Scenario 5 (without dev) vs 9 (with dev + AtW Off-Slip Only)		
<b>Without Dev No Infrastructure Vs With Dev Plus AtW Full Scheme</b>		
2024: Scenario 1 (without dev) vs 10 (with dev + AtW Full Scheme)		
2028: Scenario 3 (without dev) vs 11 (with dev + AtW Full Scheme)		
2031: Scenario 5 (without dev) vs 12 (with dev + AtW Full Scheme)		

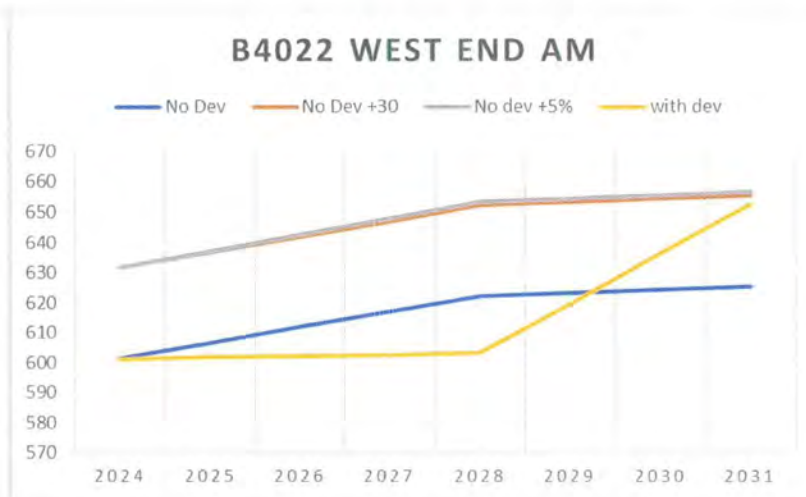
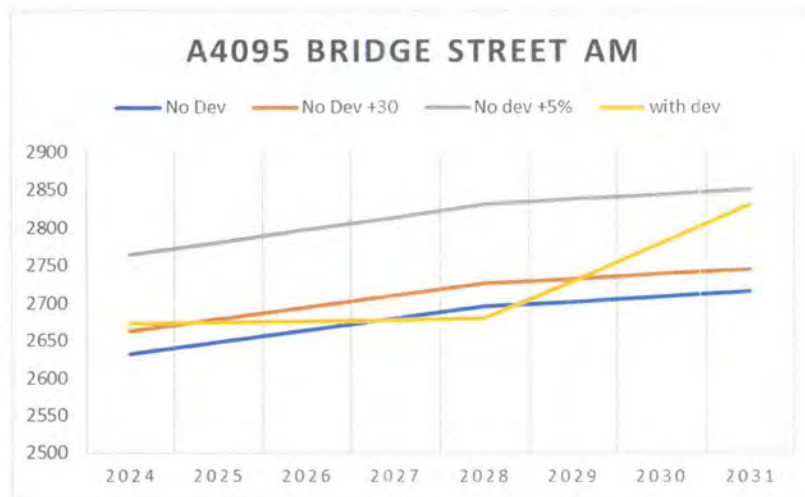
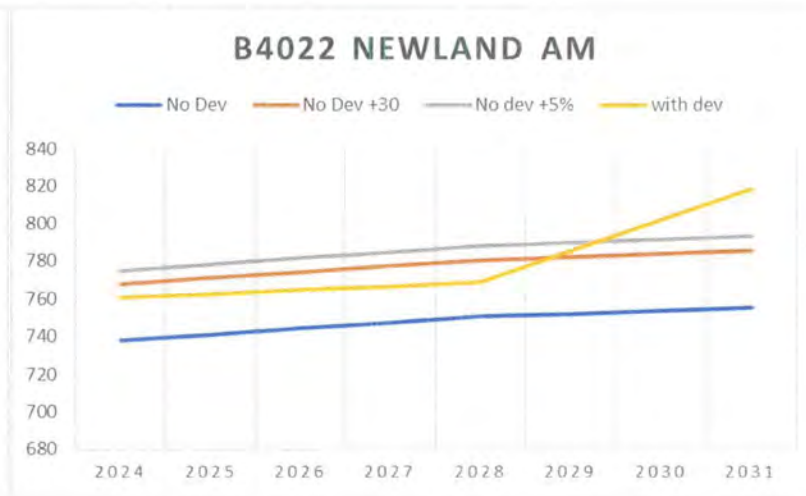
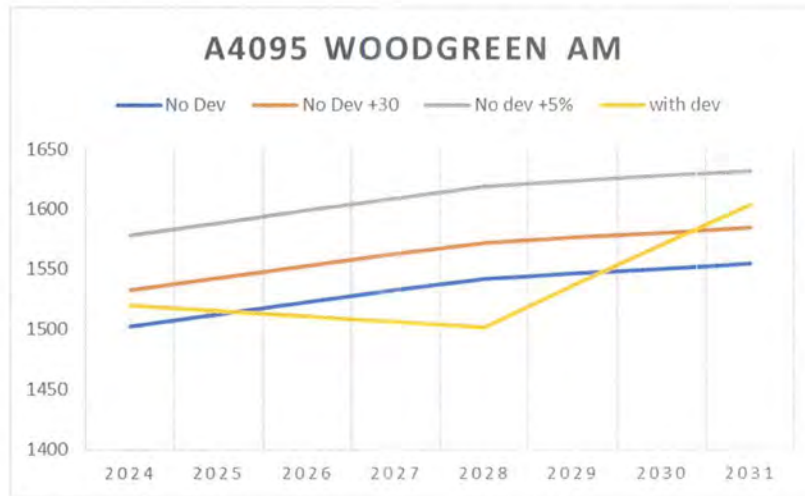
Table A3: Detailed Comparison of 'without development' vs 'with development plus AtW Off-Slip Only' for 2031 Assessment Year

