

Land North-East of Humber Doucy Lane, Ipswich

Proof of Evidence, Dealing with Transport Matters – Jon Hassel BEng (Hons) MCIHT MTPS

Appeal Reference: APP/X3540/W/24/3350673

241083



DECEMBER 2024



RSK GENERAL NOTES

Project No.: 241083-PoE Transport (0.31)

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Client: Land North-East of Humber Doucy Lane, Ipswich

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Author	JH	Reviewer	JW
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1 EXPERIENCE AND QUALIFICATIONS

1.1. Jon Hassel BEng (Hons) MCIHT MTPS

- 1.1.1 My name is Jon Hassel, I am an Associate Director of RSK-SCP Transport Planning, formerly known as Singleton Clamp and Partners Limited, which is now part of the RSK Group of companies.
- 1.1.2 I have a Bachelor of Engineering degree (with honours) in Civil & Transportation Engineering from Edinburgh Napier University, graduating in 1992. Since graduation I have worked in private consultancy beginning with Scott Wilson Kirkpatrick and Partners, then joining Kirkpatrick & Partners Consulting Engineers Limited (1994), Sir Colin Buchanan and Partners (2000), Goodson Associates (2006), AECOM (2013), RSK Environment Limited (2020) and then RSK / SCP Transport Planning (2023) by virtue of the latter company's acquisition by the RSK Group in January 2022.
- 1.1.3 I have also gained experience in the public sector, spending 18 months on secondment working with the City of Edinburgh Council as a Senior Highways Development Management Officer deployed in their Major Planning Applications Edinburgh West Team. The area covered by this team includes Edinburgh Airport, the Royal Highland Showground, Edinburgh Park, the Heriot Watt University Campus and Research Park along with most of the City's largest strategic development sites, for example West Craigs and the International Business Gateway.
- 1.1.4 I am a member of the Chartered Institution of Highways & Transportation which is a learned society and membership body which represents and qualifies professionals who plan, design, build, manage maintain and operate transport and infrastructure.



Originally founded in 1953 as the Institute of Highway Engineers, it was incorporated by Royal Charter in 2010.

- 1.1.5 I am also a member of the Transport Planning Society, which was formed to facilitate, develop and promote best practice and innovation in transport planning and provide focus for dialogue between all those engaged in it whatever their background.
- 1.1.6 I have some 32 years of experience of the highway traffic and transport aspects of all types of development proposals and have advised many clients, both commercial and public sector in that capacity.
- 1.1.7 I was first instructed in connection with the proposal in June 2023 and have been involved in the preparation of the development proposals including local authority and public consultation, site observations and investigations that led to the production of the Transport Assessment and other highways and transport related documents that support the planning application.
- 1.1.8 I confirm that the opinions expressed in this Evidence are my true and professional opinions and have been prepared in accordance with the CIHT Code of Conduct.

1.2. Thomas Fillingham MEng

- 1.2.1 I have been assisted in the preparation of my Proof of Evidence by my colleague Thomas Fillingham on the matters relating access junction design for the proposed development.
- 1.2.2 Thomas Fillingham is a Senior Infrastructure Engineer within RSK's Land & Development Engineering (LDE) division, which specialises in sustainable engineering and environmental consultancy. He is responsible for technical expertise in surface & foul water drainage and highway design and construction.
- 1.2.3 He has a MEng degree in Civil Engineering from Heriot Watt University in Edinburgh.He is a Graduate Member of the Institution of Civil Engineers, and has significant



experience in this field, gained through a consultancy setting and through academic qualifications.

- 1.2.4 His experience covers a wide array of residential development projects. This experience ranges from pre purchase consultation, planning support through to detailed design and construction. He is also experienced in the production surface water drainage strategies to support planning applications. He is responsible for supervising and coordinating aspects of surface water drainage strategies, reviewing and authoring, and for supervising and training staff on flood risk and sustainable drainage.
- 1.2.5 During cross-examination in the inquiry session on Highways Matters, Mr Fillingham may be called upon to answer any technical questions that I may not be able to answer, as appropriate.



2 INTRODUCTION AND SCOPE OF EVIDENCE

2.1. The Scope of my Evidence

- 2.1.1 I am instructed in this matter by the Appellant's to provide highway, traffic and transport advice regarding the hybrid planning application for proposals to construct a mixed-use development of up to 660 residential dwellings and up to 400 sq m of non-residential floorspace, an Early Years facility and supporting infrastructure (the Proposed Development) on land to the north of Humber Doucy Lane (HDL) in lpswich.
- 2.1.2 Both National Highways (NH) and Suffolk County Council (SCC) as strategic and local highway authorities respectively issued holding objections to the proposed development following the submission of the planning application and their consideration of the highways and transport technical information provided to support the proposals. Both parties requested additional information required and identified specific issues which they considered needed to be addressed before they could make a reasoned judgement and provide their final recommendations to the officers.
- 2.1.3 Both holding objections were issued in May 2024. Shortly afterwards, before any further dialogue and exchange of information was progressed, Notice of Refusal of Planning Permission were issued jointly by Ipswich Borough (IBC) and East Suffolk Councils (ESC) as the planning authorities for the application.
- 2.1.4 I was somewhat frustrated by this position taken by the local planning authorities, particularly on highways and transport grounds. I note the fact that specific items from the holding objection by SCC's highways officer are taken out of context and used as reasons for refusal. Moreover, heed was not paid to the fact that dialogue continued between the appellant and highway officers and that updates to the Suffolk County Traffic Model (SCTM) were being carried out by the Council's own Consultants at that time, funded by the Appellant and not the public purse, to inform ongoing consultation



and ultimately seek resolution of highways matters to secure a favourable recommendation to the planning officers.

- 2.1.5 My evidence considers the reasons for refusal and the Statement of Case submitted to PINS by SCC which is being relied upon by both IBC and ESC on matters relating to the grounds for refusal on Highways and Transport. It references both the submitted Transport Assessment (TA) and modelling outputs from the updates carried out to the SCTM by SCC's consultants, WSP through SCC's framework agreement with Milestone Infrastructure Limited.
- 2.1.6 My Proof of evidence is broken down into four key parts which aligns with the Statement of Common Ground on Highways Matters:
 - Highway Modelling,
 - Access Junction Design,
 - Active Travel Interventions, and
 - Section 106 Obligations.



3 THE SITE CONTEXT

3.1. Local Plan Allocation Policy

- 3.1.1 The development site comprises four separate parcels of land allocated under the 'Cross Boundary Working to Deliver Sites' Policies ISPA4.1 and SCLP12.24 of the respective adopted Ipswich Borough and Suffolk Coastal Local Plans.
- 3.1.2 The three northeastern most parcels, which includes the SCLP12.24 allocation in its entirety, lie adjacent to each other.
- 3.1.3 The fourth parcel from the ISPA4.1 allocation lies to the southeast of the rugby club. The appellant's planning consultant notes in his Proof of Evidence (para 3.9) that the rugby club land identified as PF in the IBC/ESC Policies Maps did not appear to have been promoted as available for development in the LP review, and as such is not included in the land allocated under Policies IPSA4.1 and SCLP12.24. I conclude, therefore that the published land allocations are not reliant upon the rugby club land for their deliverability.





- 3.1.4 The allocated sites in the supporting policy require the following to support their delivery from a Highways and Transport perspective:
 - Highway and junction improvements on Humber Doucy Lane and Tuddenham Road;
 - walking and cycling infrastructure to link the site to key social and economic destinations including the town centre, and local services and facilities;
 - public transport enhancements; and
 - appropriate mitigation measure that arise from demand created by the development, in line with the ISPA Transport Mitigation Strategy.
- 3.1.5 The northwestern most point of Humber Doucy Lane is located some 3.5km from the town centre on the edge of Ipswich. The Policy acknowledges that sustainable transport connections will be key to providing transport options to employment and other destinations and there is an expectation that as part of the emerging development proposals and any mitigation measures required to support them that these drive a significant modal shift through a robust travel plan and other sustainable measures.

3.2. Local Highway Network

Humber Doucy Lane

- 3.2.1 Humber Doucy Lane is predominantly a northwest-southeast single carriageway road, connecting to Tuddenham Road to the north and terminating at Playford Road to the south. Humber Doucy Lane is subject to a 30mph speed limit. The road provides access to residential properties, as well as Rushmere St Andrew Village Hall and Rushmere Community Hub towards its junction with Rushmere Road. As a local distributor road with residential frontage access on its the south side, Humber Doucy Lane benefits from ample street lighting and protective bollards located near lay-by parking spaces, as well as segregated footpaths along much of the western side of the carriageway. Near the proposed main site access, the carriageway is approximately 5.3 5.5 m in width.
- 3.2.2 No formal pedestrian crossings are present within the vicinity of the site. Furthermore, the portion of Humber Doucy Lane between the roundabout with Rushmere Road /



The Street Rushmere and the junction with Playford Road lacks adequate pedestrian footpaths, and in some places narrows to approximately 4.8 m in width.

3.2.3 Two bus stops are located immediately north of the crossroad junction of Humber Doucy Lane where it intersects with Seven Cottages Lane and Roxburgh Road at the southern boundary of the Site. 'Roxburgh Road' bus stop comprises a 'Flag and Pole' information point. Two bus stops are located northwards on the Humber Doucy Lane situated between the Ayr Road and Sidegate Lane. The 'Rugby Club' bus stop also comprises one 'Flag and Pole' information point with no shelter.

Tuddenham Road

- 3.2.4 Tuddenham Road is a main road, linking Ipswich Town with the satellite village of Tuddenham. The full length of the Tuddenham Road is 1.8 miles (2.9 km) from the south intersecting South Colchester and A1214 Roundabout to Tuddenham village.
- 3.2.5 With a road width of approximately 5.5 m Tuddenham Road runs along a short portion (approximately 232 m) of the northern most boundaries of the Site, where Humber Doucy Lane terminates at its most northerly point. Approaching from the east, this section of the road comprises a rail bridge within the national speed limit zone, which becomes a 30mph zone approximately 26 m before the junction with Humber Doucy Lane. The rail bridge road carriageway is approximately 6.5 m wide.
- 3.2.6 At the junction with Humber Doucy Lane, there is a private business entrance situated diagonally opposite, along with the entrance to a Veterinary Clinic, approximately 15m east of Humber Doucy Lane. There are also field accesses onto Tuddenham Road immediately west of the rail bridge.
- 3.2.7 Tuddenham Road is largely bounded by vegetation in the form of trees, hedges, grass banks and verges of varying width and size. There are no bus stops within the vicinity of the junction with Humber Doucy Lane, with the closest located at the Millennium Cemetery and The Meadows Montessori High School.

3.3. Development Proposals

3.3.1 The applications were submitted in Outline, with all matters reserved. The proposed quantum of development is defined by the application description as being up to 660



dwellings, up to 400 sqm of non-residential floorspace within Use Classes E and/or F2(b), and an Early Years facility.

- 3.3.2 The illustrative site-wide Framework Plan (Ref HDL-PRP-XX-XX-DR-A-07207_P02), supported by an illustrative site-wide Landscape Strategy (Ref 6675_116_A), depict the envisaged development. The Framework Plan is translated into a series of eight Parameter Plans, which were submitted as formal application plans for approval. Once approved, the Parameter Plans would set the limits for future Reserved Matters applications on matters of land use, green and blue infrastructure, building heights and density, and access and movement for different modes.
- 3.3.3 The description of the Proposed Development refers to the application being 'hybrid', relating to the fact that the Apellants have chosen to submit full details of the layout of the proposed vehicular, cycle and pedestrian connections between the site and the adjoining area. The locations for the detailed elements can be seen on sheet 1 of the Proposed Access Strategy drawings (Ref 890695-RSK-ZZ-XX-DR-C-0001-P02), and the various locations are then shown in greater focus on the subsequent sheets.
- 3.3.4 'Access' remains a Reserved Matter by virtue of the submitted plans do not include full details for movement within the site and are shown only in principle on the Parameter Plans.

3.4. Concluding Remarks

3.4.1 The submitted planning application along with the supporting robust TA and Framework Travel Plan demonstrate that the development proposals with its supporting infrastructure, including accommodating sustainable infrastructure in accordance with the Suffolk Design Guide will permit easy access for pedestrians, cyclists and bus services (supported by a robust travel plan and measures) are accord with this policy and is therefore acceptable in Highways and Transport terms.



4 HIGHWAY MODELLING

4.1. Reasons for Refusal on Modelling and Impacts

RfR Point One: The scale, nature and impacts of the proposals

"By virtue of the scale and nature of the proposed development, the impacts of the development on the surrounding highway network need to be fully assessed in order to understand the acceptability of the proposals and the mitigation required. The development proposals will also be expected to ensure opportunities to promote walking, cycling and public transport use are identified and secured."

and

RfR Point Two: Further information and justification

"Further information and justification is required to support the trip generation information assumed and junction modelling analysis undertaken. It is considered necessary to ensure the impacts of the development have been accurately and fully considered and required mitigation identified. There is a concern that the distribution of trips has not been accurately assessed and necessary mitigation such as improvements needed at the A1214 and Tuddenham Road Roundabout have not been fully identified. Furthermore impacts on the Strategic Road Network and rail infrastructure (including Westerfield Railway Station) in the vicinity of the proposals need to be factored in and assessed in order to conclude acceptability and any mitigation required."