<b>Junction 5: Bridge Street / West End / Newland / Woodgreen (Double Mini-Roundabout)</b>						
Stream	2031 Assessment Year					
	Queue (PCU)				Change in Queue Scenario 5 vs Scenario 9	
	AM		PM		AM	PM
	Scenario 5	Scenario 9	Scenario 5	Scenario 9		
	Without Dev	With Dev	Without Dev	With Dev		
1 - Western Mini - 1 - Internal Link	1.6	1.6	1.5	1.5	0.0	0.0
1 - Western Mini - 2 - Bridge Street (A4095)	29.8	4.6	17.6	4.2	-25.2	-13.4
1 - Western Mini - 3 - West End (B4022)	29.9	22	56.5	25	-7.9	-31.5
2 - Eastern Mini - 1 - Newland (B4022)	30.7	45.3	19.5	33.5	14.6	14.0
2 - Eastern Mini - 2 - Internal Link	1.9	1.5	1.8	1.5	-0.4	-0.3
2 - Eastern Mini - 3 - Woodgreen (A4095)	127.9	131.6	73.4	67.5	3.7	-5.9

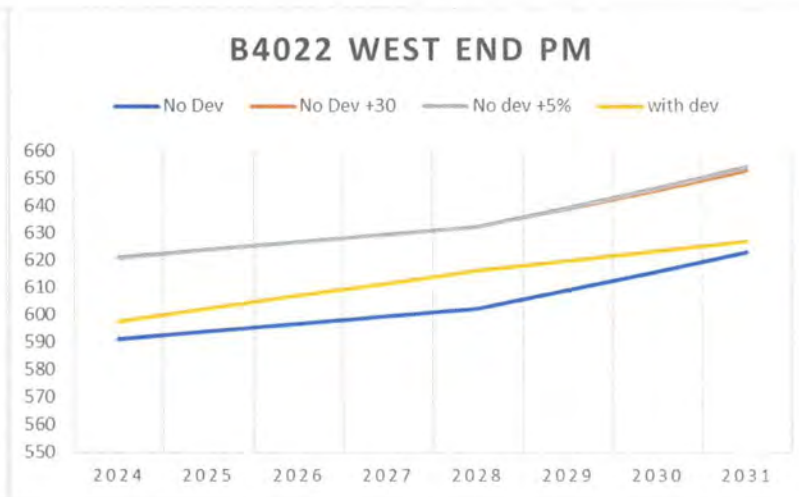
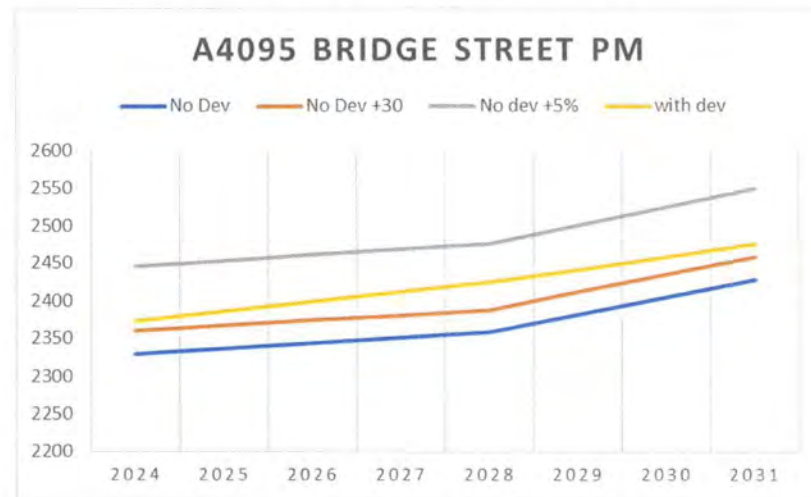
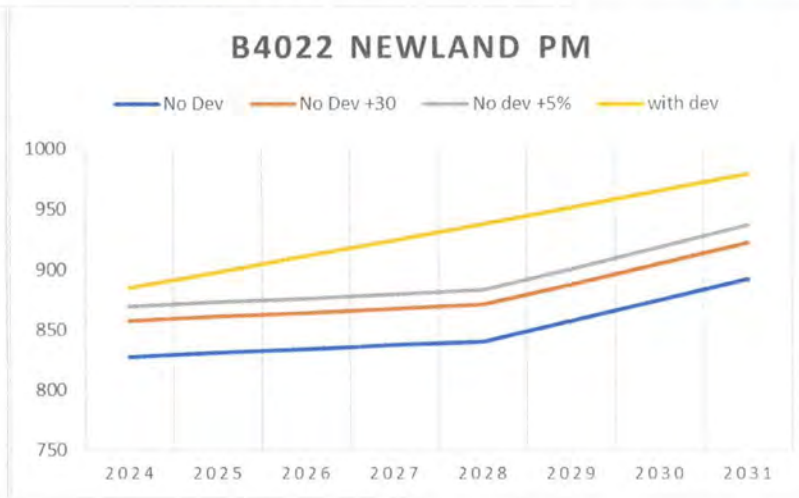
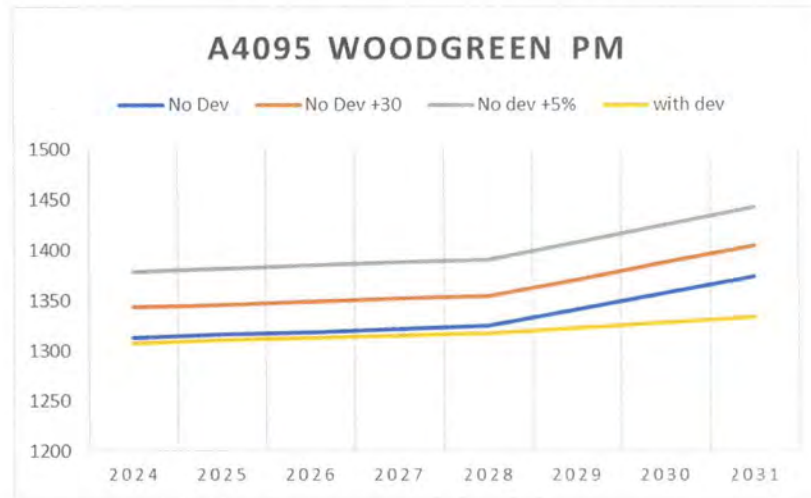
## Appendix B

### Charts

**East Witney Strategic Development Area  
Application No: 20/02654/OUT  
Shores Green Junction Improvements - Trigger Points**







**Appendix TG3.2  
Transport Modelling Brief  
May 2021**

**Transport Modelling Brief – Work on behalf of Glanville's - East Witney SDA**  
**Revised 10 May 2021.**

**Introduction**

Glanville acting on behalf of the East Witney Strategic Development site request the following model runs using the Witney Highway Model (cordoned from the Oxfordshire Strategic Model).

This brief will be sent to Tetra Tech for a fee estimate and timings.

**Creation of a new forecast year**

Please can Tetra Tech confirm the approach to creating a new forecast year for 2028.

**Scenario Assumptions**

- a) Assumed the Northern Distributor Road through North Witney SDA is not in place in the 2024 or the 2028 scenarios but is for 2031.
- b) WEL2 is included in scenarios where the North Witney SDA has 1400 dwellings.
- c) The WODC Local Plan Housing Trajectory from 2018 has been used to determine the level of occupations at North Witney SDA for the three different model years.