4.2. Impact on Westerfield Station

4.2.1 I am aware that Network Rail submitted an objection dated 29/04/2024 seeking additional information as regards the impact of the Proposed Development on Westerfield Station, which is referred to in the Councils' Reasons for Refusal Point 2. I am also aware that Network Rail had submitted the same objection to the current application for 1020 homes at Red House Park (within the Ipswich Garden Suburb), which is a site in immediate proximity to Westerfield Station, and which asked for the same additional information in respect of that development. However, I am aware that in May 2024, Network Rail withdrew their objection to Red House Park without any additional highway assessment work being done, based on a proposed s106 contribution by that scheme of £106,335 towards improvements at Westerfield Station. Given the smaller scale of the Appeal Scheme and its further distance from Westerfield Station, I do not consider that any substantive case has been made that



would justify a similar s106 contribution being required from the Appeal Scheme to that being sought from the Red House Park scheme.

4.3. Transport Assessment Modelling v. SCTM Modelling:

The TA

- 4.3.1 Now turning to the main topic of the highway modelling, a robust Transport Assessment was prepared to accompany the planning application for the Appellant's site. This used a traditional methodology to estimate the trip generation of the Proposed Development site and specifically how the predicted vehicle (car-based) trips would be distributed onto the wider highway network (for an agreed study area) between the site and places of work defined by MSOA travel to work data from the 2011 Census. General traffic growth and trips generated by cumulative development sites such as the Ipswich Garden Suburb, general goods vehicle traffic growth estimate, and interpolated TEMPro growth (with planning data for Ipswich & East Suffolk pertaining to the cumulative sites and appellant's site removed to avoid double counting of growth) were also included within the assessment undertaken and presented in the TA.
- 4.3.2 Capacity assessments were undertaken for junctions within the agreed study area, vis-a-vis:
 - Tuddenham Road / Humber Doucy Lane;
 - Humber Doucy Lane / Inverness Road;
 - Humber Doucy Lane / Sidegate Lane;
 - Humber Doucy Lane / Roxburgh Road;
 - Humber Doucy Lane / Dumbarton Road;
 - Humber Doucy Lane / Rushmere Road / The Street mini-roundabout;
 - A1214 Colchester Road / Rushmere Road roundabout; and
 - A1214 Colchester Road / Tuddenham Road "Valley" roundabout.
- 4.3.3 Testing of the junctions was carried out for the following scenarios as presented in the TA report:
 - Baseline 2023 based on actual observed traffic count data and not model estimated;



- Baseline 2026 (corresponding to the year of first occupation) including traffic growth and committed development completions
- Baseline 2026 plus first Proposed Development completions
- An "Assessment Year" 2032 Baseline (corresponding to the anticipated year of completion of the full Proposed Development) including traffic growth and committed development completions; and
- 2032 Baseline plus the completed Proposed Development.
- 4.3.4 Focussing on the assessment year scenario, capacity analysis of offsite junctions demonstrated that the majority would continue to operate within capacity with future traffic growth, committed development traffic and predicted vehicle traffic associated with the Proposed Development based on the methodology used.
- 4.3.5 The TA conclusions (Section 8.2) based on the adopted methodology noted that the Valley Road roundabout was predicted to exceed capacity on two approaches with just future traffic growth and committed development traffic flows in the assessment year 2032. The analysis of the junction performance included improvements proposed as part of the Ipswich Garden Suburb development, which were referenced and appended to the Red House Park (Planning Application Ref: 22/00013/OUTFL), with the details used extracted from the submitted TA supporting that planning application. I have included a copy of the drawing of the improvement at Appendix 1.
- 4.3.6 Interestingly, The Ipswich Garden Suburb SPD in Para. 6.44 on offsite highway works (included at Appendix 2 of my Proof) lists the replacement of the Tuddenham Road / Valley Road roundabout with a traffic signal-controlled junction including facilities for pedestrians and cyclists and bus priority as part of a suite of offsite infrastructure to support the IGS development. Yet, in Para. 3.1.3, Table 3-2 "Ipswich future highway schemes" of transport consultant WSP's report, "ISPA Local Planning Modelling, Methodology" prepared for SCC and published January 2020 sees this infrastructure significantly reduced to "increased capacity modelled on A1214 approaches to



roundabout due to flares". I have included the relevant report extract at Appendix 3 of my Proof, for reference.

4.3.7 Unsurprisingly, the addition of traffic generated by the Proposed Development and assigned using the TA methodology increases the impact on the affected approaches.

The SCTM

- 4.3.8 Following the submission of the planning application, SCC raised the issue that the submitted TA did not consider the use of the SCTM in determining the potential offsite traffic impacts of the Proposed Development. The SCTM is a strategic traffic model which is used by SCC for planning purposes such as testing Local Plan site allocations. It is maintained by the consultant WSP on behalf of SCC through the County's framework contract with Milestone Infrastructure Limited.
- 4.3.9 The appellant agreed for the SCTM to be used and paid WSP to update the SCTM on behalf of SCC. The Proposed Development trip generation (agreed with SCC), number of dwellings and quantum of non-residential uses that was used in the preparation of the submitted TA were also provided for use by WSP in the update of the SCTM. A list of the model adjustments to be performed by WSP included the following:
 - Generating forecast year (2040) models without the proposed development (Scenario 1 or "Do-minimum") and with the proposed development (Scenario 2 or "Do-something").
 - 2. Forecast traffic growth adjustments:
 - 3. Covid-19 adjustments applied to the model's existing 2019 base matrices to reflect 2023 using available traffic flow data possessed by SCC
 - 4. NTEM/TEMPro Core Scenario Growth would be interpolated between 2023 and 2040 to determine growth in car-based trips, with households and employment associated with specific developments (including the proposed development) removed from planning data for Ipswich & Suffolk Coastal area to avoid double counting of growth
 - Linked to the above, updates to the committed developments included in the model for future years – to be confirmed by SCC, IBC and ESC. Allocated sites without a current planning application would be ignored



- 6. National Road Traffic Projections 2022 would be used for general growth of goods vehicle traffic, using East of England projections
- 7. TRICS trip rates would be used for the majority of the developments modelled, and where possible trip rates from submitted TA reports would be used
- 8. Forecast committed infrastructure, from a list agreed with SCC, IBC and ESC would be included in the forecast model scenarios
- 4.3.10 Key outputs from the updated model to be supplied to the appellant included:
 - 1. Link based 'Actual' flow plots for all scenarios
 - 2. Link based 'Actual' flow differences comparing all scenarios to the 2019 base, and Do-minimum against Do-something
 - 3. Select link plots for the Appellant's development site
 - 4. Data for the purpose of noise and air quality assessments
 - 5. Junction turning flows for specific junctions of interest in the agreed study used in the TA, covering 12 external network junctions and the 3 proposed development parcel access points.
- 4.3.11 No base year re-validation of the model updates and formal reporting were provided by WSP as this was included in the scope of work agreed with SCC.
- 4.3.12 The parties have agreed a Statement of Common Ground. This confirms the following inputs/assumptions regarding the RSK modelling relating to the submitted TA as being reasonable:
 - 1. Approach to the calculation of the development trip generation
 - Notwithstanding the SCC's views that additional detailed junction modelling may be required following a strategic modelling exercise, the extent of the study area and junction to be tested, being:
 - a. Tuddenham Road / Humber Doucy Lane
 - b. Humber Doucy Lane / Inverness Road
 - c. Humber Doucy Lane / Sidegate Lane
 - d. Humber Doucy Lane / Roxburgh Road
 - e. Humber Doucy Lane / Dumbarton Road



- g. A1214 Colchester Road / Rushmere Road roundabout
- h. A1214 Colchester Road / Tuddenham Road "Valley" roundabout
- The assumptions regarding traffic growth/cumulative impacts (subject to SCC's view of the need to ensure traffic is dynamically re-distributed in response to growth).
- 4. The assessment base date and future year assessment date.
- 4.3.13 SCC, however, do not agree, or required further information, in respect of the following inputs/assumptions:
 - 1. Approach to trip generation distribution using travel to work data Census 2011 rather than strategic modelling
 - 2. Approach to trip generation assignment using a static approach rather dynamic re-distribution provided by outputs from the SCTM (as per SCC's comment above)
 - 3. Robustness of the junction capacity assessments of offsite impacts resulting from the above.
 - SCC does not agree that no additional detailed junction modelling will be required following a strategic modelling exercise, as set out within the Highway Authority's Proof.
- 4.3.14 Regarding Points 1 through 3, in paragraph 4.3.13 above, SCC have not provided any evidence to justify their disagreement on these particular points.
- 4.3.15 On Point 4, SCC have failed to indicate which additional junctions may need to be considered over and above those considered as part of the TA. Indeed, the Highways Authority's Proof will be the first time the appellant has seen evidence backing their points of disagreement. We therefore need to reserve the right to review their evidence, without prejudice, and rebut accordingly.

4.4. The Adopted Modelling Methodology

4.4.1 Turning to the detail of the joint Council's reason for refusal, Point Two; the primary concern expressed by the Highway Authority, in their Statement of Case (Paras. 6.5



through 6.11), relates to the methodology underpinning the trip distribution assumptions used, the submitted TA itself, and comparison with the SCTM.

- 4.4.2 Para. 6.5 refers to National Highways (NH) as the strategic road authority having requested further information on this matter in relation to possible impacts on key junctions on their network. I would like to deal with this matter first.
- 4.4.3 Additional information was provided to NH by way of direct written correspondence on the 25th of October 2024, a copy of which was provided to SCC, IBC and ESC. In this correspondence, which I have included at Appendix 4, we address the predicted impacts of car trips to and from the development site for the purpose of journeying to work on highway assets maintained by National Highways; the assets in question being Junctions 53, 55, 56 and 58 of the A14. It sets out the methodology of determining the distribution of journey to work trips using Middle Super Output Area (MSOA) data from the 2011 census.
- 4.4.4 You will note that the NH officer, Mr Norman, in his Appeal Statement (Para. 5.2) included at Appendix 5 of my evidence, confirms this methodology as an agreed approach, and "standard within the assessment of traffic impact". This contradicts the comment by the SCC officer, Mr Cantwell-Forbes, in Para. 6.7 of the Council's SoC that the use of the 2011 census data as inappropriate.
- 4.4.5 Moreover, Mr Norman, acknowledges in his Appeal Statement (Para. 5.2) that the 2021 census data was affected by the Covid-19 pandemic lockdown at the time, and I conclude the use of 2011 Census origin-destination data for journey to work purposes is robust and would therefore bring into question the use of 2021 data to which Mr Cantwell-Forbes refers as an alternative to our adopted methodology.
- 4.4.6 In his concluding remarks in Para. 6.1 of his statement, Mr Norman, confirms that the additional information supplied addresses NH's concerns and that the Proposed Development is unlikely to have a severe impact upon the strategic road network.
- 4.4.7 Returning to the assessment process adopted in the preparation of the TA; once the distribution of work trips has been determined the next step is to assign the trips to



the highway network. By this I mean, the selection of vehicle routing through the network to arrive at a destination or 'zone'.

- 4.4.8 The method adopted, and that used for the assessment of impacts on the strategic road network detailed in the response to NH, was the use of a 'static' assignment utilising the Google Maps platform. This is similar to how you would use a car's Satellite Navigation (Satnav) system. The output result of this 'static' methodology is the determination of a best or quickest route between a given Point A and Point B on the map.
- 4.4.9 In this regard, you should be aware that Google Maps uses a range of variables to determine the best route. Its algorithm uses factors such as distance, real-time traffic updates (where these are available); historical data of traffic updates to estimate average travel time for a specific section of road at different times and days of the week; road closures and roadworks which impact on travel time; and alternate routes.
- 4.4.10 The image below illustrates live Google traffic data for Ipswich Town centre, with a traffic light style colouration on the roads which indicates the level of delay being experienced by vehicles on these routes.



Figure 4.1: Example of Google Maps live traffic data for Ipswich Town Centre

4.4.11 As an aside, in the case of when using a car's Satnav or a smartphone (in hands free mode) to navigate, Google can also be gathering personal data on the preferred types



of roads that you use which can then influence the output result offered and a further layer of complexity or 'smartness'. However, this does not apply to the methodology used in the preparation of the TA.

- 4.4.12 A computer traffic model such as the SCTM uses dynamic assignment which is an iterative process examining possible routes through a road network to take a vehicle from its origin to its destination and arriving at a 'least cost' path in a specific model scenario.
- 4.4.13 In broad terms the static approach using Google Maps algorithm and the dynamic assignment in the traffic model are similar. If you compare the following screenshot images in the figure overleaf you can see the principal routes used by trips assigned to the road network for the Proposed Development site.
- 4.4.14 The image to the left is the static Google Maps assignment and to the right the dynamic model assignment. You will note that the dynamic model is more visibly granular. This is due to the model containing smaller and more model zones but similar routing options to the static Google approach. The model zones are represented by the short stubs seen in the image on the right if you compare it to the larger MSOA in the Google image to the left.
- 4.4.15 However, the principal routes are identical, those being: Humber Doucy Lane, Tuddenham Road, Rushmere Road, Sidegate Lane, Westerfield Road which I have highlighted (shaded red) in the image on the right.
- 4.4.16 These also represent the TA study area agreed with Mr Cantwell-Forbes during scoping of the TA, which also dictated the traffic data collection, in the form of junction turning flow counts, that were commissioned by the appellant in 2023 and therefore reflective of post Covid-19 vehicle travel in Ipswich. This in turn was used, projected forward to the predicted completion of the development, to carry out the traffic impact capacity assessment of the offsite highway network junctions.





Figure 4.2: Visual comparison of trip assignment between Google Maps and the SCTM (2040 Do-something Scenario)

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- 4.4.17 When considering a future, or rather, predicted traffic scenario, Google cannot estimate what traffic on Ipswich's roads will be like 1, 5 or 10 years hence and how that may affect trip patterns. But then neither can a traffic model in truth. The output results are based on the predicted traffic input by the user in the form of trip matrices and currently planned changes in highway and junction infrastructure. The latter may change over time when you consider published Local Transport Plans, like Local Plans, providing strategies and plans over a 20-year period. Then consider changes in government both local and national, budgetary constraints, changing priorities and then no one could have predicted the dramatic changes that occurred from the Covid-19 pandemic. That said, we need a basis for comparison.
- 4.4.18 Where the static and strategic modelling approaches differ, is that a traffic model will predict how existing trips through the network will be assigned to that network as a predicted reaction to additional trips from the application development, other strategic developments and planned changes or improvements to the road network identified in, say, the adopted Local Plan and Local Transport Plan.
- 4.4.19 I note Mr Cantwell-Forbe's implied assertion in SCC's SoC (Para. 6.9) that the model is superior because the trip matrices contain trips that aren't just trips for the purpose of traveling to work. This is correct provided it is gathered as part of the origindestination data collected and used in the matrix estimation process of the modelling, but I would question it being used to suggest the SCTM is therefore superior over the adopted methodology. However, in the SCTM this granular data is grouped within the overall car-based vehicle trip matrices. Its significance or otherwise is ultimately dependent on the granularity of the model zones. It you consider the image overleaf,





taken from Figure 4.2 above, I have highlighted the location of the local schools to the HDL site – Northgate High School and Rushmere Hall Primary School.

Figure 4.3: Location of the local schools in relation to the SCTM model network

- 4.4.20 As you can hopefully see or interpret from the figure, an image of the SCTM model network, any trips relating specifically to the schools is clearly grouped with other trips in the general mix with origins or destinations in the residential areas that surround them, indicated by the model zone connector stubs in the image.
- 4.4.21 The trip rates used to determine trips generated by the Proposed Development contain all trip types. The trip types which will depend on the peak period being considered with specific school trips or drop-off linked to a trip for the purpose of work being captured in the morning peak period and to a lesser extent in the evening peak. Notwithstanding, if a trip predicted from the appellant's site which uses Sidegate Lane



stops momentarily to drop-off a school pupil, it is not of particular significance in the determination of the overall traffic impact, and therefore Mr Cantwell-Forbes comment has no significant bearing on the adopted methodology and result.

- 4.4.22 Discussion took place during pre-application consultation and at formal scoping of the existence of the SCTM and its potential use in the determination of the Proposed Development impacts for both the appellant and a tool for Mr Cantwell-Forbes' to evaluate the submitted TA report. The Council's SoC mentions this several times. However, as noted by Mr Cantwell-Forbes, there is no Council transport or planning policy which requires an applicant to use the model and as such the Appellant did not wish to pursue its use.
- 4.4.23 Mr Cantwell-Forbes notes that the "appellant have commissioned and were provided the outputs from the SCTM." This point is correct. However, it fails to acknowledge that the commissioned work included updates to SCTM rather than 'just' providing outputs from the existing model. I have outlined these updates and the information supplied by the appellant in Para. 4.3.10 of my evidence.
- 4.4.24 Mr Cantwell-Forbes notes that the submitted TA does not take account of the SCTM modelling results provided in June 2024. That is correct, the TA supporting the validated planning application was submitted along with the other documentation in March 2024, some months *before* the SCTM model updates were commissioned by SCC in conjunction with the Appellant.
- 4.4.25 Digesting the SCC's SoC, it is clear Mr Cantwell-Forbes is of the opinion that the SCTM model is a superior evaluation tool in comparison to the traditional methodology and traffic impact assessment presented in the submitted TA. Rather than continuing to consider each comment in turn beyond this point and rebut or otherwise, it may be more appropriate to note that SCC has not provided any evidence to the Appellant to demonstrate that the SCTM model disagrees with the findings of the submitted TA. Essentially their complaint is that "you haven't used the SCTM".
- 4.4.26 Mr Cantwell-Forbes in Para. 6.9 of the Council's SoC highlights that the SCTM is a strategic model calibrated and validated to reflect traffic conditions for a base year of 2019. The appellant has paid for an update to the SCTM on behalf of SCC. Output



results have been shared with the appellant. However, the output results do not include reporting of any recalibration and validation exercise undertaken by WSP.

4.4.27 We reviewed the output data and fed back to SCC and their consultant WSP, requesting further information. Not all the requested information was available to the Appellant without further costs. For these reasons we have not been able to validate the output traffic flows from the updated model as fit for purpose to re-evaluate the predicted traffic impacts of the Proposed Development presented in the TA report nor confirm with SCC whether additional offsite junctions required assessment.

4.5. The Transport Assessment – Traffic Impacts

- 4.5.1 The TA identified the following junctions for further detailed assessment, or junction capacity analysis, as a conclusion of a preliminary analysis which considered the relative change in traffic flows at each junction in the agreed study area used by the predicted development traffic against recognised thresholds 5% for principal/strategic or congested roads and 10% elsewhere:
 - 1. Tuddenham Road / Humber Doucy Lane Priority-Controlled Junction;
 - 2. Humber Doucy Lane / Inverness Road Traffic Signal-Controlled Access;
 - 3. Humber Doucy Lane / Sidegate Lane Priority-Controlled Junction;
 - 4. Humber Doucy Lane / Roxburgh Road / Seven Cottages Lane Priority-Controlled Junction;
 - 5. Humber Doucy Lane / Dumbarton Road Priority-Controlled Junction;
 - 6. Humber Doucy Lane / Rushmere Road / The Street Mini Roundabout;
 - 7. A1214 Colchester Road / Rushmere Road Roundabout; and
 - 8. A1214 Colchester Road / Valley Road / Tuddenham Road Roundabout.



- 4.5.2 The junction capacity modelling results from the TA are presented at Appendix 6.
- 4.5.3 For the junction capacity assessment, the TRL Software package Junctions 9 was used to model roundabout and priority junctions, while JCT Consultancy's LinSig Version 3 software was used to model the signalised junctions.
- 4.5.4 In terms of the results reporting, the performance of a priority-controlled junction or roundabout is measured using the statistic Ratio of Flow to Capacity (RFC).
- 4.5.5 RFC considers the amount of traffic that flows through a given approach on the junction as a ratio of the available capacity of the approach. The available capacity is a function of the geometrical layout and the amount of traffic circulating on the roundabout passing a given junction approach / entry. A predicted 'practical' RFC of 0.85 (85%) is considered an acceptable coefficient for a roundabout junction design, where congestion is likely to begin to occur. An RFC of 1.00 is the theoretical point at which this congestion is more likely to occur regularly during the assessment period/scenario.
- 4.5.6 A signalised junctions' capacity is measured by the Degree of Saturation (DoS), with a practical DoS being 90%. An indication of the overall spare capacity at the junction is also given by the Practical Reserve Capacity (PRC). PRC denotes the maximum desirable flow through a junction and typically a PRC of 0% is reached when one or more approaches to the junction are at 90% of their actual capacity. A DoS of 90% (i.e. a headroom of 10%) therefore indicates that there is still some spare capacity to deal with fluctuations in traffic volumes.
- 4.5.7 Queues in Junctions 9 are reported in terms of the maximum forecast queue during the modelled period (in vehicles), while queues in LinSig are reported in terms of the Mean Maximum Queue (MMQ) in PCUs during the modelled period.
- 4.5.8 I now provide a summary of the findings of the TA methodology junction capacity modelling, in general terms, in the following paragraphs.

Tuddenham Road / Humber Doucy Lane Priority Controlled junction

4.5.9 The results (Appendix 6, Table TP-4.1) demonstrate that the junction is predicted to perform within the limits of practical capacity for all future year scenarios tested in



both the morning and evening peaks. Accordingly, it is concluded that there are no traffic impacts that require to be mitigated.

Humber Doucy Lane / Inverness Road Traffic Signal-Controlled Access

4.5.10 This proposed junction serves the main land parcel of the development proposals – up to 555 residential units and the 400sqm non-residential and early years uses. The results (Appendix 6, Table TP-4.2) demonstrate that the junction is predicted to perform with spare capacity and minimal vehicle queuing on Humber Doucy Lane and Inverness Road for all future year scenarios tested in both the morning and evening peaks.

Humber Doucy Lane / Sidegate Lane Priority-Controlled Junction

4.5.11 The results (Appendix 6, Table TP-4.3) demonstrate that the junction is predicted to perform within the limits of practical capacity for all future year scenarios tested in both the morning and evening peaks. Accordingly, it is concluded that there are no traffic impacts that require to be mitigated.

Humber Doucy Lane / Roxburgh Road / Seven Cottages Lane Priority-Controlled Junction

4.5.12 The results (Appendix 6, Table TP-4.4) demonstrate that the junction is predicted to perform within the limits of practical capacity for all future year scenarios tested in both the morning and evening peaks. Accordingly, it is concluded that there are no traffic impacts that require to be mitigated.

Humber Doucy Lane / Dumbarton Road Priority-Controlled Junction

4.5.13 The results (Appendix 6, Table TP-4.5) demonstrate that the junction is predicted to perform within the limits of practical capacity for all future year scenarios tested in both the morning and evening peaks. Accordingly, it is concluded that there are no traffic impacts that require to be mitigated.

Humber Doucy Lane / Rushmere Road / The Street Mini Roundabout

4.5.14 The results (Appendix 6, Table TP-4.6) demonstrate that the junction is predicted to perform within the limits of practical capacity for all future year scenarios tested in



both the morning and evening peaks. Accordingly, it is concluded that there are no traffic impacts that require to be mitigated.

A1214 Colchester Road / Rushmere Road Roundabout

4.5.15 The results (Appendix 6, Table TP-4.7) demonstrate that in the year of development completion, year 2032 traffic flow conditions, the junction is predicted to operate within the limits of practical capacity for a roundabout junction. A maximum RFC of 0.90 is predicted on the A1214 northbound roundabout entry/approach during the evening peak hour, with a corresponding queue of up to 8 vehicles providing adequate additional capacity to accommodate daily traffic flow variation. We conclude therefore that the junction performance is acceptable. Accordingly, it is concluded that there are no traffic impacts that require to be mitigated.

A1214 Colchester Road / Valley Road / Tuddenham Road Roundabout

- 4.5.16 The results (Appendix 6, Table TP-4.8) indicate that the junction operates within its capacity under 2023 observed Baseline traffic flow conditions, but then deteriorates in performance in its current roundabout design layout as time progresses and traffic growth and committed development traffic is added to the point where several approaches are very near or are over capacity with long vehicle queues and delays. These are highlighted in red text in the tables.
- 4.5.17 The addition of trips from the Proposed Development based on the TA modelling methodology are predicted to erode the capacity even further and queuing/delays increase. But bear in mind this is the existing roundabout layout.
- 4.5.18 We then applied the proposed 'committed' improvements to the roundabout briefly described in Para. 4.3.5 of my Proof, with specific modelling details taken from a supplementary (sensitivity test) technical note, prepared by consultant Vectos, for the IGS, Red House Park committed development (Planning Application Ref: 22/00013/OUTFL) TA provided by SCC. The proposed junction layout (Drawing: 4228-SK-04) is included at Appendix 6 of my Proof.
- 4.5.19 Re-running our models but using the revised roundabout geometry, the results reported in Table TP-4.9 (Appendix 6 of my Proof) are realised. Note, these models are again based on the traffic flows from the TA modelling methodology. As you can see, operating conditions are predicted to improve with the application of the changes to the roundabout when compared to the standard layout results in Table TP-4.8. The



results still indicate erosion of the junction capacity where it is predicted to be operating near or over capacity on the Tuddenham Road (S) approach (or NB as it is referred to in the results table) to the roundabout in the Assessment Year 2032 with just predicted background traffic growth and committed development, indicating that further improvements would be required. The addition of generated trips associated with the Proposed Development predictably erodes the capacity of the same approach further, but all the other approaches will be operating within their practical capacity.

4.5.20 Our TA report concludes that the Tuddenham Road / Valley Road roundabout would require further improvements in the Assessment Year 2032 before the Proposed Development was built and therefore as a strategic improvement the proposed modifications would not be adequate to cater for the predicted levels of traffic using the TA modelling methodology.

4.6. SCTM Update Output Traffic Flows – Traffic Impacts

- 4.6.1 I have noted in paragraph 4.4.27 of my evidence our reasons for being cautious in the use of the SCTM update traffic flows to re-evaluate the junction impacts reported in the TA report. However, out of curiosity I instructed my team to re-run our junction models but using the SCTM traffic flows to understand whether these would have a significant effect on the outcomes of the capacity assessment and conclusions presented in the TA. We carried this out only for the junctions where output results were provided by WSP. These were:
 - 1. Tuddenham Road / Humber Doucy Lane Priority-Controlled Junction;
 - 2. Humber Doucy Lane / Inverness Road Traffic Signal-Controlled Access;
 - 3. Humber Doucy Lane / Sidegate Lane Priority-Controlled Junction;
 - 4. Humber Doucy Lane / Roxburgh Road / Seven Cottages Lane Priority-Controlled Junction;
 - 5. Humber Doucy Lane / Dumbarton Road Priority-Controlled Junction;
 - 6. Humber Doucy Lane / Rushmere Road / The Street Mini Roundabout; and
 - 7. A1214 Colchester Road / Rushmere Road Roundabout.



- 4.6.2 The traffic flow scenarios output from the model and used in the analysis are the following:
 - Assessment Year 2040 "Do-Minimum" baseline which includes general traffic growth plus committed development generated trips, such as the IGS; and
 - Assessment Year 2040 "Do-Something" which includes general traffic growth, committed development generated trips and the trips generated by the Proposed Development.
- 4.6.3 I have included summary tables of the traffic impact assessment using these flows Appendix 7. Comparing these results to those for the same junctions reported in the TA you can see that they are broadly similar, and any differences noted are not significant enough to lead us to change the original TA conclusions.

Tuddenham Road / Humber Doucy Lane

- 4.6.4 The exception to this is the junction of Tuddenham Road with Humber Doucy Lane (Appendix 7, Table TP-4.10). This junction is predicted to operate in excess of its practical capacity in the Do-Minimum morning (AM) peak. From interpretation, this is being caused by the dynamic reassignment of trips in the SCTM resulting in additional trips on Tuddenham Road which in turn make it more difficult for vehicles to turn in and out of Humber Doucy Lane. I am not aware of any proposed strategic improvements proposed for this junction but clearly mitigation is required at some point in the future to cater for just traffic growth and the other planned committed development trips and not just the Proposed Development site. As you will note from the site allocation (Para. 3.1.4 of my Proof) there is an expectation for improvements to be carried out to this junction.
- 4.6.5 In the Do-Something traffic scenario, not surprisingly, the capacity of the Tuddenham Road / Humber Doucy Lane junction is eroded further with the addition of trips generated by the Proposed Development. Interestingly for the AM peak scenario, this result is despite the traffic flows on Humber Doucy Lane are predicted to reduce in comparison to the Do-Minimum scenario resulting from the SCTM's dynamic reassignment ability.
- 4.6.6 The analysis highlights that the junction will experience capacity issues in the Do-Minimum traffic scenario using the SCTM traffic flow outputs and which require to be mitigated as a strategic improvement, I would suggest comparison with the Do-Something traffic flows is not appropriate.



Rushmere Road / A1214 Colchester Road

- 4.6.7 You will also note that there are differences in the junction capacity model results for the Rushmere Road / A1214 Colchester Road roundabout depending on the input traffic flows. With the use of the SCTM traffic flows (Appendix 7, Table TP-4.15) you will note, however, that the junction is predicted to be operating at or near capacity. This is predicted to occur in the do-minimum scenario without the Proposed Development, with only very marginal erosion in the available capacity and increase in the vehicle queuing predicted when the predicted trip generation by the Proposed Development is added. But again, the modelling results point to capacity problems in the Assessment Year Do-Minimum SCTM traffic scenario. As with the Tuddenham Road / Humber Doucy Lane junction I am not aware of any strategic improvements proposed for this junction and I would therefore suggest that comparison with the Do-Something traffic flows is not appropriate.
- 4.6.8 In the case of both junctions I have highlighted, the output traffic flows from the SCTM by virtue of the fixed model traffic scenarios which have not been amended to compare with the TA assessment years as part of the model update, there are a further 8 years of background traffic growth included along with the dynamic reassignment. I would re-emphasise that both junctions are predicted to experience issues with their performance in the Do-Minimum scenario without the Proposed Development. However, the majority of the junction capacity tests and results are not significantly changed by the use of the SCTM update modelled traffic flows. I would however, also at this juncture, remind you of our reservations in the use of the SCTM model outputs at present.
- 4.6.9 Mr Cantwell-Forbes raises concerns in Para. 6.17 of the council's SoC, regarding the potential 'understating' of vehicles using the proposed main access traffic signal-controlled junction particularly when the proposals have it located opposite Inverness Road and intensification of its use by vehicles entering / exiting the site. We have therefore taken the output flows from the SCTM and input these to the signalised access junction model.
- 4.6.10 Before discussing the results of this test analysis, I would point out that there are several issues. Firstly, the location of the zone connector and therefore access in the SCTM forms a 3-arm junction and not a crossroads opposite Inverness Road as we have proposed. Secondly the traffic flows through the junction are less in the 2040 Do-Something scenario with the Proposed Development than those used in the



analysis provided in the TA modelling methodology. This latter point contradicts the Mr Cantwell-Forbes' questioning of the robustness of our junction modelling.

4.6.11 The results of this model test indicate that the proposed access junction will perform better using the SCTM modelled flow outputs, notwithstanding the fact that it performs well within practical capacity with the higher TA traffic flows tested and as a crossroads with Inverness Road as currently proposed.

4.7. Concluding Remarks on Modelling Matters

- 4.7.1 I am content, in the absence of evidence provided by SCC to the contrary, that the modelling methodology used in the TA is robust.
- 4.7.2 The robust TA submitted in support of the planning application and the modelling analysis contained therein of traffic impacts on offsite junctions in the agreed study area demonstrate that the majority will continue to operate within capacity with future traffic growth, committed development traffic and predicted vehicle traffic associated with the Proposed Development.
- 4.7.3 Results using the TA modelling methodology predicts that the Tuddenham Road / Valley Road roundabout will exceed operational capacity on the Tuddenham Road approach with just future traffic growth and committed development traffic flows, regardless of the inclusion of proposed strategic improvements to this junction as part of Local Plan allocated development.
- 4.7.4 Re-evaluation of the junction capacity assessment but using the outputs from an updated SCTM demonstrates that the majority of junctions on the external network will continue operate within capacity. There are subtle differences in performance because of the difference in traffic flows but significant enough to change the conclusions on their performance reported in the TA.
- 4.7.5 There were two exceptions to this finding which were the Tuddenham Road / Humber Doucy Lane junction and A1224 Colchester Road / Rushmere Road roundabout. As with the Valley Road roundabout results from the TA, both junctions are predicted to be operating with capacity issues in the assessment year with traffic growth and other committed developments only. Despite this, strategic improvements to these



junctions have not proposed but there is an expectation for improvements to the former junction as part of the allocation for the Humber Doucy Lane site.

4.7.6 Taking account of all of the above, subject to agreement of proportionate mitigation of offsite traffic impacts, I conclude that the Proposed Development is in a sustainable location and there are no grounds for refusal of planning permission in terms of the traffic impact modelling.



5 ACCESS JUNCTION DESIGN

5.1. General

RfR Point One: The scale, nature and impacts of the proposals

"By virtue of the scale and nature of the proposed development, the impacts of the development on the surrounding highway network need to be fully assessed in order to understand the acceptability of the proposals and the mitigation required. The development proposals will also be expected to ensure opportunities to promote walking, cycling and public transport use are identified and secured."

- 5.1.1 The Transport Assessment report submitted in support of the hybrid planning application has been prepared to demonstrate the consideration of the predicted impacts of the Proposed Development and where any mitigation may be required. It has been prepared in consultation with SCC as the Local Highway Authority responsible for the application.
- 5.1.2 Several pre-application discussions were undertaken with the SCC officer to discuss the development access strategy which considered in detail the need to provide access for all modes of transport, cascading from pedestrians down to cyclists, public transport and lastly private cars. The strategy also needed to consider minimising any impacts on the site boundaries with, and the existing users and residents along Humber Doucy Lane.
- 5.1.3 The location of the site has been demonstrated to be within a walkable (and cycling) distance of local schools and amenities such as those located at Selkirk Road.
- 5.1.4 The site access points, and internal highway infrastructure of the development proposals are the subject of the detailed planning element of the hybrid application and have been developed in accordance with the Suffolk Design Streets Guide (2022) which includes provisions for pedestrians, cyclists, buses and motor vehicles. In preparing the access strategy, a movement framework and street typology discussions also included the council's public transport officer. This has ensured that appropriate consideration has been given to public transport access to the development by means of a core internal loop road designed to cater for bus use,


and a dedicated bus gate forming the access point on Humber Doucy Lane, opposite Sidegate Lane.

5.2. Access Junction Design

- 5.2.1 Turning to the access junctions serving the development parcels these have been designed in accordance with the relevant highway design guidance which is a combination of the Suffolk Design Guide and Design Manual for Roads and Bridges (CD 123 Geometric design of at-grade priority and signal-controlled junctions, Highways Agency et al, 2021¹).
- 5.2.2 The officer, in the Council's SoC (Paras. 6.18 through 6.20) raises concerns regarding the achievement of the necessary visibility at the junctions at the main and Tuddenham Road parcels. We commissioned the collection of vehicle speed survey data for the purpose of determining the visibility requirements and to understand concern raised by members of the public at the consultation events of perceived vehicle speeding issues along Humber Doucy Lane. The results of these surveys indicated the following:

Survey Location	Direction of Vehicle Travel	7-day 85 th Percentile Speed	7-day Average Speed
Tuddenham Road (between	Northeast bound	38.2 mph	32.6 mph
HDL and Railway Bridge, north of NSL signs)	Southwest bound	37.3 mph	31.9 mph
Tuddenham	Northeast bound	37.9 mph	31.7 mph
Dorset Close)	Southwest bound	36.4 mph	30.9 mph
Humber Doucy Lane (north of	Northwest bound	37.9 mph	32.1 mph
Inverness Road)	Southeast bound	38.1 mph	32.7 mph
Humber Doucy	West bound	32.6 mph	28.1 mph
Kinross Road)	East bound	34.6 mph	29.0 mph



- 5.2.3 The survey results demonstrate that on Tuddenham Road north of Humber Doucy Lane between the National Speed Limit (NSL) road signs and the Ipswich-Lowestoft rail line bridge vehicles are either decelerating on approach to the 30mph zone or accelerating north of the NSL signs, but speeds are well within the NSL 60mph limit. The Tuddenham Road south survey site indicates that vehicles within the 30mph speed limit are on average travelling 1.3mph higher than the posted speed limit, or 4% and an 85th percentile speeds of 37.1mph.
- 5.2.4 On Humber Doucy Lane north of Inverness Road, in the extended 30mph speed limit zone to Tuddenham Road, are on average travelling at 32.4mph or 8% higher than the posted speed limit. 85th percentile speeds of 38mph which is 27% higher than the posted speed limit.
- 5.2.5 Humber Doucy Lane east of Kinross Road, vehicles are on average travelling at 28.5mph or 5% below the posted speed limit. 85th percentile speeds are 33.6 mph or 12% higher than the posted speed limit.
- 5.2.6 The visibility splays at the access junctions, the traffic signals access excepted as it has different inter-visibility requirements, and the main road visibility on the approaches to the junctions are achievable in accordance with highway design standards.



5.3. Access Junction Layouts

5.3.1 Now, turning to the specific details of the proposed layout of the access junction points, I take each one in turn. Larger scale images for comparison are included at Appendix 8 – Appendix 11 of my Proof.

Tuddenham Road Access

5.3.2 The following is an extract from RSK drawing 0002 and demonstrates the proposed access strategy off Tuddenham Road.





- 5.3.3 In the SoCG on Highways Matters, SCC agrees that the junction proposals would be acceptable, subject to the following changes:
 - 1. Provision of funding for a TRO to extend the 30mph zone northwards;
 - 2. An 82m Y value; is achievable on Tuddenham Road to the south of the access and an 136m Y value is achievable on Tuddenham Road to the north of the access within land controlled by the Appellant and/or within highway maintainable at public expense.
 - 3. Amendment of the transition point of the 2m footways and the provision of a 3.0m shared facility for accessibility to cycling.
- 5.3.4 The following figure illustrates how the junction would look with SCC's changes incorporated.



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5.3.5 As can be seen from comparing the plan as submitted with the version showing the changes sought by SCC, none of the changes affect the position, size, or geometry of the design. The securing of funding for the Traffic Regulation Order is a matter for the s106 agreement (the heads of terms put forward by SCC already include a TRO heading), the securing of the relevant visibility splays can be achieved by condition in the normal way, and the additional paving could be secured through the s278 technical approval process (if required - the paving on either side was deliberately left short of Tuddenham Road as there is no pedestrian route on Tuddenham Road to connect to).

Humber Doucy Lane – Main Access

5.3.6 The following figure is an extract from RSK drawing 0003 and demonstrates the proposed main access strategy off Humber Doucy Lane.





- 5.3.7 In the SoCG on Highways Matters, SCC agrees that the junction proposals would be acceptable, subject to the following changes:
 - 1. Suitable forward visibility for the signal heads being achievable within land controlled by the Appellant and/or within highway maintainable at public expense.
 - 2. Tactile paving extended to the back edge of the footway
 - 3. Increased width of the island
 - 4. Confirmation that it is not intended to provide a push button control.
 - 5. A reduction to the width of the crossing point to 4.0m.
 - 6. Suitable cycle transitions being achieved on Inverness Road.
- 5.3.8 The following figure illustrates how the junction would look with SCC's changes incorporated.



5.3.9 Again, as can be seen by comparison of the submitted design with the illustration that reflects SCC's suggested amendments, none of the changes affect the position, size or geometry of the proposed junction. The first point is a matter that can be addressed by condition in the normal way. The second, fourth, fifth and sixth points can all be



addressed through the s278 technical approval process, with all of the changes being within the public highway.

Humber Doucy Lane – Bus Gate and Pedestrian / Cycle Crossing

5.3.10 The following is an extract from RSK drawing 0004 and demonstrates the proposed access for buses along with a cycling/pedestrian crossing along Humber Doucy Lane.



- 5.3.11 In the SoCG on Highways Matters, SCC agrees that the junction proposals would be acceptable, subject to the following changes:
 - 1. Narrowing of the access to 3.25m;
 - 2. Reducing the radii to as close to 6m as possible, subject to vehicle tracking;



5.3.12 The following figure illustrates how the junction would look with SCC's changes incorporated.



5.3.13 Again, comparing the submitted design to the illustration that shows amendments that accord with the requirements of SCC, there is no change to the position, size, or geometry of the junction. Point 1 in respect of narrowing can be achieved by other means that reducing the carriageway width (e.g. road markings as shown in the image) and point 2 could be covered as part of the detailed s278 technical design process.



Humber Doucy Lane – Eastern Parcel Access

5.3.14 The following is an extract from RSK drawing 0005 and demonstrates the proposed access strategy off Humber Doucy Lane for the smaller eastern parcel.



- 5.3.15 In the SoCG on Highways Matters, SCC agrees that the junction proposals would be acceptable, subject to the following changes:
 - 1. Provision of a suitable transition onto Seven Cottages Lane
 - 2. A new bus shelter and raised DDA compliant kerbing
 - 3. Provision of a suitable crossing point across Humber Doucy Lane.
 - 4. The internal segregated walking and cycling facility being integrated into the design to ensure crossing of the access junction is level with the facility.



5.3.16 The following figure illustrates how the junction would look with SCC's changes incorporated.



5.3.17 As can be seen from comparing the submitted design to illustration, the only change to the physical extent of the works would be the additional access point onto Seven Cottages Lane. Whilst the Appellant does not object to this, it is not required, as access to Seven Cottages Lane is already provided in the vicinity of the bus stop, and on the north-eastern side of this parcel. Works to the bus shelter and paving can be secured by condition/obligation, alongside any other off-site highway works required. A suitable crossing point to Humber Doucy Lane could likewise be controlled by condition/obligation as off-site highway works without affecting the submitted design. Integrating the footway/cycleway into the design to provide a level



route is essentially a matter of surfacing, for example through a raised speed table at that point and can be controlled by planning condition.

5.4. Concluding Remarks on Access Junction Design

- 5.4.1 The access strategy and junction design proposals were discussed during preapplication consultation and the preferred options presented in the submitted application drawings. The Appellant finds themselves in the position where SCC have agreed that the junction layout proposals are acceptable subject to relatively minor changes. Ordinarily these 'changes' would have been resolved in discussions post submission of the planning application on receipt of the Highway Authority's comments. Unfortunately, this opportunity was closed due to Ipswich Borough Council and East Suffolk Council issuing their respective planning permission refusal notices.
- 5.4.2 I conclude that none of these points need to be changed in the submitted drawings and can be secured either by planning condition, s106 obligation or through the s278 technical approval process. Therefore, I consider all matters to be resolved.



6 ACTIVE TRAVEL INTERVENTIONS

6.1. Pedestrian & Cycling Connectivity

RfR Point Three: Internal connectivity

"Internal connectivity between parcels is shown within the cycle and pedestrian movement Parameter Plans. The connectivity and permeability between parcels is considered inadequate and should be better designed to encourage and promote walking and cycling in and around the site. In particular the connections between the main parcel of development and eastern parcel (residential areas E1 and E2) involves a connection which should be more direct and convenient than presently proposed."

6.1.1 Pedestrian and cycle connectivity has been considered in the development of the internal highway infrastructure and the access points to Humber Doucy Lane. As I have noted in Section 3.3, Paragraph 3.3.2 of my evidence, a series of parameter plans were developed from the Framework Plan submitted as part of the hybrid application which clearly highlight the principles of the internal access and circulation networks for pedestrians, cyclists, public transport and other vehicles. As I have noted, once approved the parameter plans would set the limits for future Reserved Matters applications on matters such as access and movement. I would suggest that this is not substantive reason for refusal of the application in highways and transport grounds.

RfR Point Four: Further consideration of offsite connections

"Further consideration also needs to be given to off-site connections to existing routes and key destinations. At present the proposals fail to demonstrate that cycle and walking will be sufficiently promoted and prioritised off-site within neighbouring areas and to key destinations. An off-site walking and cycling strategy should be developed which would recommend improvements to ensure safe and suitable movement for pedestrians and cyclists and to maximise accessibility to sustainable modes of travel."

6.1.2 The TA report provides commentary on the accessibility of the site by sustainable transport modes. Appendix 12, of this Proof highlights the accessibility of the Proposed Development site by way of a series of isochrone plans (which were



appended to the TA), for example in connection with pedestrian access in relation to existing public transport connections (bus stops) and local amenities and schools.

- 6.1.3 The pedestrian isochrone plan demonstrates that Rushmere Hall Primary School and St Christopher's Academy are within 500m and Northgate High School 800m of the site. The nearest bus stops providing access to regular bus services are also within 400m of the site.
- 6.1.4 Local facilities at Selkirk Road and Sidegate Lane West junction with Colchester Road are within a 1km walk of the development site.
- 6.1.5 All walking and cycling distances to the local public transport connections, local amenities and schools are considered acceptable and in accordance with recognised distances.
- 6.1.6 The latter plan shows a public transport heatmap which illustrates the accessibility of the current bus services using Humber Doucy Lane and Tuddenham Road adjacent to the site. As you can see from the plan, the town centre is within a 30 to 40-minute journey time of the development site and other important destinations within 60 minutes of the site. This therefore demonstrates that public transport is a realistic alternative to the private car for travel to work from the development site.



6.1.7 The figure below illustrates the active travel routes between the site and key offsite destinations agreed between the Appellant and SCC and is included in the SoCG on Highways matters.



Figure 6.1: Agreed active travel routes between the Appellant's site and key local destinations

- 6.1.8 The Appellant and SCC have agreed that destinations most likely to be frequented by persons walking and cycling from the Appeal Site are:
 - Ipswich Town Centre
 - Rushmere Hall Primary School
 - Northgate High Secondary School
 - Selkirk Road neighbourhood centre
 - Local bus stops on Humber Doucy Lane and Inverness Road
- 6.1.9 Regarding the first bullet, the principle of an Ipswich Strategic Planning Area Contribution to fund a scheme of walking and cycling improvements on Cemetery Lane, Tuddenham Road, Bolton Lane and Soane Street to provide a safe and



suitable connection between Ipswich Town Centre and Sidegate Lane West, has been agreed between the parties and is confirmed in the SoCG.

- 6.1.10 Site visits were undertaken in preparation of the TA to evaluate the walking and cycling routes from the site to nearby local facilities and amenities. This included gathering data on width and condition of routes.
- 6.1.11 In general connectivity to the neighbouring areas to the HDL site are of typical width for footways, circa 1.5 2.0m.
- 6.1.12 To the north end of Sidegate Lane and along Humber Doucy Lane the footways are separated from the main road carriageways by grass verges which are within the adopted highway boundary. The verge feature continues into Lanark Road and Renfrew Road towards Rushmere Hall primary school and St Christopher's Academy. It extends onto Moffat Avenue, Selkirk Road, Dumbarton Road, Caithness Close and Cromarty Road.
- 6.1.13 The surfacing material of the routes is inconsistent ranging from a typical flexible bitumastic surfacing to concrete paving slabs (of various sizes and shape) and in-situ cast concrete which was noted at driveway crossings. Maintenance of the infrastructure is poor with significant weed growth which is noticeable between slab



joints creating potential trip hazards. Moss and tree roots are also impacting the integrity of the surfacing, again creating trip hazards.

- 6.1.14 Having a consistent surfacing material and wider footways would improve the routes from the site to the local amenities and would make them more attractive and provide the opportunity for shared use with cyclists.
- 6.1.15 The following style of table was included in the first draft of the Highways SoCG submitted to SCC for their completion but subsequently removed by SCC. To date SCC have not provided a list of improvements.

Road	Appellant	Appellant	SCC "necessary"	SCC "desirable"
	"necessary"	"desirable"	improvements	improvements
	improvements	improvements		
Humber	Safe crossing	Tactile paving at		
Revex	points from Parcel	crossing of PROW		
Lane	B to the west side	48.		
	of HDL.			
	Safe crossing from			
	Parcel C to south			
	side of HDL			
Sidegate		Tactile paving to		
Lane		existing crossing		
		point on the south		
		side of the junction		
		of Inverness Road		
		(Parcel B)		
		Tactile paying to		
		existing crossing		
		point at the junction		
		of Lanark Road		
		(Parcel B)		
		Replacing paving		
		with tarmac on		
		south side between		
		Humber Doucy Ln		
		and Lanark Rd		
		(Parcel B)		
Ave Deced	NUA	NIA		
Renfrow	N/A	Replacing paying		
Rennew		with termos on		
Noau		north side between		
		Avr Road and		
		Lanark Rd at St		
		Christopher's		
		Academy (Parcel C)		
Lanark		Tactile paving to the		
Road		existing crossing		
		points at junction of		
		Renfrew Road		
		(Parcel C)		



6.1.16 SCC noted in the first round of proposed amendments to the SoCG that they had not undertaken their own assessment of the external active travel connections to the agreed key destinations and requested that the tables were excluded from the SoCG. Consequently, at present the parties are not in agreement regarding what proportionate mitigation is required to improve the external active travel connections. The full suite of tables as originally drafted for the Highways SoCG are included at Appendix 13 of my evidence.

Reason Five: Travel Plan Framework

"Travel Plan framework has been submitted in support of the application, however whilst some measures included would be acceptable, additional measures would be required to demonstrate that sustainable travel options were being maximised and the value of funding estimated is considered insufficient to fund the measures identified and ensure effective sustainable travel is promoted within the proposed development."

- 6.1.17 The planning submission is supported by a Framework Travel Plan (FTP) that would be developed into a separate full Travel Plan and remains the responsibility of the Developer, as stated in its introductory chapter. It was in no way promoted as the finished article for approval. The FTP makes neither attempts to calculate nor suggest levels of funding required for the outline measures proposed in the document.
- 6.1.18 I and the Appellant fully anticipated that an approved Travel Plan would be secured by means of a planning condition as a reserved matter.
- 6.1.19 I can confirm that Appellant is fully committed to the development and agreement of a full Residential Travel Plan with supporting measures and targets, in consultation with the local planning and highway authorities, along with the appointment of a Travel Plan Coordinator.



7 S106 OBLIGATIONS

- 7.1.1 In the Statement of Common Ground both parties agree that the Proposed Development creates the need for the following s106 Obligations. The sums are those requested by SCC. The Appellant agrees the principle of each contribution, but needs to further understand the calculation of the sums before these are agreed:
 - Passenger Transport Contribution: a passenger transport contribution of £1,113,700.80 is requested by SCC to pump prime an extension of Ipswich Busses service number 6 into the development site for a total of 6-years and increase the frequency to 20 minutes from 30 minutes. The Appellant agrees the principle of a contribution but needs to further understand the calculation of the sum.
 - **Travel Plan Monitoring Contribution: £1,300 per annum**, from the date of the submission of the baseline survey (to be outlined within the Travel Plan condition) for a minimum of 5-years or until 1-year has passed from the anniversary of the occupation of the final dwelling, whichever is longer.
 - Traffic Regulation Order Contribution: £15,000 to cover the County's costs in implementing the TRO.
 - Ipswich Strategic Planning Area Contribution (ISPA): An ISPA contribution of £493,160.90 is requested by SCC to fund a scheme of walking and cycling improvements on Cemetery Lane, Tuddenham Road, Bolton Lane and Soane Street to provide a safe and suitable connection between Ipswich Town Centre and Sidegate Lane West.
 - **PRoW contributions:** PRoW improvements are outlined below and a total planning contribution of £110,149.
 - Footpath 45: improved signage.
 - Footpath 49: improved signage.
 - Tuddenham Bridleway 001: improved surfacing to 3.0m to accommodate walking and cycling connectivity between the site and Tuddenham and the ongoing countryside.



8 CONCLUSIONS

8.1.1 The joint Council's published four grounds for refusal of the Proposed Development on Highways and Transport matters.

Firstly, Reason One: The scale, nature and impacts of the proposals

"By virtue of the scale and nature of the proposed development, the impacts of the development on the surrounding highway network need to be fully assessed in order to understand the acceptability of the proposals and the mitigation required. The development proposals will also be expected to ensure opportunities to promote walking, cycling and public transport use are identified and secured." and

Reason Two: Further information and justification

"Further information and justification is required to support the trip generation information assumed and junction modelling analysis undertaken. It is considered necessary to ensure the impacts of the development have been accurately and fully considered and required mitigation identified. There is a concern that the distribution of trips has not been accurately assessed and necessary mitigation such as improvements needed at the A1214 and Tuddenham Road Roundabout have not been fully identified. Furthermore impacts on the Strategic Road Network and rail infrastructure (including Westerfield Railway Station) in the vicinity of the proposals need to be factored in and assessed in order to conclude acceptability and any mitigation required."

- 8.1.2 In my evidence in respect to the impacts of the Proposed Development on the Strategic Road Network I confirm that additional information has been supplied to the Strategic Road Authority in response to their holding objection. In their Appeal Statement they confirm the acceptability of the assessment undertaken and agree that there are no severe impacts on their assets, consequently withdrawing their objection.
- 8.1.3 In regard to the impacts on the rail network, specifically Westerfield Station, I note that Network Rail withdrew their objection to Red House Park, a much more substantial and closer development to the station without any additional highway assessment work being done, based on a proposed s106 contribution by that scheme of £106,335 towards improvements at Westerfield Station. Given the smaller scale of the Appeal Scheme and its further distance from Westerfield Station, I do not consider that any substantive case has been made that would justify a similar s106 contribution



being required from the Appeal Scheme to that being sought from the Red House Park scheme.

- 8.1.4 In regard to the impact of the proposals, my evidence sets out a comparison of the methodology used in the modelling and preparation of the robust TA submitted as part of the planning application. It compares this against the methodology being promoted as acceptable by the Highway Authority (the SCTM) and its critique of our evaluation of the predicted development impacts and mitigation without providing substantive reasoning or evidence itself as to why one methodology is better than the other. It compares the results of the junction capacity assessment conclusions from the TA against junction modelling results based on traffic flow data exported from an updated SCTM (commissioned jointly by the Appellant and SCC, with funding provided by the Appellant). I explain why we have our own justified reservations around the use of the output SCTM traffic flows. Notwithstanding, I conclude that the use of the SCTM flows in the junction models do not significantly change the outcome and conclusions drawn in the TA for the majority of the external highway junctions. Where there are differences, the junction of Tuddenham Road and Humber Doucy Lane in particular, I note that using the SCTM output flows highlights that the junction is predicted to experience capacity issues which require mitigation considering just background traffic growth and other committed development traffic flows resulting from the dynamic traffic reassignment in the SCTM. Despite this observation, I am not aware of any strategic improvements to the junction and only the expectation that improvements will be required to the junction as part of the Humber Doucy Lane site allocation. Bearing this in mind, I consider that subsequent comparison of the traffic impacts resulting from the Proposed Development using the SCTM modelled flows is not appropriate.
- 8.1.5 On access to the external road network, in my evidence I summarise the agreement by SCC with the Appellant that the proposed forms of the individual access junctions are acceptable, subject to specific matters of technical detail. In my evidence I demonstrate what each access would look like to incorporate these changes. In doing so, I confirm that there is no change to the position, size, or geometry of each junction. I conclude that none of these points need to be changed in the submitted drawings and can be secured either by planning condition, s106 obligation or through the s278



technical approval process. Therefore, I consider all matters can be resolved in terms of the access junction designs.

Secondly, Reason Three: Internal connectivity

"Internal connectivity between parcels is shown within the cycle and pedestrian movement Parameter Plans. The connectivity and permeability between parcels is considered inadequate and should be better designed to encourage and promote walking and cycling in and around the site. In particular the connections between the main parcel of development and eastern parcel (residential areas E1 and E2) involves a connection which should be more direct and convenient than presently proposed."

8.1.6 My evidence sets out the plans prepared for the hybrid planning application including parameter plans which highlight the principles of the internal access and circulation networks for pedestrians, cyclists, public transport and other vehicles. Once approved the parameter plans would set the limits for future Reserved Matters applications on matters such as access and movement. I would suggest that this is not substantive reason for refusal of the application on highways grounds.

Thirdly, Reason Four: Further consideration of offsite connections

"Further consideration also needs to be given to off-site connections to existing routes and key destinations. At present the proposals fail to demonstrate that cycle and walking will be sufficiently promoted and prioritised off-site within neighbouring areas and to key destinations. An off-site walking and cycling strategy should be developed which would recommend improvements to ensure safe and suitable movement for pedestrians and cyclists and to maximise accessibility to sustainable modes of travel."

8.1.7 My evidence and the robust TA submitted as part of the planning application sets out the accessible nature of the Proposed Development site. It sets out the key destinations and routes to them along with an evaluation of the quality of the routes and suggested improvements that could be made. The Highway Authority requested the omission of tabulated 'necessary' and 'desirable' improvements to the offsite routes in the draft SoCG. Further discussion needs to take place with the Highway Authority to agree proportionate improvements to external active travel networks. In the meantime, the parties have agreed through the SoCG to the principle of s106 contributions to the ISPA and PROW improvements to improve active travel



connectivity to Ipswich Town and the wider networks to the north of the site respectively.

And finally, Reason Five: Travel Plan Framework

"Travel Plan framework has been submitted in support of the application, however whilst some measures included would be acceptable, additional measures would be required to demonstrate that sustainable travel options were being maximised and the value of funding estimated is considered insufficient to fund the measures identified and ensure effective sustainable travel is promoted within the proposed development."

8.1.8 My evidence demonstrates that the submitted Framework Travel Plan that accompanied the TA report laid the foundations including outline measures for an emerging full Travel Plan. The Travel Plan was not promoted as anything but a framework nor sought to agree the funding for the outline measures to which the Authority refers in their RfR. The Appellant included this document in the full expectation that a Travel Plan would be conditioned as part of an emerging planning permission. I therefore suggest that this is not substantive reason for the refusal of the Proposed Development.



APPENDIX 1 VALLEY ROAD ROUNDABOUT COMMITTED IMPROVEMENTS

I



		C	O NOT SCAL	E PLAN 7
	K	<u>FOOTWAY</u>		
		PUBLIC REALM/PLANTING		
		ON STREET CYCLEWAY		
	*	*	₹ ₹	
		-		
	ENTRY WIDENED			
	TO ACCOMMODATE TWO LAND			
				ROGRESS
PROJECT:		SCALE @ A2: 1:500	CHECKED: AKM	APPROVED: PC
IPSWI	CH GARDEN SUBURB	CAD FILE: 4228-SK-01-04.DWG	DESIGN-DRAWN: GW	DATE: November 16
JUNCTION 3 - TUDI	DENHAM ROAD	PROJECT No: 70024228	DRAWING NO: 4228-SK-	04 REV:
OPTION A: ROUND	ABOUT IMPROVEMENT SCHEME	(C)	WSP Group L	_td
			·	



APPENDIX 2 IPSWICH GARDEN SUBURB SPD EXTRACT





SUPPLEMENTARY PLANNING DOCUMENT IPSWICH GARDEN SUBURB DRAFT FOR PUBLIC CONSULTATION

6.41 The design of these junctions will be subject to detailed testing at the Outline Planning Application stage, when a full Transport Assessment will be required. The detailed design should take account of the requirement to utilise the Urban Traffic Management Control system to manage the impact of travel demand at Westerfield Road on the wider network. Controlled junctions are anticipated by the Highway Authority (potentially signal controlled) in order to balance local, (east-west) and through (north-south) traffic, including pedestrian and cycle traffic.

Henley Road

6.42 Provision should be made for up to two traffic signal controlled junctions onto Henley Road from the proposed Henley Gate (Figure 47 Access & Movement). The Urban Traffic Management Control system will be employed at this point to manage traffic Impact.

Off-Site Highway Works

- 6.43 Improvements to a number of junctions within Ipswich will be necessary to manage increased demand for travel. The required Transport Assessment must quantify the level of increased travel arising from the development, and must confirm the extent and location of the off-site works required.
- 6.44 Current anticipated off-site works include:
- Upgrading the existing junctions of Valley Road with Henley Road and with Dale Hall Lane as part of the UTMC network and improvements to facilities for pedestrians and cyclists.
- Replacing the Westerfield Road and Valley Road roundabout with a traffic signal controlled junction including facilities for pedestrians and cyclists and priority for bus services.
- Replacing the Tuddenham Road and Valley Road roundabout with a traffic signal controlled junction that includes facilities for pedestrians and cyclists and bus priority.
- A new Toucan crossing for Fonnereau Way on Valley Road linked to the UTMC system.
- Potentially, improvements at the junction of Bolton Lane with the town centre gyratory to provide priority for buses and improved bus journey times to Tower Ramparts.
- 6.45 This list of offsite highway improvements set out is not exhaustive and the wider implications of the proposed housing will be considered in detail through a Transport Assessment(s).



APPENDIX 3 ISPA LOCAL PLANNING MODELLING, METHODOLOGY REPORT EXTRACT



Suffolk County Council

ISPA LOCAL PLAN MODELLING

Methodology Report



ISPA-MR7 JANUARY 2020

vsp

3 FUTURE HIGHWAY SCHEMES

- 3.1.1. This section details the future highway infrastructure schemes which have been included in the forecast model networks.
- 3.1.2. Table 3-1 lists the highway schemes which have been included in Babergh and Mid Suffolk

 Table 3-1 – Babergh / Mid Suffolk future highway schemes

District / Borough	Description	Mitigation
Babergh	Chilton Woods access road	Access road between A134 Springlands Way (new roundabout) and Acton Lane (new priority junction)
Babergh	A1071 / Swan Hill roundabout	Capacity improvements
Babergh	A1071 / Hadleigh Road signals	Capacity improvements
Babergh	A1071 / Poplar Lane	Signalisation as part of access arrangements for Wolsey Grange
Babergh	A1214 London Road	New signalised junction part of access arrangements for Wolsey Grange
Mid Suffolk	A140 Eye Airfield	Roundabout improvements

3.1.3. Table 3-2 shows the future highway schemes which have been included within Ipswich.

Table 3-2 – Ipswich future highway schemes

District / Borough	Description	Mitigation
lpswich	Bixley Road / Heath Road / Foxhall Road	Additional lane NB for Bixley Road / Additional lane SB for Heath Road
lpswich	Nacton Road / Maryon Road	Turn WB Nacton to two lanes, and EB Nacton to one lane
Ipswich	Upper Orwell Street	Changed to one-way southbound from St Helen's Street
Ipswich	St Helen's Street / Bond Street	Bus lane removal
lpswich	A1214 / Bell Lane	Ban of right turn from A1214 onto Dr Watson Lane. Signalised junction of A1214 / Bell Lane changed to priority-controlled roundabout

wsp

District / Borough	Description	Mitigation
lpswich	Ipswich Radial Corridor Route improvements - Felixstowe Road	Capacity increase to Felixstowe Road & Bixley Road arms of roundabout with A1156 Bucklesham Road. Capacity increase at Bixley Road / Ashdown Way junction
Ipswich	Ipswich Garden Suburb – Henley Gate	Two signalised junctions included as part of site access onto Henley Road
Ipswich	Ipswich Garden Suburb – Fonnereau	Priority controlled junction included on Westerfield Road in relation to access
Ipswich	Ipswich Garden Suburb – Red Hill Farm	Two priority-controlled junctions included on Westerfield Road, north and south of Fonnereau access junction
lpswich	A1214 Valley Road / Westerfield Road	Increased capacity modelled on A1214 approaches to roundabout due to flares
lpswich	A1214 Valley Road / Tuddenham Road	Increased capacity modelled on A1214 approaches to roundabout due to flares
lpswich	Europa Way link road	Link road between Sproughton Road and Bramford Road, extension of Europa Way with priority-controlled roundabouts

3.1.4. Table 3-3 shows the future highway schemes included within Suffolk Coastal

Table 3-3 – Suffolk Coastal future highway schemes

District / Borough	Description	Mitigation	
Suffolk Coastal	Brightwell Lakes - A12 corridor improvement ⁶	A12 / Eagle Way / Anson Road roundabout signalisation	
Suffolk Coastal	Brightwell Lakes - A12 corridor improvement	A12 / Eagle Way / Gloster Road roundabout signalisation	
Suffolk Coastal	Brightwell Lakes - A12 corridor improvement	A12 / Foxhall Road / Newbourne Road roundabout signalisation	
Suffolk Coastal	Brightwell Lakes - A12 corridor improvement	A14 Junction 58 signalisation	

⁶ Brightwell Lakes is the development formerly referred to as Adastral Park



APPENDIX 4 NATIONAL HIGHWAYS ADDITIONAL INFORMATION



25 October 2024 Our reference: RSK/MA/230597/NH/24/05747 Your reference: NH/24/05747 Fourways House 57 Hilton Street Manchester M1 2EJ UK

Telephone: +44 (0)161 236 2757 www.rskgroup.com

Martin Fellows c/o Mark Norman Operations Directorate East Region National Highways

By email: PlanningEE@nationalhighways.co.uk

Dear Sir

Re: 24/00172/OUTFL Land between Humber Doucy Lane and Tuddenham Lane, Ipswich - Hybrid Planning Application for mixed use development including housing (up to 660 units), Class E/F2(b) space (400sqm) and Early Years facility etc

We refer to your holding objection to the above of 30 May 2024. The application is now at Appeal, with an Inquiry set to occur in January, and proofs of evidence required before Christmas. In terms of the additional information you requested, we set this out below, and would be grateful if you could confirm whether or not this material addresses the queries you raised.

Trips potentially routing via Junctions 53, 55, 56 and 58 of the A14 and also utilising the A12 are accessing employment centres in the Medium Level Super Output Areas (MSOA) from the proposed development site based on the 2011 Census O-D information for the Ipswich004 MSOA, as follows:

 Mid Suffolk 007, 010, 011 and 012

 St Edmundsbury 005, 007, 008 and 009

 Babergh 010

 Chelmsford 010

 Colchester 002 and 007

 Tendring 003

 Suffolk Coastal 004, 005, 007, 008, 012, 013, 014 and 015





The respective distribution proportion of the development generated trips going to/from these MSOAs as a place of work are the following:

MSOA	Generated Trip Distribution (%)
Mid Suffolk 007	1.03%
Mid Suffolk 010	1.84%
Mid Suffolk 011	2.60%
Mid Suffolk 012	1.84%
St Edmundsbury 005	0.33%
St Edmundsbury 007	0.33%
St Edmundsbury 008	0.33%
St Edmundsbury 009	0.38%
Babergh 010	0.71%
Chelmsford 010	0.33%
Colchester 002	0.60%
Colchester 007	0.49%
Tendring 003	0.33%
Suffolk Coastal 004	0.71%
Suffolk Coastal 005	0.76%
Suffolk Coastal 007	0.60%
Suffolk Coastal 008	2.88%
Suffolk Coastal 012	1.57%
Suffolk Coastal 013	0.33%
Suffolk Coastal 014	0.92%
Suffolk Coastal 015	3.53%

Applying the trip assignment methodology used in the preparation of the submitted Transport Assessment, between the site origin and the employment destinations provides the following routing:

Destination MSOA	Routing
Midsuffolk 007	Humber Doucy Lane – Tuddenham Road – A1214 Valley Road – A1156 Norwich/Bury Road – A14 J53 – A14 J51 – A140 Norwich Road – A1120 Stowmarket Road and vice-versa. Note a shorter more direct route avoiding the A14 is available but as a worst case for this exercise has been rejected.
Midsuffolk 010	Humber Doucy Lane – Tuddenham Road – A1214 Valley Road – A1156 Norwich/Bury Road - A14 J53 - A14 J50 and vice-versa.



Destination MSOA	Routing
Midsuffolk 011	Humber Doucy Lane – Tuddenham Road – A1214 Valley Road – A1156 Norwich/Bury Road – A14 J53 – A14 J51 – B1078 Barking Road and vice- versa.
Midsuffolk 012	Humber Doucy Lane – Tuddenham Road – A1214 Valley Road – A1156 Norwich/Bury Road – A14 J53 – A14 J52 and vice-versa. Note a shorter more direct route avoiding the A14 is available but as a worst case for this exercise has been rejected.
St Edmundsbury 005, 007, 008 and 009	Humber Doucy Lane – Tuddenham Road – A1214 Valley Road – A1156 Norwich/Bury Road – A14 J53 – A14 J44/J43 and vice-versa
Babergh 010	Humber Doucy Lane – Tuddenham Road – A1214 Valley Road – A1214 Yarmouth/London Road – A14 J55 – A12– A12 J31 and vice-versa
Chelmsford 010	Humber Doucy Lane – Tuddenham Road – A1214 Valley Road – A1214 Yarmouth/London Road – A14 J55 – A12– A12 J19 – B1137 and vice-versa
Colchester 002	Humber Doucy Lane – Tuddenham Road – A1214 Valley Road – A1214 Yarmouth/London Road – A14 J55 – A12– A12 J29 – A1232 Ipswich Road and vice-versa
Colchester 007	Humber Doucy Lane – Tuddenham Road – A1214 Valley Road – A1214 Yarmouth/London Road – A14 J55 – A12 – A12 J28 and vice-versa
Tendring 003	Humber Doucy Lane – Tuddenham Road – Ipswich TC – A137 Wherstead Road – A14 J56 – A137 – B1352
Suffolk Coastal 004	Humber Doucy Lane – A1214 Colchester Road – A12 / Main Road Martlesham Jtn – A12 – A12 / A1094 Alderburgh Rd – B1069
Suffolk Coastal 005 and 007	Humber Doucy Lane – A1214 Colchester Road – A12 / Main Road Martlesham Jtn – A12 – A12 / A1152 Rendlesham Rbt
Suffolk Coastal 008	Humber Doucy Lane – A1214 Colchester Road – A12 / Main Road Martlesham Jtn – A12 – A12 / B1079 Woodbridge Rbt
Suffolk Coastal 012, 013, 014 and 015	Humber Doucy Lane – A1214 Colchester Road – A1189 Felixstowe Road – A1156 Felixstowe Road – A14 J58

Applying the previous trip distribution proportions to the predicted trip generation for the proposed development and the assignment detailed above, the maximum number of trips using the respective A12 and A14 Junctions equates to the following:

AM Peak		PM Peak		Daily	
Outbound	Inbound	Outbound Inbound		Outbound	Inbound
Joining/leaving A14 at Junction 53					
19	6	10	15	113	111



AM Peak		PM Peak		Daily	
Outbound	Inbound	Outbound	Inbound	Outbound	Inbound
		Crossing A14	at Junction 55		
5	2	2	4	29	29
		Crossing A14	at Junction 56		
1	0	0	1	5	4
		A14 Jur	nction 58		
21	7	11	17	128	124
		A12 / Main Road	l Martlesham Rbt		
10	3	5	7	58	56
		A12 / B1079 V	Voodbridge Rbt		
7	2	3	5	40	39
A12 / A1152 Rendlesham Rbt					
1	0	1	1	8	8
A12 / A1094 Aldeburgh Jtn					
2	1	1	1	10	10

As can be seen from the above the quantum of predicted development trips using the SRN junctions is **not significant**.

We trust that the foregoing information provides you with a greater degree of comfort in terms of the predicted proposed development trip impacts on the SRN.

Should you require any further information, please do not hesitate to contact us.

Yours sincerely

Jon Hassel Associate Director


APPENDIX 5 NATIONAL HIGHWAYS OFFICER'S APPEAL STATEMENT

Town and Country Planning (General Development Procedure) Order 1995

National Highways Appeal Statement

Appeal ref: Ipswich Borough Council: APP/R3515/W/24/3350674, East Suffolk District Council: APP/X3540/W/24/3350673

District council: Ipswich Borough Council

Site: Land Between Humber Doucy Lane and Tuddenham Lane, Humber Doucy Lane, Ipswich, Suffolk

Summary: Planning application for the Land for the following proposals was refused by the Local Planning Authority:

Hybrid Application - Full Planning Permission for the means of vehicle, cycle and pedestrian access to and from the site. Outline planning application (all matters reserved) for a mixed use development for up to 660 dwellings (Use Class C3), up to 400 sq m (net) of non residential floorspace falling within Use Class E and/or Use Class F2(b), an Early Years facility, and associated vehicular access and highway works, formal and informal open spaces, play areas, provision of infrastructure (including internal highways, parking, servicing, cycle and pedestrian routes, utilities and sustainable drainage systems), and all associated landscaping and engineering works. (THE APPLICATION IS A CROSS-BOUNDARY APPLICATON AND IS LOCATED IN BOTH IPSWICH BOROUGH COUNCIL AND EAST SUFFOLK COUNCIL).

1. Introduction

- 1.1 The Secretary of State for Transport, as Highway Authority, is responsible for the management and maintenance of the trunk road network in England. National Highways is a government owned company sponsored by the Department for Transport.
- 1.2 The Chief Executive of National Highways is directly accountable to the Secretary of State, and is responsible for carrying out the Secretary of State's executive functions in relation to the road network under a licence agreement, namely:
 - The management and maintenance of the trunk road network.
 - The delivery of the Secretary of State's programme of trunk road improvement schemes.
 - Certain environmental and sustainability related obligations.

2. National Highways representative:

- 2.1 My name is Mark Norman. I have been employed by National Highways and its predecessors for 30 years. I currently work in the Planning and Development Division, which forms part of National Highways Operations Directorate (East) based at Bedford. My job title is Spatial Planner.
- 2.2 I make this statement on behalf of National Highways.

3. Location

3.1 The site is located on the north side of Humber Doucy Lane, approximately 3km to the north east of Ipswich town centre. Access to the wider highway network is taken from the A1214 route, which connects A12 (non-trunk route) in the east to the east of Ipswich, which provides onward connections to the trunk road network via Junctions 53 and 54 of the A14. Although the nearest link to the A12 is part of the local road network, the connection from the A12 with the A14 at Junction 58 of the A14 is part of the trunk road network.

4. National Highways previous engagement relating to this site:

- 4.1 National Highways have previously commented on the application related to this site. The history is covered below:
- 4.2 IP/24/00172/OUTFL An application was received for the proposal outlined within the summary of this Appeal Statement. A holding objection was issued on 30th May 2024 which raised concern that the Transport Assessment did not provide a forecast for potential trips that would reach Junctions 53, 54 or 58 of the A12.
- 4.3 A further submission was made, direct to National Highways on 25th October 2024, in response to the holding objection of 30th May 2024. This submission comprises a letter and appendices dated 25th October 2024, with reference number RSK/MA/230597/NH/24/05747.

5. National Highways Appeal Statement

- 5.1 Upon review of the Transport Assessment, it was evident that the potential for effects in traffic terms on the SRN junctions in the vicinity of the site. As a result, a holding objection was raised with the local planning authority.
- 5.2 The submission of 25th October seeks to address the effects on Junctions 53, 55, 56 and 58 of the A14, and sets out that traffic is distributed to relevant destinations in accordance with 2011 Census travel to work data for the Ipswich 004 Middle Super Output Area (MSOA). The principle is agreed as an approach, given that it is a standard within the assessment of traffic impact, and that the 2021 data was affected by COVID-19 lockdown at the time.
- 5.3 The supplementary submission includes a table showing each of the destination MSOAs and the routing involved with each journey made to and from the application site (Ipswich 004).

- 5.4 We have reviewed the route assignment and are in agreement on findings. While we note that note trips are assigned to J54, it is evident that journeys made along the A1214 from the site towards a southern destination would join at the Copdock interchange (J55), and that J53 is better positioned than J54 to accommodate trips to the north from Ipswich. It is noted that J58 will be a key part of journeys made between the site and coastal destinations.
- 5.5 It is noted within the summary tables that focus on peak hours and daily flows, that on all strategic road network junctions, the number of new trips attributed to the proposals will be less than 30 trips per hour, which is the threshold for which an assessment is typically requested. It is therefore considered that the proposed development is unlikely to have a perceptible effect on the strategic road network.

6. Conclusion

6.1 National Highways previously raised concerns that the site subject to appeal did not address potential for effects on junctions on the strategic road network. The submission of 25th October is considered to resolve this matter. And we conclude the application is unlikely to have a severe impact upon the SRN.



APPENDIX 6 JUNCTION CAPACITY ASSESSMENT RESULTS

Movement	AM Peak			PM Peak		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
	2032	Baseline				
Humber Doucy Lane – Tuddenham Rd (NB)	0.7	15.80	0.40	0.3	14.38	0.25
Humber Doucy Lane (E) – Tuddenham Rd (SB)	1.6	27.75	0.62	2.0	29.12	0.68
Tuddenham Rd (NB) – Tuddenham Rd / Humber Doucy Lane	0.4	6.50	0.20	0.2	5.45	0.10
	2032 Baseline	e + Developmen	it			
Humber Doucy Lane – Tuddenham Rd (NB)	2.6	41.50	0.74	0.9	26.61	0.48
Humber Doucy Lane (E) – Tuddenham Rd (SB)	3.4	59.69	0.80	3.5	4904	0.80
Tuddenham Rd (NB) – Tuddenham Rd / Humber Doucy Lane	0.5	7.10	0.27	0.4	6.34	0.22

Table TP-4.1: Tuddenham Road / Humber Doucy Lane (Priority Junction) extracted from the submitted TA Report

Table TP-4.2: Humber Doucy Lane Signalised Access Junction extracted from the submitted TA Report

Lane Description	AM	Peak	PM Peak					
	Deg of Sat (%) MMQ		Deg of Sat (%)	MMQ				
2032 Baseline + Development								
Humber Doucy Lane (N) – Left Ahead Right	62.9	6.6	49.5	5.0				
Humber Doucy Lane (S) – Right Ahead Left	58.2	5.6	54.5	5.0				
Inverness Road – Ahead Left Right	2.4	0.1	2.4	0.1				
Spine Road – Right Left Ahead	56.6	3.6	38.7	1.8				

Movement		AM Peak			PM Peak	
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
	2032 Basel	ine				
Sidegate Lane - Humber Doucy Lane (SB)	0.1	7.28	0.07	0.1	7.01	0.08
Sidegate Lane - Humber Doucy Lane (NB)	0.3	12.10	0.21	0.2	10.93	0.17
Humber Doucy Lane - Sidegate Lane / Humber Doucy Lane (NB)	0.3	5.09	0.14	0.2	5.13	0.09
2032	Baseline + De	velopment				
Sidegate Lane - Humber Doucy Lane (SB)	0.1	7.59	0.08	0.1	7.54	0.10
Sidegate Lane - Humber Doucy Lane (NB)	0.3	14.05	0.24	0.2	12.62	0.20
Humber Doucy Lane - Sidegate Lane / Humber Doucy Lane (NB)	0.4	4.86	0.18	0.2	5.08	0.11

Table TP-4.3: Humber Doucy Lane / Sidegate Lane (Priority Junction) extracted from the submitted TA Report

Table TP-4.4: Humber Doucy Lane / Roxburgh Road / Seven Cottages Lane (Priority Junction) extracted from the submitted TA Report

Movement		AM Peak		PM Peak					
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC			
	2032 Baseline								
Roxburgh Road - Humber Doucy Lane (SB) / Seven Cottages Ln	0.0	6.40	0.01	0.0	6.49	0.02			
Roxburgh Road - Humber Doucy Lane (NB) / Seven Cottages Ln	0.0	9.12	0.03	0.0	8.83	0.01			
Humber Doucy Lane (NB) - Roxburgh Road/ Humber Doucy Lane (SB) / Seven Cottages Ln	0.0	5.05	0.00	0.0	4.92	0.01			
Seven Cottages Ln - Roxburgh Road/ Humber Doucy Lane (SB) / Humber Doucy Lane (NB)	0.0	10.08	0.03	0.0	0.00	0.00			
Humber Doucy Lane (SB) - Roxburgh Road/ Humber Doucy Lane (NB) / Seven Cottages Ln	0.0	4.69	0.01	0.0	5.10	0.00			
	2032	2 Baseline + Deve	lopment						
Roxburgh Road - Humber Doucy Lane (SB) / Seven Cottages Ln	0.0	6.62	0.01	0.0	6.90	0.02			
Roxburgh Road - Humber Doucy Lane (NB) / Seven Cottages Ln	0.0	10.08	0.03	0.0	9.82	0.01			
Humber Doucy Lane (NB) - Roxburgh Road/ Humber Doucy Lane (SB) / Seven Cottages Ln	0.0	5.04	0.00	0.0	4.65	0.01			
Seven Cottages Ln - Roxburgh Road/ Humber Doucy Lane (SB) / Humber Doucy Lane (NB)	0.0	11.38	0.03	0.0	0.00	0.00			
Humber Doucy Lane (SB) - Roxburgh Road/ Humber Doucy Lane (NB) / Seven Cottages Ln	0.0	4.34	0.01	0.0	4.98	0.00			

Table TP-4.5: Humber Doucy Lane / Dumbarton Road (Priority Junction) extracted from the submitted TA Report

Movement	AM Peak			PM Peak		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
	2032	Baseline				
Dumbarton Road - Humber Doucy Lane (SB)	0.0	5.54	0.01	0.0	5.58	0.01
Dumbarton Road - Humber Doucy Lane (NB)	0.1	10.77	0.10	0.1	9.85	0.07
Humber Doucy Lane (SB) - Dumbarton Road / Humber Doucy Lane (NB)	0.0	4.61	0.02	0.0	5.14	0.01
	2032 Baselin	e + Developmer	nt			
Dumbarton Road - Humber Doucy Lane (SB)	0.0	5.69	0.01	0.0	5.92	0.01
Dumbarton Road - Humber Doucy Lane (NB)	0.1	12.06	0.11	0.1	11.06	0.08
Humber Doucy Lane (SB) - Dumbarton Road / Humber Doucy Lane (NB)	0.0	4.28	0.02	0.0	5.02	0.01

Table TP-4.6: Rushmere Road / Humber Doucy Lane / The Street (Mini-roundabout) extracted from the submitted TA Report

Arm		AM Peak		PM Peak		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
		203	2 Baseline			
Humber Doucy Lane (S)	0.1	3.55	0.09	0.1	3.43	0.12
Rushmere Road	0.4	7.63	0.31	0.2	6.75	0.19
Humber Doucy Lane (N)	0.7	5.97	0.41	0.3	4.37	0.22
The Street	0.6	7.56	0.38	0.4	6.04	0.31
		2032 Baseli	ine + Development			
Humber Doucy Lane (S)	0.1	4.02	0.11	0.2	3.72	0.15
Rushmere Road	0.6	8.48	0.37	0.5	8.51	0.34
Humber Doucy Lane (N)	1.3	8.00	0.56	0.4	4.83	0.30
The Street	0.8	9.45	0.44	0.5	6.64	0.33

Table TP-4.7: A1214 Colchester Road / Rushmere Road (Roundabout) extracted from the submitted TA Report

		AM Peak			PM Peak	
Arm	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
		203	2 Baseline			
Rushmere Rd (WB)	0.4	6.82	0.28	0.4	6.69	0.26
A1214 (NB)	2.8	12.37	0.74	7.0	27.57	0.89
Rushmere Rd (EB)	0.4	7.27	0.29	0.7	9.57	0.40
A1214 (SB)	4.5	18.92	0.83	4.8	19.84	0.83
		2032 Baseli	ne + Development			
Rushmere Rd (WB)	0.5	7.55	0.35	0.4	7.02	0.30
A1214 (NB)	3.1	13.73	0.76	7.7	30.53	0.90
Rushmere Rd (EB)	0.3	4.18	0.20	0.9	10.64	0.46
A1214 (SB)	4.7	19.80	0.83	5.3	22.23	0.85

Table TP-4.8: A1214 Colchester Road / Valley Road / Tuddenham Road Roundabout extracted from the submitted TA Report

		AM Peak		PM Peak		
Arm	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
	•	202	23 Baseline		-	
Colchester Rd	0.3	4.47	0.22	0.4	5.03	0.26
Tuddenham Rd (NB)	5.4	19.96	0.85	4.9	18.45	0.83
Valley Rd	0.4	6.33	0.28	0.5	6.76	0.34
Tuddenham Rd (SB)	3.1	13.40	0.76	5.2	21.12	0.84
		202	26 Baseline			
Colchester Rd	0.3	4.64	0.23	0.4	5.24	0.28
Tuddenham Rd (NB)	7.4	26.32	0.89	7.4	26.35	0.88
Valley Rd	0.4	6.63	0.29	0.6	7.24	0.36
Tuddenham Rd (SB)	4.0	16.22	0.80	7.0	27.41	0.88
	20	26 Baseline + Devel	opment (160 units c	ompleted)		
Colchester Rd	0.3	4.77	0.25	0.4	5.31	0.28
Tuddenham Rd (NB)	8.0	28.41	0.89	7.6	27.25	0.89
Valley Rd	0.4	6.77	0.30	0.6	7.32	0.36
Tuddenham Rd (SB)	4.1	16.71	0.81	7.9	30.66	0.89
	20	26 Baseline + Devel	opment (200 units c	ompleted)		
Colchester Rd	0.3	4.79	0.25	0.4	5.33	0.29
Tuddenham Rd (NB)	8.1	28.86	0.89	7.7	27.57	0.89
Valley Rd	0.4	6.79	0.30	0.6	7.35	0.36
Tuddenham Rd (SB)	4.1	16.79	0.81	8.2	31.69	0.90

Table TP-4.8: A1214 Colchester Road / Valley Road / Tuddenham Road Roundabout (Continued)

		AM Peak			PM Peak	
Arm	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
		203	2 Baseline			
Colchester Rd	0.4	5.19	0.26	0.4	5.93	0.31
Tuddenham Rd (NB)	24.4	80.44	0.97	87.8	260.64	1.04
Valley Rd	0.5	7.49	0.33	0.7	8.76	0.42
Tuddenham Rd (SB)	9.8	36.15	0.91	45.8	155.33	1.01
		2032 Basel	ine + Development			
Colchester Rd	0.5	5.88	0.35	0.5	6.11	0.35
Tuddenham Rd (NB)	51.0	162.93	1.01	115.2	343.47	1.06
Valley Rd	0.5	8.06	0.35	0.7	9.11	0.43
Tuddenham Rd (SB)	12.9	46.97	0.94	117.6	373.90	1.07

Table TP-4.9: A1214 Colchester Road / Valley Road / Tuddenham Road Roundabout "Sensitivity Test" extracted from the submitted TA Report

	AM Peak				PM Peak	
Arm	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
		203	2 Baseline			
Colchester Rd	0.4	5.23	0.26	0.5	6.07	0.32
Tuddenham Rd (NB)	23.1	76.28	0.97	83.6	248.47	1.04
Valley Rd	0.4	6.11	0.29	0.6	6.95	0.36
Tuddenham Rd (SB)	2.7	9.79	0.73	4.1	13.83	0.81
		2032 Basel	ine + Development			
Colchester Rd	0.5	5.93	0.35	0.6	6.53	0.36
Tuddenham Rd (NB)	47.5	152.27	1.01	110.6	329.55	1.06
Valley Rd	0.4	6.51	0.30	0.6	7.17	0.37
Tuddenham Rd (SB)	3.0	10.52	0.75	5.6	18.10	0.85



APPENDIX 7 JUNCTION CAPACITY ASSESSMENT RESULTS – USING SCTM MODELLED FLOWS

Table TP-4.15: Rushmere Road / A1214 Colchester Road (Roundabout) using SCTM model output traffic flows

		AM Peak			PM Peak	
Arm	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
		204	0 Baseline			
1 - Rushmere Rd (WB)	1.0	11.21	0.50	1.2	11.61	0.55
2 - A1214 (NB)	2.2	11.31	0.69	22.4	77.08	1.00
3 - Rushmere Rd (EB)	0.4	7.19	0.29	0.4	9.57	0.29
4 - A1214 (SB)	64.8	191.10	1.11	11.1	42.62	0.94
		2040 Baseli	ne + Development			
1 - Rushmere Rd (WB)	1.0	11.20	0.50	1.3	11.93	0.56
2 - A1214 (NB)	2.5	12.45	0.72	23.0	78.37	1.00
3 - Rushmere Rd (EB)	0.4	7.59	0.31	0.4	9.61	0.30
4 - A1214 (SB)	68.0	201.26	1.11	14.1	52.79	0.96

APPENDIX 8 RSK DRAWING 890695-RSK-ZZ-XX-DR-C-0002 COMPARISON





APPENDIX 9 RSK DRAWING 890695-RSK-ZZ-XX-DR-C-0003 COMPARISON





APPENDIX 10 RSK DRAWING 890695-RSK-ZZ-XX-DR-C-0004 COMPARISON





APPENDIX 11 RSK DRAWING 890695-RSK-ZZ-XX-DR-C-0005 COMPARISON







APPENDIX 12 ACCESSIBILTY ISOCHRONES

Walk Accessibility

- ✦ Site Location
- Bus Stops
- Railway Stations
- School Locations
- 👉 Convenience Stores
- 🛒 Supermarkets
- Post Offices
- ATMs
- + Pharmacies
- Dentists
- 🕂 GPs
- Hospitals

Meters

- 500 (c.5 Minutes)
- 1000 (c.10 Minutes)
- 2000 (c.30 Minutes)



Ipswich School Sports Ground

(+)

0

1 km







APPENDIX 13 OFFSITE ACTIVE TRAVEL INTERVENTION TABLES



Rushmere Hall Primary School

The table below shows the interventions that each party considers could be done to improve walking and cycling.

Road	Appellant "necessary" improvements	Appellant "desirable" improvements	SCC "necessary" improvements	SCC "desirable" improvements
Humber Doucy Lane	Safe crossing points from Parcel B to the west side of HDL. Safe crossing from	Tactile paving at crossing of PROW 48.		
	side of HDL			
Sidegate Lane		Tactile paving to existing crossing point on the south side of the junction of Inverness Road (Parcel B) Tactile paving to existing crossing point at the junction of Lanark Road (Parcel B) Replacing paving with tarmac on south side between Humber Doucy Ln and Lanark Rd		
Ayr Road	N/A	N/A		
Renfrew Road		Replacing paving with tarmac on north side between Ayr Road and Lanark Rd at St Christopher's Academy (Parcel C)		
Lanark Road		Tactile paving to the existing crossing points at junction of Renfrew Road (Parcel C)		



<u>Northgate High School</u> The table below shows the interventions that each party considers could be done to improve walking

and cycling

Road	Appellant "necessary" improvements	Appellant "desirable" improvements	SCC "necessary" improvements	SCC "desirable" improvements
Humber Doucy Lane	Safe crossing points from Parcel B to the west side of HDL.	Tactile paving at crossing of PROW 48.		
	Safe crossing from Parcel C to south side of HDL	Replacing paving with tarmac on south side between Sidegate Lane and Ayr Road (Parcel C)		
Sidegate Lane		Tactile paving to existing crossing point on at the junction of Lanark Road (Parcel B+C)		
		As Rushmere PS plus replacing paving with tarmac on south side between Lanark Road and junction of Sidegate Lane West (Parcel B+C)		



<u>Selkirk Road Neighbourhood Centre</u> The table below shows the interventions that each party considers could be done to improve walking and cycling.

Road	Appellant "necessary" improvements	Appellant "desirable" improvements	SCC "necessary" improvements	SCC "desirable" improvements
Humber Doucy Lane	Safe crossing points from Parcel B to the west side of HDL.	Tactile paving at crossing of PROW 48.		
	Safe crossing from Parcel C to south side of HDL	Tactile paving to existing crossing point on the junction of Sidegate Lane (Parcel B)		
		Replacing paving with tarmac on south side between Sidegate Lane and Ayr Road (Parcel B)		
Ayr Road		Tactile paving to the existing crossing points at Renfrew Road Junction (Parcel B+C)		
Renfrew Road		Tactile paving to the existing crossing points at junction of Fife Road and Selkirk Road (Parcel B+C)		
		Replacing paving with tarmac on west side between Ayr Road and Selkirk Road (Parcel B+C)		



Road	Appellant "necessary" improvements	Appellant "desirable" improvements	SCC "necessary" improvements	SCC "desirable" improvements
Roxburgh Road		Tactile paving to the existing crossing point at junction of HDL (Parcel C)		
		Dropped crossing and tactile paving at junction of Seven Cottages Lane		
		Replacing paving with tarmac on north side between HDL and Renfrew Road.		

Local Bus Stops on Humber Doucy Lane and Inverness Road The table below shows the interventions that each party considers could be done to improve walking and cycling.

Road	Appellant "necessary" improvements	Appellant "desirable" improvements	SCC "necessary" improvements	SCC "desirable" improvements
Humber Doucy Lane	Safe crossing points from Parcel B to the west side of HDL. Safe crossing from Parcel C to south side of HDL	Tactile paving at crossing of PROW 48.		