**Scenarios for modelling (revised May 2021)**

Scenario			AIW Scheme		Planned Interventions			Development (Units)			Comments
Originator	No.	Year	Off-Slip Only	Full Scheme	West End Link	Bridge Street	Northern Distributor Road	No. of Units at EWSDA	Local Plan Growth <u>excluding</u> EWSDA & NWSDA	No. of Units at NWSDA	
<b>Zero infrastructure reference cases</b>											
East Witney: Glanville	1	2024	No	No	No	No	No	0	Yes	0	2024 Reference Case
East Witney: Glanville	2	2024	No	No	No	No	No	248	Yes	0	Identifies direct impact of delivering first half of 495 (248) units at EWSDA
East Witney: Glanville	3	2028	No	No	No	No	No	0	Yes	0	2028 Reference Case
East Witney: Glanville	4	2028	No	No	No	No	No	371	Yes	0	Identifies direct impact of delivering three quarters of 495 (371) units at EWSDA
East Witney: Glanville	5	2031	No	No	No	No	No	0	Yes	0	2031 Reference Case
East Witney: Glanville	6	2031	No	No	No	No	No	495	Yes	0	Identifies direct impact of delivering full build-out of 495 units at EWSDA
<b>Off-slip only scenarios</b>											

Scenario			AtW Scheme		Planned Interventions			Development (Units)			Comments
Originator	No.	Year	Off-Slip Only	Full Scheme	West End Link	Bridge Street	Northern Distributor Road	No. of Units at EWSDA	Local Plan Growth <u>excluding</u> EWSDA & NWSDA	No. of Units at NWSDA	
East Witney: Glanville	7	2024	Yes	No	No	No	No	248	Yes	0	Identifies direct impact of delivering first half of 495 (248) units at EWSDA with inclusion of AtW off-slip
East Witney: Glanville	8	2028	Yes	No	No	No	No	371	Yes	0	Identifies direct impact of delivering three quarters of 495 (371) units at EWSDA with inclusion of AtW off-slip
East Witney: Glanville	9	2031	Yes	No	No	No	No	495	Yes	0	Identifies direct impact of delivering full build-out of 495 units at EWSDA with inclusion of AtW off-slip
<b>Full Access to Witney (Shres Green) scheme implementation</b>											
East Witney: Glanville	10	2024	No	Yes	No	No	No	248	Yes	0	Identifies direct impact of delivering first half of 495 (248) units at EWSDA with inclusion of full AtW scheme
East Witney: Glanville	11	2028	No	Yes	No	No	No	371	Yes	0	Identifies direct impact of delivering three quarters of 495 (371) units at EWSDA with inclusion of full AtW scheme
East Witney: Glanville	12	2031	No	Yes	No	No	No	495	Yes	0	Identifies direct impact of delivering full build-out of 495 units at EWSDA with inclusion of full AtW scheme
<b>NWSDA influenced scenarios</b>											
East Witney: Glanville	13	2024	No	Yes	No	No	No	225	Yes	175	Benchmark 1: As per TA Scenario 5 As Scenario 2 in the TA
East Witney: Glanville	14	2024	Yes	No	No	No	No	248	Yes	175	Identifies direct impact of delivering 175 units at NWSDA with first half of 495 (248) units at EWSDA already built relying just on the off-slip
East Witney: Glanville	15	2028	No	Yes	Yes	No	No	371	Yes	925	Identifies direct impact of delivering 925 units at NWSDA with three quarters of 495 (371) units at EWSDA already built, with full AtW in place and West End Link

Scenario			AIW Scheme		Planned Interventions			Development (Units)			Comments
Originator	No.	Year	Off-Slip Only	Full Scheme	West End Link	Bridge Street	Northern Distributor Road	No. of Units at EWSDA	Local Plan Growth <i>excluding</i> EWSDA & NWSDA	No. of Units at NWSDA	
East Witney; Glanville	16	2031	No	Yes	Yes	No	Yes	495	Yes	1,400	Benchmark 2: As per TA Scenario 5 Identifies direct impact of delivering 1,400 units at NWSDA with full build-out of 495 units at EWSDA complete, with full AIW in place along with West End Link and Northern Distributor
<b>With NWSDA but without EWSDA</b>											
East Witney; Glanville	17	2031	No	No	Yes	Yes	Yes	0	Yes	1,400	Identifies Impact of NWSDA without EWSDA or AIW

**Outputs**

Demand for turning movements counts at the junctions in excel spreadsheet.

<https://www.google.com/maps/d/u/0/edit?mid=1XZ3R1ZMGDWZOF3qpbx6kixl-f9ogb79&usp=sharing>

Confirmation of this brief from Glanville's:

Signed:

Date:

