

# M5 Junction 10 Improvements Scheme

**Applicant Written Submissions of Oral Case for  
Issue Specific Hearing 1 (ISH1)**

**TR010063 – APP 9.31**

Regulation 5 (2) (q)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

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# Infrastructure Planning Planning Act 2008

## Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

### M5 Junction 10 Improvements Scheme Development Consent Order 202[x]

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#### Applicant Written Submission of Oral Case for Issue Specific Hearing 1 (ISH1)

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<b>Regulation Number:</b>	5 (2) (q)
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# 1. Introduction

- 1.1.1. The purpose of this document is to set out the Applicant's written summary of the oral case for Issue Specific Hearing 1 (ISH1) held on Wednesday 5 June 2024 in Cheltenham and virtually via Microsoft Teams.
- 1.1.2. This document does not propose to summarise the oral summaries of parties other than the Applicant, summaries of oral submissions made by other parties are only included where necessary in order to give context to the Applicant's summary.
- 1.1.3. Where the Examining Authority requested further information from the Applicant on particular matters, or the Applicant undertook to provide further information during the Hearing, the Applicant's response is set out.
- 1.1.4. This document follows the order of the Agenda published by the Examining Authority on Tuesday 28 May 2024.
- 1.1.5. For defined terms and abbreviations, please refer to Section 14 of the Introduction to the Application (APP-001).

## 1.2. Item 1 - Welcome, introductions and arrangements for the Hearing

- 1.2.1. Andrew Tait KC of Francis Taylor Building confirmed that he represents the Applicant and introduced the following members of the Applicant's project team, who would speak as required on the agenda items:
  - Douglas Haycock, Burges Salmon;
  - Tim Pearce, Planning Lead, AtkinsRéalis;
  - Colin Cartwright, Environment Lead, AtkinsRéalis
  - Mike Vaughan, Flood Risk Assessment Lead, AtkinsRéalis; and
  - Steve Katesmark, Transport Planning Lead, AtkinsRéalis
- 1.2.2. In response to a request from the Examining Authority for clarification on the site inspection for the Informal Traveller Site, the Applicant explained that the landowner of the Informal Traveller Site would be leaving the country for an undisclosed period in about a month's time. The Applicant noted that this could have implications for the Examining Authority's planned site inspection, for the purpose of viewing the environmental barrier adjacent to the highway. The Examining Authority noted that they would be content to visit the site whether it was occupied or unoccupied, since the main purpose of visiting the site would be to understand the relationship between the land and proposed environmental barrier adjacent to the highway. The Applicant agreed to instruct its land agents to discuss the matter in more detail once there is a clearer idea of the programme for the ASI.

### 1.3. Item 2 - Policy

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(i)	<p>The Applicant will be asked to explain the chronology of the events that have led to the development of local policy and how this proposal has responded to the policy development.</p> <p>The Applicant should highlight any part of the proposals which conflict with local policy or where they remain silent.</p>	<p>The Applicant began their submission by referring to the Joint Core Strategy (“JCS”), which was adopted in December 2017. The Applicant explained that as part of the JCS process, a large amount of transport evidence was produced and there were several iterations over the preparation and examination periods. In respect of the “do something” scenarios DS1 – DS7, the Applicant confirmed that there was a distinct change in the kind of solutions that were seen to address the needs of the allocated land within the plan from DS3A onwards. This was more prevalent from DS5 onwards. At DS6, the revised scenario tested that land use was in line with the proposals included in the main modifications document dated February 2017.. In this scenario, access was provided via M5 Junction 10 with a new distributor road linking into the site from the motorway. DS7, the final “do something” scenario, concluded that an all-movements junction at M5 Junction 10 was required to unlock all of the strategic allocations within the JCS. At the time, this did not include the unlocking of land that was safeguarded for development.</p> <p>The Applicant confirmed that the Scheme features in two policies within the JCS. SA1.7 seeks to ensure the implementation of the Infrastructure Delivery Plan for Gloucester and the provision of any other necessary infrastructure in accordance with Policies INF6 and INF7 of the JCS. SA1.8 links to the local transport plan and states that the transport strategy to support the delivery of Strategic Allocations should align with and where appropriate contribute to the wider transport strategy contained within the (Gloucester) Local Transport Plan. The Gloucester Local Transport Plan, at paragraph 4.2.31 (Central Severn Vale Strategic Vision to 2031), states that the Central Severn Vale Strategic Vision will require improvements to M5 Junction 10 and 11 to maintain the safe operation of the highway and that these improvements will also support the delivery of the North West and West Cheltenham strategic allocation as well as addressing traffic congestion issues on the A40 and A4019 corridors. The Applicant then referred to paragraph 4.1.12 of the JCS, which highlights the agreement across relevant partners of the M5 Junction 10 task group, that the upgrading of Junction 10 to an all-movements junction will support the economy of the JCS area and that of wider</p>

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		<p>Gloucestershire. It would support accelerated growth of the economy, enabling land to be delivered for mixed use including high value employment. The Applicant noted that this speaks to both the housing and employment need that the Scheme seeks to unlock.</p> <p>The Applicant also referred to the Golden Valley Development Supplementary Planning Document (adopted July 2020), which refers to allocation A7 within the JCS. The Applicant noted that paragraph 1.1.6 of the document speaks to connectivity as being key to maximise its potential, ensuring both direct access to the motorway and the effectiveness of the local highway network. It states that the M5 Junction 10 Scheme supports the strategic allocations at North West and West Cheltenham. Paragraph 1.1.11 notes that the Supplementary Planning Document and supplementary guidance helps coordinated development within the allocated sites and looks beyond the current JCS plan period of 2031.</p> <p>The Applicant then referred to the relevant Local Plans. The Cheltenham Plan (adopted July 2020) speaks to the distribution of key employment sites to the west of Cheltenham, noting that whilst Junction 10 is current constrained as a two-way junction, west Cheltenham stands to benefit from an all-movements junction and upgrading the junction provides significant economic growth opportunities by unlocking the potential of the additional land. The Tewkesbury Plan (adopted June 2022) states, at Chapter 10, the Local Transport Plan provides the overarching strategic context for transport in the area, and states that the Local Transport Plan contains the strategic policies and investment priorities for transport in relation to that plan. The Applicant referred to the Emerging Strategic and Local Plan, although in its early stages, there was an options consultation in January – March 2024. There were 6 scenarios proposed for the consultation, the Applicant’s interpretation is that only scenario 2, which relates to urban extensions, would be the only scenario that would meet both the housing and employment need the plan is seeking. The other scenarios, in respect of a pros and cons approach, would have the con of not fully meeting the needs that are being sought.</p> <p>The Applicant confirmed that there is no conflict between the Scheme and local policy. The Scheme is consistent and builds upon local policy. The local plans for</p>

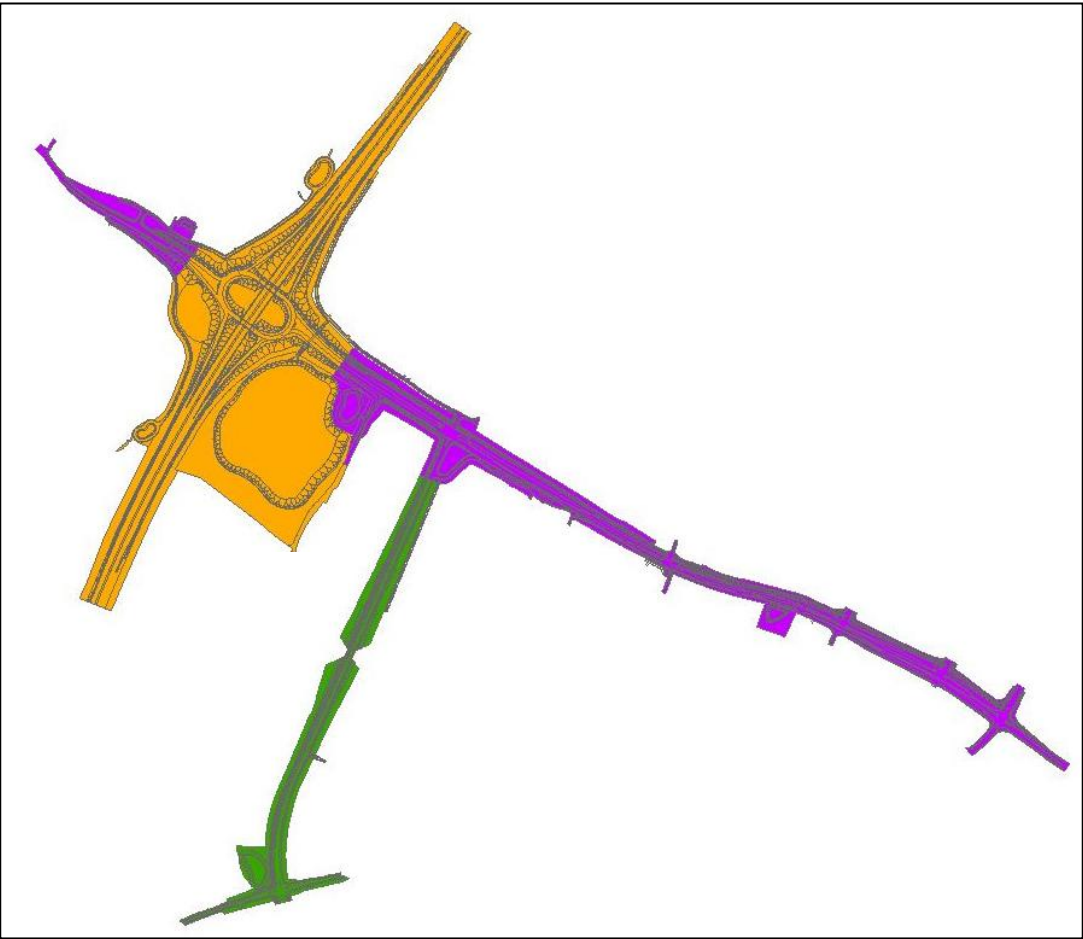
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		<p>some of the host authorities defer to the JCS which is the strong planning policy base for the Scheme and there is an interconnection with both the IDP and the Local Transport Plan.</p> <p>In response to a request by the Examining Authority for an example of a specific policy which supports the West Cheltenham Link Road and the A4019 dualling, the Applicant explained that the Local Transport Plan, at Table CPS 1A (Central Severn Vale – Highway Scheme priorities up to 2031) includes M5 Junction 10 all movements junction and link road as the main priority highway Scheme to support CPS 1. The Applicant explained that the widening of the A4019 is directly linked to the M5 Junction 10 improvements and link road and the increased traffic throughput they will create in both directions along the A4019. This increased traffic throughput necessitates the improvements beyond those outlined by the developers for Site Allocation A4.</p> <p>In response to the Examining Authority’s comment that INF 7 is not mentioned at Appendix A of the Planning Statement, the Applicant confirmed that they would update the document to include reference to INF 7.</p>
	<p>Action Point: The Applicant can confirm that INF7 is now included in Appendix A of the Planning Statement.</p>	
(ii)	<p>The Applicant should explain the alignment of the proposals with the National Policy Statement for National Networks (NPSNN) and the strategic need to improve the National Road Network.</p>	<p>The Applicant explained that both the national and local elements of the Scheme should be judged by the same tests in the NPSNN, because they are either NSIP or associated development. The Applicant noted that paragraph 11 of the associated development guidance by DCLG 2013 makes it clear that the impacts of all relevant development are to be assessed, including any associated development, and it isn’t suggested that there is any lesser/different policy test or assessment in relation to a pure motorway improvement and the local elements that relate to it. The Applicant confirmed this does not apply to the standards of design which apply to a local road network when compared to a national highway, where different guidance may apply.</p> <p>The representatives for Bloor Homes Limited and Persimmon Homes Limited, made oral submissions regarding their interpretation of the JCS policy to the effect</p>

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		<p>that they disagree that the M5 Junction 10 improvements are required for the allocations A4, A7 and the safeguarded land to come forward. The Applicant submitted that the developer’s written or oral submission do not deal with important parts of the policy framework, such as SA1 points 7 and 8. For example, SA1.8 provides that the delivery of Strategic Allocations should align with and where appropriate contribute to the wider transport strategy contained within the Local Transport Plan. Likewise SA1.7, relating to the IDP which includes the M5 Junction 10 proposal, must engage with the relevant infrastructure regulators and providers to ensure the implementation of the IDP and the provision of any other necessary infrastructure in accordance with Policies INF6 and INF7.</p>
(iii)	<p>The Applicant will be asked to provide an explanation of whether there is a distinction between the national and local highway elements of the Scheme in policy terms.</p>	<p>The Examining Authority requested the Applicant’s position on whether the dualling of the A4019 or West Cheltenham Link Road would be NSIPs in their own right in absence of the M5 Junction 10 improvements. The Applicant explained that, following a number of precedents, it has not drawn a sharp line between what is the NSIP and what is the associated development in Schedule 1 of the DCO. The Applicant explained this is commonplace and there is no requirement to do so in law or guidance. All the works in Schedule 1 are either NSIP or associated development and if consent were to be granted there would be no distinction in law between the two. The M5 Junction 10 improvements are required to be an NSIP under section 22 of the Planning Act 2008 and other highway works are capable of being associated development, the annex to the guidance, although expressly stated to be non-exhaustive, includes other highway related works as an example in relation to the generality of access.</p>
(iv)	<p>The Applicant will be invited to explain how the proposed development meets the tests set out in the Department for Communities and Local Government Guidance on associated development applications for major infrastructure projects 2013.</p>	<p>The Applicant explained that both the North West Cheltenham allocation (A4) and the West Cheltenham allocation (A7) require the upgrade of M5 Junction 10 which lies at the heart of the proposals. When M5 Junction 10 is improved, the A4019 must also be improved to deal with the induced traffic from the M5 Junction 10 improvements and also to deal with developments from the North West Cheltenham site. The M5 Junction 10 improvements are required irrespective of the developer’s current proposals in relation to improvements to the A4019 contained as part of their as yet undetermined 2016 planning application. As to the Link Road, the West Cheltenham site cannot be released without M5 Junction 10</p>




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		<p>improvement and the Link Road to connect to the M5 Junction 10 improvement and therefore there is a close interdependence.</p> <p>The Applicant set out that it considered that there are three main relevant principles set out in the DCLG 2013 Guidance when considering whether development should be treated as associated development:</p> <ul style="list-style-type: none"> <li>a. There should be a direct relationship, in that associated development should either support the construction, operation or address the principal development impacts</li> <li>b. Associated development should not be an aim in itself but should be subordinate</li> <li>c. Associated development should be proportionate to the nature and scale of the principal development.</li> </ul> <p>Making reference to the DCLG guidance, the Applicant confirmed that for test 1 on associated development, the purposes of the two local roads are directly related to the objectives of the M5 Scheme, as a growth led Scheme, to unlock development potential. For test 2, the elements are subordinate to the main purpose. Here, the guidance is intended to prevent some separate purpose for the other elements, it must be integrated part of that main purpose. Whether the development is proportionate in scale is a matter for planning judgement. The Applicant confirmed that a view can be reached both in relation to impacts and geographical scope and suggested that the other elements are proportionate in relation to the key works for the improvement of M5 Junction 10.</p> <p>The Examining Authority invited the Applicant to provide clarity on the test of proportionality given the possibility that, when viewed in terms of tarmac and scale of infrastructure, the proportions of the local infrastructure may be larger than the key works to the interchange. The Applicant confirmed that in relation to built infrastructure, one issue can be whether the flood compensation works, which take up a large area, are part of the NSIP or not. The Applicant confirmed that the issue of where the boundary is drawn is sometimes debated in DCOs and so the</p>

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		<p>Applicant has not tried to draw a boundary. A geographical approach will draw you into those difficulties. A purposive approach to proportionality is more straightforward in this case given the subordination to the main purpose.</p> <p>In response to the Examining Authority’s summary that the Applicant’s position is that it is local road infrastructure which is proportionate because it is subordinate to the national strategic road infrastructure, the Applicant confirmed it is also subordinate to the overriding purpose at the heart of the M5 Junction 10 improvement to unlock development. The Applicant reiterated that the underlying purpose of the DCLG guidance is to guard against other non-related purposes.</p>
	<p>Action Point 7 and 8:</p> <p>In addition to the Applicant’s position regarding the interpretation of the term “proportionate” which is that both a purposive and geographical interpretation could be used but it is that “purposive” interpretation that goes to the heart of the intention of the guidance, which is to protect against other associated proposals being introduced into an NSIP, the Applicant can provide the below figures, which provide an estimate over the extents of each element of the Scheme relative to the SRN which might allow the ExA to take a view as to the proportionality in geographical terms of the elements of the Scheme. It should be noted that the DCLG Guidance does not speak directly of geographical proportionality and so to the extent that this is relevant to the assessment of whether development is associated development or not, it must be balanced against the overall aims of the development which the Applicant set out in the Hearings are directly related and subordinate, in accordance with guidance.</p>	

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		<p>The areas taken by the physical works for each of the three elements of the Scheme (M5 Junction 10, Link Road and A4019) has been calculated from the above figure.:</p> <ul style="list-style-type: none"> <li>• Orange – M5 Junction 10, including the flood storage area as this is required in part as flood compensation for the new slip roads for Junction 10 within existing floodplain. 49.9 hectares.</li> <li>• Green – Link Road. 10.9 hectares. This includes the works on the B4634 to tie in the Link Road to this B-road.</li> <li>• Purple – A4019. 25.02 hectares.</li> </ul> <p>With regards to the existing road network that has been altered as part of the Scheme, the relationship between the area of the road network categorised as SRN, and the roads categorised as local roads is presented in the figure below.</p>

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	 <ul style="list-style-type: none"><li data-bbox="376 1299 815 1326">• Blue – the SRN – 17.14 hectares</li></ul>	

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	<ul style="list-style-type: none"> <li>Bright green – local roads – 12.81 hectares</li> </ul>	
(v)	<p>The Applicant should explain how the cited 5 Scheme objectives relate to the requirements of the NPSNN.</p>	<p>The Applicant worked through each objective and referred to relevant paragraphs from the NPSNN as follows:</p> <ul style="list-style-type: none"> <li>Support economic growth and facilitate growth in jobs and housing by providing improved transport network connections in west and north-west Cheltenham - paragraph 2.2, 2.6, 2.9 and 2.22.</li> <li>Enhance the transport network in the west and north-west of Cheltenham area with the resilience to meet current and future needs – paragraph 2.23 and 4.32 and the first row of table 1 (Options for addressing need).</li> <li>Improve the connectivity between the Strategic Road Network (Strategic Road Network) and the local transport network in west and north-west Cheltenham – paragraph 5.2.11.</li> <li>Deliver a package of measures which is in keeping with the local environment, establishes biodiversity net gain and meets climate change requirements – paragraph 3.2 to 3.5.</li> <li>Provide safe access to services for the local community, including for users of sustainable transport modes within and to west and north-west Cheltenham – paragraph 2.2, 2.6, 2.9 and 3.15 to 3.20.</li> </ul> <p>The Examining Authority requested a signposting document to explain how the Scheme meets the 5 objectives and how they align with the NSPNN, which the Applicant agreed to provide. Post Hearing note: the signposting document submitted in response to Action Point 3 (below) develops the Applicant’s position further providing additional references to those stated orally.</p>
	<p>Action Point 3: The Applicant has now provided a signposting document in response to the Examining Authority’s request – see Appendix B to this document in response to Action Point 3 which sets out the 5 scheme objectives and how the scheme meets the 5 objectives and aligns</p>	

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	with NN NPS 2014. Also see updated Appendix B and C of the Planning Statement and NN NPS Accordance Table submitted at Deadline 1 (TR010063/APP/7.1) as requested in ISH1.	
(vi)	<p>The Applicant will be asked whether the newly designated NPS NN has important and relevant considerations for the ExA to consider.</p>	<p>The Applicant explained that the Secretary of State, at paragraph 16 of the M3 Junction 9 decision, set out that in the context of that case neither the draft revised NPS nor revised NPS supports a different outcome and didn’t give either any material weight. The Applicant suggests that neither would support a different outcome in the present case. The Applicant recognised that there are some updates to reflect the Stonehenge judgment and in relation to climate change (at paragraph 5.38).</p> <p>The Applicant confirmed that there are some changes that reinforce the position taken by the 2014 NPSNN. In particular, paragraphs 3.8, 3.16 and 3.46 of the New NPS. Drivers of growth, resilience of networks and the wider policy objectives are reinforced on top of the 2014 version. The Applicant’s position is strengthened over and above the 2014 NPS in relation to paragraphs 3.9, 3.16, 3.31, 3.42, and 4.78.</p>
(vii)	<p><b>Court Decision: Friends of the Earth and Ors v SSDESNZ 3 May 2024</b> Neutral Citation Number: [2024] EWHC 995 (Admin)</p> <p>The Applicant will be invited to address any issues that may arise as a consequence of the recent court judgement, and whether this has any M5 Junction 10 Improvement Project Issue Specific Hearing 1 implications for the Proposed Development, or the information provided to date in the ES.</p> <p>The Applicant will also be asked to address the recent Written Ministerial Statement of the 24 May regarding the 6th Carbon Budget.</p>	<p>The Applicant confirmed that there are no implications. The judgment was concerned with the process of the adoption of the Carbon Budget Delivery plan and the government has been given a year to produce a revised carbon budget decision plan. The M3 Junction 9 decision, of the Secretary of State on 16 May 2024, took account of the judgement (at paragraph 84) noting the successful challenge to the CBDP and that the government is required to produce a CBDP within the next 12 months. The Applicant read out the Secretary of States decision letter which states “The Secretary of State has no reason to consider that the Proposed Development will hinder delivery of the current Net Zero Strategy or any updated strategy. [...] that consenting the Proposed Development will not affect the delivery of the Net Zero Strategy, or net zero in principle, nor will it have a material impact on the ability to meet the national targets, including 5CB (and overachievement in the Net Zero Strategy) or 6CB”. This has been taken into account in the context of NPS policy, the approach of the Courts and the Secretary of State’s various decisions on DCOs applying that policy.</p>

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		<p>The Applicant reiterated that the judgment doesn’t alter the test in the NPS, the test remains from the NPS as applied in the Climate Chapter of the Environmental Statement. The new NPS makes clear at paragraph 5.38 that, having referred to section 13 and the government’s duty to meet UK carbon budgets at the macro level, it would not be feasible or sensible for such an assessment to be done at the time of taking individual development decisions, and there is no legal requirement to do so. That is consistent with the approach of the courts in relation to various DCOs and other infrastructure decisions. The government’s duty to produce a revised CBDP does not require any different approach to individual development decisions and the test remains in the NPS as further articulated in the new NPS.</p> <p>The Applicant confirmed that the answer would be the same in relation to the final point of this agenda item. The Written Ministerial Statement of 24 May reiterates the commitment to the existing CB6 requirements and how the government meets that at a macro level does not require any different approach to individual decisions in the DCOs.</p>
(viii)	<p>The Applicant will be asked whether the latest iteration of the NPPF raises any important relevant considerations the ExA should be aware of.</p>	<p>The Applicant confirmed that the latest version of the NPPF does not alter the fundamental framework or the importance of the delivery of much needed housing and employment opportunities, particularly in respect of paragraph 60. There is a reinforcement of the message that supply of homes is an important factor in local plan making and decision making, which is one of the main purposes of the Scheme.</p> <p>In relation to comments by National Highways regarding differences between the current NPSNN and the new NPSNN, the Applicant confirmed that it is updating Appendix C of the Planning Statement.</p>
	<p>Action Point 3: The Applicant has now updated Appendix C of the Planning Statement (TR010063/APP/7.1 – Rev 1)</p>	

**Green Belt – Green Belt Assessment**



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(i)	<p>The Applicant will be asked to provide an explanation upon their approach to how the Proposed Development accords with the specific tests of Green Belt policy, and to understand if there are any differences between the Councils and the Applicant with regard to the approach and conclusions reached.</p> <p>The ExA will examine the approach taken by the Applicant and how their case has been presented and conclusions reached within the ES and Planning Statement [APP-135]</p>	<p>The Applicant explained that paragraph 1.55 of the NPPF outlines the forms of developments that are not inappropriate in the Green Belt provided they preserve its openness and do not conflict with the purposes of including land within it. In relation to the Junction improvements and A4019, as pre-existing highways infrastructure and following options appraisals, the location of those elements within the Green Belt were restricted in a geographical location and so the need to improve in that location was relatively fixed. In terms of the Link Road, there is a clear policy need for the allocation that is geographically constrained to its location to link to the strategic road network. Options appraisals were undertaken in respect of the location of the link road, the options were narrowed down into options within the Green Belt, and the one which was eventually chosen was the least impactful on that basis. The Applicant submitted that, from an NPPF perspective, it is local transport infrastructure which has a demonstrable requirement for its Green Belt location.</p> <p>In response to the Examining Authority’s comment that the Green Belt Assessment (paragraph 6.7.28) describes the Scheme as predominantly engineering operations and its query about the parts of the Scheme that are not “engineering operations”, the Applicant noted this comment largely relates to landscape requirements, but it would be considered further.</p> <p>In response to the Examining Authority’s query about the proportion of development which is taking place on existing highway land and the extent to which each element of the Scheme will be within the Green Belt, the Applicant confirmed that they would respond to the Examining Authority in writing.</p>
(ii)	<p>The Applicant will be asked to provide evidence of other examples of road Schemes delivered through the DCO process where the proposed development has been considered to be not inappropriate development in the Green Belt?</p>	<p>The Examining Authority’s raised a query about whether the Green Belt test can apply where the Scheme is part of a national road Scheme. The Applicant confirmed that there are examples of DCOs which have construed “local” in the context that the specific objectives and benefits may be local even though the network is national. The Applicant drew attention to the conclusions reached in the A19 A104 Testos Junction DCO and confirmed there is no reason why, in the</p>

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		<p>context of policy, that one cannot regard local transport infrastructure as an NSIP. The Applicant noted that there have been 5 DCOs between 2013 and 2023 which concluded that they were not inappropriate development in the Green Belt, in addition to the CPO for the South Bristol Link Road and the Morpeth Northern Bypass DCO which dealt with proposed Greenbelt.</p>
	<p>Details of six large-scale road infrastructure DCOs, and one CPO, which have been found not to be inappropriate development within the Green Belt are presented in Appendices 1-7 of Appendix A to this document (Technical Note: Inappropriate Development in the Green Belt).</p>	
(iii)	<p>The Applicant will be asked whether the Proposed Development may be inappropriate development within the meaning of Green Belt policy and if this were to be the case the implications that would arise.</p>	<p>The Applicant does not consider the development to be inappropriate within the meaning of Green Belt policy but it explained that there would not be implications for the Scheme as consideration has been given to the impacts on Green Belt, particularly in terms of character area assessments and landscape character assessments.</p>
(iv)	<p>If the Proposed Development (or any part of it) may be inappropriate development are there special circumstances that exist which may mean that the harm by reason of inappropriateness and any other harm, is outweighed by other considerations</p>	<p>The Applicant explained that the approach can be found in the Planning Statement. Paragraph 5.178 of the NPSNN provides that The Secretary of State will need to assess whether there are very special circumstances to justify inappropriate development. Very special circumstances will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm, is clearly outweighed by other considerations. Paragraph 171 provides that linear infrastructure linking an area near a Green Belt with other locations will often have to pass through Green Belt land, and there will need to be the identification of a policy need for the linear infrastructure. The Applicant submitted that there is an identifiable policy need addressed under other Agenda items, and there is in particular a policy need for the Link Road in that location to serve allocation A7, which is geographically constrained.</p>
(v)	<p>Effects on openness: geographical considerations</p> <p>Having regard to the different component parts of the project to understand from the Councils and the Applicant</p>	<p>The Applicant referred to the assessment and consideration of openness at the LVIA Chapter [APP068] and the effects on landscape character. The Applicant explained that the effects of the Scheme on the landscape character have been assessed against the characteristics of the landscape at a local level, namely</p>

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	<p>whether there are particular locations within the Green Belt where the effects on openness would be particularly pronounced, and conversely whether there are locations where effects on openness would be avoided or at the lower end of the harm scale.</p>	<p>landscape character area SV6B (which covers the whole of the Scheme) and the more local JCS landscape character areas. Landscape character area SV6B, describes an open landscape with, for example, intermitted small ridges, hillocks and undulations, an undulating land form that encloses views in some areas whilst in other areas there are distant views beyond the vale landscape towards the Cotswolds Escarpment, woodland being limited to a few small copses, and the M5 motorway forming a spine through the area, often screened by adjacent embankments, but also filtered views towards the motorway from that surrounding landscape. The Applicant explained that the landscape design for the Scheme has sought to fit in with the landscape character, replacing woodland and scrub along the M5 and around the new junction to reinstate the screening effect and integrate the new development back into the landscape. A similar approach along the A4019 and the Link Road aims to embed the infrastructure works back into the landscape. For example, along the Link Road the landscape design provides for hedgerows and supplementary blocks of woodland and individual trees with the aim of reflecting the local character of the area. The typical characteristics of landscape character area SV6B are assessed as retained and potentially enhanced by the landscape design of the Scheme, with the M5 becoming more embedded in the landscape through the additional planting, hedgerows being infilled and new habitats being created. It is considered there will be a negligible beneficial effect on the landscape character area SV6B. The LVIA chapter considers that, in the long term, the Scheme would sit comfortably within the landscape, potentially providing enhancement of the environment and sense of place.</p> <p>The Applicant explained that, in relation to the effects of the Scheme on Green Belt, specific consideration is made of the Link Road on the Green Belt as a new infrastructure element of the Scheme which is wholly within the Green Belt. Whilst the Junction and A4019 are within the Green Belt, the works consist of changes to existing infrastructure. In respect of the Link Road and openness on the Link Road, the LVIA chapter (APP-068, paragraph 9.11.26) concludes what whilst it is a new feature in the landscape, it is not considered that it would significantly reduce the feeling of openness in the area. The proposed planting would embed the road whilst allowing filtered views through and across the Link Road. As an overall conclusion on openness, the LVIA assessment has assessed the Scheme against</p>

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	<p>The Applicant would further add that with regards the to the Link Road and the effects on openness of the Link Road within the Green Belt, the LVIA chapter (APP-068, paragraph 9.11.26) concludes that whilst the Link Road is a new feature in the landscape, it is not anticipated that it would significantly reduce the feeling of openness in the area. The proposed planting described above would visually integrate and break the line of the new Link Road, embedding it into the existing pattern of open views broken by intermittent mature vegetation, allowing filtered views through and across the Link Road. In addition, it sits within the context of the existing M5 infrastructure to its west. The LVIA chapter (para 9.11.27) concludes as the proposed landscape mitigation measures gradually fulfil their function, and certainly by year 15, it is anticipated that the Scheme could provide overall Beneficial effects on the landscape character.</p> <p><b>ISH1.7 - To prepare a note relating to the Scheme’s impact on the Green Belt and particularly its openness. The Examining Authority referred to the River Chelt bridge and the junction near Old Gloucester Road (B4634) in particular.</b></p> <p>These details are presented in Section 5 of the Technical Note attached as Appendix A to this document.</p>	<p>the landscape character of the area in which it is situated and has concluded an overall beneficial effect on landscape character and therefore no impact on openness.</p> <p>The Examining Authority noted queries regarding the effects of the raised area over the River Chelt, the junction near the old Gloucester Road and views in all directions, which the Applicant agreed to address in a more detailed response.</p>
(vi)	<p>In light of the policy within the NPSNN at paragraph 5.171 whether there are any additional policy elements which the ExA should take into consideration</p>	<p>The Applicant explained that the basis of the Scheme is the JCS, which identifies the need for the M5 all-movements junction as well as Policy SA1 and the other policy documents which speak to the Link Road specifically. The site allocation at A7 is defined by the JCS and is geographically fixed, therefore the options open to the Scheme to connect the site allocation to the strategic road network are limited. The Applicant went through varying route proposals before settling on the Scheme. The Applicant believes the current Scheme location, in terms of the junction at the A4019 and the Link Road are the only options available with some of the other options having significantly more impact on the Green Belt itself.</p>

## 1.4. Item 3 - Need

### 1.4.1. To obtain an understanding on the assessment of need for each element of the Proposed Development

Agenda Reference	Examining Authority Agenda Item	Applicant’s summary of oral submission
(i)	<p>The Applicant will be asked to explain the need for all of the Scheme components to form one NSIP Proposal.</p>	<p>The Applicant confirmed that the Scheme objectives, particularly 1 to 3, all focus on the required improvements to the road network in North West and West Cheltenham to facilitate the associated allocations. The Applicant submitted that it is not possible to separate out the separate Scheme elements because they are all interlinked for the purpose of meeting those objectives and it is not possible to deliver the Scheme objectives without all three. The Applicant also drew reference to paragraph 3.42 of the revised NPS, which provides that “there are interdependencies between the efficient operation of the SRN and its impact on the local road network and vice versa. Effective operation and optimisation of both the SRN and the local road network are essential to achieve the outcomes set by the Transport Decarbonisation Plan.” There is also reference in paragraph 3.31 as to that interdependence about improving the overall performance of local roads network as well as the SRN.</p>
(ii)	<p>The Applicant will be asked to explain how the Scheme design process determined the need for each of the 3 main components of the Scheme. It would be helpful if this makes reference to any trigger points (traffic generations or levels of capacity and delay) which inform this.</p> <p>Furthermore, the Applicant should clearly explain the need for the proposals (and individual components) and the specific associated future land use proposals, including the safeguarded land or land allocations within the Joint Core Strategy.</p>	<p>The Applicant noted that there is some subjectivity as to what is viewed as an acceptable level of impact; however, in respect of the Scheme, there were clear thresholds in the Traffic Forecasting Report produced for the HIF application which supported the Outline Business Case for HIF funding. The report set out specific criteria regarding changes in queue length and demand to capacity ratios etc. This was looked at for modelling for the scenario with dependent development but without the Scheme, it looked at the impact on the road network and determined the trigger points in terms of the need for the Scheme, proportions of deadweight and dependent development and the capacity uplift required. The process of designing the Scheme is iterative in combination with the traffic modelling. The Scheme is not a highway improvement scheme as such and is only required to provide sufficient uplift in capacity to accommodate the additional traffic generated</p>

Agenda Reference	Examining Authority Agenda Item	Applicant’s summary of oral submission
		<p>by the JCS developments. The starting point for the Scheme was to ensure the performance of the wider road network would not be negatively impacted, compared to the situation without the Scheme and without the dependent development. The Applicant confirmed that within the Scheme boundaries, all junctions and components of the Scheme are designed to operate within practical capacity (approximately less than 90% demand to capacity) accounting for all the dependent development.</p> <p>The Applicant agreed to submit the Traffic Forecasting Report produced for the HIF Outline Business Case to the examination.</p> <p>In response to the Examining Authority’s request for clarification on the requirement of the Scheme to provide nil detriment, the Applicant explained that the Scheme isn’t designed to resolve problems within the wider road network, but it will improve the situation within the Scheme itself significantly (for instance queues on slip roads from the M5). The Examining Authority followed up with a question about the policy justification for providing nil detriment. The Applicant confirmed that it is not explicitly policy, but the objectives of the JCS Transport Strategy, specifically - <i>"Provide an efficient, safe and resilient transport network which enables the delivery of residential and employment growth by minimising its impacts on the transport network."</i> implies nil-detriment. The Examining Authority followed up with a further query about benchmarks. The Applicant confirmed that the JCS policy establishes the need for an all-movements junction at Junction 10 and the Link Road, with the widening and duelling of the A4019 being required as part of the overall scheme to ensure there is no backing up onto the motorway from the local road network. The DCO Scheme takes the policy and moves the design forward to achieve the policy aims, including the key components that are required. There was then an iterative process in terms of the design, which looked at optimising that design to achieve the outcomes. For example, roundabout junctions were initially considered, but modelling showed these were over capacity and therefore changed to signal controlled junctions, and the link road was initially designed as a dual carriageway which was deemed to be unnecessary and it was reduced to a single carriageway.</p>

Agenda Reference	Examining Authority Agenda Item	Applicant’s summary of oral submission
		<p>It was agreed that the Applicant would provide the HIF Traffic Forecasting Report and would provide a written response on operational thresholds and the NPS.</p> <p>In response to National Highways’ comments on the traffic modelling, the Applicant confirmed that there is extensive dialogue taking place between the parties.</p> <p>In response to the comments of Bloor Homes Limited and Persimmon Homes Limited concerning the design of the Scheme to include development beyond the JCS allocations, the Applicant confirmed that the point around safeguarded land will be considered later. However, the Scheme is not just looking to the JCS, but also growth beyond that when the planning period under the JCS ends in 2031. The Applicant also confirmed that the modelling shows that a scenario without any highway improvements, but with dependent developments, does result in a severe impact on the highway network and there is a need to address that.</p>
	<p>Action Point 11</p> <p>The Housing Infrastructure Fund (HIF) Outline Business Case (OBC) Traffic Forecasting Report (TFR) for the Scheme, appended as Appendix C to this document, describes the methodologies and tools adopted to generate traffic forecasts and determine the scheme-dependent sites used to support the scheme development. It provides details of the assumptions used in the forecasting process and scheme-dependency assessment and presents the traffic forecasts required for economic assessment. One of its key aims is to demonstrate that the procedures adopted in producing the forecasts are consistent with good practice and the advice given by the Department for Transport (DfT) in Transport Analysis Guidance (TAG) and within the Design Manual for Roads and Bridges (DMRB).</p> <p>Section 4 of this report describes the approach to determining scheme dependency. Section 6 determines scheme dependency, with Section 10 providing the summary and conclusions.</p> <p>The impact analysis undertaken in the HIF TFR considers the aggregate impact of all JCS sites that are not under construction. The procedure used to determine network locations requiring mitigation involves comparing the network with potential dependent development to that with no dependent development to gauge network performance and identify areas operating at a reasonable level of service, namely:</p> <ul style="list-style-type: none"> <li>• Link and Junction Stress &gt;90% and a flow increase &gt;10%.</li> </ul>	

Agenda Reference	Examining Authority Agenda Item	Applicant’s summary of oral submission
		<p>For points on the network beyond this initial threshold, a significance indicator was introduced in order to assess the severity of impacts. The rationale being the full impacts of JCS won’t be mitigated by a single network improvement. The indicators are as follows:</p> <ul style="list-style-type: none"> <li>• Level One (slight): Stress &gt;90% to &lt;100% and flow increase &gt;10% to &lt;=20%;</li> <li>• Level Two (moderate): Stress &gt;90% to &lt;100 and flow increase &gt;20% or Stress &gt;100% and flow increase &lt;10% to &lt;=20%; and</li> <li>• Level Three (severe): Stress &gt;100% and flow increase &gt;20%</li> </ul> <p>The subsequent quantification of ‘scheme-dependent’ development includes just the sites that cause ‘Level Three’ impacts (i.e. Stress &gt;100% and flow increase &gt;20%). These are the congestion pinch points where impacts are the most severe. Thus, the procedure used to assess/calculate for dependency is as follows:</p> <ul style="list-style-type: none"> <li>• Undertake an analysis on each Level 3 (most severe) congestion hotspot to identify:             <ul style="list-style-type: none"> <li>○ The proportion of total flow contributed by the JCS developments;</li> <li>○ The individual JCS sites that contribute to the impact; and</li> <li>○ What proportion of JCS flow is contributed by each site.</li> </ul> </li> <li>• Apply a ‘critical mass’ threshold of &gt;10% flow contributed by an individual site. This is to screen out sites that do not constitute a substantive impact on the most severe hot spots;</li> <li>• Calculate dependent development by:             <ul style="list-style-type: none"> <li>○ Analysing the scenario to determine what level of flow would need to be removed before the impacted areas are likely to operate within their acceptable level of service (LoS) threshold;</li> <li>○ Apportion the flow reduction between the remaining developments equitably based on their contribution to the impact; and</li> <li>○ Set the individual site required flow reduction against the total flow reduction to determine the proportion of development that is dependent and the proportion that could reasonably go ahead (Deadweight).</li> </ul> </li> </ul>



Agenda Reference	Examining Authority Agenda Item	Applicant’s summary of oral submission
		<p>The results clearly demonstrate that of the sites considered, NW Cheltenham (strategic allocation and safeguarded) and W Cheltenham (strategic allocation and safeguarded) are those which are dependent on the M5 Junction 10 Improvements Scheme to fully unlock their development. The sites are predicted to generate traffic beyond that which the current, most severe, pinch points on the transport network can accommodate. As such, any planning consent sought for each would need to be conditioned on the introduction of the proposed scheme, before housing could exceed the deadweight numbers. Also see the Applicant’s response below under Action Point 13.</p> <p>The Scheme has not been designed to cater for unconstrained traffic growth for the following reasons. The Scheme model has taken into account “near certain” and “more than likely” development to account for known drivers of forecast increases in traffic growth. The Scheme model also accounts for an assumption for traffic growth using TEMPRO which assumes a level of growth across the whole model in accordance with TAG. Also in accordance with TAG, traffic growth in the model is constrained, or capped, to the TEMPRO growth factors and therefore the forecast demand constitute unconstrained traffic growth. There is an element of TEMPRO which could be said to be “predict and provide” since it is based on forecast changes in demographics, such as population growth, economic growth, changes in car ownership, etc. Given that it is part of the requirements of TAG, the Applicant considers it entirely appropriate for the traffic modelling to determine forecast traffic growth based on a combination of TEMPRO and forecast site specific traffic generation. The safeguarded land has also been included in the model, but where this has been done overall traffic demand has been adjusted to ensure that net growth is constrained to the TEMPRO growth factor. The Applicant considers it entirely reasonable to explicitly include growth in the targeted area of safeguarded land as the Scheme needs to ensure that it can mitigate the localised effects of growth due to the JCS dependant development which is reasonably likely to happen up to its design year (2042).</p> <p>As well as ensuring that the growth factors in the model are sufficiently curtailed in accordance with TAG, the Applicant also considers that ensuring the Scheme isn’t designing for “unconstrained traffic growth”. The overall JCS Transport Strategy has sought to alleviate traffic growth by providing for modal alternatives. Committed schemes providing modal alternatives have been included in the model and so the model has accounted for any benefit they might bring, such as the extension of Arle Court Park &amp; Interchange Hub. The Scheme incorporates a bus lane on the A4019, to cater for improved public transport provision, and a substantially improved and coherent network of facilities for active modes of transport, i.e., pedestrians and cyclists. Consequently, it facilitates increased travel demand by alternatives to the private car, in addition to providing additional road capacity, to enable delivery of the JCS developments in accordance with the JSC Transport Strategy. Within its limits, the Scheme has been optimally designed to operate within practical capacity, without building in any additional reserve capacity to accommodate unconstrained traffic growth.</p> <p>Therefore, the Applicant considers that the Scheme is compliant with the policy test in paragraph 4.26, NPSNN (2014)</p>

Agenda Reference	Examining Authority Agenda Item	Applicant’s summary of oral submission
(iii)	The Applicant will be asked to explain whether the current transport assessment has included the safeguarded land and if so whether that is appropriate at this stage?	<p>The Examining Authority requested an explanation of Table 6 of Appendix L - Traffic Forecasting Report. The Applicant explained that the deadweight development is the quantum of development that can be delivered without triggering need for the Scheme and dependent development is the development that can only be delivered with the Scheme, to unlock the road capacity necessary to support that development. The Examining Authority requested an explanation of the assumptions applied in order to divide the deadweight figures between the different sites. The Applicant explained that the numbers in total were originally consistent with the JCS, this was refined to reflect updated knowledge and the West Cheltenham SDP document. Some of the development that was identified for the West Cheltenham safeguarded land was not deemed to be deliverable due to a sewage treatment works on the site. At the same time, it was viewed that, on the basis of applications coming forward etc., that the likely volume on the allocated West Cheltenham site would be increased and so it has been moved for modelling purposes to that allocated site, but overall, the numbers stay broadly the same. In terms of breakdown between the dependent and deadweight, this would have been based on the trigger analysis done for the HIF bid as presented in the HIF Traffic Forecasting Report. The Applicant confirmed that it will provide further information on how the figures were determined for each site.</p> <p>The Examining Authority asked about the assumptions made in relation to the safeguarded land in absence of any firm proposals. The Applicant explained that the safeguarded land for North West Cheltenham had been included as dependent development because the HIF funding application was based on that development and so it is intrinsically linked with delivery of the Scheme. Since the site has been taken out the Green Belt by the JCS policy, it is more likely to come forward as development and given the proximity to the Scheme it was viewed as an exception. It was a reasonable assumption to include it as part of the assessment and was justified because the Scheme is there to unlock future development of that safeguarded land or equivalent.</p> <p>When asked by the Examining Authority, the Applicant confirmed that it is a correct interpretation of the table that of the c.4,000 homes allocated for the North West Cheltenham allocation, only 973 can come forward without the Scheme. The</p>

Agenda Reference	Examining Authority Agenda Item	Applicant’s summary of oral submission
		<p>Applicant noted that this this aligns with a National Highways’ recommendation which provides a cap on development at North West Cheltenham of 1,000 homes. The Examining Authority noted that a local authority consultation response to the Bloor Homes application appears to accept a different and lower level of mitigation required for approximately 4,000 homes. The Applicant confirmed that the figures shown in Table 6 were based on the best information at the time and are consistent with the that used in the HIF bid because the Scheme is tied to it. Whilst planning applications have subsequently been submitted for different amounts of development on the allocated sites to those used for the assessment of the Scheme, none of these applications have been determined and cannot, therefore, be categorised as committed developments. The Applicant also confirmed that the response from Gloucestershire County Council of October 2022 in respect of the Bloor Homes application makes it clear that improvement works are carried out at M5 Junction 10, so the entire response is qualified by that requirement. The Applicant agreed to provide an explanation of the assumptions used for the table and an explanation of the timings for the HIF submission in relation to the Bloor Homes planning application.</p>
	<p><b>Action Point 13:</b></p> <p>The table below provides a timeline of the evolution of the quantum and mix of development assumed for the JCS allocated and safeguarded sites that have been included in the Uncertainty Log for the demand forecasting and traffic modelling for the DCO application. The below process has determined the ultimate allocation of deadweight and dependent development as set out in Table 6, Appendix L Traffic Forecasting Report. The total of dependent dwellings set out in the Table 6, Appendix L Traffic Forecasting Report is reflected in Table 2-1 of the Introduction to the Application, removing dependent dwellings in relation to West Cheltenham due to known deliverability issues. The total of dependent employment floor space set out in the Table 6, Appendix L Traffic Forecasting Report is set out as 295,989m<sup>2</sup> (excluding West Cheltenham) which equates to 29.5ha. Table 2-1 of the Introduction to the Application quotes 87ha of unlocked employment space. The reason for this apparent difference is that the total site areas for employment uses on the JCS allocated sites and safeguarded land are quoted in hectares in the JCS and the adopted Golden Valley SDP. These areas were converted to potential usable gross floor area of buildings that could be provided on the sites for employment using applicable factors that accounted for land required for car parking, access roads, landscaping, etc. The same conversion factors have been applied for the traffic modelling undertaken for the JCS, the HIF OBC and the DCO application.</p>	

Agenda Reference	Examining Authority Agenda Item			Applicant's summary of oral submission
	Key dates	Key events	Model tests	Key outputs/outcomes
	Prior to May 2017	Preparation of Joint Core Strategy (JCS) 2011-2031 transport evidence base	DS1-7	JSC Transport Strategy - Six-point plan, including conversion of M5 Junction 10 to a full-movements junction and providing access to the West of Cheltenham strategic allocation.
	Dec 2017	Adoption of JCS	N/A	Site allocations and safeguarded land confirmed, including assumed quantum and mix of development on allocated sites. Conversion of M5 Junction 10 to a full-movement junction and providing access to the West of Cheltenham strategic allocation adopted as JCS policy. Principle of the Scheme and its need established.
	2018	Finalisation of the Uncertainty Log for demand forecasting and modelling for the HIF OBC.	N/A	Confirmation of quantum and mix of proposed developments on both JCS allocated and safeguarded sites matched to the demands in Housing Needs Assessments and spatial policies. For allocated sites this is consistent with the quantum and mix contained in the JCS (Table SA1).
	2018-2019	Traffic modelling to support HIF OBC	Scenarios P, Q, S and R.	Established approach to determination of scheme dependency and criteria/trigger points to quantify the proportions of dead-weight and dependant development for each JCS site to include in Scenarios P and R respectively. Need for the Scheme reconfirmed, scheme dependency determined, and proportions of dead-weight and dependant development quantified. Evidence-base for HIF OBC, reported in HIF OBC Traffic Forecasting Report.
	Mar 2020	HIF awarded.	N/A	HIF awarded for the M5 Junction 10 Improvement Scheme on the basis that it enables delivery of developments on both JCS allocated and safeguarded sites.
	Jul 2020	Golden Valley SDP adopted. (West Cheltenham)	N/A	Revised quantum and mix of proposed development on West Cheltenham allocated site (SPD Appendix p. 37).
	May 2022	Finalisation of the Uncertainty Log for demand forecasting and modelling for the DCO application.	N/A	Confirmation of revised quantum and mix of proposed developments on JCS allocated sites to reflect Golden Valley SDP and inclusion of NW Cheltenham safeguarded land, but with and removal of proposed development on West Cheltenham safeguarded land (considered undeliverable).

Agenda Reference	Examining Authority Agenda Item			Applicant's summary of oral submission
	May 2022 To Dec 2023	Demand forecasting and traffic modelling to support DCO application.	Updated Scenarios P, Q, S and R.	Traffic flow and road network operational performance data for transport and environmental impact assessments of the Scheme to be reported in the DCO application documents.
	Several planning applications for developments on the JCS allocated sites (NW and W Cheltenham) have been submitted to the relevant local planning authority. However, none of these have been determined and cannot therefore be considered committed developments. Consequently, the Uncertainty Log used for the demand forecasting and traffic modelling for the DCO application remains valid as it reflects the current policy position.			
(iv)	The Applicant will be asked to explain how the level of vehicular capacity that the proposals will provide has been determined?			The Applicant noted that there is no recognised metric to assess the capacity of a network as a whole comprising junctions and links with differing levels of reserved capacity. There are various metrics but no overall defining metric that can be quoted to define operational performance of a road network in a wider sense. The Scheme has been design using the outputs of the traffic modelling to ensure that it operates within practical capacity accounting for dependent development.

## 1.5. Item 4 - Alternatives

The Applicant will be asked to provide an explanation of the ES consideration of alternatives and how that aligns with the requirements of the NPSNN, in particular with regard to the following.

Agenda Reference	Examining Authority Agenda Item	Applicant's summary of oral submission
(i)	EIA Regulations	<p>The Applicant confirmed that the consideration of alternatives is set out within Chapter 3 of the Environmental Statement, which sets out the process by which options were considered for the development of the Scheme and the Scheme design. Options were considered for the location of the junction of the Link Road and options for the A4019.</p> <p>The Applicant explained that Chapter 3, figure 1.3 [App-007] identifies the options considered for the motorway junction and the Scheme as a whole. The Applicant explained that all the options have a Link Road connector to the West Cheltenham development to the south, which is in the Green Belt. For the locations considered for the motorway junction, Option 3 (located to the south of the existing Junction 10), and the northern half of the junction for Option 1A are within the Green Belt. A sifting exercise was undertaken on the junction locations that looked at various environmental factors including impacts on landscape, flood risk, noise, air quality management areas and historic land fill. As a result, Option 3 was sifted out due to too a great an impact on flood risk. The two northern junction locations (Option 1A and Option 5) were sifted out on the basis of cost, primarily due to the cost of the additional infrastructure required with additional link roads to the A4019.</p> <p>The Applicant explained that four options were considered for the Link Road route corridor (see Chapter 3 figure 3-4), following the selection of Option 2 as the location for the all-movements M5 junction. The figure 3-4 also shows flood risk within the area. To</p>

Agenda Reference	Examining Authority Agenda Item	Applicant's summary of oral submission
		<p>provide context the Applicant explained that the existing Withybridge Lane is the green corridor (option 2), and that the purple circled area to the right is the Moat House scheduled monument at Uckington. Option 4 was removed on first sift due to its proximity to Moat House and because it would require the longest connection from the motorway junction at Junction 10, to West Cheltenham development. Options 1 and 2 were identified as having a bigger impact on flood risk and existing listed buildings (Mill House Farm and Butler's Court on Withybridge Lane). Option 3 was the option taken forward for the current Scheme.</p> <p>Regarding the A4019, as a result of impacts on existing property and the planned development areas, no alternative route corridors were considered. The options appraisal undertaken for the A4019 was around the redevelopment of the existing alignment of the A4019. This considered how it would be done and how it would impact the existing properties in Uckington in particular.</p> <p>In summary, an options appraisal was undertaken presenting the main alternatives considered and the reasons for the selections made. The process took account of the environmental effects of the different options.</p> <p>The Examining Authority asked whether the assessment of alternatives was consistent with what was submitted for HIF funding and RIS 2, to this the Applicant confirmed that there was further development and optioneering post HIF funding around the A4019 alignment and confirmation of the best route corridor for the Link Road. The Applicant agreed to provide further information in writing.</p> <p>In relation to compliance of the assessment of alternatives as required by the EIA regulations, the Applicant confirmed they set out an options appraisal considering the options and the</p>

Agenda Reference	Examining Authority Agenda Item	Applicant's summary of oral submission
		<p>environmental effects of each. Additionally, there was a consideration of flood risk and the sequential test. There was also a consideration of the Habitat Regulations Act (HRA) and Water Framework Directive (WFD) requirements with both of the assessments being undertaken on the final option. Both concluded that the Scheme design of the final option was compliant with those two regulations and that no alternatives were required.</p> <p>The Examining Authority referred to Table 3.2 of Chapter 3 and asked whether the 7 environmental factors listed are consistent with factors that would have been considered for other comparable RIS 2 Schemes. The Applicant confirmed that they would look into this and will supply written submissions. The Examining Authority then asked whether the application of a different set of 7 factors would lead to a different solution. The Applicant confirmed that the 7 factors were selected as they were the factors considered to be relevant for those route corridors within the area, given the components of the environment. Following the Examining Authority's question about whether a judgement was made for the selection of the 7 factors, the Applicant confirmed that a judgement was made. The Applicant explained that certain factors, such as historic landfill sites of which the Applicant understands there are none in the area and would have no score) were not included. If different factors were considered then the answer would differ.</p> <p>The Examining Authority asked whether adding Green Belt as a factor would have altered the outcome of the alternatives assessment. The Applicant explained that it would have been a factor and could have been included, but it was considered within the landscape component..</p>
	<p>The Applicant would further add regarding the Route Corridor Option 4 for the Link Road, that the proximity of this corridor to the Moat House scheduled monument would likely result in significant adverse effects on the scheduled monument. This corridor was the longest of the four corridors considered (in terms of distance from Junction 10 to the West Cheltenham Development Area) and would have</p>	



Agenda Reference	Examining Authority Agenda Item	Applicant's summary of oral submission
		<p>required the traffic accessing the West Cheltenham Development Area from Junction 10 to route through Uckington and along a section of the B4634 (Old Gloucester Road). It would not have been feasible to include this additional traffic through Uckington without further highway infrastructure to that in the current design, and impacts to property and land. Option 4 was therefore removed from consideration at the first sift it was not considered to be a viable route option.</p> <p>The only remaining options therefore (Options 1-3) are those that go through the Green Belt. The Applicant has set out separately in the Technical Note attached as Appendix A to this document, how it has assessed the potential impacts of those three options on the Green Belt, and then how it has sought to mitigate the effect on the Green Belt of the selected option. Therefore if one were to assume that the Link Road was inappropriate development and high priority should be given to avoiding the Green Belt, the Applicant has demonstrated that there remains no viable alternative and very special circumstances should apply. The Applicant's full reasoning for the Scheme meeting the very special circumstances test is set out in its Planning Statement (TR010063/APP/7.1-rev1).</p> <p>Action Point 14 and 15: <b>Provide the alternatives assessment for HIF funding and identify any consistencies/differences between the two along with any issues relating to the requirement of NPS Section 4.26</b></p> <p><b>Alternatives assessment for the HIF bid</b></p> <p>All of the details presented in the HIF bid with regards to the identification of options are presented in ES Chapter 3 (APP-062). The HIF bid was based on the DS7 infrastructure option, and identified three concept options for the location of the motorway junction. Only one option was developed for the Link Road and A4019 improvements.</p> <p>The options assessed in the HIF bid were all included as part of the options appraisal as presented in APP-062. The only difference between the options appraisal in the HIF bid and that presented in APP-062 is that the HIF bid identified a new motorway junction to the north of its current location as the preferred option. This selection was changed in subsequent assessment undertaken, as detailed below.</p> <p>The motorway junction options identified in the HIF bid were (as summarised in para 3.2.4 of APP-062):</p> <ul style="list-style-type: none"> <li>• Concept 1 – Junction 10 moved north of its current location.</li> <li>• Concept 2 – Upgrade to the existing Junction 10.</li> </ul>

Agenda Reference	Examining Authority Agenda Item	Applicant's summary of oral submission
	<ul style="list-style-type: none"> <li>• Concept 3 – Junction 10 moved south of its current location</li> </ul>	<p>Concept Option 1 was identified as the preferred approach and taken forwards in the HIF bid. This is a different option to that taken forwards as the preferred route for the Scheme (upgrade of the existing junction 10 (Concept 2)).</p> <p>Following the submission of the HIF bid, further identification and assessment of options was undertaken. This assessment included the three options presented in the HIF bid, and subsequently dismissed Concept 1 as the preferred option. This process is summarised below.</p> <p>As detailed in Section 3.3 of APP-062, a further assessment of the motorway junction options was undertaken in the TAR Development Workshop, with the options identified appraised in the Technical Appraisal Report and the Preliminary Environmental Assessment of Options Report (paragraph 3.3.8 of APP-062). This includes versions of the Concept 1 and Concept 2 options considered in the HIF bid. Concept 3 was sifted out following the TAR Development Workshop on the basis of flood risk.</p> <p>As detailed in paragraph 3.3.29 of APP-062:</p> <ul style="list-style-type: none"> <li>• Environmental impacts – each option was assessed against the seven-point scale from WebTAG. This identified that all five options would be likely to have a positive impact on people and communities, Options 2, 2A and 2B (variations on Concept 2) would have benefits in terms of air quality, noise and vibration, and generally performed favourably to Options 1A and 5 (variations on Concept 1) in the comparative assessment by environmental topic. All options would have a negative impact on road drainage and the water environment, cultural heritage, landscape and nature/conservation, although the adaptation of the existing M5 Junction 10 and utilisation of the existing A4019 (Options 2, 2A or 2B) was generally preferable to construction of a replacement junction in a new location to the north which would necessitate the construction of new lengths of carriageway across existing floodplain (Options 1A and 5).</li> <li>• Buildability and programme - all options would require the existing entry and exit to and from the M5 to be removed, and Options 1A, 2 and 5 would require the demolition of an existing structure currently crossing the M5. All of the options would require the link road between the A4019 and B4634 to be constructed, which would require construction over the existing high-pressure gas main and under the 132kv electric cables. All of the options, both during construction and in completion of the A4019 would maintain the existing walking, cycling and horse riding routes and facilities along the A4019. Additional land take would be required for all options to accommodate the revised junction and associated slip roads. For Options 2, 2A and 2B this would require properties adjacent to the existing junction to be demolished.</li> </ul>

Agenda Reference	Examining Authority Agenda Item	Applicant’s summary of oral submission
	<ul style="list-style-type: none"> <li>• Compatibility – all options are considered to be compatible with the Scheme objectives as set out in the brief provided by GCC’s local highway authority.</li> <li>• Option cost - Option 2A had the lowest expected option cost, and Option 1A the highest. Options 1A and 5 were estimated to cost more than Options 2, 2A and 2B.</li> <li>• BCR and VfM – Options 2, 2A and 2B achieved a BCR of between 2.0 and 4.0, and subsequently a ‘High’ category of VfM. Options 1A and 5 achieved a slightly lower BCR of between 1.5 and 2.0 and therefore a slightly lower VfM category of ‘Medium’.</li> </ul> <p>All options were compatible with the objectives of the Homes England Bid and provided an integrated scheme of transport infrastructure improvements that could facilitate the planned housing and economic development.</p> <p>From this process it was concluded (para 3.3.31 of APP-062) that Options 1A and 5 should not be taken further forward, as they provided a less sustainable option compared to Options 2, 2A and 2B, primarily in relation to affordability, value for money and environmental reasons. Options 1A and 5 would also result in land take from the safeguarded land to the north-west of Cheltenham, thereby reducing the area available for subsequent development within that safeguarded land. The assessment concluded that Options 2, 2A and 2B would all meet the Scheme objectives, but that there was marginal difference in the overall benefits or disadvantages of these three options when compared with each other. A preferred solution was not recommended as part of the TAR and therefore, Options 2, 2A and 2B, with the A4019 widening and West Cheltenham Link Road, were taken forward to the non-statutory public consultation (Autumn 2020).</p> <p>To confirm, this information on the optioneering undertaken for the Scheme is presented in the ES Chapter 3 (APP-062) and is thus compliant with the EIA Regulations requirement as to the main alternatives studied, as required in NPS NN Section 4.26.</p> <p><b>Consideration of the assessment criteria for the Link Road corridor options and the Green Belt; and the consistency of the assessment undertaken with other RIS2 schemes, is provided in Appendix A of this document.</b></p>	
(ii)	Flood Risk and the application of the sequential and exception tests	The Applicant confirmed that the sequential test is described in paragraph 4.26 of the NPS, which refers to the NPPF, which in turns refers to the Flood Risk and Coastal Change Guidance

Agenda Reference	Examining Authority Agenda Item	Applicant's summary of oral submission
		<p>(NPPG). Demonstration of the site selection process and the review of the amount of floodplain traversed by the different options is described at (i) above. As part of this process, the Applicant considered the length of the highway/Scheme in the flood risk areas (the published Environment Agency flood zones 3 and 2). This gave an indication of how much the Scheme would impact on flood storage (i.e. the displacement of flood water as a result of the Scheme). The Applicant also completed a count on the number of watercourse crossings that would be required for each option, which provided an indication of the likely impact on flood conveyance and how many additional bridges or culverts would be needed.</p> <p>The Applicant noted that the Scheme is referred to in the recently adopted Tewkesbury Borough Local Plan (adopted June 2022) but is not a policy as such. The Scheme was not considered within the strategic flood risk assessment supporting the local plan. The flood risk assessment, is presented in Part 1 [AS-023] and Part 2 [APP-107]: section 4.3 concludes that the Scheme crosses flood zones 2 and 3 (all four routes option alternatives would do so). There are no reasonably alternative lower risk sites, and all would cross the flood plain. The Applicant considers the vulnerability of the Scheme to be essential infrastructure as defined under the NPPF Annex 3 – “essential transport infrastructure, including mass evacuation routes, which has to cross the area at risk”. By cross-reference to table 2 at paragraph 79 of NPPG the Scheme’s vulnerability is compatible with the envisaged flood risk. The exception test at paragraph 5.107 of the NPSNN notes that the exception test is only appropriate for use where the sequential test alone cannot deliver an acceptable lower risk site. The Scheme satisfies both parts of the exception test in accordance with paragraphs 31 to 37 of the NPPF: it will provide wider sustainability benefits to the community that outweigh flood risk by virtue of it encouraging economic growth in jobs and housing, by providing</p>

Agenda Reference	Examining Authority Agenda Item	Applicant's summary of oral submission
		<p>the improves transport network connections in West and North West Cheltenham as described by Scheme Objective 1 (Paragraph of ES paragraph 2.21). The second part of the exception test is the demonstration through the flood risk assessment, and hydraulic modelling that supports it, that it manages flood risk satisfactorily over the lifetime of the development (accounting for future climate change with no material increase in flood risk elsewhere).</p> <p>The Examining Authority made reference to the Environment Agency's relevant representation and suggested that it appears to question the project being essential infrastructure. The Applicant suggested that the Environment Agency's point appears to be that it is not for us or them to decide if the Scheme is essential infrastructure or not, and the EA is pointing it towards the Examining Authority to decide. In the alternative, if it is not described as essential infrastructure then it is unclear what it would it be classed as none of the other classifications relate to this type of development. The Applicant highlighted the various alternative categories are highly vulnerable (police and fire stations), more vulnerable (residential) or less vulnerable (commercial and car parks), not to transport infrastructure as such. The Applicant explained that the Scheme involves essential transport infrastructure which must cross the areas at risk, as set out in the NPPF and NPPG. The Applicant agreed to provide an explanation of where this interpretation can be found in the Environmental Statement in addition to examples of other similar road Schemes which have been considered in the same way and deemed to be essential infrastructure.</p>
	<p><b>Action Point 16 - To identify examples of other road schemes which were identified as “essential infrastructure” for their flood risk assessments</b></p> <p>The M5J10 gyratory is part of the SRN although the Link Road is not.</p>	

Agenda Reference	Examining Authority Agenda Item	Applicant's summary of oral submission
		<p>Similar schemes that assessed the flood risk based on an Essential Infrastructure classification include:</p> <p><b>1. A14 Cambridge to Huntingdon Improvement Scheme DCO application – TR010018</b>  <b>1. A14 Cambridge to Huntingdon improvement scheme DCO application - TR010018</b>            Scheme includes local roads off the SRN.            Extract from the Flood Risk Assessment:  <i>Application of the Sequential Test:</i>            - 25.2.1 <i>The scheme is located within all Flood Zones: 1, 2, 3a and 3b.</i>            - 25.2.2 <i>In terms of flood risk vulnerability the scheme is classified as 'Essential Infrastructure'. Therefore, the development is appropriate in Flood Zones 1 and 2 but the Exception Test is required for Flood Zones 3a and 3b.</i></p> <p><b>2. Lower Thames Crossing - TR010032</b>            Extract from the Flood Risk Assessment:  <i>Flood risk vulnerability:</i>  <i>Vulnerability classification - Annex 3 of the NPPF details five flood risk vulnerability classifications and lists the types of development that fall into each classification. According to Annex 3, <u>essential transport infrastructure is listed under the 'essential infrastructure' classification.</u></i>  <i>The Project is considered to represent essential infrastructure for the following reasons:</i>            a) <i>The Project will form an integral part of the strategic road network.</i>            b) <i>The Project is classified as an NSIP, as defined by the Planning Act 2008.</i>            c) <i>The Project was identified by HM Treasury (2014) as one of the top 40 priority investments in their National Infrastructure Plan 2014.</i>            d) <i>The National Infrastructure Delivery Plan 2016–2021 (Infrastructure and Projects Authority, 2016) lists the Project as a priority.</i>            e) <i>The National Infrastructure Strategy (HM Treasury, 2020) identifies the Project as part of the government's proposals to unite and level up the UK.</i></p> <p><i>5.2 Sequential Test and Exception Test:</i>            - 5.2.1 <i>The Project would lie primarily in Flood Zone 1 but would include three sections that cross Flood Zones 2, 3a and 3b.</i>            - 5.2.2 <i><u>The Project is regarded as essential infrastructure.</u> The DLUHC guidance (DLUHC, 2022) notes that it is appropriate to construct essential infrastructure in Flood Zone 3.</i></p> <p><b>3. A57 Link Roads - TR010034</b>            The scheme includes local road elements off the respective SRN.</p>

Agenda Reference	Examining Authority Agenda Item	Applicant’s summary of oral submission
	<p>Extract from the Flood Risk Assessment:            5.1.3 <i>The Scheme is defined as “Essential Infrastructure” and parts of the Scheme lie in Flood Zones 2 and 3 but are considered to be an acceptable development within these flood zones.</i></p> <p>Extract from the Examining Authority’s Report of Findings and Conclusions and Recommendation to the Secretary of State for Transport - <i>Sequential and Exception Tests:</i>            5.10.160 <i>We agree that the Proposed Development amounts to Essential Infrastructure which the NPPG shows is appropriate in Flood Zone 2 and can be in Flood Zone 3 (a and b) subject to the Exception Test. NPSNN paragraph 5.98 requires that where flood risk is a factor in determining an application for development consent, the Secretary of State should be satisfied that, where relevant, the Sequential Test has been applied as part of site selection and, if required, the Exception Test as set out in the NPPF. We also recognise the nature of Proposed Development as provision of new linear infrastructure. We are satisfied that, in linking Mottram Moor to Woolley Bridge no alternative route would be located to an area of lower flood risk. Therefore, we find that the Proposed Development meets the Sequential Test.</i></p> <p><b>4. A47 Wansford to Sutton Dualling - TR010039</b>            Extract from errata sheet ...            12.6. Conclusion:            - 12.6.1. <i>Taking all the relevant documents and policies into account and on the basis of the above, I conclude as follows:</i>            ▪ <i>The Proposed Development would meet the sequential and exception tests as essential infrastructure and it would be appropriately located, even given that parts would be within Flood Zones 2 and 3.</i></p> <p><b>5. A428 Black Cat to Caxton Gibbet improvements - TR010044</b>            The scheme includes a new link road:            Extract from the Flood Risk Assessment:            - 4.7.6 <i>For FRAs, the “flood risk vulnerability classification”, Table 2 in the NPPF Planning Practice Guidance for Flood Risk and Coastal Change Guidance (Ref 4-16) for the type of development and the “flood zone” (Table 1 in the guidance) should be used to decide which peak river flow allowances (allowance category) to use based on the lifetime of the Scheme. The indications from Environment Agency’s climate change guidance (Ref 4-15) are shown in Table 4-2. The Scheme assessed in this FRA is considered essential infrastructure</i></p> <p>Others Schemes where an essential infrastructure classification has been assumed include the M25 Junction 10 and M25 Junction 28.</p>	

Agenda Reference	Examining Authority Agenda Item	Applicant's summary of oral submission
(iii)	Whether the proposal has had a full options appraisal through the Road Investment Strategy 2 (RIS2) or other appropriate policy or investment plans?	The Applicant noted that RIS 2 refers to this Scheme, M5 and Link Road and the governance processes which has been adopted. Essentially, with DfT being on the delivery board this would replicate what would be the position if the Scheme were promoted through the PCF governance process operated by National Highways equivalent schemes.
(iv)	Whether if the development were considered to be inappropriate development within the Green Belt this should have been a factor in considering the alternatives.	<p>The Applicant explained that as part of the options appraisal, all of the options required an interaction with the Green Belt. In order to deliver the Scheme and meet the JCS requirements, there must be some infrastructure constructed within the Green Belt. Taking all factors into consideration, the Scheme is not feasible without construction in the Green Belt.</p> <p>The Examining Authority asked whether it would be reasonable for a decision maker to conclude the impact on Green Belt would be different for each route corridor. The Applicant explained that there were different factors for the other route corridors which were deemed to be important for each route corridor and impacted the sifting of those corridors. For example, taking the only route which had no impact on Green Belt, other balancing impacts were the impact on scheduled monument of Moat House, and the length of the routes. If Option 4 was chosen all traffic would be routed through Uckington, and then all along the B4634 which would have required additional infrastructure on both of the roads of which Green Belt is a part. In response to the Examining Authority's suggestion that applying the receptors in a different way would result in a different outcome, the Applicant illustrated that replacing the hedgerows and trees row of table 3.2 with "Green Belt", corridor would remain at rank 1, and corridors 1 and 2 would have some variance, but it would not result in a different outcome when considered together. The Applicant confirmed that they would follow up on this point in writing.</p>



Agenda Reference	Examining Authority Agenda Item	Applicant's summary of oral submission
		<p>The Examining Authority raised a query regarding the location of figures 3.2 and 3.3, which the Applicant explained are in Appendix 1.3 [APP-077]. The Applicant clarified that Scheme-wide figures have been provided in a separate appendix to assist with readability.</p> <p>Bloor Homes Limited and Persimmon Homes Limited made three comments regarding: (i) Scheme funding, (ii) a suggestion that the Scheme could have provided that developers would deliver certain infrastructure elements and (iii) that access points should have been added to their land. The Applicant confirmed that its position is that the entirety of the Scheme is required to support the allocation of the allocated sites. The Applicant confirmed that it will respond to all interested parties in respect of their representations, including the developers, and noted the juxtaposition between the points made about reducing the scale of the Scheme and also about providing additional access opportunities.</p>
	Action Point: Further to the above, please see Appendix A.	

# Appendices



# 1 Appendix A – Technical note – Inappropriate development in the Green Belt

# Technical Note: Inappropriate Development in the Green Belt



## 1 INTRODUCTION

- 1.1 This note has been prepared in relation to ISH1 and details the Applicant's position in relation to the M5 Junction 10 Improvement Scheme (the "**Scheme**") and its compliance with Green Belt policy. This note is intended to supplement the analysis undertaken at paragraph 7.6 of the Applicant's Planning Statement and Schedule of Accordance with National Policy Statement (Application document TR010063/APP/7.1) as to why the Scheme should not be considered as inappropriate development in the Green Belt.
- 1.2 This note is structured as follows:
- (a) Section 2 - Summary of relevant Green Belt policy from the NPPF and the National Policy Statement for National Networks (published December 2014) ("**NPSNN**");
  - (b) Section 3 - Overview of the Applicant's position as to why the M5 Junction 10 Improvement Scheme should not be considered inappropriate development in the Green Belt;
  - (c) Section 4 - Breakdown of the land area for each of the Scheme's elements and confirmation of the quantum of highway land (Action points 7 and 8 of ISH1), including a comparison of Green Belt land area;
  - (d) Section 5 – Assessment of the Scheme's impact on visual openness of the Green Belt (Action point 10 of ISH1);
  - (e) Section 6 – Assessment of alternatives and the Green Belt;
  - (f) Section 7 – Conclusion; and
  - (g) Appendices 1 to 7 - Overview of six large-scale road infrastructure DCOs, and one CPO, which have been found not to be inappropriate development within the Green Belt (Action Point 5 of ISH1).

# Technical Note: Inappropriate Development in the Green Belt



## 2 OVERVIEW OF GREEN BELT POLICY

### Overview of the NPPF

- 2.1 The NPPF is the main source of policy for proposals that affect the Green Belt. It provides that the Government attaches great importance to Green Belts and explains that the fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open. It goes on to confirm that the essential characteristics of Green Belts are their openness and their permanence.<sup>1</sup>
- 2.2 The NPPF provides that inappropriate development is, by definition, harmful to the Green Belt and should not be approved except in very special circumstances.<sup>2</sup>
- 2.3 In terms of the definition of 'inappropriate development', the NPPF provides that the construction of new buildings should be regarded as inappropriate, subject to certain exceptions.<sup>3</sup>
- 2.4 The NPPF states that certain other forms of development will not be inappropriate within the Green Belt provided they preserve its openness and do not conflict with the purposes of including land within it, these are:
- (a) mineral extraction;
  - (b) engineering operations;
  - (c) local transport infrastructure which can demonstrate a requirement for a Green Belt location;
  - (d) the re-use of buildings provided that the buildings are of permanent and substantial construction;
  - (e) material changes in the use of land (such as changes of use for outdoor sport or recreation, or for cemeteries and burial grounds); and
  - (f) development, including buildings, brought forward under a Community Right to Build Order or Neighbourhood Development Order.<sup>4</sup>
- 2.5 In respect of the M5 Junction 10 Improvements Scheme, the most relevant categories are paragraphs 155(b) and (c). Paragraph 155(c), or an equivalent provision from an earlier version of the NPPF, applied to all the DCOs listed at Appendices 1 to 6 below.
- 2.6 Once a project has been found to fall within one of the categories listed above, it must also satisfy the other requirements of paragraph 155 (i.e. it must preserve the Green Belt's openness and must not conflict with the purposes of including land within it). Relevant to this test are the five purposes of the Green Belt, which are:
- (a) to check the unrestricted sprawl of large built-up areas;
  - (b) to prevent neighbouring towns merging into one another;
  - (c) to assist in safeguarding the countryside from encroachment;
  - (d) to preserve the setting and special character of historic towns; and

<sup>1</sup> National Planning Policy Framework (December 2023) ("**NPPF**"), paragraph 142

<sup>2</sup> NPPF, paragraph 152

<sup>3</sup> NPPF, paragraph 154

<sup>4</sup> NPPF paragraph 155

# Technical Note: Inappropriate Development in the Green Belt



- (e) to assist in urban regeneration, by encouraging the recycling of derelict and other urban land.<sup>5</sup>

If none of the *exceptions* apply and a project is found to constitute inappropriate development in the Green Belt, consideration needs to be given as to whether 'very special circumstances' exist to justify that inappropriate development. The NPPF provides that very special circumstances will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm resulting from the proposal, is clearly outweighed by other considerations<sup>6</sup>

## Overview of the NPSNN

- 2.7 The NPSNN sets out policy in relation to open space, green infrastructure and Green Belts at paragraphs 5.162 to 5.185.

- 2.8 In particular, the NPSNN recognises at paragraph 5.171 that-

*'Linear infrastructure linking an area near a Green Belt with other locations will often have to pass through Green Belt land. The identification of a policy need for linear infrastructure will take account of the fact that there will be an impact on the Green Belt and as far as possible, of the need to contribute to the achievement of the objectives for the use of land in Green Belts.'*

- 2.9 At paragraph 5.178, the NPSNN confirms the assessment to be undertaken by the Secretary of State where a national networks infrastructure project is located in the Green Belt-

*'When located in the Green Belt national networks infrastructure projects may comprise inappropriate development. Inappropriate development is by definition harmful to the Green Belt and there is a presumption against it except in very special circumstances. The Secretary of State will need to assess whether there are very special circumstances to justify inappropriate development. Very special circumstances will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm, is clearly outweighed by other considerations. In view of the presumption against inappropriate development, the Secretary of State will attach substantial weight to the harm to the Green Belt, when considering any application for such development.'*

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<sup>5</sup> NPPF paragraph 143

<sup>6</sup> NPPF paragraph 153

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## 3 THE APPLICANTS POSITION

3.1 The Applicant's position in relation to Green Belt policy is detailed at section 7.6 of the Planning Statement. It is noted at paragraph 7.6.9 that the Scheme can be described as engineering operations and the improvement of existing local transport infrastructure which can demonstrate a requirement for a Green Belt location, as per Paragraph 155 of the NPPF.

3.2 This section explains how the Scheme falls within the local transport infrastructure exception and details the relevant requirements of paragraph 155(c) of the NPPF. below.

### The Local Transport Infrastructure exception

3.3 The Scheme is local transport infrastructure because it primarily benefits the local area. These benefits are clear from the five Scheme Objectives, with four of the five relating to the improvement of local transport infrastructure in some way. Moreover, the Scheme is supported by local transport policy which is set out in further detail in the Planning Statement.

3.4 The basis for the Scheme's requirement for a Green Belt location is detailed at paragraphs 7.6.17 and 7.6.18 of the Planning Statement, in summary:

(a) paragraph 7.6.17 confirms that the Scheme requires some land take in the Green Belt but that it constitutes an improvement to existing SRN infrastructure rather than entirely new SRN infrastructure; and

(b) paragraph 7.6.18 confirms that the Scheme helps meet the strategic improvements set out around M5 Junction 10 including in relation to the safeguarded land removed from the Green Belt at Strategic Allocations A4 (Land at North West Cheltenham) and A7 (Land at West Cheltenham).

3.5 This aligns with paragraph 5.171 of the NSPNN which confirms that linear infrastructure linking an area near a Green Belt with other locations will often have to pass through Green Belt land. The Applicant details, at Section 6 of this note, how the conclusion of its assessment of alternatives would not be changed if Green Belt was included as an explicit factor in the assessment.

3.6 Moreover, the total area of Green Belt land used by the Scheme is proportionate. Section 4 of this note details the land take of each element of the Scheme and sets out the area of land from each element that lies within the Green Belt. These calculations show that much of the Scheme lies outside of the Green Belt and even for the land within the Green Belt, a large proportion of this land already contains existing highway.

3.7 In terms of the availability of the local transport infrastructure exception for the Scheme, there is nothing to prevent the exception from applying to NSIPs and there have been at least five DCOs granted between 2013 to 2023 which have been found to be local transport infrastructure (see Appendices 1 to 5 below).

3.8 This issue was addressed directly at paragraph 4.5.38 of the Recommendation Report for the A38 Derby Junctions project-

*'The Proposed Development is an NSIP, rather than local, infrastructure project. The NPSNN is clear that the NPPF is not intended to contain specific policies for NSIPs but that it should be applied to the extent that it is relevant to the project. In this case, the Proposed Development requires a GB location because it comprises the upgrading of existing linear infrastructure in the GB. It would frustrate the aims of NPSNN policy on the importance of improving the SRN if the*

# Technical Note: Inappropriate Development in the Green Belt



*exception for local infrastructure provided by paragraph 146(c) of the NPPF did not also apply to this NSIP [...]*

- 3.9 Additionally, the fact that parts of the Scheme will make up the SRN should not be a barrier to the local transport infrastructure exception. This was the case in the A19 Downhill Lane Junction Improvement project, noted at paragraph 4.17.49 of Recommendation Report-

*[...] Whilst being part of the SRN it also serves as a local transport improvement scheme to secure economic benefit. As such it is “local transport infrastructure which can demonstrate a requirement for a Green Belt location [...]*”

- 3.10 The ability for a local transport infrastructure to have strategic importance is further reinforced by the Secretary of State’s comments at paragraph 37 of their decision letter for the A19 Downhill Lane Junction Improvement project-

*[...] The Secretary of State agrees with the ExA’s analysis that the Proposed Development, in addition to its strategic importance in transportation and economic development terms, can be considered as a form of “local transport which can demonstrate a requirement for a Green Belt location [...]*’

- 3.11 In terms of scale, several of the projects listed in the Appendices to this note are of a similar scale to the Scheme. In particular, the A19/A184 Testo’s Junction Improvement project included both a junction improvement and two link roads to the junction to the south, being 1,035m and 815m in length respectively. The link road proposed by the Scheme is [1.4km] of new road, sharing a similar total length to the Testo’s Junction Improvement project link roads when taken together. This demonstrates that there does not appear to be a hard limit to the scale of local transport infrastructure.

## Preservation of Green Belt openness

- 3.12 The Applicant’s position is that the Scheme would not significantly reduce the openness of the Green Belt. This is detailed at paragraph 7.6.16 of the Planning Statement. The Applicant has provided a further analysis of the Scheme’s impact on visual openness at Section 5 of this note.

## Purposes of including land within the Green Belt

- 3.13 The Applicant’s position is that the Scheme would not conflict with any of the purposes of including land within the Green Belt. The Applicant’s assessment against each purpose is detailed at paragraphs 7.6.10 to 7.6.15 of the Planning Statement.

## Conclusion

- 3.14 Please see Section 7 for the Applicant’s overall conclusion on Green Belt issues.
- 3.15 Whilst this section has focussed on the application of the local transport infrastructure exception, it is the Applicant’s position that the Scheme also falls within the exception for engineering operations provided by paragraph 155(b) of the NPPF. However, for the purposes of the Scheme being ‘not inappropriate development’ it is sufficient for the Scheme to satisfy the local transport infrastructure exception.



# Technical Note: Inappropriate Development in the Green Belt

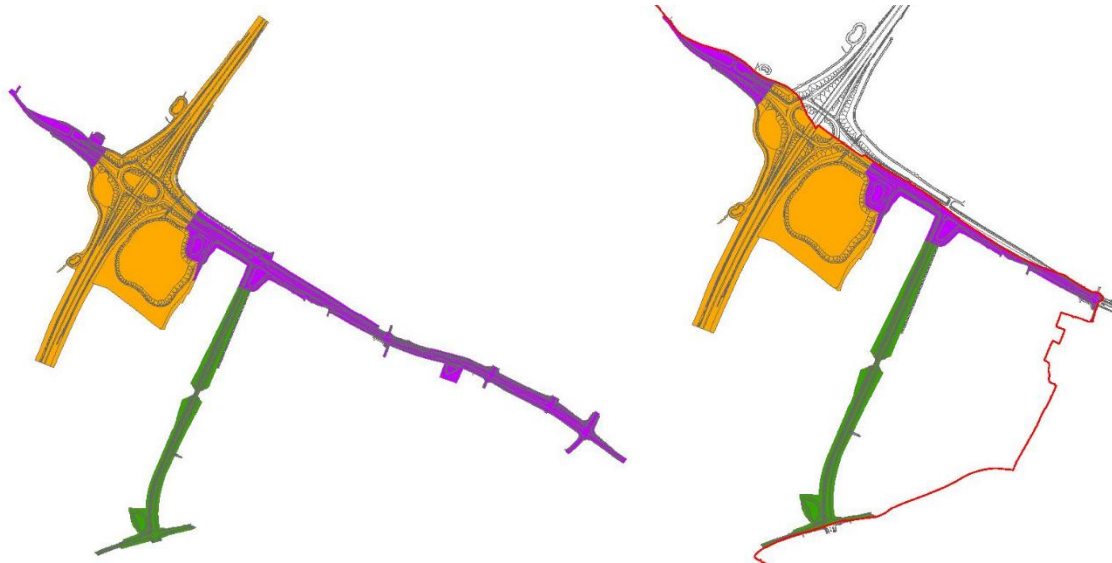
## 4 ASSESSMENT OF LAND AREA IN THE GREEN BELT

### Action Point 7 – Confirmation of the land area for each element of the Scheme

4.1 The table below details the respective land area of each of the three main elements of the Scheme (M5 Junction 10, the Link Road and the A4019), and the extent to which this is within the Green Belt. The areas presented are the areas in which physical works are proposed, as illustrated in the two figures below the table.

Scheme Element	Area of the Element	Area of the Element within the Green Belt
M5 Junction 10 (orange shaded element)	49.9 hectares	35.67 hectares
Link Road (green shaded element)	10.9 hectares	10.15 hectares
A4019 (purple shaded element)	25.02 hectares	11.70 hectares

4.2 The red line in the righthand figure is the Green Belt boundary. This boundary of the Green Belt aligns with that shown in AS-044:



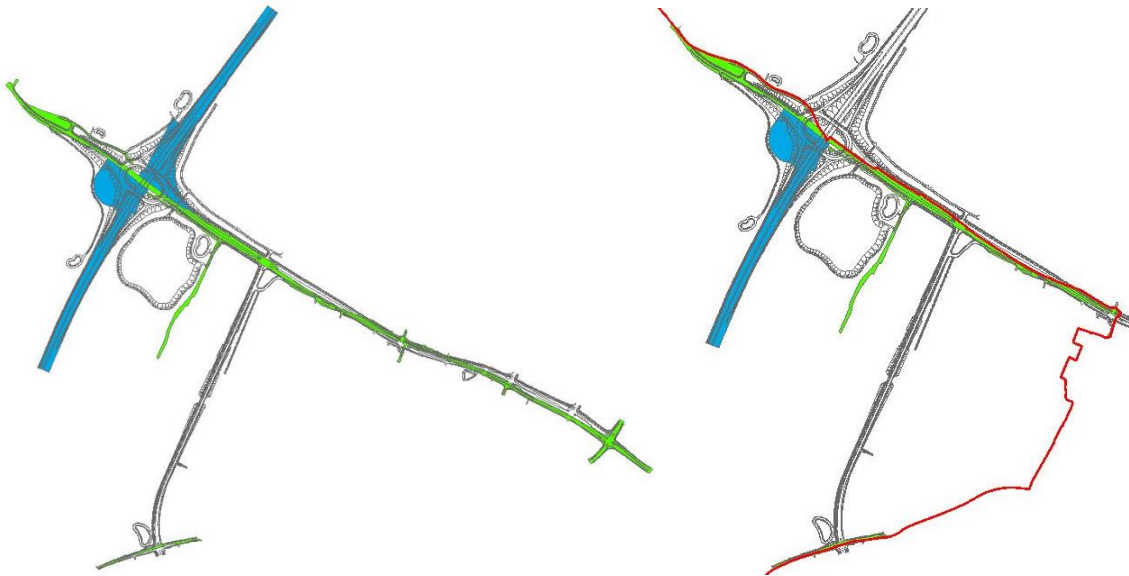
# Technical Note: Inappropriate Development in the Green Belt

Action Point 8 - Confirmation of the quantum of highway land relative to the SRN

4.3 Repeating the exercise above for the existing highway:

Existing highway	Area of the Element	Area of the Element within the Green Belt
SRN (blue shaded element)	17.14 hectares	8.62 hectares
Local roads (bright green element)	12.81 hectares	8.67 hectares

4.4 The red line in the righthand figure is the Green Belt boundary. This boundary of the Green Belt aligns with that shown in AS-044:



## Assessment of land within the Green Belt

The table below provides details of the areas of the proposed Scheme and the existing highway that are within the Green Belt, and therefore the area of new development within the Green Belt.

Area calculations	Area calculated	Basis of the calculation (for information)
Total area of the Scheme	85.82 hectares	The total of the orange (49.9ha), green (10.9ha) and purple (25.02ha) areas in the figure above.
Total area of the Scheme in the Green Belt	57.52 hectares	The total of the orange (35.67ha), green (10.15ha) and purple (11.70ha) areas in the figure above, taking into account the Green Belt boundary.

# Technical Note: Inappropriate Development in the Green Belt



Total area of existing highway	29.95 hectares	The total of the blue (17.14ha) and the green (12.81ha) areas in the figure above.
Total area of existing highway in the Green Belt	17.29 hectares	The total of the blue (8.62ha) and the green (8.67ha) areas in the figure above, taking into account the Green Belt boundary.
Total area of the Scheme excluding existing highway	55.87 hectares	The total area of the Scheme (85.82ha) minus the total area of the existing highway (29.95ha)
Total area of new highway in the Green Belt	40.23 hectares	The total area of the Scheme within the Green Belt (57.52ha) minus the total area of the existing highway in the Green Belt (17.29ha).

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## 5 VISUAL OPENNESS IN THE GREEN BELT

- 5.1 This section deals with the Scheme's impact on the visual openness of the Green Belt, this corresponds with Action Point 10 from ISH1.
- 5.2 As stated above, the fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open; the essential characteristics of Green Belts are their openness and their permanence.
- 5.3 The majority of the Scheme lies within land defined as Green Belt. This is not a statutory landscape designation, but a planning policy to prevent urban sprawl by keeping land permanently open. Its presence is relevant here regarding the potential effect of the Scheme on the openness of the Green Belt. Commentary on the overall expected effect on openness is noted within the landscape effects summary. The Planning Statement and Schedule of Accordance with National Policy Statement (Application document TR010063/APP/7.1) that accompanies the application for a DCO provides more detail on the Scheme compliance with Green Belt policy.

### Link Road

- 5.4 The Link Road would be a new feature in the landscape, but it is not considered that it would significantly reduce the feeling of openness in this small area. The proposed roadside planting would help embed the road, whilst also allowing filtered views through and across the Link Road.
- 5.5 The existing landscape that the Link Road crosses is quite well visually contained with views being largely restricted to near and mid-range due to the flat topography and intervening field vegetation and woodland blocks. Thus, the existing visual openness is limited. The long range views are of the distant raised hills and escarpment of the Cotswolds National Landscape (previously known as the Cotswolds AONB) beyond Cheltenham.
- 5.6 The Link Road Bridge over the River Chelt, results in the Link Road being gradually raised up and over the river corridor, thereby further restricting the extent of view. However, the sense of openness of the landscape beyond the raised road is likely to remain; with views possible under the bridge and the proposed planting reducing the noticeability of the built elements, and in time breaking the line of the Link Road in views.
- 5.7 The junction of the Link Road and the Old Gloucester Road (B4634) is within a wider area of existing flat ground, extending from the B4634 north to the electricity pylons and east-west to the Hayden Fruit Farm and House in the Tree public house. The proposed junction would be constructed at similar elevation (within a few hundred millimetres) to the existing local road (the B4634), and would therefore not be a raised element in the landscape. The lighting columns would be new features and potentially detracting, however, given the existing surrounding pylons and telegraph poles, the columns are unlikely to substantially affect the sense of openness.

### M5 Junction 10

- 5.8 The existing junction is raised within the landscape and heavily vegetated. The Scheme requires extensive vegetation clearance here, opening up views across the motorway. This will simultaneously and temporarily increase the visual openness of the landscape, whilst also causing the built elements of the Junction to become obvious in the landscape. As the proposed mitigation planting establishes and matures, the Junction will become integrated back into the landscape, reducing the extent of views but also reducing the visibility of built elements. The general character of the Junction and its perceived openness within the Green Belt will not substantially be changed.

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## A4019 corridor

- 5.9 As with the landscape of the proposed Link Road, the character of the A4019 and visibility within it is well contained. The Scheme requires a widening of the road corridor and the introduction of lighting columns. These may be detracting to the perception of visual openness as perceived as an element of the Green Belt land, especially in the short term, however, as the proposed planting matures, the trees and hedgerows will help to integrate the built elements, whilst retaining a broader sense of openness across the road. The general character of the road and its perceived openness will not substantially be changed.

## M5 corridor

- 5.10 The works to the M5 corridor itself are minimal but require vegetation clearance, opening up views across the motorway and temporarily increase the visual openness of the landscape. As the mitigation planting matures the views will become contained once more. The general character of the M5 corridor and its impact on the perceived openness of the Green Belt through which it passes will not be substantially changed in the medium to long term.

## Summary

- 5.11 It is considered that, from a visual perspective, the Scheme design and its landscape mitigation will preserve the openness of the Green Belt and is not inappropriate development.

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## 6 ASSESSMENT OF ALTERNATIVES AND THE GREEN BELT

6.1 This section considers the assessment criteria for the Link Road corridor options, it does not deal with the other elements of Action Point 14 and 15 which are set out in the Applicant’s written summary of ISH1.

### Consideration of the assessment criteria for the Link Road corridor options

6.2 The four route corridor options for the Link Road were assessed against seven environmental criteria, as presented in Table 3.2 of Chapter 3 (APP-062). These criteria were selected on the basis of those that would provide a distinction between the route corridors. In the assessment undertaken, the route corridor options were ranked 1-4 against each of the selection criteria, with Corridor 3 scoring the lowest. As described in Chapter 3, Corridor 3 was taken forwards as the preferred option for the Link Road as it was the most direct, has least impact on properties, second least impact on floodplain and generally the scale of environmental impacts would be less than the other corridors.

6.3 Two tables are presented below:

- (a) The first table is a repeat of Table 3.2, but with the scoring totals presented for each Corridor option, and commentary added on the ranking assigned. Corridor 3 is the lowest scoring corridor option.
- (b) The second table includes the Green Belt as a specific criteria. This does not change the overall result, with Corridor 3 remaining as the lowest scoring (most preferable) corridor option.

6.4 Including Green Belt into the selection process for the Link Road route corridor does not change the outcome.

Receptor / factor in consideration	Corridor 1	Corridor 2	Corridor 3	Corridor 4	Commentary on the ranking assigned
Floodplain	4	3	2	1	Corridor 1 has to cross the greatest extent of the River Chelt floodplain, and Corridor 4 the least.
Directness of route	3	2	1	4	Corridor 3 provides the most direct route between the Junction 10 and the West Cheltenham Development Area (2.1km route length). Corridor 4 is the least direct (3.4km route length). This is relevant in terms of access to the development area once the Scheme is operational and connected to the development area with longer journey times and therefore more vehicle emissions and potential noise and air quality impacts; and also to the amount of infrastructure required to provide an appropriate linkage

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					<p>for the number of vehicles using this route.</p> <p>Route corridors 1-3 will require the construction of a new link road (between 1.4km and 2.0km in length).</p> <p>Route corridor 4 will require the improvements to the B4634, and potentially further improvements to the A4019 to manage the additional traffic from Junction 10 round to the development area (across a distance of 3.4km).</p>
Properties	2=	2=	1	2=	<p>Corridor 3 has no direct impact on properties along its route. The other three corridors will have direct impacts on properties.</p> <p>On review it is possible that Corridor 1 would have no direct impact on properties, and should have the same ranking score as Corridor 3.</p>
Hedgerows and trees	2=	4	2=	1	<p>Corridor 2 would result in the loss of the existing hedgerows along at least one side of Withybridge Lane. Corridors 3 and 4 would be aligned so as to limit impacts to existing hedgerows and trees.</p> <p>Corridor 4 would have the best ranking if any infrastructure improvements to the B4634 could avoid impacts to existing hedgerows. If this cannot be achieved then a ranking equivalent to Corridor 2 would be appropriate.</p>
Buried archaeology	2=	1	2=	2=	<p>Corridor 1, 3 and 4 traverse greenfield land, and may therefore encounter buried archaeology. Corridor 2 uses the existing Withybridge Lane and is expected to encounter less buried archaeology as a consequence of the previous construction of the road.</p>

# Technical Note: Inappropriate Development in the Green Belt



Listed buildings	3	2	1	4	<p>Assessment factor covers both listed buildings and the Moat House scheduled monument.</p> <p>Corridor 4 is close to the Moat House scheduled monument (and its associated listed buildings) and therefore is awarded the worst ranking.</p> <p>Corridor 3 is the furthest from any of the listed buildings and is awarded the best ranking.</p>
Noise and air quality impacts	1=	1=	1=	4	<p>Corridor 4 is awarded the worst ranking on the basis of it being the longest of the four routes, and therefore resulting in the largest noise and AQ emissions from vehicles.</p> <p>Corridor 4 also passes close to more residential properties than the other three corridors, as a result of it routing through Uckington and Hayden Hill.</p>
<b>Total score</b>	<b>17</b>	<b>15</b>	<b>10</b>	<b>17</b>	

6.5 An extension of Table 3.2 with the Green Belt included as a specific assessment factor:

Receptor / factor in consideration	Corridor 1	Corridor 2	Corridor 3	Corridor 4	Commentary on the ranking assigned
<b>Total score (without Green Belt included as a specific factor)</b>	<b>17</b>	<b>15</b>	<b>10</b>	<b>17</b>	
Green Belt	4	3	2	0	<p>Corridor 4 is assigned a ranking score of zero as it is the only route corridor that is outside of the Green Belt.</p> <p>The other three corridors have been ranked on the basis of their landtake within the Green Belt. Corridor 1 (2km) is the longest of these three options, and therefore has the highest ranking. Corridor 3 (1.4km) is the shortest of the three and consequently has the</p>



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					lowest ranking (of these three).  Whilst Corridor 2 follows the alignment of the existing Withybridge Lane, further highway improvements were identified as required for the existing lane to be used as the link road. The improvements required were considered to introduce greater environmental impacts for this route corridor than for Option 1. Further details on the assessment undertaken (and reported in APP-062) are provided below.
<b>Total score (with Green Belt)</b>	<b>21</b>	<b>18</b>	<b>12</b>	<b>17</b>	

- 6.6 Comparing the total scores, including Green Belt as a specific criteria does not change the overall result, with Corridor 3 the lowest scoring corridor option.
- 6.7 A further assessment was undertaken to consider the suitability of the existing Withybridge Lane route (Corridor 2) as an alternative to constructing the Link Road. This is detailed in paras 3.5.13 - 3.5.17 of APP-062. This assessment identified that Withybridge Lane in its current alignment would suffer from flooding during the 1% annual exceedance probability event (1 in 100-year return period), and would not meet the requirement of the NPPF as a development [that] would be safe for its lifetime taking account of the vulnerability of its users. As a primary access route into new development sites this amount of flooding would not be appropriate and measures would be required to protect the road, reduce the risk for users, and better afford safe access and egress to the land served by the road.
- 6.8 The measures required to improve the route's resilience to flooding (and therefore achieve compliance with the NPPF requirement) would involve a new bridge across the River Chelt and the elevation of the road at other points. The new bridge would have significant adverse effects on the Grade II listed buildings at Millhouse Farm, and elevating the road at other points would require the removal of the existing hedgerows along at least one side of the lane. Option 2 was sifted out on the basis of the expected adverse effects on both the landscape and the listed buildings.
- 6.9 The proximity of the Route Corridor Option 4 to the Moat House scheduled monument would likely result in significant adverse effects on the scheduled monument. In addition this corridor was the longest of the four corridors considered (in terms of distance from Junction 10 to the West Cheltenham Development Area) and would have required the traffic accessing the West Cheltenham Development Area from Junction 10 to route through Uckington and along a section of the B4634 (Old Gloucester Road). It would not have been feasible to include this additional traffic through Uckington without further highway infrastructure to that in the current design, and impacts to property and land.

# Technical Note: Inappropriate Development in the Green Belt



Option 4 was therefore removed from consideration at the first sift it was not considered to be a feasible route option.

- 6.10 The only remaining options therefore (Options 1-3) are those that go through the Green Belt. Details are presented above on the potential impacts of those three options on the Green Belt, and also how the landscape design of the Scheme has sought to mitigate the effect on the Green Belt of the selected option. Therefore if one were to assume that the Link Road was inappropriate development and high priority should be given to avoiding the Green Belt, the Applicant has demonstrated that there remains no viable alternative and very special circumstances should apply. The Applicant's full reasoning for the Scheme meeting the very special circumstances test is set out in its Planning Statement (TR010063/APP/7.1-rev1).

## **Link Road Corridor assessment – consistency of the assessment of alternatives with other RIS2 schemes**

- 6.11 The Scheme is not a RIS2 scheme. It is promoted by GCC and addresses capacity issues in the existing local road network and local sections of the SRN (M5 Junction 10), including consideration of the impact on transport infrastructure of required development allocations in the area. In addition, the link road corridor is only one element of a wider Scheme. Notwithstanding this, The assessment of alternatives for the Scheme is consistent with other major highway schemes, for example M3 J9, A417 Missing Link with an iterative review of the identification of reasonable options and the subsequent assessment and sifting of the options down to a single route alignment, in line with the Transport Appraisal Process. Where further design development identifies additional options these are considered through either qualitative or quantitative approaches (M3 J9 for example considered walking and cycling route options within part of the scheme using a quantitative scoring matrix).
- 6.12 The options appraisal of the four route corridors for the Link Road was a semi-quantitative assessment using the environmental criteria considered to be relevant to the types of environmental receptors present within the area, flood risk, people, heritage, noise and AQ, hedgerows and trees (as the relevant landscape features), as based on the environmental assessment work undertaken to date.
- 6.13 Whilst Green Belt was not included at that time as a selection criteria, repeating the assessment with Green Belt included has not changed the result.

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## 7 CONCLUSION

- 7.1 Taking each of the Green Belt considerations in turn, the figures provided at Section 4 of this note demonstrate that the area of land taken from Green Belt is proportionate to the Scheme as a whole, with new highway within the Green Belt forming less than half of the total land area for the Scheme. Regarding the requirement for the Scheme's location in the Green Belt, this is justified by the location of existing SRN infrastructure and the strategic allocations that the Scheme will help to unlock. In any event, the Scheme is linear infrastructure linking an area near a Green Belt with other locations, which the NPSNN recognises will often have to pass through Green Belt land.<sup>7</sup> The assessment of alternatives at Section 6 of this note also demonstrates that including Green Belt in the assessments would make no difference to the route chosen. In terms of preserving openness, Section 5 of this note provides that, from a visual perspective, the Scheme design and its landscape mitigation will not result in significant harm to the openness of the Green Belt. Finally, the Applicant considers that the Scheme does not conflict with any of the purposes of the Green Belt (as assessed at paragraphs 7.6.10 to 7.6.15 of the Planning Statement).
- 7.2 The Applicant's position is that the Scheme does not constitute 'inappropriate development' in the Green Belt and the Secretary of State should not need to consider the 'very special circumstances' case. The Scheme should be deemed to be either 'engineering operations'<sup>8</sup> or 'local transport infrastructure which can demonstrate a requirement for a Green Belt location'<sup>9</sup>. Appendices 1-7 of this note provide numerous examples of large-scale road projects, including NSIPs, which have benefited from the latter exception. Although each project should be considered on its own merit, there are numerous parallels between those projects and the Scheme. Nonetheless, the Applicant recognises that the Examining Authority or Secretary of State may consider that the Scheme is 'inappropriate development' and it necessary to consider the 'very special circumstances' case. If so, the potential harm to the Green Belt by reason of inappropriateness, and any other harm resulting from the proposal, is clearly outweighed by other considerations (as set out at paragraphs 7.6.20 to 7.6.29 of the Planning Statement).

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<sup>7</sup> NSPNN, paragraph 5.171

<sup>8</sup> NPPF, paragraph 155(b)

<sup>9</sup> NPPF, paragraph 155(c)

## Appendix 1 - A19 / A184 Testos Junction Improvement DCO

### Part A

#### 1 PROJECT DESCRIPTION

- 1.1 This project was granted development consent on 12 September 2018. The proposed development is described at paragraphs 3 and 4 of the Secretary of State's decision letter-

3. *'The Order as applied for would grant development consent for upgrading the existing at-grade A19/A184 Testos Junction in South Tyneside to a grade-separated configuration with embankments and a single flyover bridge or underbridges carrying the A19 mainline across the roundabout intersection. It would incorporate providing new parallel frontage link roads between the Testos Junction and the existing Downhill Lane Junction to the south; widening the existing roundabout at Testos Junction to accommodate the combination of new connector roads (slips) and frontage roads; accommodation and diversion of pedestrian, cycle and bridleway routes, including the removal of an existing bridleway overbridge and reconfiguration of highway drainage works.'*

4. *'As set out at paragraph 2.1.3 of the ExA's report ("ER"), with regard to the two potential options for the carriage of the A19 mainline over the existing Testos intersection, Option 1 consists of the formation of a fill embankment across the roundabout, with two underbridges, one for each side of the roundabout and Option 2 consists of the construction of a single flyover bridge across the roundabout. The ExA set out that these are not intended as alternatives in the sense that the Order would provide for one or the other. It is rather that the Applicant is intending to reserve maximum design and construction flexibility into the post approval stage to ensure there is flexibility to adopt which ever proves to be the best design option [...]*

- 1.2 The design of the project was modified slightly by the A19 Downhill Lane Junction Improvement DCO to remove a proposed cycleway. The revised works plans submitted as part of the A19 Downhill Lane Junction Improvement examination can be found at Appendix 1 Part B below [TR010024/APP/7.5(1)].

#### 2 EXAMINING AUTHORITY'S RECOMMENDATION REPORT

- 2.1 The Report notes that the Applicant's position was that the proposed development would not breach Green Belt policy because it was proposed to be delivered on Order Land which largely benefited from allocation in a Development Plan proposal that supports the upgrade of the Testos's intersection.<sup>10</sup> The Examining Authority also notes that there were no representations suggesting that the proposed development was inappropriate development in the Green Belt or contrary to Green Belt policy.<sup>11</sup>
- 2.2 At paragraph 4.18.78 the Examining Authority considers the application of policy and finds that the proposed development would constitute local transport infrastructure which can demonstrate a requirement for a Green Belt location-

*'NNNPS policy in paragraph 5.178 has been taken into account, together with NPPF paragraphs 80, 87, 88 and 90 and STC Core Strategy Policy A1 and EA1 with relevant Development Management and Site Allocations policies referred to above. The Development Plan proposal support provided for the Proposed Development through a site allocation establishes that it is 'local transport*

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<sup>10</sup> Paragraph 4.18.77

<sup>11</sup> Paragraph 4.18.47

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*infrastructure which can demonstrate a requirement for a Green Belt location' (NPPF paragraph 90). Because this is the case, the Proposed Development is not inappropriate development in the Green Belt provided that it preserves the openness of the Green Belt and does not conflict with the purposes of including land in Green Belt.'*

- 2.3 At paragraph 4.18.79 the Examining Authority deals with the issue of openness, determining that the proposed development would not have a significant effect -

*'In terms of impacts on openness, the Proposed Development will not have a significant effect. The A19 will be raised above grade but will remain close to its existing alignment. The location of major land-take to the west enables existing mature woodland to the east of the A19 mainline largely to be retained and the effect of this will be to ensure that the landscape enclosure of the alignment is not significantly reduced in the short term. In the medium to long term, proposed and secured landscape planting will result in a re-integration of the alignment into the local landscape. As a consequence, the openness of the Green Belt will not be harmed by the proposed development in the operational phase.'*

- 2.4 At paragraph 4.18.80 and 4.18.81, the Examining Authority found that the proposed development reinforced and supported four of the five Green Belt purposes, and did not detract from the fifth –

*4.18.80. 'Turning to the purposes of including land in the Green Belt, the location of the A19 mainline provides a hard edge to the settlements of West Boldon and Boldon Colliery and so does serve to check the unrestricted sprawl of large built-up areas onto land to the east and to prevent neighbouring towns merging into one another. This boundary effect will be enhanced. By reinforcing a hard urban boundary, the Proposed Development will assist in safeguarding the countryside from urban encroachment. By providing greater connectivity to the national road network for urban land served by the A19 mainline, the Proposed Development will also assist in urban regeneration, by encouraging the recycling of derelict and other urban land served by the A19 that is not in the Green Belt. The Proposed Development does not preserve the setting and special character of a historic town, because there is no such town within its immediate setting.'*

*4.18.81 'Taking the purposes of including land in the Green Belt together, it is clear that the Proposed Development reinforces and supports four out of five of those purposes and does not detract from the fifth purpose.'*

- 2.5 The Examining Authority therefore found, at paragraph 4.18.82, that the development as a whole would not be inappropriate development and there was no need to consider 'very special circumstances' –

*'Drawing these matters together, it is clear that the Proposed Development leaves openness unharmed and broadly reinforces the Green Belt purposes. On the basis that the proposed development is also allocated and so is 'local transport infrastructure which can demonstrate a requirement for a Green Belt location', it is clear that it is not inappropriate development. It follows that the SoS does not need to consider a 'very special circumstances' case for approval.'*

## 3 SECRETARY OF STATE DECISION LETTER

- 3.1 The Secretary of State agreed with the Examining Authority's assessment of Green Belt at paragraph 38 of their decision letter –

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*'The Secretary of State notes that the Development is located in the Green Belt (ER 4.18.27) but for the reasons set out at ER 4.18.77-4.18.82, the Secretary of State agrees with the ExA that the Development will not harm openness and is not an inappropriate development on Green Belt land for which a very special circumstances case would need to be considered (ER 4.18.84).'*

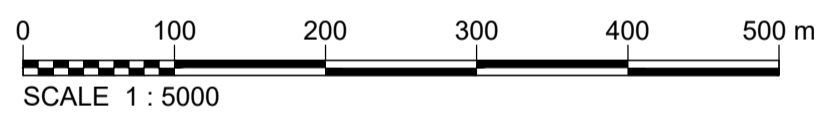


**NOTES**

- All dimensions are in metres unless stated otherwise.
- Works are described in Schedule 1 (Authorised Development) of the Development Consent Order (document reference TR010020/APP/3.1).
- The proposed works shown are illustrative only and will be subject to change as part of detailed design development. Any changes will be limited to being within the Order Limits and any other constraints included in the Development Consent Order.
- These Works Plans should be read in conjunction with the Land Plans and the Engineering Drawings and Sections of the made A19/A184 Testos Junction Alteration Development Consent Order 2018, and with application document 7.5 of the A19 Downhill Lane Junction Improvement DCO application (document reference TR010024/APP/7.5).

**KEY**

- Limits of land to be acquired or used permanently or temporarily
- Local Authority Boundary
- Area not included within the DCO boundary
- The Scheme (shown for illustrative purposes)
- Land Plot Boundaries
- - - Linear Highway Work Centerline (Approx)
- Highway Work Limit of Deviation
- Non-linear Highway Work
- Other Non-linear Works
- - - Utility Diversion Centerline (Approx)
- - - Utility Diversion Limit of Deviation
- Commencement of linear Works (Approx)
- Termination of linear Works (Approx)



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Rev	Revision date	Purpose of Revision	Drawn	Check'd	Rev'd	Appr'd
3	07/01/2019	DCO PLANS	TS	RA	RA	GW
2	08/03/2018	UPDATED FOR EXAMINATION DEADLINE 5	TS	RA	RA	GW
1	20/10/2017	UPDATE PRIOR TO PRELIM MEETING	TS	RA	RA	GW
0	06/07/2017	APPLICATION ISSUE	TS	RA	RA	GW

Client: **highways england**

Designer: **JACOBS** Contractor: **COSTAIN**

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Drawing title: **WORKS PLANS REGULATION 5(4) KEY PLAN**

Drawing status: **DCO PLANS**

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This drawing is not to be used in whole or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

## Appendix 2 - A19 Downhill Lane Junction Improvement DCO

### Part A

#### 1 PROJECT DESCRIPTION

- 1.1 This project was granted development consent on 16 July 2020. As set out at paragraph 3 of the Secretary of State's decision letter, the proposed order would grant development consent for:
- (a) the construction of a new bridge spanning the A19 south of the existing junction bridge. The new bridge and the existing bridge will be used to form a grade separated roundabout junction layout above the A19;
  - (b) the realignment of the existing northbound and southbound A19 slip roads to tie in with the new roundabout layout. The slip roads north of the junction will serve as link roads between Downhill Lane Junction and the proposed Testo's junction. The slip roads south of the junction will continue to provide direct access to and from the A19;
  - (c) the realignment of the A1290, Downhill Lane (West), Downhill Lane (East) and Washington Road (East) local roads to suit the new junction layout; and
  - (d) the construction of a segregated non-motorised user facility featuring a dedicated overbridge for walkers, cyclists, horse riders and wheelchair users to the south of the junction.
- 1.2 A copy of the A19 Downhill Lane Junction Improvement Works Plans can be found at Appendix 2 Part B [TR010024/APP/2.4].

#### 2 EXAMINING AUTHORITY'S RECOMMENDATION REPORT

- 2.1 At paragraph 4.17.6, the Examining Authority notes that the proposed development is largely within the Green Belt. The Examining Authority also notes, at paragraph 4.17.37, that there were no representations suggesting that the proposed development was inappropriate development in the Green Belt or that it was contrary to Green Belt policy.
- 2.2 Paragraph 4.17.29 sets out the arguments raised by the Applicant as to why the proposed development would not be inappropriate development in the Green Belt –
- *'It is in accordance with paragraph 170-171 of the Framework as the Proposed Development is supported by specific policies of the development plan, namely through the IAMP AAP and the STC Site Specific Allocations.*
  - *The existing Downhill Lane junction is already in the Green Belt and as some elements of the existing junction will be removed as a result of the Proposed Development the proposals are not inconsistent with the current use of the land.*
  - *The Proposed Development and environmental mitigation proposals were designed with reference to guidelines in DMRB for aesthetic appearance as well as function and cost to keep the impact of the Proposed Development on the openness and purpose of the Green Belt to a minimum.*
  - *The location of the Proposed Development in the Green Belt is unavoidable as it is related to an existing junction. The Framework identifies that local transport developments that cannot avoid a Green Belt location are not inappropriate development.*



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- *The Framework recognises that infrastructure projects have to be located in the Green Belt if they are to go ahead. The exception to this might be if alternative alignments not within the Green Belt are available and suitable but that is not the case for the Proposed Development.*
- *The allocation of IAMP and its removal from the Green Belt reduces the function of the Green Belt in this area particularly in terms of separating settlements and retaining openness. As the Proposed Development is integral to the delivery of the IAMP AAP as ancillary infrastructure then its inclusion in the IAMP AAP has taken into account any impact on the Green Belt. The extent of harm on the Green Belt is therefore minimal.'*

2.3 At paragraph 4.17.47, the Examining Authority considers the application of policy and concludes that the that the proposed development would be a form of local transport infrastructure which can demonstrate a requirement for a Green Belt location–

*'As the Proposed Development is in the Green Belt, I have carefully considered to whether it harms the purposes of Green Belt designation and might be "inappropriate development". Paragraph 5.178 of the NNNPS has been taken into account, together with paragraphs 143, 144 and 146 of the Framework, the IAMP AAP, STC 2012 Policy Map, the SCC Core Strategy and Development Plan and the STC Core Strategy. The Proposed Development is identified by both the Applicant and the relevant local planning authorities as being of strategic importance in transportation and economic development terms. Nevertheless, it also serves a range of local needs and as such I consider that it is supported by the development plan as a form of "local transport infrastructure which can demonstrate a requirement for a Green Belt location". On this basis the Proposed Development is not inappropriate development in the Green Belt provided that it preserves the openness of the Green Belt and does not conflict with the purposes of including land in Green Belt.'*

2.4 At paragraph 4.17.48, the Examining Authority notes that the proposed development would not have a significant impact on openness and would not be harmful to any of the five purposes of Green Belt –

*'The Proposed Development would not have a significant impact on openness with development primarily close to its existing A19 alignment and adjoining local roads. Landscape planting would ensure that new infrastructure is appropriately integrated into the local landscape. Nevertheless, the openness of the Green Belt, which does not imply freedom from any form of development, would not be harmed by the Proposed Development in the operational phase. With regard to the purposes of including land in the Green Belt as set out in paragraph 134 of the Framework, the Proposed Development would not be harmful to any of the five purposes.'*

2.5 At paragraph 4.17.49, the Examining Authority concludes that the proposed development would not be inappropriate development and that the Secretary of State does not need to consider 'very special circumstances' –

*'In summary, the Proposed Development leaves openness unharmed and broadly reinforces the Green Belt purposes. Whilst being part of the SRN it also serves as a local transport improvement scheme to secure economic benefit. As such it is "local transport infrastructure which can demonstrate a requirement for a Green Belt location", the Proposed Development is not inappropriate development. Consequently, the SoS does not need to consider "very special circumstances" in this case.'*

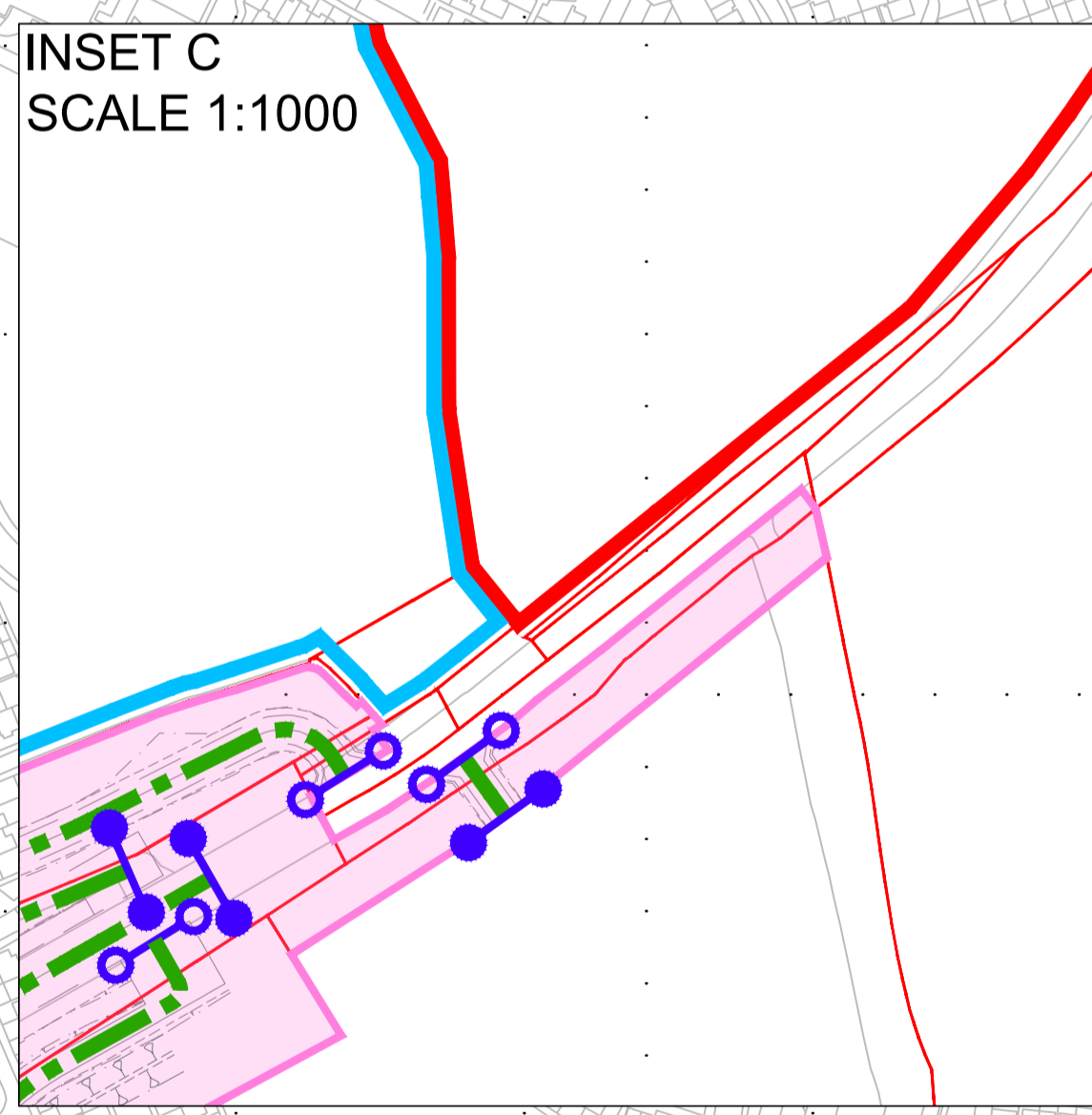
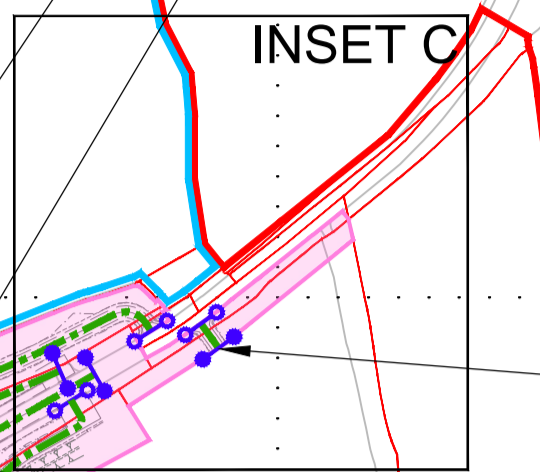
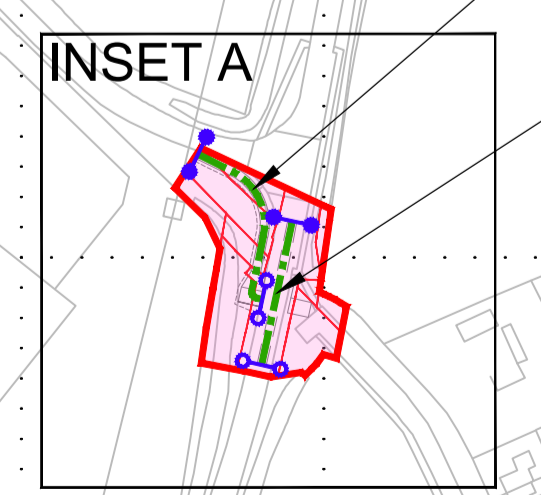
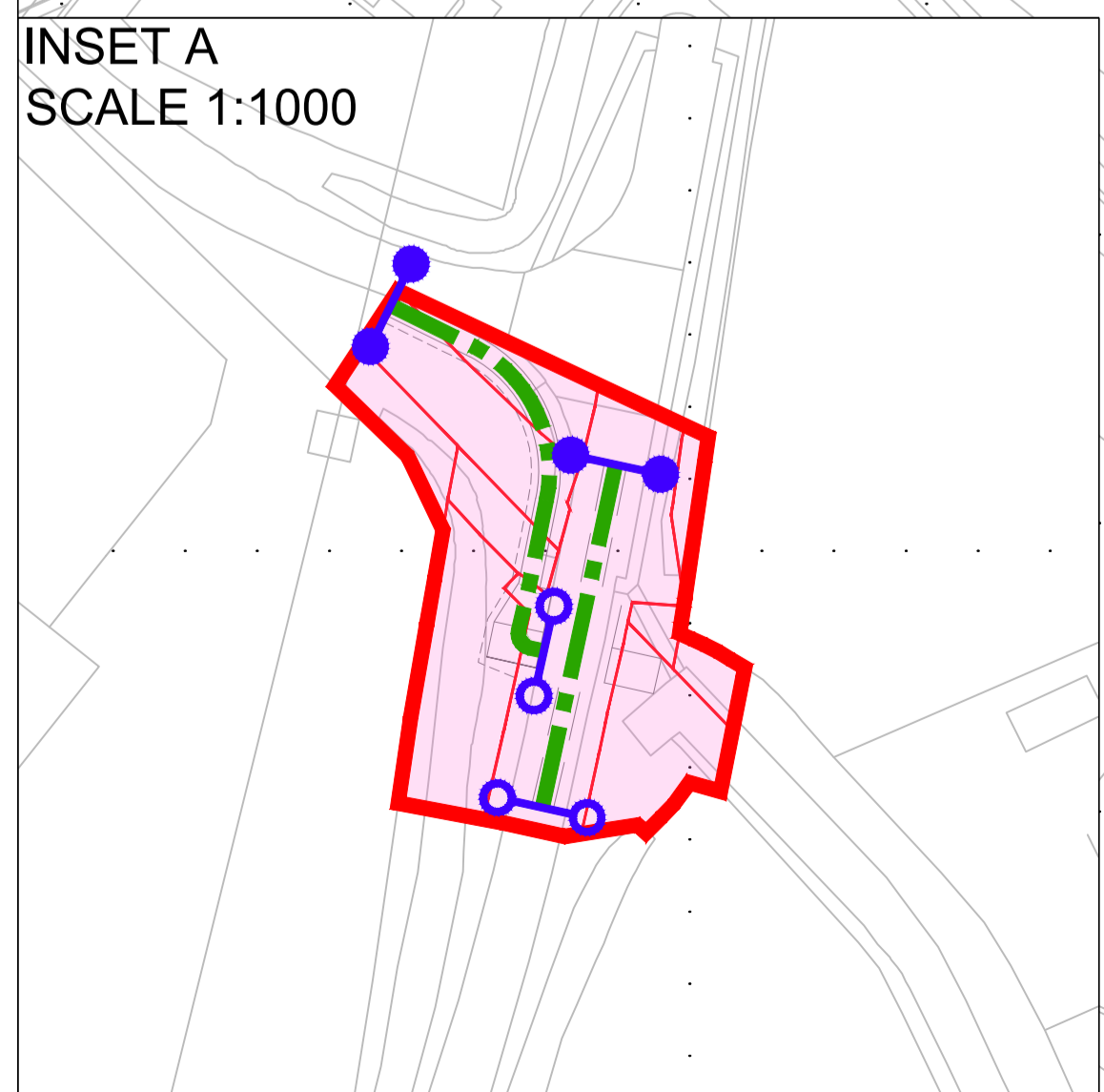
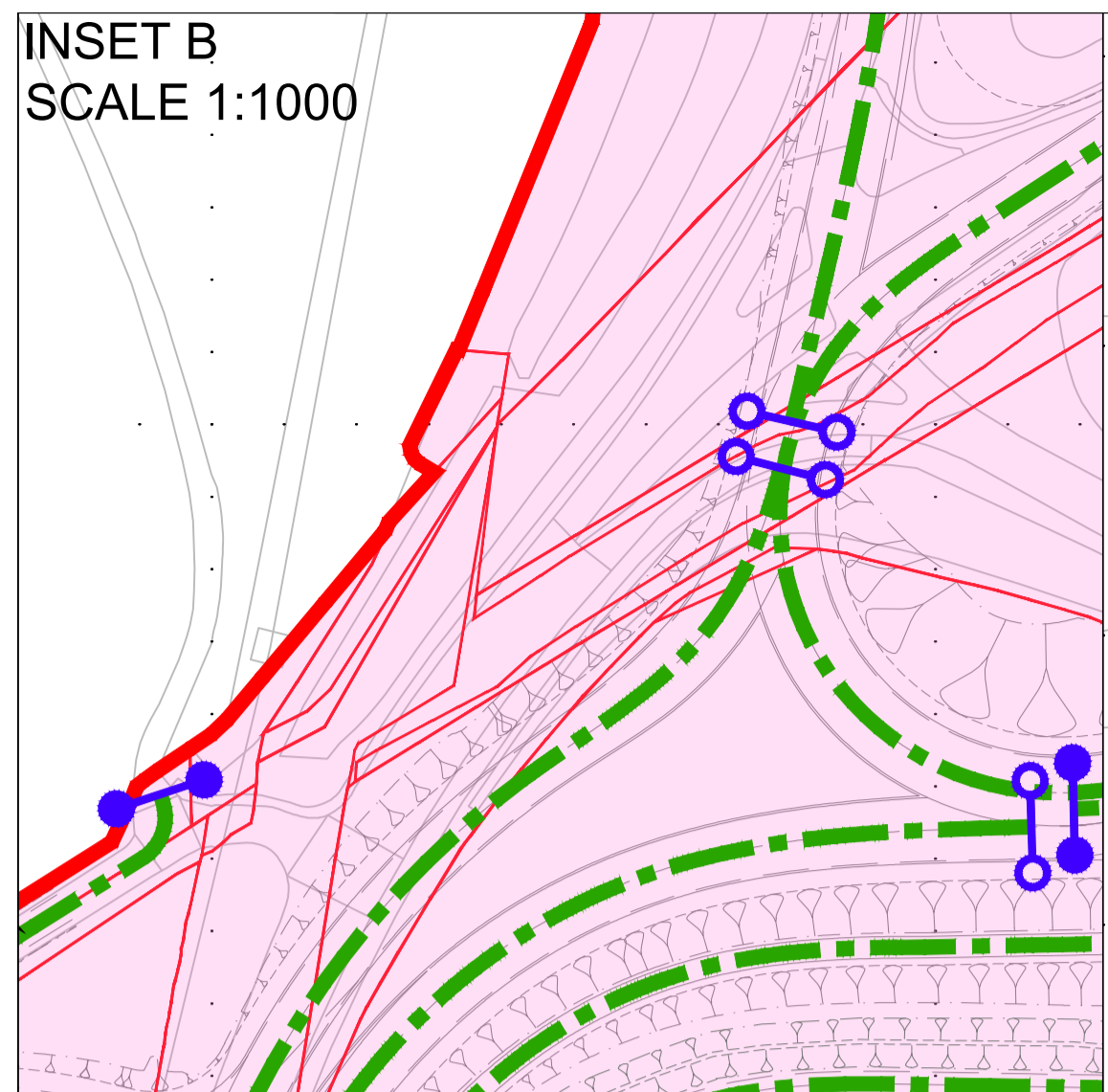
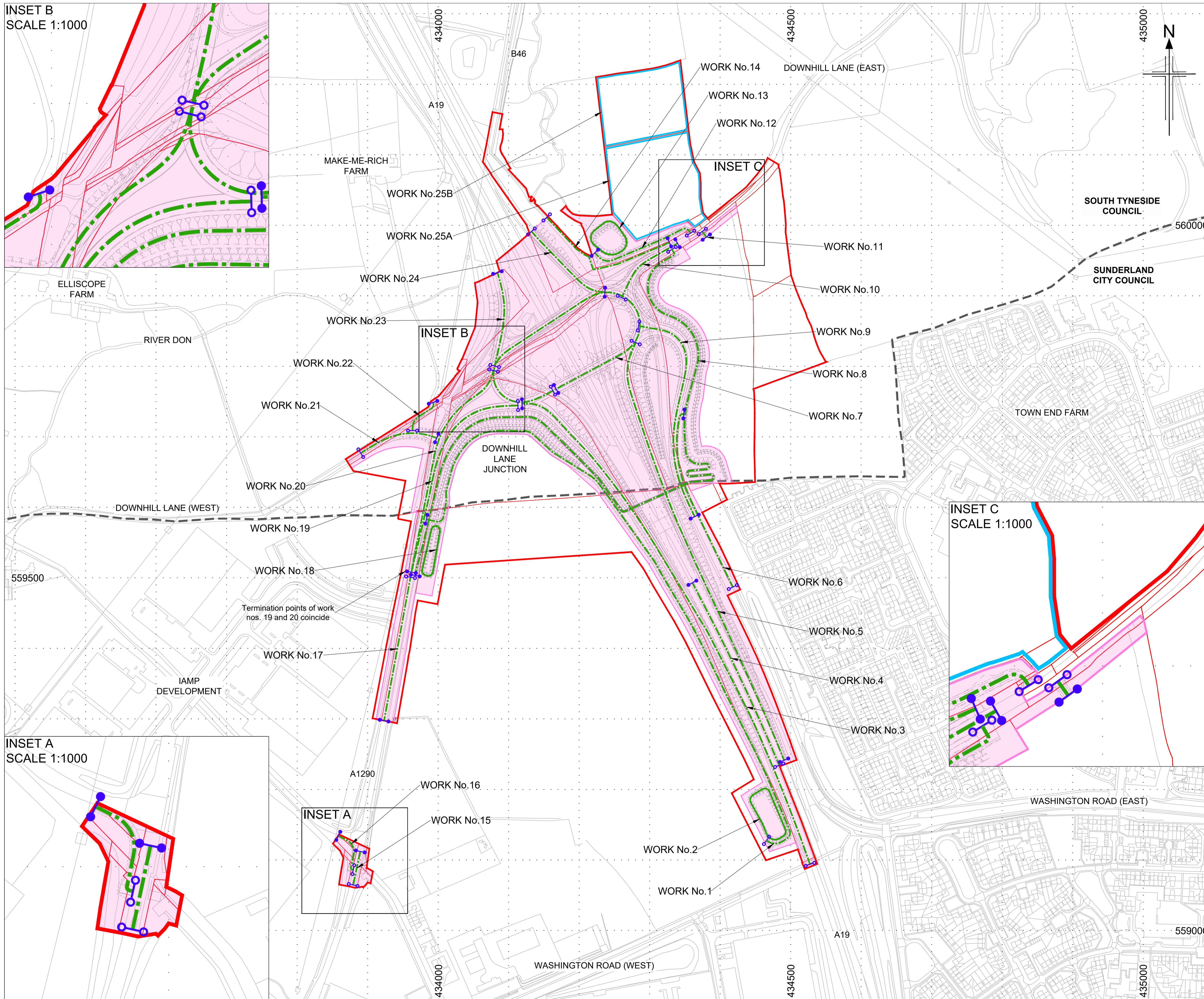
# Technical Note: Inappropriate Development in the Green Belt



## 3 SECRETARY OF STATE'S DECISION LETTER

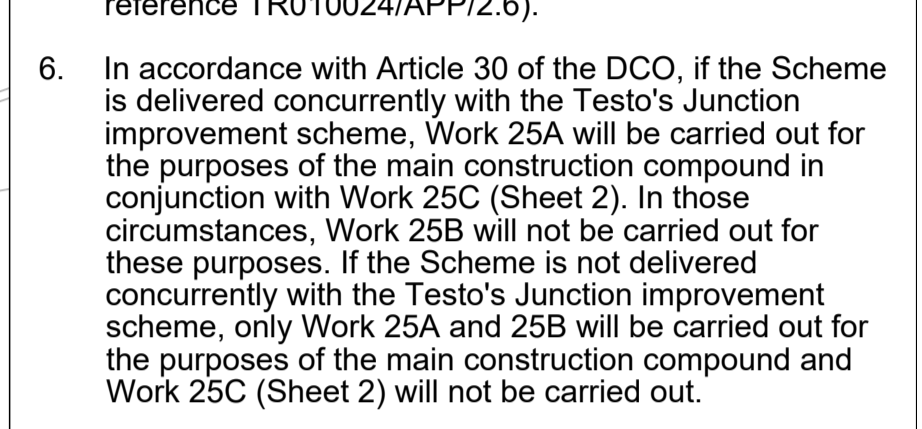
- 3.1 The Secretary of State agreed with the Examining Authority's assessment of Green Belt at paragraph 37 of their decision letter –

*'The Proposed Development is located within the Green Belt. The Secretary of State notes the Applicant's planning statement that the Green Belt is intended, amongst other things, to preserve the openness of land and prevent settlements merging and that there is a general presumption not to develop in the Green Belt unless other overriding reasons justify development (ER 4.17.28). The Secretary of State notes that the Applicant considered that the Proposed Development was not inappropriate development in the Green Belt for the reasons set out in ER 4.17.29. The Secretary of State further notes there were no representations suggesting that the Proposed Development was inappropriate development in the Green Belt or that it was contrary to the Green Belt policy (ER 4.17.37). The Secretary of State agrees with the ExA's analysis that the Proposed Development, in addition to its strategic importance in transportation and economic development terms, can be considered as a form of "local transport which can demonstrate a requirement for a Green Belt location" (ER 4.17.47). On this basis, the Secretary of State agrees that the Proposed Development is not inappropriate development in the Green Belt as it leaves the openness of the Green Belt unharmed and broadly reinforces the Green Belt purposes; consequently it is not necessary for the Secretary of State to consider "very special circumstances" (ER 4.17.49).'*



- NOTES**
- All dimensions are in metres unless stated otherwise.
  - The Ordnance Survey background displayed in this drawing has been modified to show the neighbouring Testo's and IAMP One consented schemes. This reflects the most likely baseline scenario for the opening year of the Scheme.
  - Works are described in Schedule 1 (Authorised Development) of the Development Consent Order (document reference TR010024/APP/3.1).
  - The proposed works shown are illustrative only and will be subject to change as part of detailed design development. Any changes will be limited to being within the Order Limits and any other constraints included in the Development Consent Order.
  - This Works Plan should be read in conjunction with the Land Plans (document reference TR010024/APP/2.3) and the Engineering Drawings and Sections (document reference TR010024/APP/2.6).
  - In accordance with Article 30 of the DCO, if the Scheme is delivered concurrently with the Testo's Junction improvement scheme, Work 25A will be carried out for the purposes of the main construction compound in conjunction with Work 25C (Sheet 2). In those circumstances, Work 25B will not be carried out for these purposes. If the Scheme is not delivered concurrently with the Testo's Junction improvement scheme, only Work 25A and 25B will be carried out for the purposes of the main construction compound and Work 25C (Sheet 2) will not be carried out.

- KEY**
- Limits of land to be acquired or used permanently or temporarily
  - Land plot outlines
  - Local Authority Boundary
  - The Scheme (shown for illustrative purposes)
  - Linear Highway Work Centerline (Approx)
  - Non-linear Highway Work
  - Highway Work Limit of Deviation
  - Other non-linear Work
  - Commencement of linear Works (Approx)
  - Termination of linear Works (Approx)



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Rev	Revision date	APPLICATION ISSUE	CR	AP	AP	GW
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		Purpose of Revision	Drawn	Check'd	Rev'd	Appr'd

Client: **highways england**

Designer: **JACOBS** Contractor: **COSTAIN**

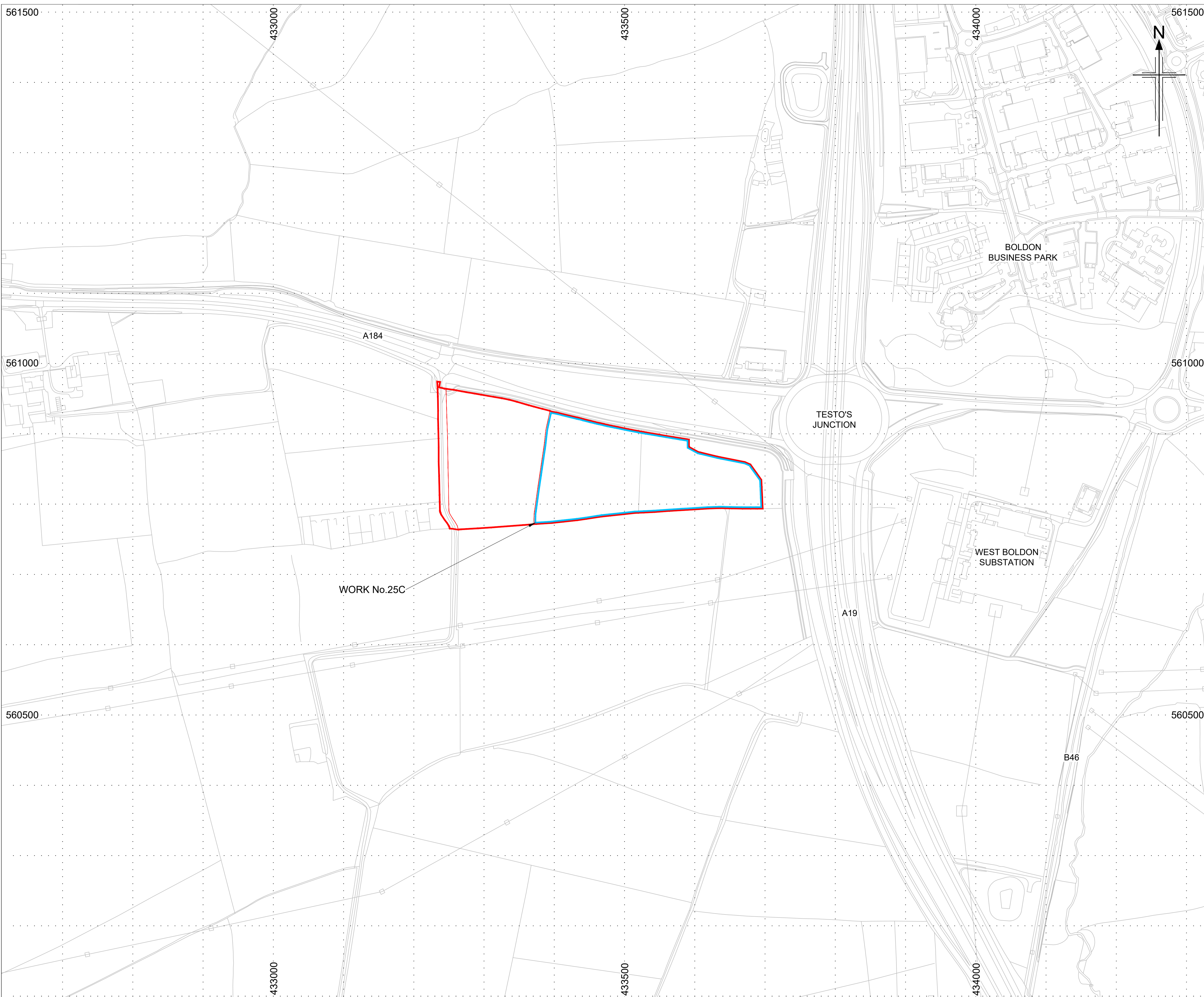
Project: **A19 DOWNHILL LANE JUNCTION IMPROVEMENT**

Drawing title: **WORKS PLANS REGULATION 5(2)(j) SHEET 1 OF 2**

Drawing status: **DCO SUBMISSION**

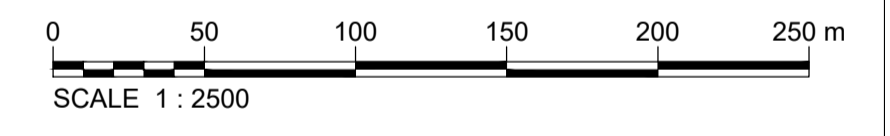
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Jacobs No.	B0140301	
Client no.	HE514495	
Drawing number	<b>TR010024/APP/2.4 (A)</b>	Rev
		<b>0</b>

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- NOTES**
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  - This Works Plan should be read in conjunction with the Land Plans (document reference TR010024/APP/2.3) and the Engineering Drawings and Sections (document reference TR010024/APP/2.6).
  - In accordance with Article 30 of the DCO, if the Scheme is delivered concurrently with the Testos Junction improvement scheme, Work 25A (Sheet 1) will be carried out for the purposes of the main construction compound in conjunction with Work 25C. In those circumstances, Work 25B (Sheet 1) will not be carried out for these purposes. If the Scheme is not delivered concurrently with the Testos Junction improvement scheme, only Work 25A and 25B (Sheet 1) will be carried out for the purposes of the main construction compound and Work 25C will not be carried out.

- KEY**
- Limits of land to be acquired or used permanently or temporarily
  - Land plot outlines
  - Other non-linear work



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0	2012/2018	APPLICATION ISSUE	CR	AP	AP	GW
Rev	Revision date	Purpose of Revision	Drawn	Check'd	Rev'd	Appr'd

Client

Designer **JACOBS** Contractor **COSTAIN**

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Project **A19 DOWNHILL LANE JUNCTION IMPROVEMENT**

Drawing title **WORKS PLANS REGULATION 5(2)(j) SHEET 2 OF 2**

Drawing status **DCO SUBMISSION**

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Client no.	HE514495	

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## Appendix 3 - A38 Derby Junctions DCO

### Part A

#### 1 PROJECT DESCRIPTION

- 1.1 This project was granted development consent on 17 August 2023. It is described in the Secretary of State's decision letter as follows:

*'The DCO as applied for would grant development consent for the construction, operation, and maintenance of three replacement roundabouts on the A38 in Derby known as the Kingsway, Markeaton and Little Eaton junctions ("the Proposed Development") [ER 1.1.2] and the components of the Proposed Development are described in more detail at ER 2.2. The Proposed Development would provide grade separation of three existing junctions of the A38 as it passes to the west and north of Derby city centre. The Proposed Development would therefore mainly take place at three distinct locations spanning some 6km [ER 2.2.4]. The proposed Kingsway junction would comprise a dumbbell roundabout arrangement and linkages at existing ground level, with the A38 passing beneath the junction in an underpass [ER 2.2.9]. The proposed Markeaton junction would comprise an enlarged two-bridge roundabout at existing ground level with the A38 passing beneath in an underpass to the south-east of the existing roundabout with slip roads connecting the A38 to the new roundabout [ER 2.2.11]. The proposed Little Eaton junction would comprise an enlarged roundabout at existing ground level with the mainline of the A38 being raised on an embankment and passing above the roundabout on two overbridges to the east and south of the existing roundabout [ER 2.2.18].'*

- 1.2 A copy of the works plans for the A38 Derby Junctions project, as submitted at Deadline 2, can be found at Appendix 3 Part B [TR010022 2.5(b)].

#### 2 EXAMINING AUTHORITY'S RECOMMENDATION REPORT

- 2.1 At paragraph 4.12.1, the Examining Authority notes that the Little Eaton junction falls within the Green Belt.
- 2.2 At paragraph 4.5.38, the Examining Authority provides that the proposed development is not inappropriate development in the Green Belt and confirms that the local infrastructure exception can apply to the NSIP –

*'The Proposed Development is an NSIP, rather than local, infrastructure project. The NPSNN is clear that the NPPF is not intended to contain specific policies for NSIPs but that it should be applied to the extent that it is relevant to the project. In this case, the Proposed Development requires a GB location because it comprises the upgrading of existing linear infrastructure in the GB. It would frustrate the aims of NPSNN policy on the importance of improving the SRN if the exception for local infrastructure provided by paragraph 146(c) of the NPPF did not also apply to this NSIP. The effect of the Proposed Development on the openness of the GB is dealt with in Section 4.12 below. However, in summary, it concludes that openness would be preserved. On this basis we find that the Proposed Development would not be inappropriate development and, therefore, accords with NPSNN policies on the GB.'*

- 2.3 At paragraphs 4.12.39 – 4.12.64, the Examining Authority considers the proposed development's impact on the openness of the Green Belt. At paragraph 4.12.65, the Examining Authority concludes that –

# Technical Note: Inappropriate Development in the Green Belt



*'Consequently, we find that, in both its spatial and visual effects, the proposal would preserve the openness of the GB. As such, the Proposed Development would fall within the exception set out in paragraph 146(c) of the NPPF and, therefore, would not be inappropriate development in the GB. As such, we find that the proposals would accord with paragraphs 5.170, 5.171 and 5.178 of the NPSNN and paragraph 133 of the NPPF.'*

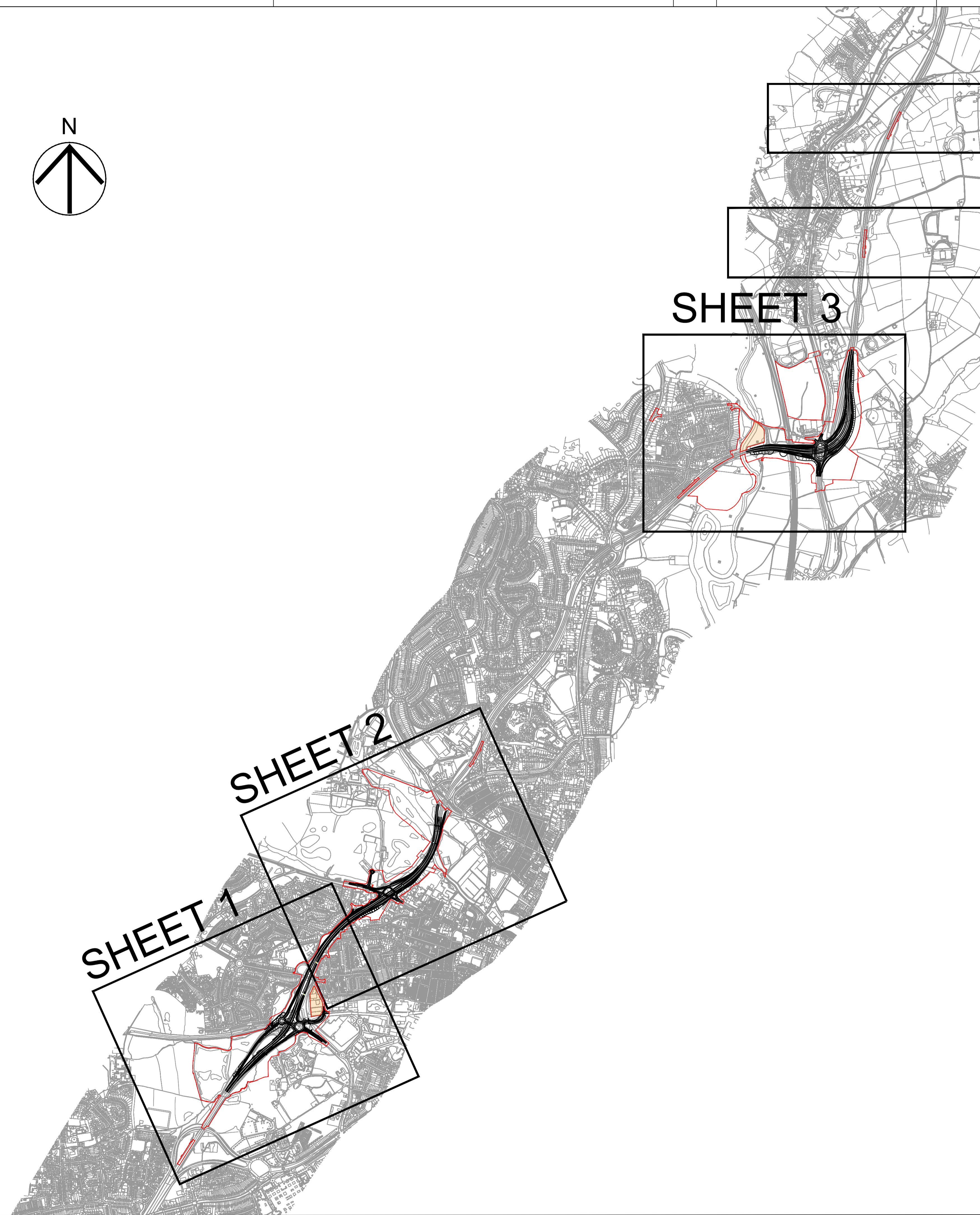
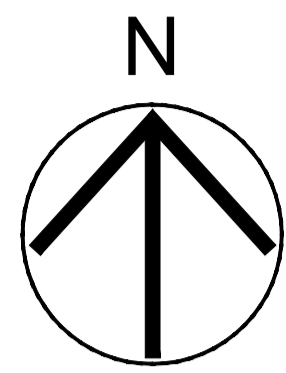
## **3 SECRETARY OF STATE'S DECISION LETTER**

- 3.1 The Secretary of State, at paragraph 77, notes that the existing Little Eaton junction is a prominent feature in the landscape which affects the openness of the Green Belt–

*'The Secretary of State notes that the Little Eaton junction falls within the Green Belt [ER 4.12.1]. The ExA set out that the existing junction is a prominent feature in the landscape and, as such, affects the openness of the Green Belt. The ExA's view was that the form and function of the existing junction is separated and readily distinguishable from nearby built developments, including Breadsall village and the group of properties to the north of the Little Eaton junction, and noted that this distinction would remain for the Proposed Development and would not lead to urban sprawl [ER 4.12.63]. The Secretary of State is satisfied that woodland planting on the embankments would further help to absorb the Proposed Development into the landscape and would provide effective visual screening when established [ER 4.12.64].'*

- 3.2 The Secretary of State, at paragraph 78, goes on to agree with the Examining Authority that the proposed development would fall within the local transport infrastructure exception and would not be inappropriate development in the Green Belt–

*'Having regard to the presence of the existing junction at Little Eaton and the scale, form, and extent of the proposed junction, the Secretary of State agrees with the ExA and finds the Proposed Development's spatial and visual effects would preserve the openness of the Green Belt. Therefore, the Secretary of State agrees with the ExA that the Proposed Development would fall within the exception set out in paragraph 150(c) of the NPPF (paragraph 146(c) in the ER) and would not be considered as inappropriate development in the Green Belt, therefore according with relevant NPSNN and NPPF policies for the Green Belt [ER 6.4.35].'*



SHEET 4 -  
INSET B

SHEET 4 -  
INSET A

SHEET 3

SHEET 2

SHEET 1

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Revision Details	By	Check	Date	Suffix
First Issue	LF	GS	05/06/19	C01
Minor amendments to key and plan in response to examination questions for deadlines 1 & 2.	LF	GS	13/11/19	C02

Purpose of issue  
**DCO APPLICATION**

Client  
Highways England  
Two Colmore Square  
38 Colmore Circus  
Birmingham  
B4 6BN



Development Consent Order Number  
**TR010022**

Project Title  
**A38  
DERBY JUNCTIONS**

Drawing Title  
**WORKS PLANS  
REGULATION 5(2)(j)  
KEY PLAN**

Designed	Drawn	Checked	Approved	Date
LF	LF	SW	GS	11/11/19

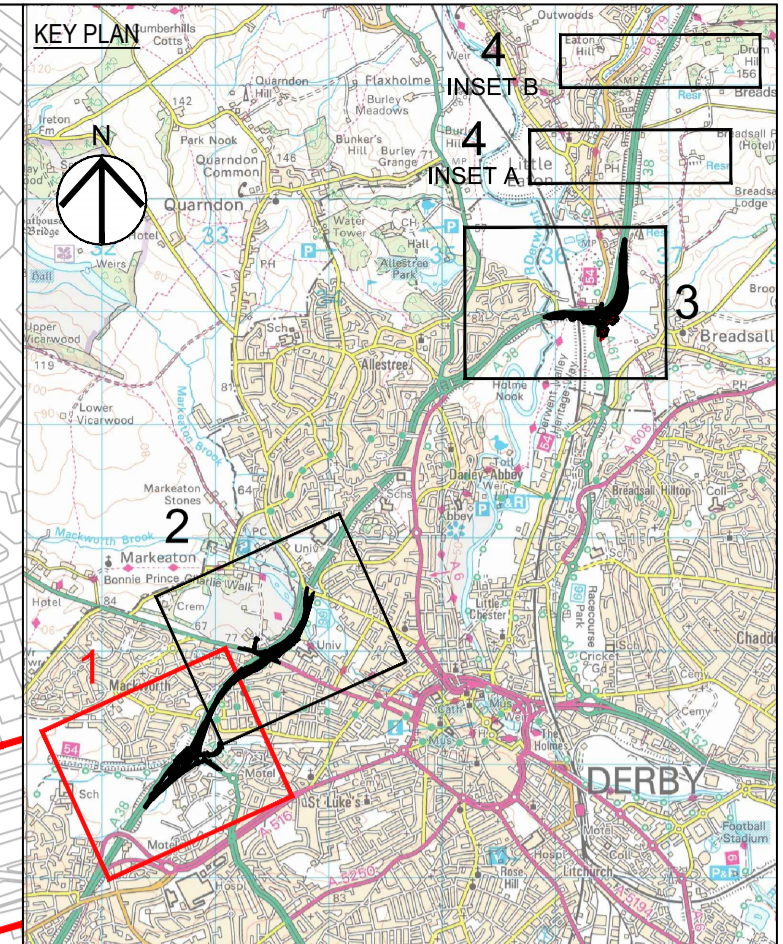
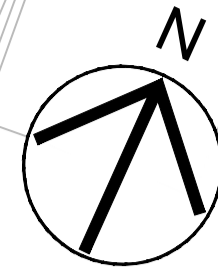
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  - EXTENTS OF LINEAR WORKS
  - LIMITS OF LAND TO BE ACQUIRED OR USED PERMANENTLY OR TEMPORARILY (THE ORDER LIMITS)
  - WORKS ITEM LIMIT OF DEVIATION.
  - UTILITY DIVERSION CORRIDOR INCLUDING WORKS ITEM LIMIT OF DEVIATION.
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  - AREA NOT INCLUDED WITHIN DCO BOUNDARY
  - PROPOSED CULVERT
  - PROPOSED WATERCOURSE
  - CONSTRUCTION COMPOUND AREA
  - RIGHTS OF WAY DIVERSION

First Issue	LE	GS	05/06/19	C01
Minor amendments to key and plan in response to examination questions for deadlines 1 & 2.	LF	GS	13/11/19	C02
Revision Details	By	GS	Check	Date
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**DCO APPLICATION**

Client  
Highways England  
Floor 5  
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B4 6BN



Development Consent Order Number  
**TR010022**

Project Title  
**A38  
DERBY JUNCTIONS**

Drawing Title  
**WORKS PLANS  
REGULATION 5(2)(j)  
SHEET 1 OF 4**

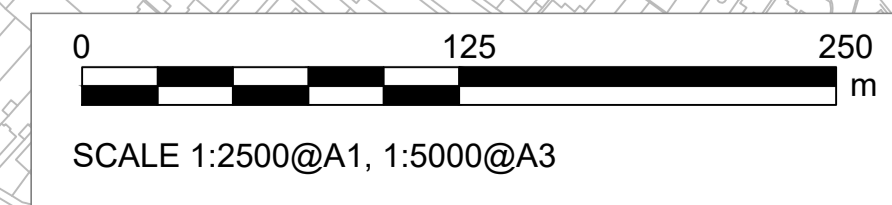
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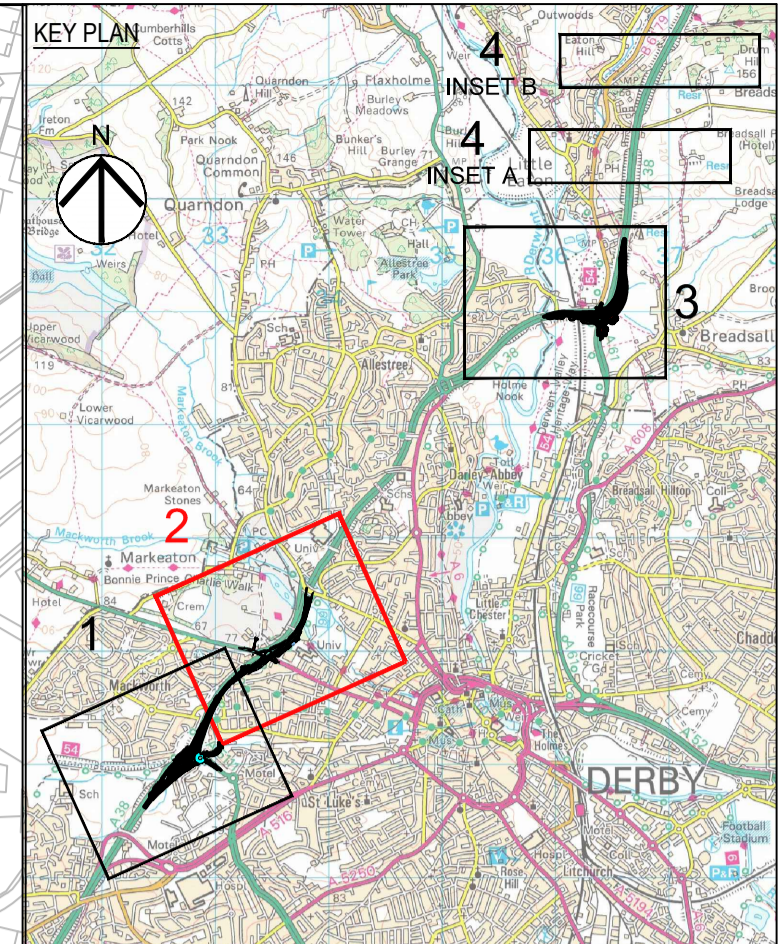
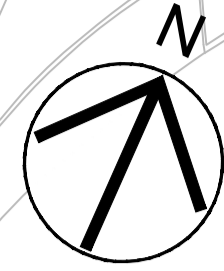
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First Issue	LE	GS	05/06/19	C01
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**DCO APPLICATION**

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Development Consent Order Number  
**TR010022**

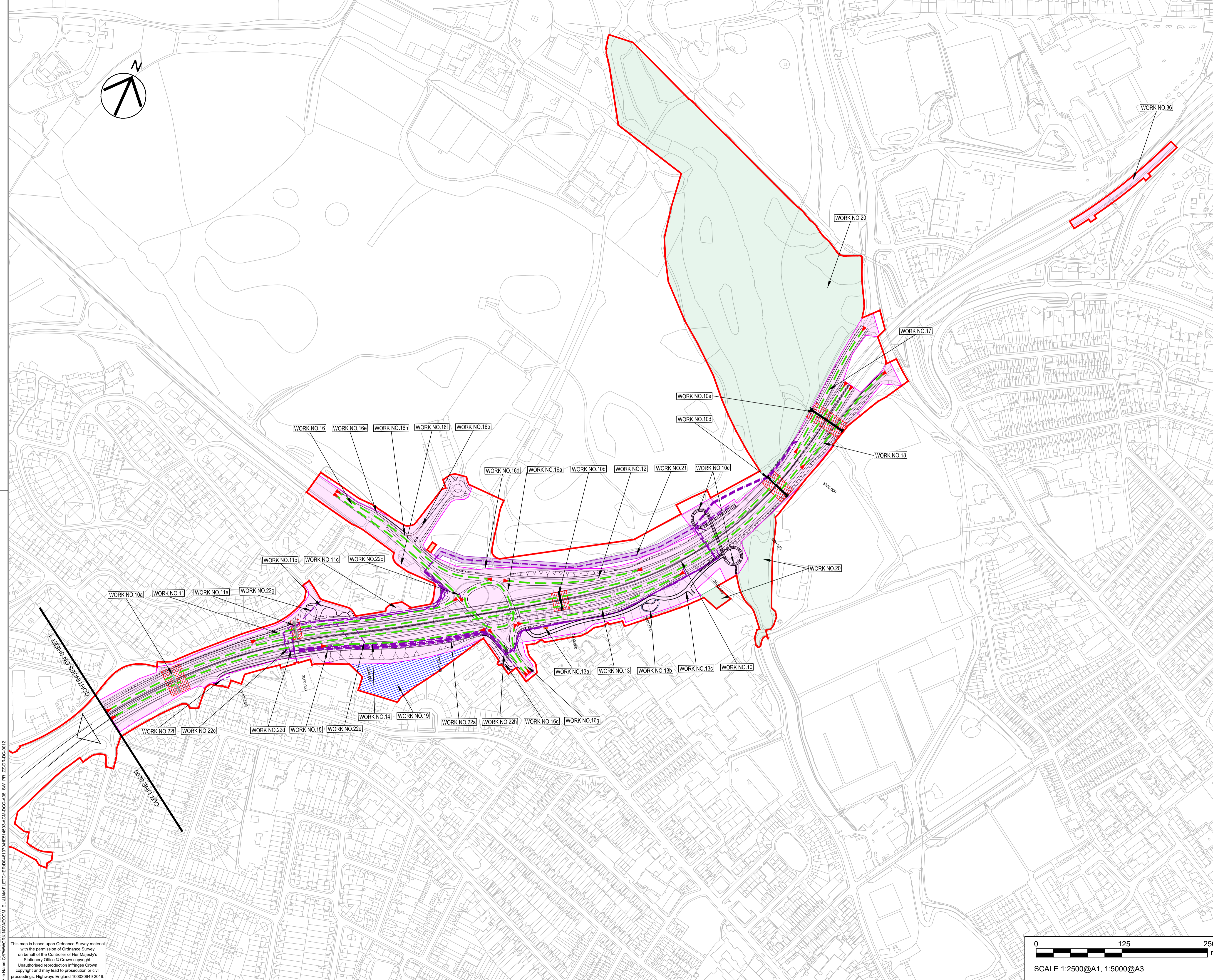
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REGULATION 5(2)(j)  
SHEET 2 OF 4**

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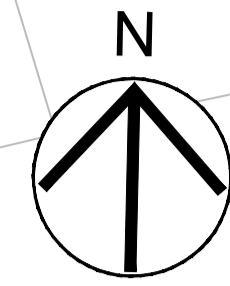
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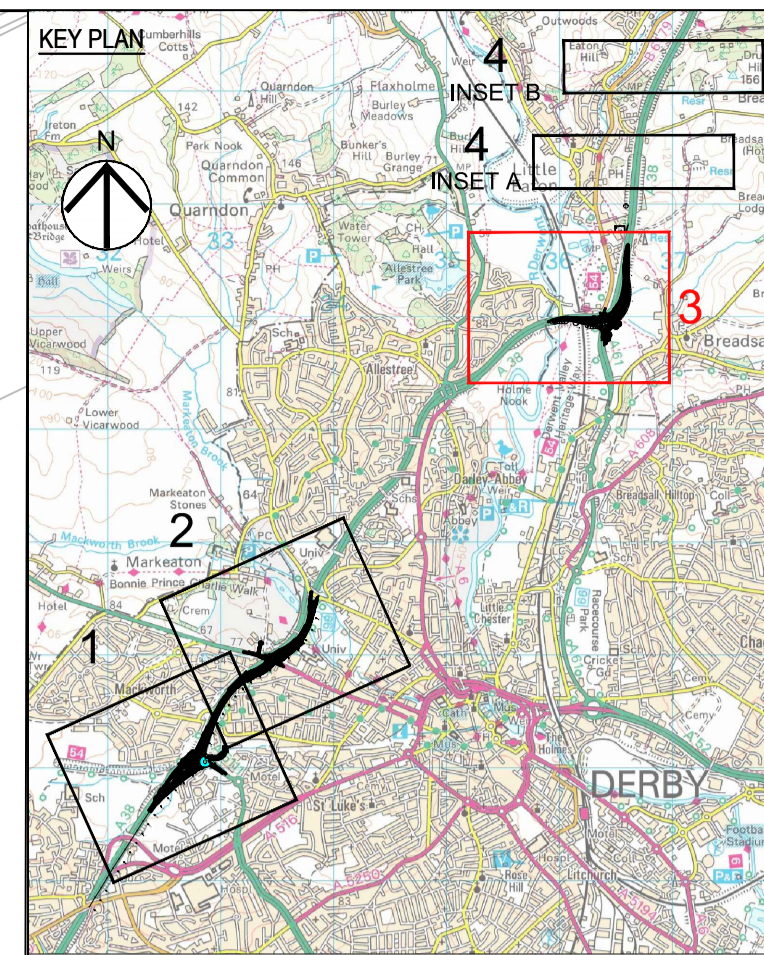


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INSETS  
A&B



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Development Consent Order Number  
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SHEET 3 OF 4**

Designed	Drawn	Checked	Approved	Date
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Suitability  
D7  
Zone  
Whole Scheme

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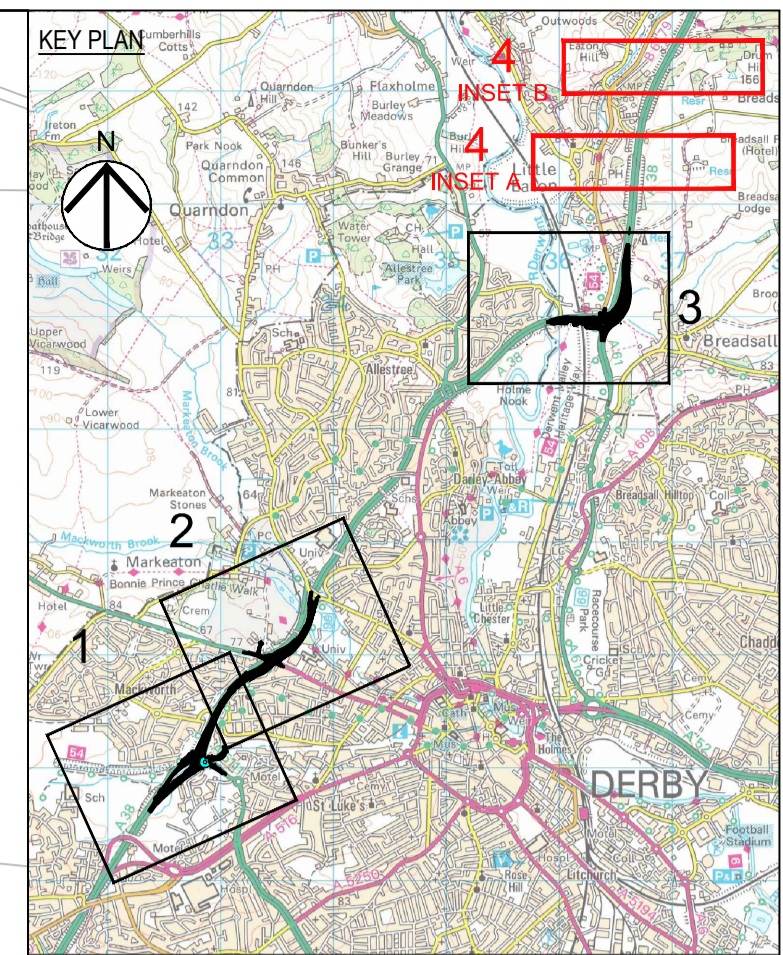
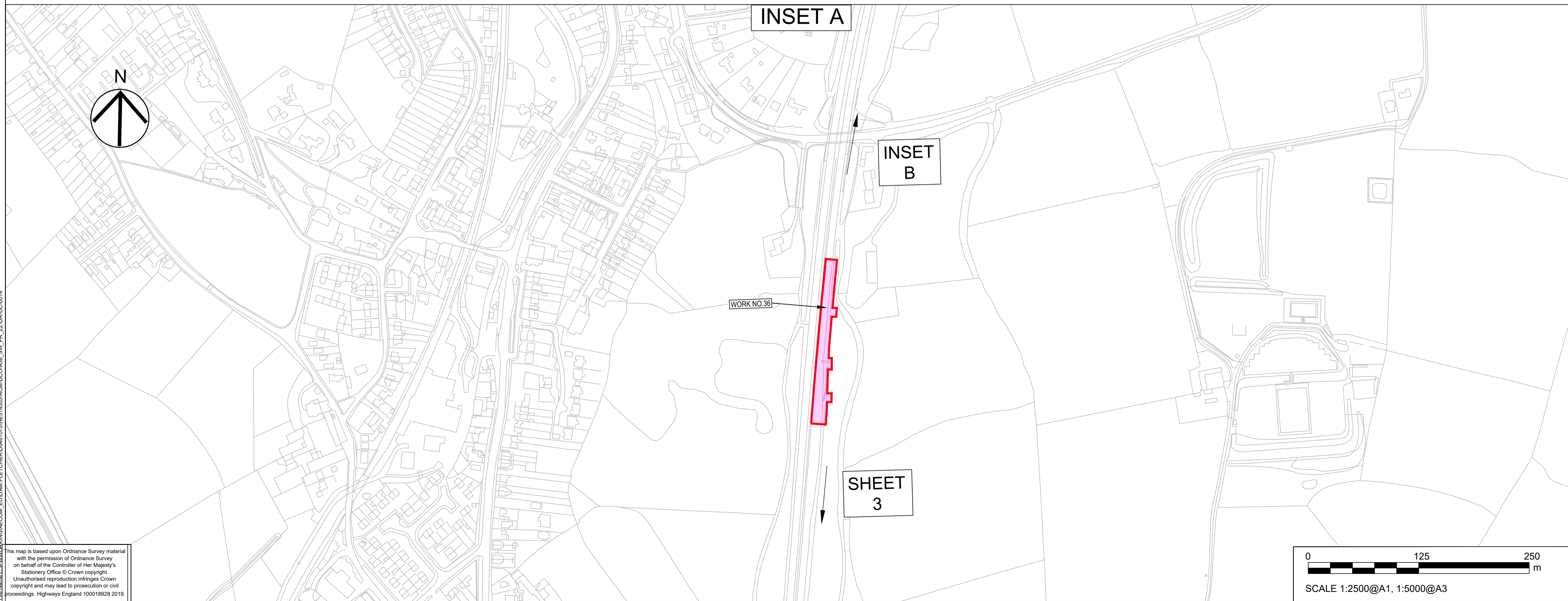
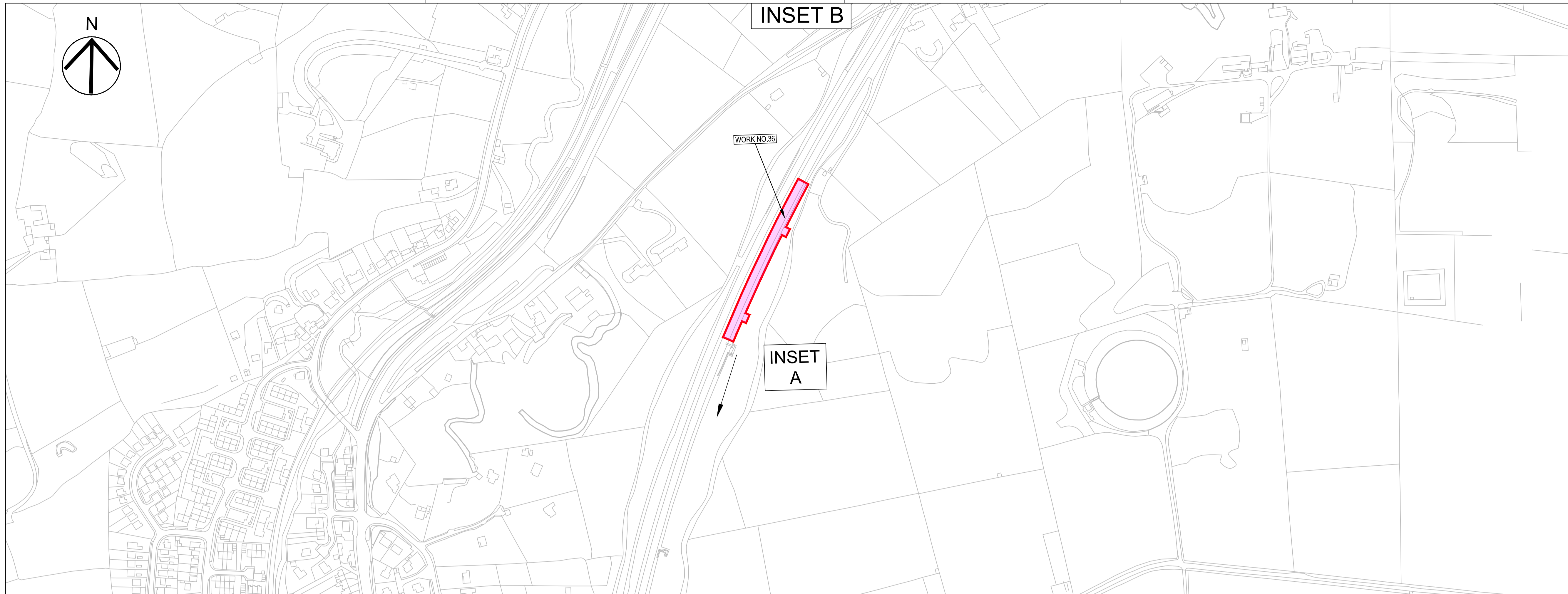
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  - HIGHWAY WORK CENTRELINE (APPROX)
  - EXTENTS OF LINEAR WORKS
  - LIMITS OF LAND TO BE ACQUIRED OR USED PERMANENTLY OR TEMPORARILY (THE ORDER LIMITS)
  - WORKS ITEM LIMIT OF DEVIATION.
  - UTILITY DIVERSION CORRIDOR INCLUDING WORKS ITEM LIMIT OF DEVIATION.
  - UTILITY DIVERSION CENTRELINE (APPROX)
  - HIGHWAY WORK LIMIT OF DEVIATION
  - ENVIRONMENTAL MITIGATION WORKS
  - AREA NOT INCLUDED WITHIN DCO BOUNDARY
  - PROPOSED CULVERT
  - PROPOSED WATERCOURSE
  - CONSTRUCTION COMPOUND AREA
  - RIGHTS OF WAY DIVERSION

Revision Details	By	Check	Date	Suffix
First Issue	LE	GS	05/06/19	C01
Minor amendments to key and plan in response to examination questions for deadlines 1 & 2.	LF	GS	13/11/19	C02

Purpose of issue  
**DCO APPLICATION**

Client  
**Highways England**  
Two Colmore Square  
38 Colmore Circus  
Birmingham  
B4 6BN

Development Consent Order Number  
**TR010022**

Project Title  
**A38  
DERBY JUNCTIONS**

Drawing Title  
**WORKS PLANS  
REGULATION 5(2)(j)  
SHEET 4 OF 4**

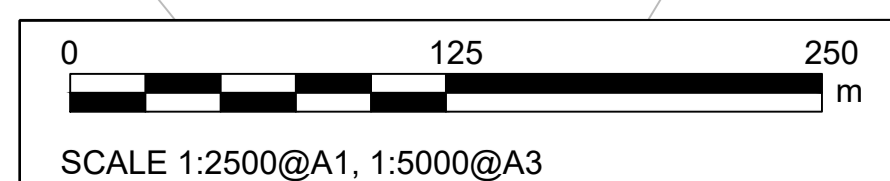
Designed	Drawn	Checked	Approved	Date
LF	LF	SW	GS	11/11/19

Internal Project No. 60533462  
Scale @ A1 1:2500  
Subsidiarity D7  
Zone Whole Scheme

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Location I Type I Role I Number

**C02**



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## Appendix 4 - Woodside Link Houghton Regis Bedfordshire DCO

### Part A

#### 1 DESCRIPTION

- 1.1 This project was granted development consent on 30 September 2014. It is described in the Secretary of State's decision letter as follows–
- (a) *'The Order would grant development consent for construction of a 2.9 kilometre highway between the Woodside area of Dunstable/Houghton Regis and new Junction 11a on the M1 which is to be constructed as part of the A5-M1 Link Road scheme. The Order would also authorise the compulsory acquisition and use of land for the purposes of the project. The new highway (referred to as the "Woodside Link") would provide a more direct route for traffic between the Woodside Industrial Estate and the primary road network avoiding the centres of Dunstable and Houghton Regis. It would also serve the Houghton Regis North Phase 1 ("HRN1") urban extension scheme which comprises a substantial housing development with business and retail elements.'*
- 1.2 A copy of the Location Plan can be found at Appendix 4 Part B [TR010011/APP/6]. A copy of the works plans could not be located since project documents have been removed from the Planning Inspectorate website. The Woodside link is shown in black and the A5-M1 Link Road project is shown in pink.

#### 2 EXAMINING AUTHORITY'S RECOMMENDATION REPORT

- 2.1 At paragraphs 4.109 to 4.111, the Examining Authority noted that a related application 'HRN1' had been approved by Central Bedfordshire Council and had not been called in by the Secretary of State. The Examining Authority noted that this decision *'must inevitably affect any consideration of the likely lifespan of the boundaries and related Green Belt policy context affecting the route of the Woodside Link'*.
- 2.2 At paragraph 4.112, the Examining Authority noted that the project could be regarded as local infrastructure despite being an NSIP –
- 'The Woodside Link application form (AD\_1), ES text (AD\_37) and Statement of Need (AD\_54) all make it clear that the Link would serve a range of local objectives as well as provide an important connection to the trunk road and motorway network. Having regard to the points made above and to these relevant and important local objectives, the Woodside Link may therefore be regarded legitimately as 'local infrastructure', notwithstanding its status as a Nationally Significant Infrastructure Project, as it would serve both local and nationally significant functions.'*
- 2.3 At paragraph 4.113, the Examining Authority concludes that the proposed development can be described as local infrastructure that is not inappropriate in the Green Belt –
- 'Accordingly, on the basis of the policy-related submissions before me (and having regard to my assessment in relation to the project's implications for the openness of the Green Belt explained in Chapter 4 at paragraphs 4.222-4.223), I agree with the CBC LIR that the Woodside Link can reasonably be regarded for the purposes of the planning policy assessment as local infrastructure that is not inappropriate in Green Belt. The policy set out at NPPF paragraph 90 therefore applies.'*

# Technical Note: Inappropriate Development in the Green Belt



- 2.4 At paragraph 4.114, the Examining Authority also concludes that the proposed development could fairly be described as requiring a Green Belt location –

*'In relation to the policy tests set out in paragraph 90 of the NPPF I also agree with the comments by CBC as LPA in paragraph 3.16 of its LIR (LIR\_1) that 'the proposal could fairly be described as requiring a Green Belt location', because the constrained choice of land available for routeing meant that only an open land location could reasonably be selected for this type of development (at least for the eastern and northern sections of the route). That open land available is located within Green Belt [...]*

- 2.5 At paragraph 4.277, the Examining Authority concludes that the proposed development would not compromise the openness of the existing Green Belt in the area, with the HRN1 development and A5\_M1 Link being relevant to longer term considerations of openness–

*'In view of these findings regarding the landscape and visual effects of the proposed scheme, which take into account observations made on my accompanied and unaccompanied site visits, I conclude that the visual effects of the road scheme when viewed from the eastern part of the Houghton Park Estate and the northern part of the Lewsey Farm Estate will be marginal. For the reasons explained above, in the short term the openness of the existing Green Belt in this area would not be compromised by the Woodside Link scheme, either during the day or at night. In the medium to longer term the effect of the major planning decisions made in relation to the HRN1 development and A5\_M1 Link must be taken into account.'*

## 3 SECRETARY OF STATE'S DECISION LETTER

- 3.1 The Secretary of State agreed with the Examining Authority's assessment of Green Belt considerations at paragraph 12 of their decision letter-

- (a) *'The Secretary of State has considered the Examining Authority's assessment at ER 4.104-120 as to whether the proposed development in the Green Belt is acceptable having regard to the NPPF, the draft National Networks NPS and the saved Local Plan Green Belt policy. He agrees with the Examining Authority that in this context the decisions made in relation to the HRN1 application by CBC and the Secretary of State for Communities and Local Government are relevant and important considerations because of the consequences of those decisions for the future of the Green Belt in this area (ER 4.111). The Secretary of State agrees, for the reasons given by the Examining Authority, that the Woodside Link can legitimately be regarded as local infrastructure that is not inappropriate in the Green Belt in accordance with paragraph 90 of the NPPF (ER 4.112-113). He agrees further that, even if the development were properly to be regarded as inappropriate development in the terms of the draft NPS, very special circumstances exist that outweigh the harm to the Green Belt and any other harm arising from the development (ER 4.115).'*

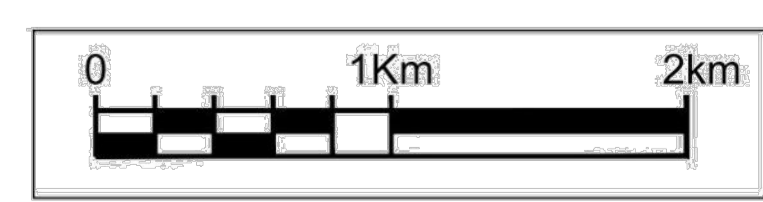
# Technical Note: Inappropriate Development in the Green Belt



Part B - Woodside Link Houghton Regis Bedfordshire DCO Location Plan



Location Plan  
Scale NTS



R0000	R0000000000	C000	A000	D000
D0000	B000000000	P0000000		
D0000	B000000000	Fo0000000		
C0000	GRS	Fo000000		
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CENTRAL BEDFORDSHIRE COUNCIL  
(WOODSIDE LINK HOUGHTON REGIS)  
DEVELOPMENT CONSENT ORDER

LOCATION PLAN  
(REG. 5(2)(o))  
(PINS REF. TR010011)

O0000D0000S000	A1	D00000000	
S0000	A0000	Co00000	OA0000/CBC

D0000 No  
30011001200

# Technical Note: Inappropriate Development in the Green Belt



## Appendix 5 - M1 Junction 10a Grade Separation – Luton DCO

### 1 PROJECT DESCRIPTION

- 1.1 The project was granted development consent on 30 October 2013. It is described in the Secretary of State's decision letter at paragraph 3 as follows-

*'The Order would grant development consent for the grade separation of M1 Junction 10a at Kidney Wood on the south side of Luton, including the removal of the existing at-grade roundabout, the widening of the M1 Spur and the A1081 Airport Way, and the construction of new slip roads and roundabouts giving access to London Road. The Order would also authorise LBC to acquire, compulsorily or by agreement, land and rights in land and to use land temporarily for the purposes of the scheme. The scheme would allow traffic to flow without interruption between the M1 Spur and Airport Way, which leads to Luton Airport and residential, commercial and industrial areas to the south of Luton.'*

- 1.2 A copy of the general layout plan can be found at Appendix 5 Part B. Since project documents have been removed from the Planning Inspectorate website, the plan is taken from the project's Environmental Impact Assessment Scoping Report (July 2011) [D121475/5/005 Final].

### 2 EXAMINING AUTHORITY'S RECOMMENDATION REPORT

- 2.1 At paragraph 3.35, the Examining Authority notes that all of the land required for the proposed development falling within Central Bedfordshire is designated as Green Belt.

- 2.2 At paragraph 3.37, the Examining Authority notes that the proposed development would constitute a prime example of local transport infrastructure which would not be inappropriate in the Green Belt-

*'The term local transport infrastructure would embrace the scheme, in my opinion. It is clearly transport infrastructure. The scheme is an NSIP, but not all NSIPs necessarily have national significance in themselves. This scheme's objectives are all local and the improvements must be undertaken at and around the existing junction which lies in the Green Belt. Consequently I regard the scheme as a prime example of local transport infrastructure and accordingly it would not be inappropriate in the Green Belt.'*

- 2.3 At paragraph 3.38, the Examining Authority states that the proposed development would accord with the Green Belt's original purpose of urban containment-

*'It is also necessary to consider whether the scheme would preserve the Green Belt's openness and conform with the purposes of including the land in the Green Belt. The land was originally included as an extension of the Metropolitan Green Belt, for the purpose of containing the outward growth of Luton and other towns<sup>8</sup> because of the expansion pressures on settlements at the time PD-012. The scheme would reinforce the existing barrier to development formed by the M1 Spur-Airport Way route and the Kidney Wood roundabout. So to my mind the scheme would accord with the Green Belt's original purpose of urban containment.'*

- 2.4 At paragraph 3.40, the Examining Authority notes that that the proposed development would have no significant impact on openness of the Green Belt-

*'There is broad policy support for the scheme at national and local levels and relatively little by way of conflict; and, as later consideration reveals, such conflict*



# Technical Note: Inappropriate Development in the Green Belt



*as there is can be effectively mitigated. As for protection of the Green Belt, later consideration of landscape and visual matters, reveals that the scheme would have no significant on openness'*

### **3 SECRETARY OF STATE'S DECISION LETTER**

- 3.1 The Secretary of State agrees with the Examining Authority that the proposed development would fall within the local transport infrastructure exception and would not constitute inappropriate development in the Green Belt at paragraph 10 of their decision letter-

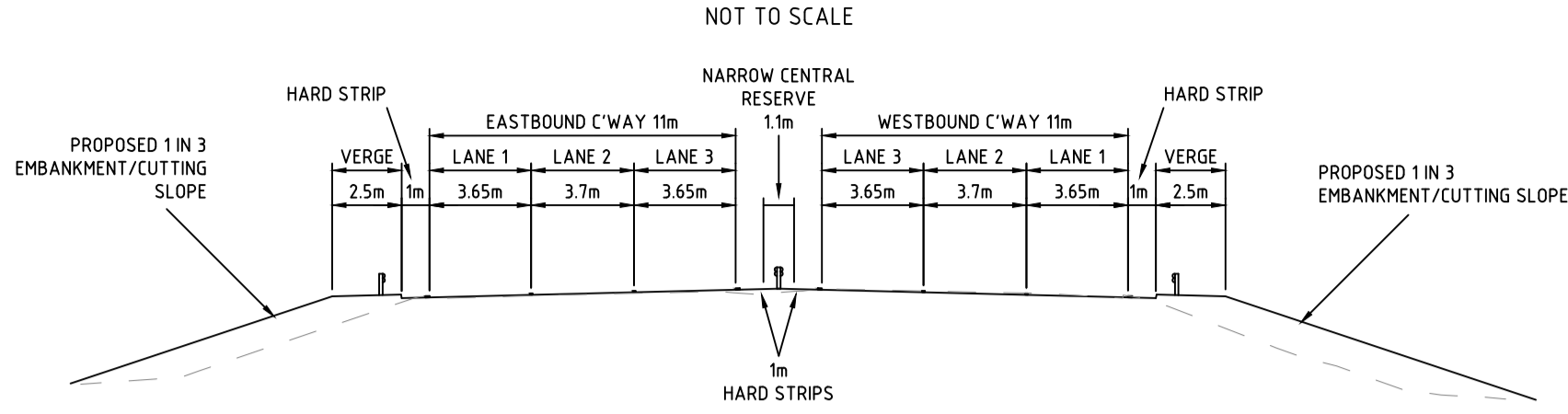
*'The Secretary of State notes that all of the land required for the scheme in Central Bedfordshire is designated Green Belt. Having regard to section 9 of the NPPF, he agrees with the Examining Authority that, since the scheme is local transport infrastructure and must be located at and around the existing junction which lies in the Green Belt, it would not be inappropriate development in the Green Belt. He agrees also that the scheme would accord with the Green Belt's original purpose of urban containment and that, taking into account the limited and temporary nature of the adverse visual impact of constructing the scheme, it would not detract from the openness of the Green Belt (ER 3.35-39, 4.107- 109).'*

# Technical Note: Inappropriate Development in the Green Belt

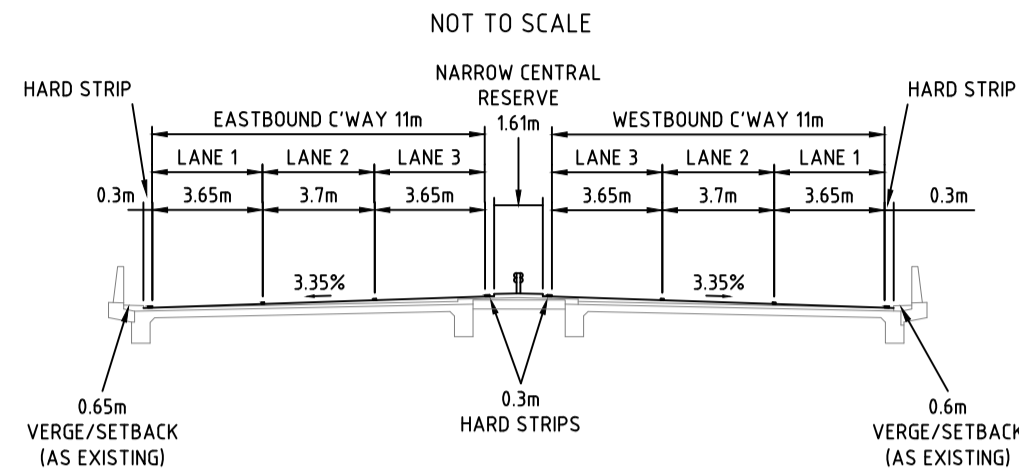


Part A - General layout plan for M1 Junction 10A Grade Separation – Luton [D121475/5/005 Final]

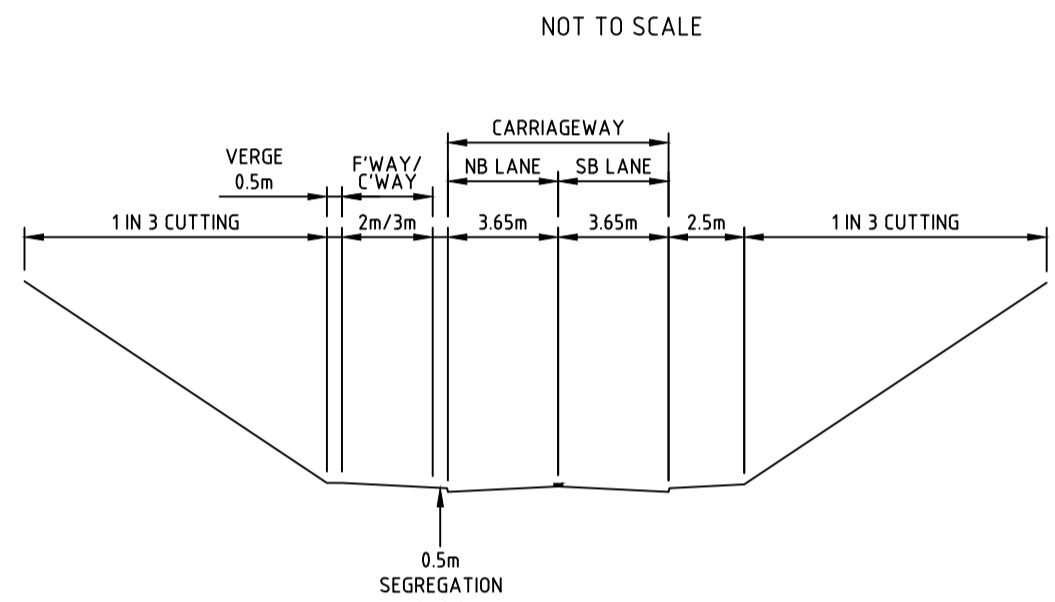
TYPICAL CROSS SECTION THROUGH M1 SPUR ROAD / A1081 AIRPORT WAY



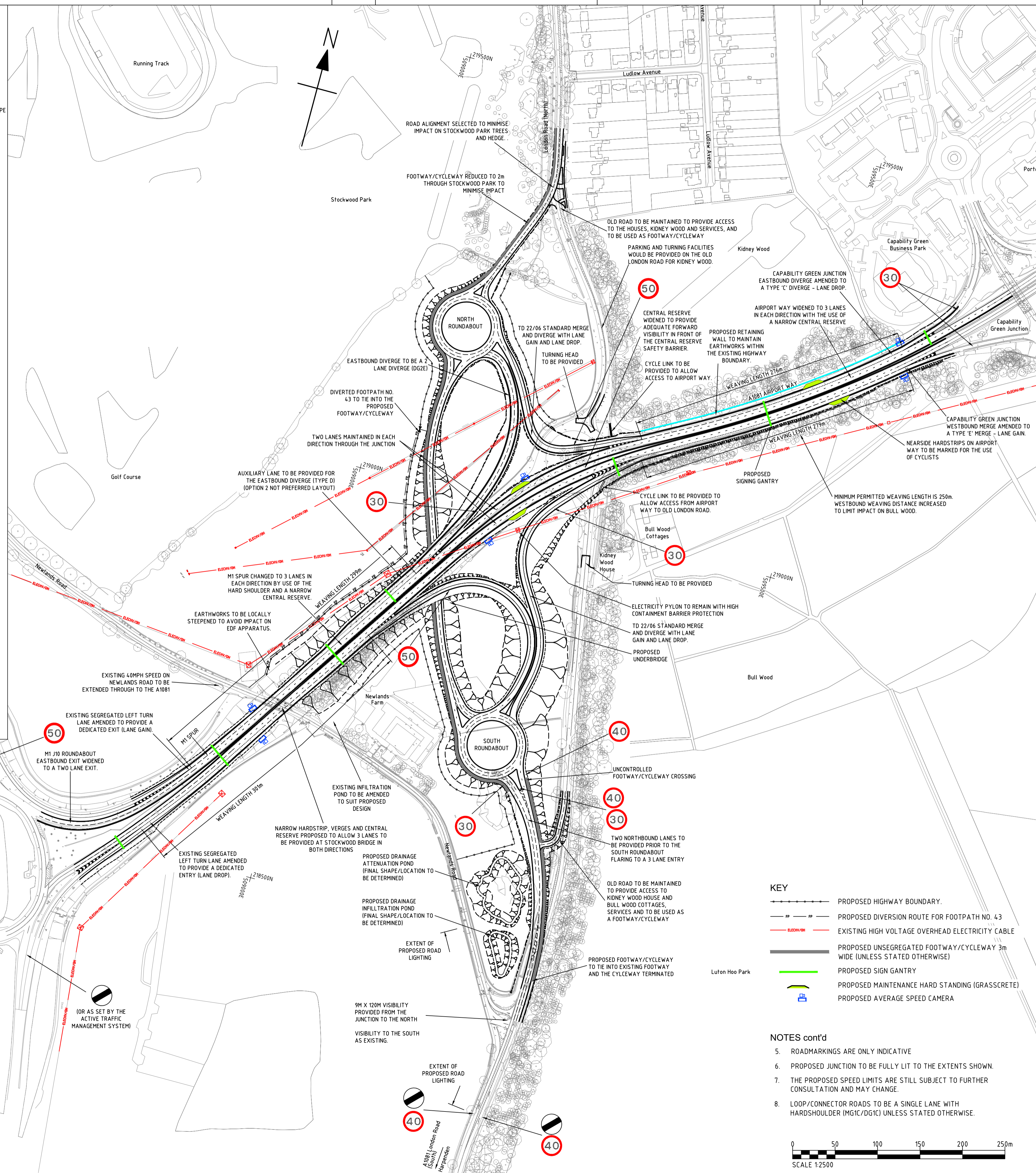
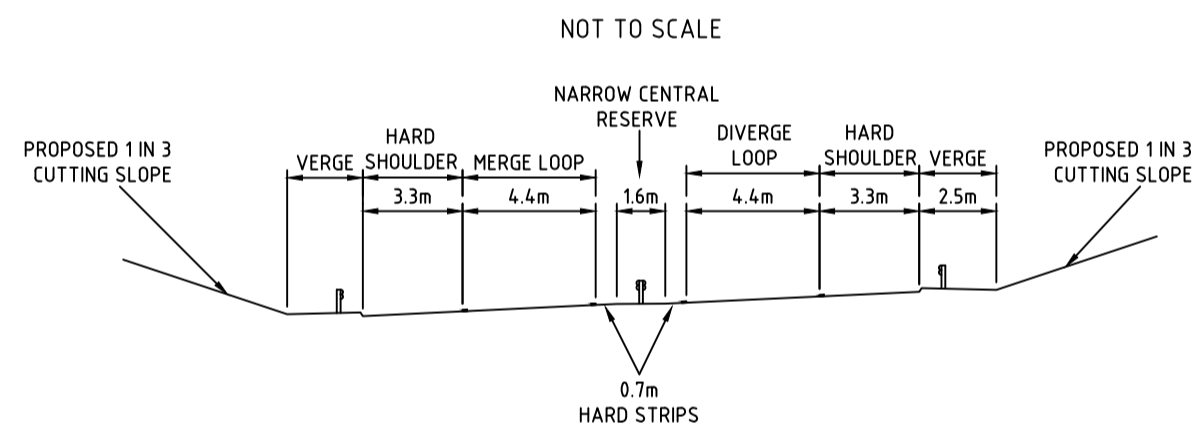
TYPICAL CROSS SECTION THROUGH STOCKWOOD BRIDGE



TYPICAL CROSS SECTION THROUGH LINK ROADS



TYPICAL CROSS SECTION THROUGH LOOPS



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- NOTES**
- PROPOSED LAYOUT HAS BEEN DEVELOPED IN ACCORDANCE WITH TD 22/06 - LAYOUT OF GRADE SEPARATED JUNCTIONS. THIS DESIGN IS AT AN ILLUSTRATIVE STAGE AND WILL BE SUBJECT TO FURTHER DESIGN DEVELOPMENTS.
  - PROPOSED M1 SPUR/AIRPORT WAY USES A REDUCED CROSS SECTION, WHICH WILL REQUIRE DEPARTURES FROM STANDARD.
  - BASE MAP REPRODUCED FROM TOPOGRAPHICAL SURVEY COMPLETED BY GREENHATCH (2009). SUPPLEMENTED WITH ORDNANCE SURVEY MAPPING.
  - ROUNDBOUTS BASED ON 2029 PEAK HOUR TRAFFIC FLOWS. ROUNDBOUT SUBJECT TO FURTHER CAPACITY CHECKS AND THEREFORE CHANGE. (NOTES CONTINUED BELOW)

GANTRY & MAINTENANCE HARD STANDING LOCATIONS ADJUSTED. EARTHWORKS UPDATED.	KB	12/07/11	A
Revision Details	By	Date	Suffix
	Check		

**DRAWING STATUS**

Code	Description	Current Status	Appd	Date
P	Preliminary			
A	Submitted for Review			
F	Final			
I	Information	X	BR	23/05/11
T	Tender			
AB	As Built			

**M1 JUNCTION 10A GRADE SEPARATION**

**ILLUSTRATIVE DESIGN OPTION 10A GENERAL LAYOUT**

Scale at A1: 1:2500

Drawn	RJO	Approved	BR
Stage 1 check	JHC	Originated	CH ROADS
Stage 2 check		Date	23/05/11

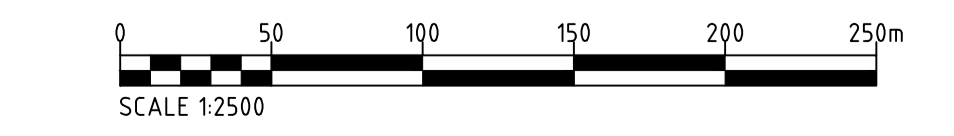


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Drawing Number	Rev
I/D121475/GD/2500/069	A

- KEY**
- PROPOSED HIGHWAY BOUNDARY.
  - PROPOSED DIVERSION ROUTE FOR FOOTPATH NO. 43
  - EXISTING HIGH VOLTAGE OVERHEAD ELECTRICITY CABLE
  - PROPOSED UNSEGREGATED FOOTWAY/CYCLEWAY 3m WIDE (UNLESS STATED OTHERWISE)
  - PROPOSED SIGN GANTRY
  - PROPOSED MAINTENANCE HARD STANDING (GRASSCRETE)
  - PROPOSED AVERAGE SPEED CAMERA

- NOTES cont'd**
- ROADMARKINGS ARE ONLY INDICATIVE
  - PROPOSED JUNCTION TO BE FULLY LIT TO THE EXTENTS SHOWN.
  - THE PROPOSED SPEED LIMITS ARE STILL SUBJECT TO FURTHER CONSULTATION AND MAY CHANGE.
  - LOOP/CONNECTOR ROADS TO BE A SINGLE LANE WITH HARDSHOULDER (MG/C/DGIC) UNLESS STATED OTHERWISE.



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## Appendix 6 - Morpeth Northern Bypass DCO

### Part A

#### **1 PROJECT DESCRIPTION**

1.1 The project was granted development consent on 12 January 2015. It is described in the Secretary of State's decision letter at paragraph 3 as follows-

(a) *'The Order would grant development consent for the construction of a 3.8 kilometre single carriageway road between a new grade-separated junction with the A1 trunk road to the north-west of Morpeth and a junction with the A197 at Whorral Bank roundabout to the north-east of Morpeth (referred to in this letter as "the project"). The Order would also authorise the compulsory acquisition and use of land for the purposes of the project. The objectives of the project are to improve highway connectivity in south east Northumberland, to improve access to allocated development sites and other strategic locations, and to reduce traffic congestion in and around Morpeth by improving highway capacity.'*

1.2 A copy of the preliminary scheme proposals can be found at Appendix 6 Part B. Since project documents have been removed from the Planning Inspectorate website, the plan is taken from the Environmental Impact Assessment non-technical summary (March 2013) [MNB part 6.1.1].

#### **2 EXAMINING AUTHORITY'S RECOMMENDATION REPORT**

2.1 At paragraphs 4.144, the Examining Authority notes that the proposed development would not occupy any land in the Green belt as defined in the development plan.

2.2 However, at paragraph 4.145 the Examining Authority explains that the emerging Draft Core Strategy includes as a Preferred Option a proposal to extend the Northumberland Green Belt to the north of Morpeth. This would have resulted in the proposed development being partly within the Green Belt and the Report notes the Applicant's arguments as to why it would not be constitute inappropriate development in any event-

*'The emerging Draft Core Strategy includes as a Preferred Option a proposal to extend the Northumberland Green Belt to the north of Morpeth (Doc APP008.23, figure 8.2). If that Preferred Option were to be implemented as proposed then the Scheme would be in the Green Belt extension from its crossing of the How Burn, east to the Whorral Bank roundabout. The Applicant comments (Doc APP008.24 ref 5.2) that the Scheme would be local transport infrastructure which can demonstrate a requirement for a Green Belt location, would preserve the openness of the Green Belt and would not conflict with the purposes of including land in the Green Belt and so would not be inappropriate development in the Green Belt; that the Scheme would not result in significant harm to the Green Belt, and that its effect on the draft purposes of extending the Green Belt (as stated in draft policy 4 of the Draft Core Strategy (Doc APP008.23)) would not, on balance, be harmful.'*

2.3 At paragraph 4.146, the Examining Authority gave the Draft Core Strategy little weight and found that the proposals to extend the Green Belt would not be a sufficiently strong reason to impede approval of the proposed bypass-

*'In my view, it is clear from the alternative routes considered during the Scheme's development (drawing HE092631/0/A197/01/99, Design Evolution Alternatives Considered, Doc APP004.35) and the constraints on the Scheme alignment, particularly toward its eastern end (the need to connect to the A197 Pegswood*

# Technical Note: Inappropriate Development in the Green Belt



*bypass and the need to minimise contact with How Burn Wood) that the Scheme would necessarily enter the proposed Green Belt. Between Fulbeck and the How Burn crossing the Scheme would reinforce the proposed Green Belt boundary and, east of that, would not lead to encroachment into the countryside; and I am satisfied that the other objectives in draft policy 4 (all of which would complement paragraph 80 of the NPPF) would be met. I have noted in paragraph 3.35 above that little weight should be given to the Draft Core Strategy by virtue of the early stage it has reached in its progress toward adoption. I find that its proposals that the green belt should be extended as currently drafted are not a sufficiently strong reason to impede approval of the proposed bypass.'*

### **3 SECRETARY OF STATE'S DECISION LETTER**

- 3.1 At paragraph 24 of their decision letter, the Secretary of State agrees with the Applicant's submissions as to why the development would not be inappropriate development-

*'The Secretary of State has considered the Examining Authority's assessment at ER 4.139-149 of the effect of the project on land use. He agrees with the Examining Authority that there is no reason to refuse the Order on grounds arising from its use of land (ER 4.150). In particular, he agrees that little weight should be given to the proposal in the Draft Core Strategy to extend the Northumberland Green Belt to the north of Morpeth, and that in any event the project would not be inappropriate development in the Green Belt for the reasons given by the applicant (ER 4.145).'*

# Technical Note: Inappropriate Development in the Green Belt



Part B – Preliminary Scheme Proposals Plan [MNB Part 6.1.1]

## Appendix 7 - South Bristol Link Road CPO

### Part A

#### 1 PROJECT DESCRIPTION

- 1.1 The North Somerset Council (South Bristol Link Classified Road) Side Roads Order 2013 and The North Somerset Council (South Bristol Link) Compulsory Purchase Orders 2013 & 2014 were confirmed by the Secretary of State on 21 October 2014.
- 1.2 The proposed development is described in the Inspector's report at paragraph 1.1-
- (a) *'The South Bristol Link (SBL or "the Scheme") is part of a package of transport schemes which aim to create a rapid transit network across the sub-region, linking key employment, housing and leisure areas. It would incorporate 4.5 kilometres (km) of new and upgraded highway between the A370, the A38 and the Cater Road roundabout, including a continuous shared cycleway and footway along the route corridor. It would also include a bus-only connection to the approved Avon Vale to Temple Meads (AVTM) bus rapid transit route.'*
- 1.3 A plan showing the route of the link road can be found at Appendix 7 Part B. This plan is taken from the Bristol City Council's planning report on the South Bristol Link planning application (13/03360/K).

#### 2 INSPECTOR'S REPORT

- 2.1 At paragraph 2.1, the Inspector notes that the rural section of the route, from the A370 to the eastern edge of Highridge Common, lies within the Green Belt.
- 2.2 At paragraph 3.8, the Inspector notes that the Scheme would not amount to inappropriate development as defined in the NPPF-
- 'Although part of the Scheme lies within the Green Belt, it would not amount to inappropriate development as defined in the National Planning Policy Framework (the Framework) and is, therefore, acceptable in principle in the Green Belt. Both NSC and BCC have concluded that even if the Scheme had been regarded as inappropriate development, there are very special circumstances to justify the development, linked to the economic benefits of the road and because the process of strategic option review over the last few years has concluded that there are no alternatives for SBL that do not require Green Belt land.'*
- 2.3 At paragraph 3.31, the Inspector also found that the openness of the Green Belt would be maintained-
- 'The design has sought to integrate the road into the landscape as far as practicable, with the landscaping devised with regard to local distinctiveness and so as to make a positive contribution to the local context<sup>74</sup>. The openness of the Green Belt would be maintained<sup>75</sup>. Although in the short term there would be potentially slight to moderate adverse landscape and visual effects, the proposed mitigation would allow the road to be assimilated in the longer term<sup>76</sup>.'*
- 2.4 At paragraph 8.16, when considering objections, the Inspector reaffirms that the proposed development would not be inappropriate development in the Green Belt-
- (a) *'Although part of the Scheme lies within the Green Belt, I share the Council's view that it would not amount to inappropriate development as defined in the Framework. The SBL is therefore acceptable in principle in the Green Belt<sup>[3.8]</sup>. In this regard I have also noted the Council's comment that the process of strategic*

# Technical Note: Inappropriate Development in the Green Belt



*option review over the last few years has concluded that there are no alternatives for SBL that would not require Green Belt land<sup>[3,8]</sup>.*

## **3 SECRETARY OF STATE'S DECISION LETTER**

3.1 Green Belt is not mentioned in the Secretary of State's decision letter.



# Technical Note: Inappropriate Development in the Green Belt

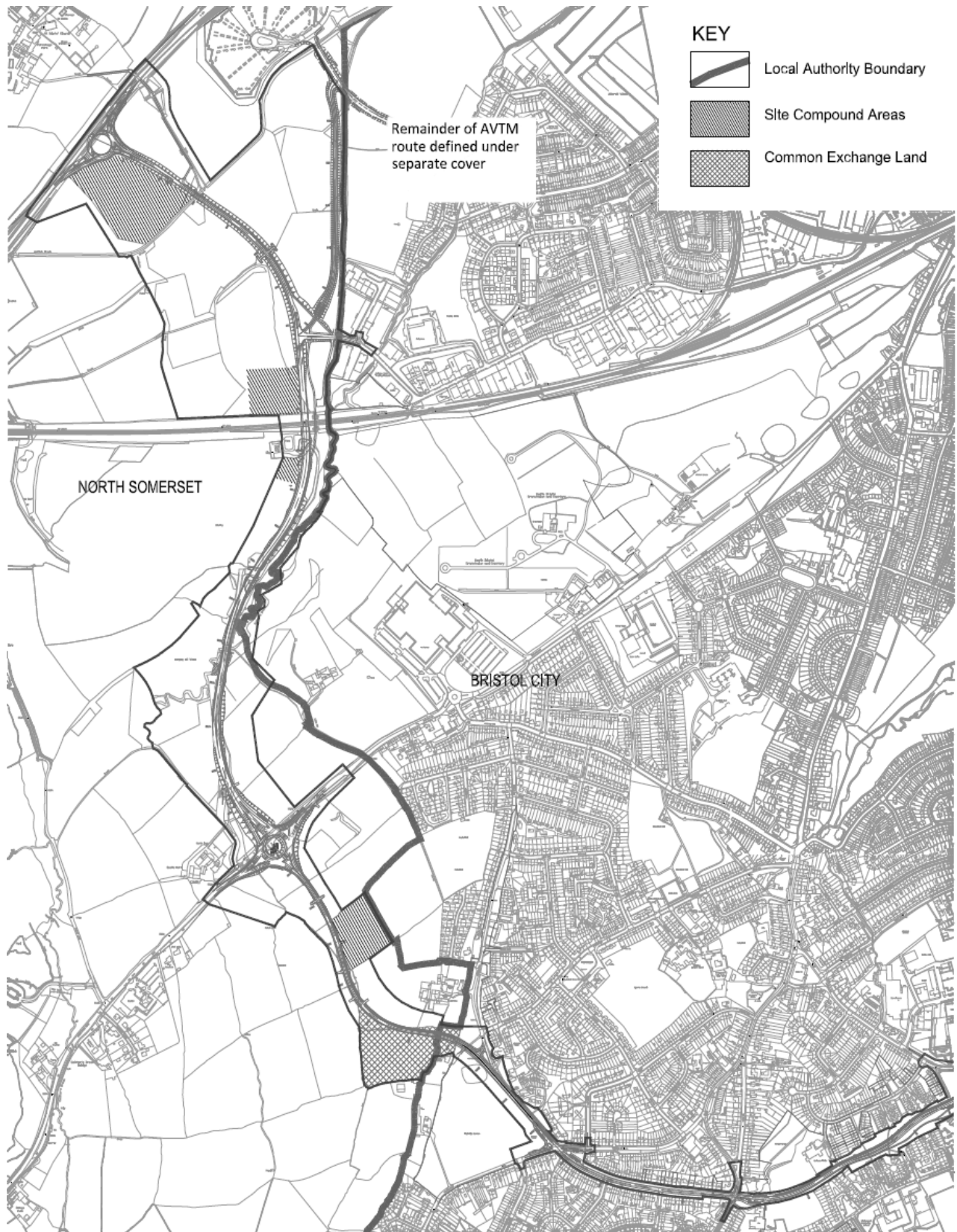


Part B – South Bristol Link Road Route Plan (taken from Bristol City Council planning report for application 13/03360/K)

**Personnel**

None arising out of this report

**Appendix A:** Plan showing route of South Bristol Link and boundary between Bristol and North Somerset.



## 2 Appendix B – Scheme Objectives and NN NPS signposting document

**Scheme Objectives and NN NPS signposting document – also see updated Appendix B and C of the Planning Statement and NN NPS Accordance Table submitted at Deadline 1 (TR010063/APP/7.1) as requested in ISH1.**

Scheme objectives	NN NPS 2014 – Relevant paragraphs to Scheme objective	Scheme Conformity - How the Scheme aligns with the 2014 NN NPS policies and Scheme objectives
<p>Support economic growth and facilitate growth in jobs and housing by providing improved transport network connections in west and north-west Cheltenham</p>	<p><b>Paragraph 2.1:</b> <i>'Well connected and high performing networks with sufficient capacity are vital to meet the country's long-term needs and support a prosperous economy.'</i></p> <p><b>Paragraph 2.2:</b> <i>'There is a critical need to improve the national networks to address road congestion and crowding on the railways to provide safe, expeditious and resilient networks that better support social and economic activity; and to provide a transport network that is capable of stimulating and supporting economic growth. Improvements may also be required to address the impact of the national networks on quality of life and environmental factors'.</i></p> <p><b>Paragraph 2.6:</b> <i>"There is also a need for development on the national networks to support national and local economic growth and regeneration, particularly in the most disadvantaged areas. Improved and new transport links can facilitate economic growth by bringing businesses closer to their workers, their markets and each other. This can help rebalance the economy".</i></p> <p><b>Paragraph 2.22:</b> <i>"Without improving the road network, including its performance, it will be difficult to support further economic development, employment and housing and this will impede economic growth and reduce people's quality of life. The Government has therefore concluded that at a strategic level there is a compelling need for development of the national road network".</i></p>	<p>The Scheme will increase highway capacity around M5 Junction 10 and on the A4019 required to unlock the planned development on the Strategic Allocations: Policy A4 West of Cheltenham and North West Cheltenham and Policy A7 safeguarded land east of M5 Junction 10. The Scheme will therefore directly contribute towards economic growth through unlocking these planned development sites and will support the scheme objective and NN NPS which specifies well connected national and local networks to support growth.</p> <p>The Scheme will facilitate and unlock the development of approximately 9,000 dwellings and employment land through the provision of a highway network that has the capacity to accommodate the increased traffic the allocated sites will generate, addressing road congestion and ensuring the future resilience of both the national and local networks.</p>
<p>Enhance the transport network in the west and north-west of Cheltenham area with the resilience to meet current and future needs</p>	<p><b>Paragraph 2.23:</b> <i>'The Government's wider policy is to bring forward improvements and enhancements to the existing Strategic Road Network to address the needs set out earlier. Enhancements to the existing national road network will include:</i></p> <ul style="list-style-type: none"> <li>• <i>junction improvements, new slip roads and upgraded technology to address congestion and improve performance and resilience at junctions, which are a</i></li> </ul>	<p>The M5 Junction 10 element of the Scheme will become part of the SRN, with M5 Junction 10 being a key junction and connection for the wider region. This would support higher capacities and greater connectivity to the M5 and local road networks west of Cheltenham as required by the Scheme objective in accordance with Paragraph 2.23. Enhancements to the existing national road network as a result of the Scheme will include:</p>

Scheme objectives	NN NPS 2014 – Relevant paragraphs to Scheme objective	Scheme Conformity - How the Scheme aligns with the 2014 NN NPS policies and Scheme objectives
	<p><i>major source of congestion;</i></p> <ul style="list-style-type: none"> <li>• <i>implementing "smart motorways" (also known as "managed motorways") to increase capacity and improve performance;</i></li> <li>• <i>improvements to trunk roads, in particular dualling of single carriageway strategic trunk roads and additional lanes on existing dual carriageways to increase capacity and to improve performance and resilience'.</i></li> </ul> <p><b>Paragraph 2.27:</b> <i>'In some cases, to meet the need set out in section 2.1 to 2.11, it will not be sufficient to simply expand capacity on the existing network. In those circumstances new road alignments and corresponding links, including alignments which cross a river or estuary, may be needed to support increased capacity and connectivity'.</i></p>	<ul style="list-style-type: none"> <li>• new and improved junctions and slip roads (improvements to Junction 10 of the M5);</li> <li>• improvements to trunk roads, in particular, dualling of single carriageway strategic trunk roads and additional lanes on existing dual carriageways [Improvements to the A4019]</li> <li>• measures to enhance capacity of the motorway network (all three components of the Scheme).</li> </ul> <p>Cheltenham currently experiences significant congestion at peak times. The Scheme will enable additional capacity on the road network whilst acting as a catalyst for economic growth and relieving traffic congestion on the existing local road network as required in NN NPS paragraphs 2.23 and 2.27 to support increased capacity and connectivity. The proposed West Cheltenham Link Road will also support the increased capacity, providing connectivity for the A7 Strategic Allocation and areas to the south of Cheltenham with much needed connectivity with Junction 10 and the M5.</p>
<p>Provide safe access to services for the local community, including for users of sustainable transport modes within and to west and north-west Cheltenham</p>	<p><b>Paragraph 2.2:</b> <i>'There is a critical need to improve the national networks to address road congestion and crowding on the railways to provide safe, expeditious and resilient networks that better support social and economic activity; and to provide a transport network that is capable of stimulating and supporting economic growth. Improvements may also be required to address the impact of the national networks on quality of life and environmental factors'.</i></p> <p><b>Paragraph 3.19:</b> <i>'The Government is committed to creating a more accessible and inclusive transport network that provides a range of opportunities and choices for people to connect with jobs, services and friends and family.'</i></p> <p><b>Paragraph 4.61:</b> <i>'The applicant should undertake an objective assessment of the impact of the proposed development on safety including the impact of any mitigation measures.' This should use the methodology outlined in the guidance from DfT (WebTAG) and from NH'.</i></p>	<p>The Scheme aims to provide safe access to services for the local community and for users of sustainable transport modes within and to West and North West Cheltenham. The Scheme has been designed in accordance with all current standards and guidance and will help to improve road safety in the area.. The Scheme will reduce road casualties and improve safety for users of sustainable modes of transport including walkers and cyclists during its operation through the provision of dedicated NMU facilities (footways, crossings, Public Rights of Way) and upgraded signalling and crossing points. The Scheme will enhance connectivity offered by recreational routes for NMUs and will include new, altered and improved PRow improving conditions and accessibility for NMUs and therefore promotes a modal shift to active travel and public transport alongside providing a safer SRN and local road network.</p> <p>The Scheme will provide safe access to services for the local community and for users of sustainable transport modes. This includes providing convenient, accessible and attractive routes</p>

Scheme objectives	NN NPS 2014 – Relevant paragraphs to Scheme objective	Scheme Conformity - How the Scheme aligns with the 2014 NN NPS policies and Scheme objectives
	<p><b>Paragraph 4.62:</b> <i>‘They should also put in place arrangements for undertaking the road safety audit process. Road safety audits are a mandatory requirement for all trunk road highway improvement Schemes in the UK (including motorways).’</i></p> <p><b>Paragraph 4.64:</b> <i>‘The applicant should be able to demonstrate that their Scheme is consistent with the Highways Agency’s Safety Framework for the SRN and with the National Strategic Framework for Road Safety. Applicants will wish to show that they have taken all steps that are reasonably required to:</i></p> <ul style="list-style-type: none"> <li>• <i>minimise the risk of death and injury arising from their development.</i></li> <li>• <i>contribute to an overall reduction in road casualties.</i></li> <li>• <i>contribute to an overall reduction in the number of unplanned incidents.</i></li> <li>• <i>contribute to improvements in road safety for walkers and cyclists.’</i></li> </ul> <p><b>Paragraph 4.65:</b> <i>‘They will also wish to demonstrate that they have considered the safety implications of their project from the outset; and they are putting in place rigorous processes for monitoring and evaluating safety’.</i></p> <p><b>Paragraph 4.66:</b> <i>‘The SoS should not grant development consent unless satisfied that all reasonable steps have been taken and will be taken to:</i></p> <ul style="list-style-type: none"> <li>• <i>Minimise the risk of road casualties arising from the Scheme.</i></li> <li>• <i>Contribute to an overall improvement in the safety of the SRN.’</i></li> </ul>	<p>for pedestrians, cyclists and equestrians and improving crossing facilities, as well as the provision of a bus lane on the A4019 eastbound carriageway.</p> <p>The Scheme has sought to take all reasonable steps to minimise the risk of road casualties arising from the Scheme and contribute to an overall improvement in the safety of the SRN, as outlined in NPS NN at paragraph 4.66.</p>
<p>Deliver a package of measures which is in keeping with the local environment, establishes biodiversity net gain and meets climate change requirements</p>	<p><b>Paragraph 2.7:</b> <i>‘In some cases there may be a need for development to improve resilience on the networks to adapt to climate change and extreme weather events rather than just tackling a congestion problem’.</i></p> <p><b>Paragraph 2.9:</b> <i>‘Broader environment, safety and accessibility goals will also generate requirements for development. In particular, development will be needed to address safety problems, enhance the environment or enhance accessibility</i></p>	<p>The Scheme will support the delivery of environmental goals including meeting 10% BNG on site.</p> <p>The inclusion of NMU routes encourages the utilisation of alternative means of transport and helps to achieve the goal of creating a more integrated and sustainable transport network, whilst reducing GHG emissions. Moreover, the Scheme will improve transport resilience by replacing old degrading assets that were designed with less resilience to climate change than</p>

Scheme objectives	NN NPS 2014 – Relevant paragraphs to Scheme objective	Scheme Conformity - How the Scheme aligns with the 2014 NN NPS policies and Scheme objectives
	<p><i>for NMUs. In their current state, without development, the national networks will act as a constraint to sustainable economic growth, quality of life and wider environmental objectives.</i></p> <p><b>Paragraph 3.2:</b> <i>‘The Government recognises that for development of the national road and rail networks to be sustainable these should be designed to minimise social and environmental impacts and improve quality of life’.</i></p> <p><b>Paragraph 3.3:</b> <i>“In delivering new schemes, the Government expects applicants to avoid and mitigate environmental and social impacts in line with the principles set out in the NPPF and the Government’s planning guidance. Applicants should also provide evidence that they have considered reasonable opportunities to deliver environmental and social benefits as part of schemes. The Government’s detailed policy on environmental mitigations for developments is set out in Chapter 5 of this document”.</i></p> <p><b>Paragraph 3.4:</b> <i>“The Appraisal of Sustainability accompanying this NPS recognises that some developments will have some adverse local impacts on noise, emissions, landscape/visual amenity, biodiversity, cultural heritage and water resources. The significance of these effects and the effectiveness of mitigation is uncertain at the strategic and non-locally specific level of this NPS. Therefore, whilst applicants should deliver developments in accordance with Government policy and in an environmentally sensitive way, including considering opportunities to deliver environmental benefits, some adverse local effects of development may remain”.</i></p> <p><b>Paragraph 3.5:</b> <i>‘Outside the nationally significant infrastructure project regime, Government policy is to bring forward targeted works to address existing environmental problems on the Strategic Road Network and improve the performance of the network. This includes reconnecting habitats and ecosystems, enhancing the settings of historic and cultural heritage features, respecting and enhancing landscape character, improving water quality and reducing flood risk, avoiding significant adverse impacts from noise and vibration and</i></p>	<p>the assets that will replace them.</p> <p>The Scheme's objective seek to support economic growth through improving transport connections whilst ensuring that the Scheme is in keeping with the local environment. The Scheme will deliver biodiversity net gain and meet climate change requirements in line with NN NPS. Overall, the Scheme is predicted to deliver in excess of 10% BNG.</p> <p>The Scheme will provide safe access to services for the local community and for users of sustainable transport modes, essential to reducing carbon emissions.</p> <p>The Scheme includes embedded mitigation for the impacts of the Scheme and aims to provide biodiversity enhancements. The Scheme also maximises the opportunities to contribute to Nature Recovery Networks and seeks to ensure green infrastructure within and adjacent to the road network can deliver biodiversity gains.</p>

Scheme objectives	NN NPS 2014 – Relevant paragraphs to Scheme objective	Scheme Conformity - How the Scheme aligns with the 2014 NN NPS policies and Scheme objectives
	<p><i>addressing areas of poor air quality’.</i></p> <p><b>Paragraph 3.15:</b> <i>‘The Government is committed to providing people with options to choose sustainable modes and making door-to-door journeys by sustainable means an attractive and convenient option. This is essential to reducing carbon emissions from transport’.</i></p>	
<p>Improve the connectivity between the Strategic Road Network (Strategic Road Network) and the local transport network in west and north-west</p>	<p><b>Paragraph 2.13:</b> <i>‘Recognises that the SRN provides critical links between cities, joins up communities, connects our major ports, airports and rail terminals and states that ‘a well functioning SRN is critical in enabling safe and reliable journeys and the movement of goods in support of the national and regional economies.’</i></p> <p><b>Paragraph 5.211:</b> <i>“The Examining Authority and the Secretary of State should give due consideration to impacts on local transport networks and policies set out in local plans, for example, policies on demand management being undertaken at the local level”</i></p>	<p>The all-movements junction on the M5 will help to join the wider network by providing opportunities for north and south entrance and exits to the M5 allowing more efficient connectivity to Cheltenham and to the wider SRN. New dedicated crossing points for pedestrians and cyclists, as well as realigned PRow, will also be provided as part of the Scheme. This includes continuous provision for pedestrian and cyclist movement along the A4019 and facilities to link over the M5.</p> <p>The Scheme will contribute towards Improved links to the north and south of M4 Junction 10, allowing for the increased movement of goods and increased reliability of journey times and improving connectivity on the SRN and local road network.</p>



### 3 Appendix C - Housing Infrastructure Fund (HIF) Outline Business Case (OBC) Traffic Forecasting Report (TFR) for the Scheme

# Traffic Forecasting Report

M5 Junction 10 Improvements - HIF OBC

COGL43063120 / 002 Revision 02

04/03/2019



ameyconsulting

 Gloucestershire  
COUNTY COUNCIL

## Document Control Sheet

<b>Project Name:</b>	M5 Junction 10 Improvements - HIF OBC
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# 1. Introduction

## 1.1. Background

- 1.1.1 Central Government's £2.3bn Housing Infrastructure Fund (HIF) was announced in the 2016 Autumn Statement. The programme provides gap funding for infrastructure investment to unlock additional homes, with a focus on areas of greatest housing demand. The HIF Prospectus was published on 4 July 2017 inviting bids for funding to be invested over the period up to March 2021. In the November Budget it was announced that a further £0.925bn would be available to March 2021, together with £2.255bn for 2021-23.
- 1.1.2 HIF may be used to deliver physical infrastructure including: transport and travel, utilities and digital communications, schools and community facilities including healthcare, heritage asset protection and green and blue infrastructure including flood defences. The Fund has two parts:
- **Marginal Viability Funding (MVF)** – up to £10m per scheme to provide the final or missing piece of infrastructure to get additional sites allocated or existing sites unblocked quickly; and
  - **Forward Funding (FF)** – up to £250m per scheme available to higher tier authorities to support a small number of strategic and high-impact infrastructure schemes.
- 1.1.3 In September 2017 Gloucestershire County Council (GCC) submitted an Expression of Interest (EoI) for FF to develop a scheme to upgrade M5 Junction 10 and provide improved development access to North West and West Cheltenham strategic allocations (as contained in the overarching land use plan, the 'Joint Core Strategy', developed by Cheltenham, Gloucester and Tewkesbury districts). In April 2018, the Ministry of Housing, Communities and Local Government (MHCLG) announced they would be working with the GCC to progress the scheme through a co-development stage culminating in the submission of an Outline Business Case (OBC).
- 1.1.4 Amey was commissioned on behalf of GCC to produce the M50 Junction 10 OBC, which includes this Traffic Forecasting Report (TFR) as a key component.

## 1.2. The Scheme

Gloucester City Council and the Borough Councils of Cheltenham and Tewkesbury have adopted the Joint Core Strategy (JCS) geared to significant housing and employment growth in the area, including the Cyber Park adjacent to GCHQ. The JCS process identified requirements for a range of improvements to its transport network to enable the planned growth including upgrading Junction 10 of the M5 to all movements and associated transport infrastructure, collectively identified as the Junction 10 Improvements Scheme.

- 1.2.1 The M5 Junction 10 scheme consists of the following:
- An all-movements junction at M5 Junction 10;
  - A38/A4019 junction improvements at Coombe Hill;
  - A new Link Road from J10 to West Cheltenham development/Cyber Park;
  - Dualling of the A4019 to the East of the Link Road; and
  - Extension to Arle Court Park and Ride.
- 1.2.2 The rationale behind the development of this scheme is that it will provide additional capacity whilst acting as a catalyst for economic growth and relieving traffic congestion and stress on the existing road network. In this context, it will facilitate both planned growth in strategic site allocations and unlock adjacent safeguarded land for both housing and employment.
- 1.2.3 The location of the elements that make up the M5 Junction 10 Improvements scheme is illustrated in Figure 1.

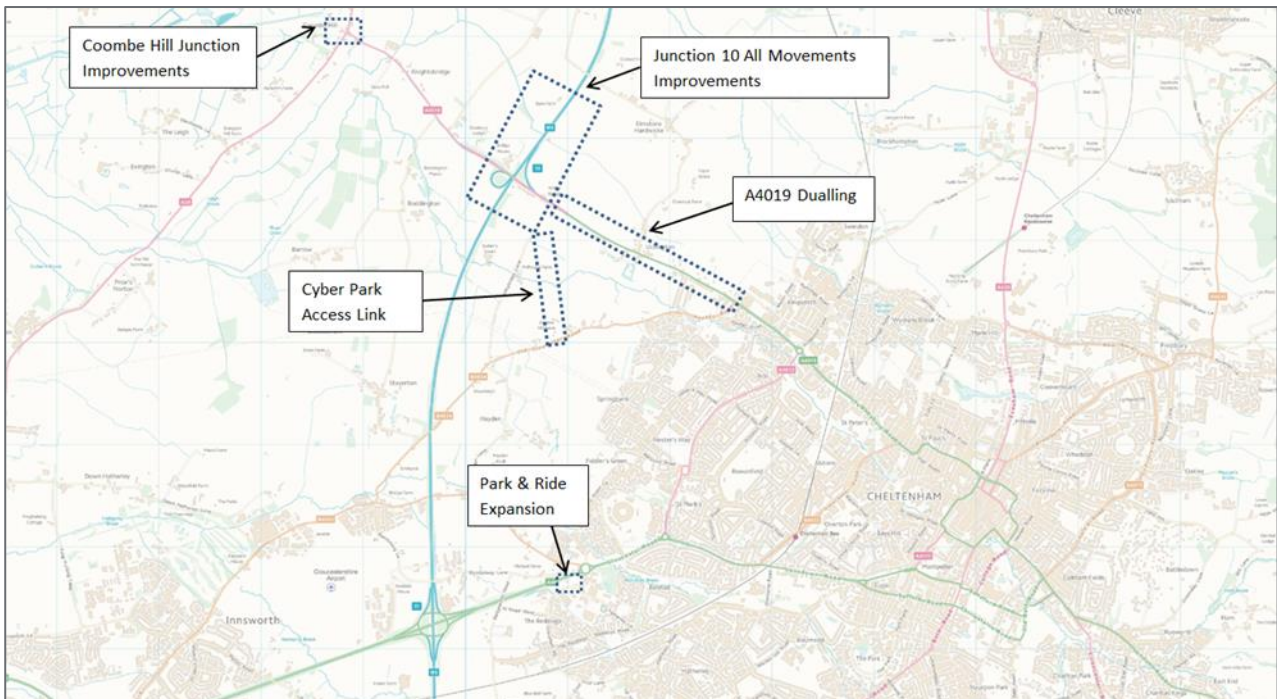


Figure 1: M5 Junction 10 Scheme Elements

1.2.4 Alongside the transport scheme, the JCS process identified a number of strategic site allocations which could be developed to accommodate the required growth. A number of sites were shown to be linked to the provision of improved transport infrastructure at Junction 10, namely (in gross development terms):

- Four sites were identified as being fundamentally linked to the scheme,
  - A1 Innsworth and Twigworth (2,295 homes and 9.1 ha of employment);
  - A2 South Churchdown (1,100 homes and 17.4 ha of employment);
  - A4 North West Cheltenham (4,285 homes and 23.4 ha of employment); and
  - A7 West Cheltenham (1,100 homes and 45.0 ha of employment).
- Two sites were identified as being somewhat dependent on the transport scheme:
  - A3 North Brockworth (1,500 homes and 3.0 ha of employment); and
  - A6 Winneycroft (620 homes and zero employment).
- Two further sites, which are extensions of two of the fundamentally-linked developments, have been safeguarded, but were not specifically identified in the JCS:
  - North West Cheltenham Safeguarded (2,258 homes and 30.0 ha of employment); and
  - West Cheltenham Safeguarded (1,324 homes and 5.0 ha of employment).

1.2.5 Figure 2 overleaf shows the location of the JCS and safeguarded development sites.



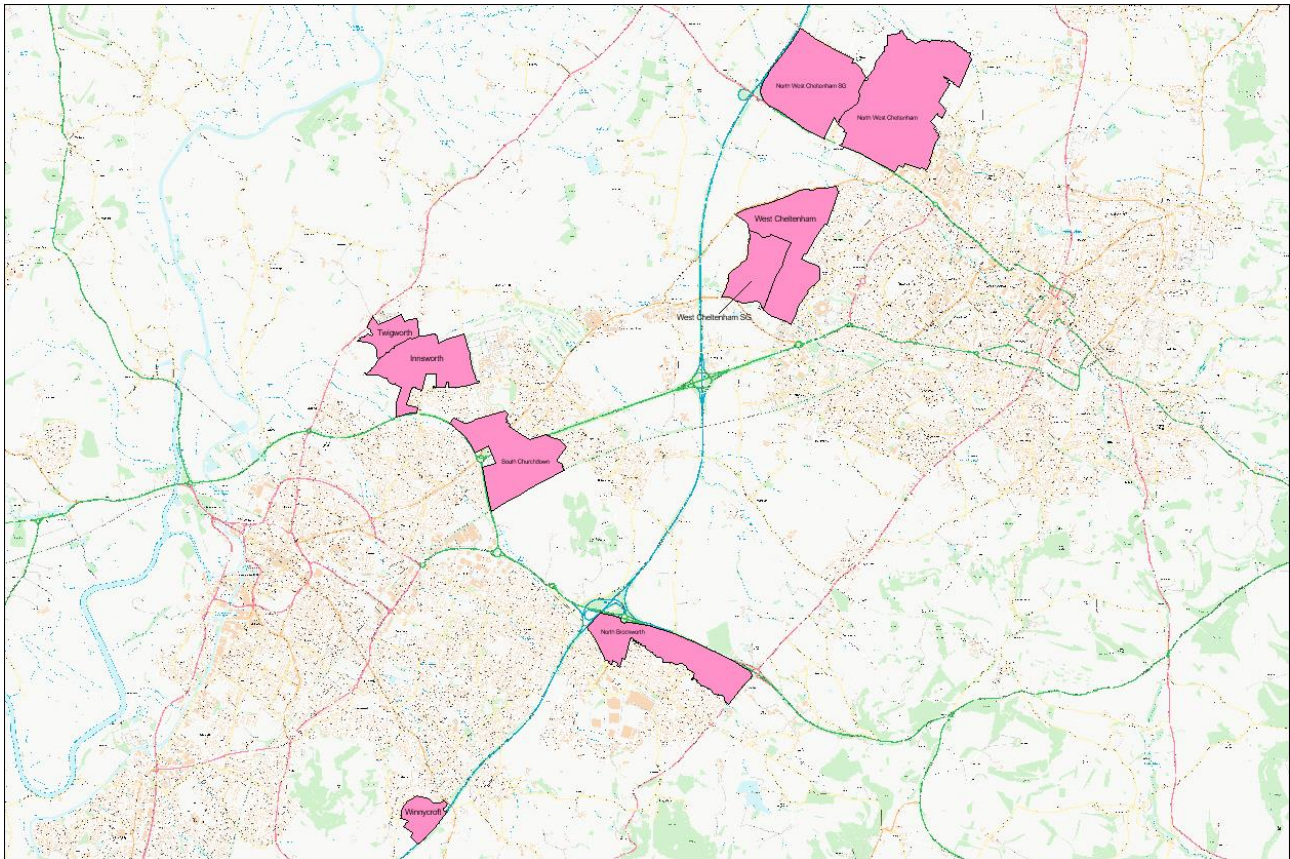


Figure 2: JCS and Safeguarded Development Locations

- 1.2.6 The transport modelling undertaken to inform the JCS process did not consider the individual impacts on the network of each site identified for housing and/or economic growth and hence did not consider their specific dependency on the M5 Junction 10 scheme. Nor did the JCS procedure quantify the respective parts of each development site which could, or could not, be delivered without a prior transport scheme to enable their satisfactory access and operation.
- 1.2.7 Therefore, further modelling work (based on guidance issued by DfT in the TAG Unit A2.2 (Induced Investment)) has been undertaken to reassess the JCS (allocated and safeguarded sites) land use activities, their associated travel movements and their implications for transport network operation.

### 1.3. The Purpose of this Report

- 1.3.1 This report, the TFR, describes the methodologies and tools adopted to generate traffic forecasts and determine the scheme-dependent sites used to support the scheme development. It provides details of the assumptions used in the forecasting process and scheme-dependency assessment and presents the traffic forecasts required for economic assessment. One of its key aims is to demonstrate that the procedures adopted in producing the forecasts are consistent with good practice and the advice given by the Department for Transport (DfT) in Transport Analysis Guidance (TAG) and within the Design Manual for Roads and Bridges (DMRB).
- 1.3.2 In summary, the main elements of the forecasting procedure are as follows:
- Produce base year 2013 AM/PM/IP validated models;
  - Identify forecast years and traffic growth parameters;
  - Assess planning data and quantify development-related trips to and from specific model zones;
  - Adjust the spatial distribution of households within NTEM by using the 'Alternative planning assumptions' functionality within the TEMPRO software;

- Calculate background growth of existing vehicle trips and apply to matrices;
- Combine base trips with new development trips and background growth, then constrain to overall ceiling growth to derive TAG Scenario Q (i.e. with the whole development);
- Develop a forecast baseline scenario (i.e. without potentially dependent development);
- Undertake initial (i.e. prior to scheme dependency testing) 'without-scheme' traffic model (SATURN) assignments;
- Analyse model outputs and determine scheme dependency;
- Develop TAG Scenario P (i.e. with deadweight development) trip matrices;
- Undertake post scheme dependency test 'with' and 'without' scheme traffic model (SATURN) assignments; and
- Analyse model outputs.

## 1.4. Report Structure

1.4.1 The report is divided into the following chapters:

- Chapter 2 - Traffic Model Overview;
- Chapter 3 - Approach to Travel Demand Forecasting
- Chapter 4 - Approach to Determining Scheme-Dependency;
- Chapter 5 - Scenario Q and Baseline Forecast Demand and Supply;
- Chapter 6 - Scheme Dependency Determination;
- Chapter 7 - Scenario P Forecast Demand and Scenario P/S/R Supply;
- Chapter 8 - Assignment Results for Scenario P, S and R;
- Chapter 9 - M5J10 Outcomes with Existing Users and with JCS Scheme-Dependent Development; and
- Chapter 10 - Summary and Conclusion.

## 2. Traffic Model Overview

### 2.1. Introduction

- 2.1.1 This section gives a brief overview of the Base Year model. It includes a commentary covering the software used, model area and network, time periods, User Classes (vehicle types and journey purposes), generalised cost parameters, validation and rationale for not adopting variable demand.
- 2.1.2 Two existing strategic models were available that covered or were adjacent to the schemes. They were the HE A417-variant of the South West Regional Traffic Model (SWRTM) and the Central Severn Vale Transport Strategy Model (CSVTSM).
- 2.1.3 The choice of model was defined taking into consideration the area which would be affected by the implementation of the scheme (including potentially unlocked developments), the strengths and weaknesses of each model and the required project outputs and time and resource constraints. The rationale for using CSVTSM is described in detail in the Appraisal Specification Report (ASR). This rationale broadly included the following:
- It is an economical tool that is already available;
  - It is suited to assessing highway operational aspects of changes to land use and highway network in the local area; and
  - It is the most straightforward tool to use when considering the time and resource constraints.

### 2.2. Model Area and Network

- 2.2.1 SATURN networks can comprise either a 'simulation' network, in which the operation of junctions is simulated, or a less detailed 'buffer' network, which essentially functions as a link-based model. Frequently, SATURN networks are set up as a combination of the two, with the less-detailed 'buffer' area on the periphery ensuring that traffic from more remote areas enters the simulation part of the network at the correct locations.
- 2.2.2 The model area for CSVTSM was identified in the Local Model Validation Report<sup>1</sup> (LMVR). Three geographic areas have been defined for model zoning and network coverage comprising:
- Area of detailed modelling;
  - Rest of fully modelled area; and
  - External area.
- 2.2.3 Figure 3 shows the first two modelled areas, while the external area comprises the rest of the UK outside these areas.
- 2.2.4 The area of detailed modelling model includes the major urban centres of Gloucester, Cheltenham and Tewksbury and the town of Stroud, which is modelled in simulation (i.e. all significant junctions are fully simulated, while links are coded where appropriate to give a representation of their speed and capacity).
- 2.2.5 The rest of the fully modelled area, which includes the surrounding areas of Forest of Dean and Cotswold are modelled in buffer (i.e. no simulation of junctions. All links are allocated representation of their speed and capacity).
- 2.2.6 The traffic model includes all trips that travel within the area of detailed modelling and the rest of fully modelled area. The external area only includes trips that would travel through the first two areas or trips that would potentially divert to travel through these areas.

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<sup>1</sup> CSV SATURN Model – LMVR - COGL43032198 Issue B – December 2016

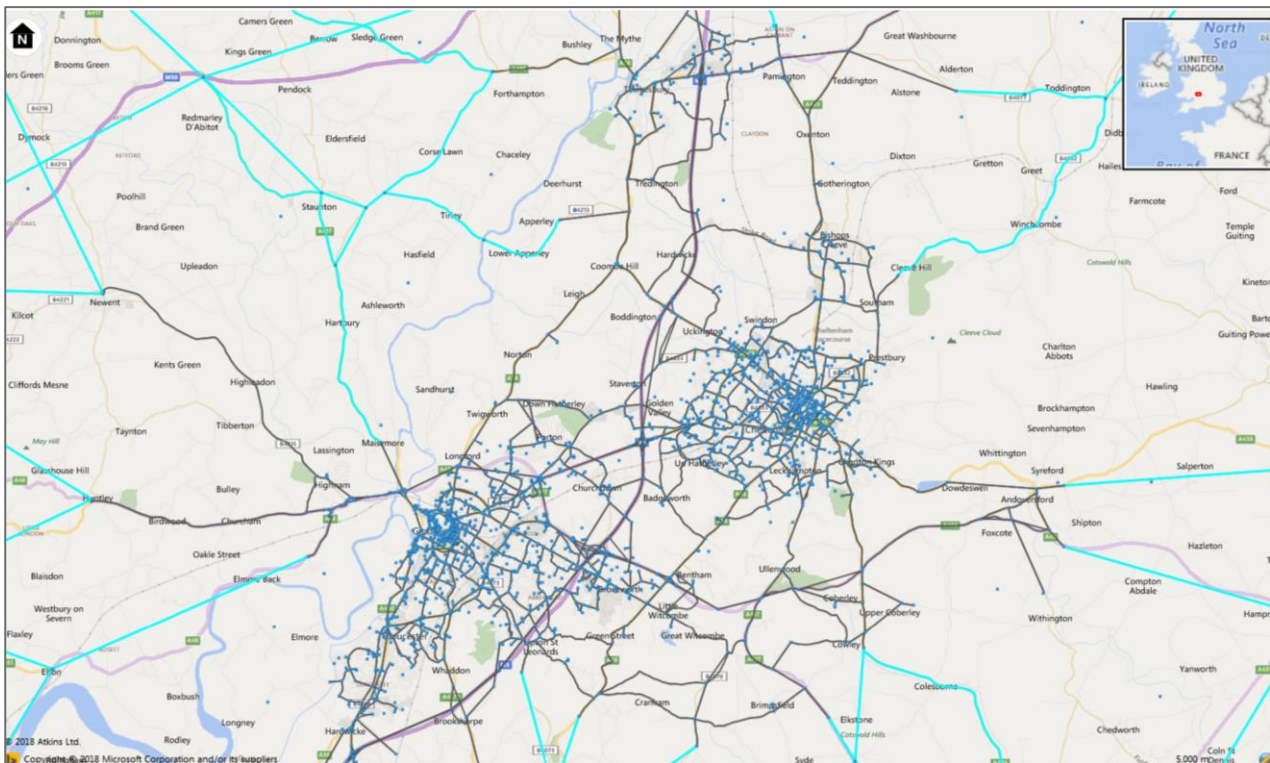


Figure 3: CSVTSM Model Coverage

## 2.3. Modelled Time Periods

2.3.1 Traffic models typically cover time periods when the most significant flow changes are likely to occur. As traffic flows are usually higher on weekdays rather than weekends and tend to be higher during the day than at night, traffic models usually cover weekday AM and PM peak hours and the period in between, known as the 'inter-peak'.

2.3.2 Previous analysis of traffic survey information identified the following peak hours, which have been modelled:

- AM Peak Hour (0800-0900hrs);
- Average Inter-Peak Hour (1000-1600hrs); and
- PM Peak Hour (1700-1800hrs).

## 2.4. User Class Segmentation

2.4.1 Different types of journeys are likely to display different characteristics in terms of trip distribution, travel time sensitivity and growth patterns.

2.4.2 The highway assignment model groups traffic into 'user classes'. These segmentations differentiate between the characteristics of road users, both in terms of their use and their physical attributes. HGVs for example are physically larger than cars, and therefore take up more road space per vehicle. The user classes are summarised as:

- User Class 1 (UC1): Cars used for Employers Business;
- User Class 2 (UC2): Cars used for Commuting;
- User Class 3 (UC3): Cars used for Other purposes;
- User Class 4 (UC4): Light Goods Vehicles (LGVs); and

- User Class 5 (UC5): Heavy Goods Vehicles (HGVs).

2.4.3 The model aggregates the user classes into 'vehicle classes' for use in reporting. The results of the forecast models will be reported by these vehicle classes, which can be summarised as:

- Vehicle Class 1 (VC1): Cars;
- Vehicle Class 2 (VC2): Light Goods Vehicles (LGVs); and
- Vehicle Class 3 (VC3): Heavy Goods Vehicles (HGVs).

## 2.5. Software Used

2.5.1 The highway model has been developed using SATURN Version 11.3.12U.

## 2.6. Assignment Procedure and Generalised Cost Parameters

2.6.1 The assignment process is a crucial element as it predicts the routes that drivers will choose considering the level of traffic demand and the available road capacity.

2.6.2 The route choice during a highway assignment is determined by the generalised travel cost incurred on each route. Generalised cost for a route between the start and end of a journey is a function of the travel time for a route and the distance travelled on the route, as shown in the equation below.

Generalised Cost =  $VOT \times \text{Time} + VOC \times \text{Distance}$ , where:

- VOT = values of time (pence per minute; PPM)
- VOC = vehicle operating cost (pence per km; PPK)

2.6.3 In general, for private trips including cars and goods vehicles, time is typically most significant part of the equation, with distance less significant. This relative weighting of time and distance varies depending on the trip purposes (e.g. commuter trips will be more time critical whereas leisure trips are less sensitive to time).

2.6.4 The assignment utilises the Wardrop Equilibrium assignment algorithm which seeks to arrange traffic on congested networks such that the cost of travel on all routes used between each start and end point of a journey is equal to the minimum cost of travel and all unused routes have equal or greater cost.

## 2.7. Model Calibration and Validation

2.7.1 The CSVTSM 2013 base year model, from which the traffic forecasts are derived for the M5 Junction 10 HIF OBC scheme, is considered to show acceptable accuracy against calibration and validation criteria specified by WebTAG.

2.7.2 The outcomes from base model calibration and validation are summarised in the LMVR, which examines the reliability of the model in terms of providing:

- Sensible travel demand trip matrix origin-destination (O-D) movements;
- Calibration against reference data used to build the model and resulting representation of: highway network and land use zone characteristics, route-choice patterns, network operational performance, and assigned traffic flow patterns;
- A validation of post-estimation matrix O-D patterns against pre-estimation movements, without excessive changes to: O-D cells, O-D trip ends, and O-D trip lengths;
- A validation against independent traffic data, configured to check: individual link and junction turning flows, aggregate screen-line flows, and travel times along recorded journey-time routes; and

- A steady-state of equilibrium assignment 'convergence', after ultimate model iterations, such that network flows and delays are stable and unchanging between iterations and the model achieves close proximity to its objective of minimised-travel-costs.

2.7.3 Key results from the CSVTSM base model in respect of the above calibration and validation aspects are summarised below.

- Stable convergence is ensured in the ultimate four assignment iterations within each of the AM / IP / PM base models, in respect of:
  - %GAP proximity <0.1%; and
  - %FLOW stability 98% changing by <1%.
- For AM Peak flow validation:
  - 85% of screenline/cordon links achieved flow-range accuracy.
- For AM Peak flow calibration:
  - 88% of screenline/cordon links achieved flow-range accuracy; and
  - 84% of all links achieved flow-range accuracy and 76% were GEH-compliant.
- For PM Peak flow validation:
  - 79% of screenline/cordon links achieved flow-range accuracy.
- For PM Peak flow calibration:
  - 88% of screenline/cordon links achieved flow-range accuracy; and
  - 78% of all links achieved flow-range accuracy and 72% were GEH-compliant.
- For Inter-Peak flow validation:
  - 74% of screenline/cordon links achieved flow-range accuracy.
- For Inter-Peak flow calibration:
  - 95% of screenline/cordon links achieved flow-range accuracy; and
  - 90% of all links achieved flow-range accuracy and 88% were GEH-compliant.
- In respect of WebTAG route journey time validation criteria and thresholds of acceptability:
  - In the AM peak, 25 out of 28 routes (89%) achieved satisfactory accuracy;
  - In the PM peak, 18 out of 28 routes (64%) achieved satisfactory accuracy; and
  - In the Inter peak, 23 out of 28 routes (82%) achieved satisfactory accuracy.

2.7.4 The size and complexity of the CSV model means that it struggles to comply fully with DMRB criteria. However, this is common for similar models of this size throughout the country. The AM Peak, Inter-Peak and PM Peak hours are represented with reasonable accuracy and deemed sufficient for the purpose of the model.

## 2.8. CSVTSM 2013 Base Model Fitness for Purpose

- 2.8.1 The CSVTSM model has a 2013 base year which is now just over five years old and approaching the six-year horizon at which a base model may not fully reflect current conditions. It is therefore normal practice that at this age a model is reviewed to ensure it remains 'fit for purpose'.
- 2.8.2 CSVTSM was constructed using count and journey time data covering the JCS authorities of Gloucester, Cheltenham and Tewksbury and the wider road network. The validation and convergence standards applied were taken from TAG Unit M3.1 (Highway Assignment Modelling).
- 2.8.3 As outlined in section 2.7, CSVTSM struggles to comply fully with TAG criteria. CSVTSM covers a wide geographic area and contains a complex urban road network with multiple centres and significant route choice possibilities. The shortcomings in some aspects of the validation of CSVTSM need to be considered in this context (i.e. a model of multiple, often parallel, corridors and multiple centres that generate urban and inter-urban trips combined with strategic road access routes).
- 2.8.4 Given the complexity of road use and the difficulty of replicating this in CSVTSM, it was decided to compromise on the accuracy of the assigned flow validation, in order to minimise unreliable changes to the model during calibration (as is advised in TAG M3.1 section 8.3.16, for large, congested urban models).
- 2.8.5 It would be fairly easy to improve the quality of the model flow validation, by allowing matrix estimation to make greater adjustments to the prior matrix. However, this would introduce unsubstantiated O-D movements into the assignment and would therefore cast doubt on the predicted outcomes of CSVTSM in the forecast model.
- 2.8.6 As stated in TAG Unit M3.1 "the achievement of the validation acceptability guidelines does not guarantee that a model is 'fit for purpose' and likewise a failure to meet the specified validation standards does not mean that a model is not 'fit for purpose'."

### Model Age

- 2.8.7 In terms of the age of highway models, it is stated, in TAG Unit M3.1, that: "Trip matrices should not be taken from existing models unless the trips having both ends in the fully modelled area which were derived from survey data which are less than six years old".
- 2.8.8 The guidance is therefore not that clear in terms of the six-year limit (i.e. it is ambiguous whether it applies to the data collection date or the base year of the model). In the case of CSVTSM, most of the data collection was from the Autumn of 2013, so this would fall within six years at present, but this is considered to be an arbitrary measure of the quality of the model.
- 2.8.9 The overall test of fitness for purpose of a model is straightforward:
- Can robust conclusions be drawn from the model outputs?
- 2.8.10 The age of the base model becomes unimportant if it can be demonstrated that travel demand and patterns have remained relatively stable since the model was developed.
- 2.8.11 The model has also been used extensively for key strategic decisions such as the Transport Plan for the Joint Core Strategy Housing Allocation (DS7) and applied for developer tests of key sites, so there is a valid reason for retaining it for the JCS / M5J10 strategy appraisal, because it maintains consistency with modelled data that were previously accepted and used as the basis for key decisions.

### Review of data

- 2.8.12 The continuing use of the 2013 CSVTSM can be justified on the basis that there has been minimal development occurring in the north and west of Cheltenham area in the intervening period since 2013. Nor have there been any significant network improvements which could have significantly impacted on travel patterns in this area, and therefore the traffic routing will have remained stable, and the assignment in the model is not likely to have changed significantly.

- 2.8.13 A sample check of the DfT's traffic flow database of AADT volumes has been referred to, which gives area-wide traffic count coverage of Gloucestershire. This shows an average 6% increase in 2-way AADT flow from 2013 to 2017, which is equivalent to a flow increase of only 1.5% per year over four years (or a 15-vehicle per year flow increase, per 1,000 vehicles). This confirms that there have been no significant overall increases in traffic across the county, since 2013 when the CSVTSM base model's accuracy was affirmed.

#### **Model Fitness for Purpose Summary**

- 2.8.14 In overall summary, the 2013 model validation is reasonably robust and plausible and remains so at a 2017 base year, although it does fall short of certain TAG accuracy criteria. However, it is considered that the TAG criteria are more suited to less detailed models, and as such it is argued that a certain level of flexibility is acceptable given the scale and complexity of CSVTSM. It is felt that these model shortcomings against some of the recommended criteria mask a reasonably robust model performance that is close to meeting the acceptability guidelines.
- 2.8.15 The review of available traffic data has also shown that continued use of the 2013 base year CSVTSM can be justified on the basis that there has been minimal change to traffic flows since 2013 and, by inference, little change in travel patterns.



## 3. Approach to Travel Demand Forecasting

### 3.1. Overview

- 3.1.1 The section sets out the sequence of steps taken to develop future year travel demand forecasts for 2021, 2026, 2031, 2036 and 2041 using CSVTSM.
- 3.1.2 Several adaptations and assumptions have been applied to the traffic model, to suit the inherent local circumstances, project resource constraints and stakeholders' advice. The model has the following key attributes:
- SATURN highway-only network traffic assignment, with capacity-constrained route choice;
  - Separation of SATURN road network into detailed, core 'simulation' and coarse, peripheral 'buffer' areas;
  - No representation of alternative travel modes; and
  - No allowance for variable demand responses to changing travel costs (e.g. trip frequency, modal choice, journey start time, or trip destination).
- 3.1.3 No multi-modal component has been modelled, because:
- There are no significant existing or feasible public transport 'spine' corridors, which will influence travel choices at JCS sites.
  - GCC does not have sufficient control or influence to prescribe and deliver substantial PT solutions to future traffic congestion associated with JCS, it can only determine highway improvements.
- 3.1.4 No variable demand component has been modelled, because the HIF and TAG guidelines for investing public funds require a coherent logic to underpin the split between JCS 'scheme-dependent' and 'deadweight' development. This development split determines the economic worth and value for money (VfM) of the strategy. It is very difficult to explain and justify the logic applied for JCS if variable demand mechanisms are added into the calculation, because they confuse the model assignment outcomes.
- 3.1.5 It is easier to make the scheme dependency calculations required by TAG Unit A2.2, which are based on clear scenario Q / P / R / S demand and supply permutations and comparisons, if variable demand effects are excluded.
- 3.1.6 It is simpler to track if certain JCS ODs are scheme-dependent and others are not, when the judgement is made solely using assigned route choice and resulting network 'Level of Service' criteria and when variable demand parameters are omitted. This means there will be more fixed reference points and constants between model scenarios with which to make logical comparisons and establish definite impacts.
- 3.1.7 In any case, for the key JCS model scenarios, legitimate variable demand responses (other than route choice), will not apply for most OD trips during busiest network peak times – i.e. highway commute and education trips. So, omitting variable demand is unlikely to cause significant inaccuracies. The omission of variable demand in this study is therefore a valid simplification and a necessary one.

### 3.2. Outline of Sequential Steps in Demand Forecasting Method

- 3.2.1 The sequence of steps undertaken to assemble the travel demand forecasts for the study are as outlined below:
- 3.2.2 Modify the trip matrix zoning structure and network accesses in the 2013 base year CSV SATURN traffic model, to match future JCS land use arrangements.
- 3.2.3 Interrogate the standard TEMPro guideline land-use and trip-end database, year-by-year from 2013, to understand the 'background', historic and forecast, spatial profile of homes, jobs and trip O-Ds, (split by

districts and their component Census MSOA, by non-freight travel modes, by journey purposes and by times of weekday).

- TEMPro contains two parallel strands of data:
  - Planning data forecasts for homes and jobs; and
  - Trip-end forecasts for O-D movements.
- The 'growth' patterns in each of the above forecasts are different, but the first determines the second.

3.2.4 Remove from TEMPro all homes and jobs for all years after 2013, to allow 'local adjustment' of the TEMPro database, to match 'locally-accurate' planning data.

3.2.5 Collate 'locally-accurate' land-use planning data from six Gloucestershire districts, then extract two strands of detail, namely:

- First, the districts' future residential and employment trajectories, predicted wholly for new houses and predicted partially for new JCS-related employment floor areas (in the absence of comprehensive employment trajectories); and
- Second, the districts' records of all identified land-use sites, (residential and employment), that have opened, closed, or that will emerge, during the study appraisal period, from base year 2013.

3.2.6 Convert these two strands of 'locally-accurate' land-use data, above, to equivalent homes and jobs, whereby jobs associated with the identified employment sites are calculated by applying standard densities of workers per unit area.

3.2.7 Categorise and handle the two strands of 'locally-accurate' homes and jobs, above, in two segments, so that, respectively, they can be removed from the TEMPro profile of homes and jobs, (to allow TEMPro 'local adjustment'), as follows:

- Retain as 'site-specific', the homes and jobs data of any 'significant' residential or employment development, greater than a threshold size, that is 'near-certain', 'more-than-likely', or is a designated JCS site (i.e. relevant to the HoE HIF bid); and then:
  - Exclude the site-specific homes and jobs from locally-adjusted 'background' TEMPro data; and
  - Represent the site-specific homes and jobs as calculated O-D movements in appropriate zones, for traffic assignment modelling and impact appraisal, whereby trip movements are derived using TRICS trip rates.
- Dismiss as 'non-site-specific' any developments that are only 'reasonably-foreseeable' or 'hypothetical', or below the threshold size for 'significance'; and then:
  - Include the non-site-specific developments within locally-adjusted 'background' TEMPro data; and
  - Handle the non-site-specific developments as a 'residual' homes and jobs by district, proportioned amongst constituent MSOA and model zones in line with TEMPro, whereby residuals are converted to trip O-D movements using trip rates within TEMPro.

3.2.8 Calculate the 'residual' homes and the 'residual' jobs, above, to be used to 'locally-adjust' the 'background' TEMPro year-on-year profiles for homes and jobs, from 2013 as follows:

3.2.9 For homes, as the net difference between:

- 'Locally-accurate' housing trajectory, from 2013, without any 'background' TEMPro growth from 2013 (as this is wholly replaced by local data); minus
- 'Locally-accurate' profile of selected, 'significant' site-specific homes, from 2013.

3.2.10 For jobs, as the net difference between:

- 'Locally-accurate' profile of JCS-related employment from 2013, including 'background' TEMPro growth from 2013 (where local data is missing); minus
- 'Locally-accurate' profile of selected, 'significant' site-specific jobs, from 2013.

3.2.11 Make the 'local-adjustments, above, to 'background' TEMPro, after removing the homes and jobs profiles from years beyond 2013, using the following steps:

- Add the year-on-year profile of 'residual' homes and jobs to the 2013 'background' TEMPro data, so that TEMPro can calculate locally-adjusted, future year, 'alternative' planning and trip-end growth at district and MSOA level:
  - This 'alternative' growth is then applied to the base year 2013 CSV model O-D trip demands, for zones where no 'site-specific' trips will be added; and
- Add the year-on-year profile of 'site-specific' homes and jobs to the 'residual' profile, above and the 2013 'background' TEMPro data, so that TEMPro can calculate locally-adjusted, future year, 'constrained' planning and trip-end growth at district level only:
  - This 'constrained' growth is then applied to the base year 2013 CSV model O-D trip demands, for all zones, after non-TEMPro 'site-specific' trips have been added, to dampen any distortion caused by using trip rates from TRICS rather than from TEMPro.

3.2.12 Calculate O-D trip ends, in each future year and time period, for each zone where 'site-specific' development has been identified, by applying appropriate TRICS trip rates, categorised by land use type and vehicle type, to the 'site-specific' homes and jobs.

3.2.13 Segment the 'site-specific' trips, above, into car journey purpose categories for commute, work (employer's business) and other, using proportions from the 2013 base year CSV model.

3.2.14 Apply a distribution to the 'site-specific' O-D trip ends, by matching the trip O-D distributions to those of selected, similar, model zones, which have comparable land use characteristics.

3.2.15 Calculate O-D trip ends, in each future year, for zones where no 'site-specific' development has been identified, by applying appropriate 'locally-adjusted', TEMPro 'alternative growth' (above) from 2013, to the base CSV model zone trip distributions.

3.2.16 Add together the O-D trip ends derived from the respective 'site-specific' trip rate and 'alternative growth' calculations, above, then apply a 'constraint' adjustment factor, to match with TEMPro 'constrained growth' (above), which will dampen any distortion caused by using some 'site-specific' trip rates from TRICS alongside dissimilar trip rates from TEMPro.

3.2.17 Apply a 'Furness' procedure to the resulting 'constrained growth' O-D trip ends, above, to match as closely as possible the base 2013 CSV matrix trip O-D distribution, by year and time period, and thereby derive a 'flat' matrix in which total origin trips are equal to total destination trips.

3.2.18 Undertake 'sense-checks' on the final forecast trip demand matrices, to ensure that trip O-D movements appear logical and match the 'locally-accurate' land-use data inputs and to ensure that overall, year-on-year, demand uplift is consistent with the 'constrained growth' TEMPro forecast.

## 4. Approach to Determining Scheme-Dependency

### 4.1. Overview

- 4.1.1 This section summarises the approach used to determine the 'transport scheme-dependency' that is associated with proposed development sites, which constitute the Joint Core Strategy (JCS) land use plan adopted by Cheltenham, Gloucester and Tewkesbury districts of Gloucestershire. 'Transport scheme-dependency' refers to the requirement for certain remedial transport infrastructure improvements to be introduced, before a specific segment of new land use can be soundly developed.
- 4.1.2 Scheme-dependent land use activity cannot legitimately commence without the infrastructure needed to mitigate its impact, because without remedial investment the development is likely to cause unacceptable 'stress' for transport users and a shortfall in performance, reliability and level-of-service on the transport network.

### 4.2. Scheme-Dependency Principle

4.2.1 'Scheme-dependency' is a key concept for measuring the economic value for money (VfM) of a transport scheme intervention, because the proportionate split between non-scheme-dependent ('deadweight') and scheme-dependent development determines how the economic welfare benefits and costs for transport users are compiled and attributed. The economic VfM impacts of a scheme intervention are categorised into two strands, to comply with HM Government's DfT Transport Analysis Guidance (TAG) and HoE Housing Infrastructure Fund (HIF) criteria, respectively, as follows:

- 'Level-1', non-scheme-dependent (deadweight-only) transport users' net economic welfare impact, i.e.:
  - Net welfare benefits less costs, associated with a change in transport efficiency and safety; and
  - Derived by comparing with-scheme and without-scheme intervention scenarios, with deadweight trip demands only.
- 'Level-3', development land value net economic welfare impact, i.e.:
  - Derived by comparing scheme-dependent against non-scheme-dependent (deadweight) land use value components; and
  - Offset against the external transport impacts and infrastructure impacts of the scheme-dependent strand of development.

4.2.2 In the context of scheme-dependency and for GCC's proposed HIF bid to HoE, it is necessary to determine the following items:

- First, the 'scheme-dependent' and 'deadweight' strands of JCS land use development;
- Second, the scope of the remedial transport package required to deliver the scheme-dependent strand of JCS; and
- Third, the calculations of economic worth associated with the above two items, i.e.:
  - Firstly, HoE's HIF (or TAG 'level-3') Net Present Value housing benefit formula: [Net private benefit of land value uplift] – [Net social external costs] – [Private development costs]; and
  - Secondly, DfT's TAG 'level-1' user benefit/cost (BCR) formula.

4.2.3 The two contrasting strands of JCS development can be described more precisely as follows:

- The 'scheme-dependent' portion is that which would create unacceptable congestion and cost for existing transport users;

- It will require remedial infrastructure, for it to be delivered; conversely
- The 'non-scheme-dependent' or 'deadweight' portion is that which would allow acceptable network performance and entail viable cost for existing transport users;
- It will not require a mitigating scheme package, for it to be delivered (except for site access).

4.2.4 A method has been formulated to determine the scheme-dependency of JCS-related development, to enable the following:

- Selection of an appropriate package of remedial transport interventions;
- Modelling and appraisal of scheme impacts in compliance with TAG; and
- Submission of an Outline Business Case and an accompanying HIF bid, to capture funds and support scheme delivery.

4.2.5 In overview, the appraisal method is set to be objective and overcome several obstacles, e.g.:

- It addresses the complexities of JCS, but within the limitations of the CSV traffic model;
- It analyses the opposing economic drivers of the appraisal; i.e.:
  - HIF NPV of housing benefit relies on 'scheme-dependent' JCS development;
  - TAG transport scheme user benefit relies, conversely, on 'deadweight' development;
  - JCS scheme-dependency for HIF NPV entails transport network stress, which requires a mitigating package, which is unlikely to be resolved through a simple scheme in one location;
  - JCS scheme-dependency creates significant external costs, which reduce the HIF NPV; and
  - JCS scheme-dependency restricts TAG BCR, because restricted deadweight leaves less 'stress' to be resolved on the without-scheme network.

### 4.3. Assumptions for Determining Scheme-Dependency and Deadweight

4.3.1 Scheme-dependency is hard to quantify, as has been confirmed by other technical teams working on other studies. To make sense, the JCS scheme-dependency analysis considers the aggregate impact of full JCS and all its development sites, because the combined implications for trip patterns and network performance will be different and greater than the effects of each JCS site taken individually.

4.3.2 However, the full JCS introduces a web of Origin to Destination (OD) movements and journey routes, which are wide-ranging and complex to analyse for their scheme-dependency and user impacts.

4.3.3 The approach used to determine scheme-dependency for JCS is set to achieve a satisfactory compromise between many complexities, especially in respect of:

- The capabilities of the traffic modelling tools.
- The opposition and contradiction associated with some desired outcomes from the appraisal, e.g.:
  - Desired NPV of housing benefit, derived using HIF (or TAG 'level-3') criteria, relies on more scheme-dependent development; but
  - More scheme-dependent development implies widespread transport stress problems; and
  - Resolution of stress problems necessitates considerable public investment cost and is unlikely to be resolved through a single, straightforward, scheme; also
  - More scheme-dependent development creates significant external transport cost, which reduces the NPV of housing benefit associated with JCS; and

- More scheme-dependent development involves less 'deadweight';
- Less deadweight restricts the desired transport scheme NPV, derived using TAG 'level-1' criteria, (as the inverse of the HIF / TAG 'level-3' benefit and NPV), because it implies less network 'stress' to be resolved in the without-scheme intervention scenario.

4.3.4 The transport effects of full JCS are too challenging to mitigate entirely in one attempt with a single scheme, because at some locations:

- Selection of appropriate mitigation will require further investigation and consultation; and because
- Judgement of network 'stress' and adverse impact of JCS is subjective, as an indicator of need for mitigation when compared against performance thresholds.

4.3.5 Although TAG (Unit A2.2, May 2018) provides an outline procedure for determining scheme-dependency of development, it is neither precise nor definitive. The methods available and the variables to be considered for determining scheme-dependency for JCS are extremely complicated, as they entail:

- Complex interplay between: numerous different background land use zones and new development sites; the resulting conditions of traffic flow, occupied capacity and travel time on different highway links; and the dynamic switching of origin to destination (O-D) trips between multiple, competing routes, to travel through the network;
- Consequent variability and unpredictability of modelled outcomes between assignment iterations; and
- Necessity to measure development impacts against subjective thresholds of acceptability for transport network performance and Level-of-Service (LoS), congestion-related 'stress' and magnitude of change from a reference 'baseline' situation.

4.3.6 The task has therefore been tackled in a pragmatic, localised context, considered appropriate for the conditions and characteristics in the Central Severn Vale (CSV) area of Gloucestershire.

4.3.7 The following unavoidable imprecisions in the scheme-dependency method should be noted:

- The SATURN model uses capacity-constrained assignment parameters that are different from the network Level-of-Service (LoS) thresholds used to determine scheme-dependency, which means that:
  - The model assignments cannot be precisely controlled to comply with the scheme-dependency criteria;
- The SATURN model entails dynamic routing of matrix O-D trips across the network, in each iterative assignment, which means that:
  - When scheme-dependent development trip movements are removed, remaining trips may re-assign to occupy routes where the removal of scheme-dependent trips should have resolved any LoS shortfall;
  - This complicates any direct comparison between full-development and no-development scenarios;
- The only achievable method for determining scheme-dependent development is to compare two modelled scenarios, as follows:
  - With full JCS development (TAG scenario 'Q'); and
  - With no JCS development (TAG scenario 'baseline');
  - Identifying the presence of development trips using 'select-link' O-D trip analysis; and
  - Calculating the amount of traffic that has to be removed from scenario Q to achieve an uplift on the Baseline flow that remains within the LoS threshold;

- However, the model re-assignment mechanism referred to above means that quantifying the true extent of scheme-dependent development is very difficult, since even when scheme-dependent trips are removed using the select-link approach and when only the 'deadweight' remains, traffic may be displaced back on to the relieved routes, which will reduce the expected LoS improvement such that LoS remains above the acceptable threshold; and
  - The CSVTSM hourly assignment mechanism also includes two components of 'fixed-flow' on the network, i.e. buses and 'passed queues' (from the preceding hour), which cannot easily be allowed for in the scheme-dependency calculations.
- 4.3.8 There are several, core principles and assumptions applied during the scheme-dependency analysis, as follows:
- Handle all JCS development sites on an equal basis, whereby:
    - Only one model assignment is run to determine scheme-dependency; and
    - Only one model assignment is run to remove proportions of dependent development and to establish non-dependent deadweight;
- 4.3.9 Otherwise, if the process was run iteratively, removing segments of development incrementally during successive assignments, it would distort the results because traffic will re-route during different model iterations.
- 4.3.10 For each JCS site, its scheme-dependent component is removed only once, calculated as the flow volume on that 'Critical road link' to which it contributes the highest flow, because it's impossible, otherwise, to allow for the likelihood that each JCS site will make duplicate O-D trip contributions to flows on several successive road links along a route.
- 4.3.11 A remedial scheme has been identified and tested to rectify the 'primary' LoS shortfalls that would arise with the combined, respective strands of JCS scheme-dependent and non-scheme-dependent (deadweight) development (TAG scenario 'R'), which have so far been calculated. However, when this remedial package is introduced, the model predicts further traffic re-assignment effects which, in turn, are likely to create further, 'secondary' LoS issues at other locations on the network.
- 4.3.12 An exercise to resolve the secondary problems is still on-going, but GCC is confident that appropriate mitigation can be delivered in due course and so this does not mean that the initial split of scheme-dependent and deadweight development needs to be changed.

#### 4.4. JCS Development Scheme-Dependency Method

- 4.4.1 The sequence of steps undertaken to determine the transport scheme dependency of JCS development, in terms of calculating a HIF-compliant housing NPV and undertaking a TAG-compliant transport user economic impact appraisal, are as outlined below.
- 4.4.2 Select the core skeleton highway network components on which forecast scenario performance, level-of-service (LoS) and operational 'stress' will be judged, omitting minor local road links where model outputs could obscure important strategic differences between scenarios.
- 4.4.3 Specify a range of acceptability for the indicators of network stress, from which JCS impact severity is then judged and remedial scheme requirements are assessed.
- 4.4.4 It gives the following key indicators of stress:
- A 'with-JCS' AADT/CRF absolute ratio – (a) between 90% and 100%; or (b) greater than 100%;
  - A 'with-JCS' link traffic flow incremental increase, compared with 'no-JCS' – (c) between 10% and 20%; or (d) greater than 20%;

- A 'with-JCS' junction flow/capacity absolute ratio – (e) between 90% and 100%; or (f) greater than 100%;

4.4.5 It also gives the following impact weightings:

- (a) Link AADT/CRF ratio 90-100% and (c) flow increase 10-20% = 'Level One' impact and mitigation-need;
- (b) Link AADT/CRF ratio >100% and (c) flow increase 10-20% = 'Level Two' impact and mitigation-need;
- (a) Link AADT/CRF ratio 90-100% and (d) flow increase >20% = 'Level Two' impact and mitigation-need; and
- (b) Link AADT/CRF ratio >100% and (d) flow increase >20% = 'Level three' impact and mitigation-need;

4.4.6 Run future year forecast CSV traffic model assignments for AM/IP/PM periods, at 2041, as follows:

- With all site-specific JCS development, allocated and safeguarded – i.e. Scenario Q; and
- Without any site-specific JCS development, with TEMPro 'alternative', (base 2013 plus 'residual' homes-and-jobs-related growth only) – i.e. Baseline Scenario;

4.4.7 Calculate equivalent Annual Average Daily Traffic (AADT) flows from aggregated and factored model time periods, by adjusting assigned flows in line with observed AADT / time period flow proportions.

4.4.8 Calculate the weighted impacts associated with the difference in AADT flows between the relevant model scenario assignments.

4.4.9 Calculate the guideline Congestion Reference Flow (CRF) on each link section of the core skeleton highway network, i.e.:

- The 2-way AADT flow on a link section above which conditions are likely to be congested and reveal link 'stress' during busiest peak periods, in line with the road's characteristics.

4.4.10 The quantification of 'scheme-dependent' development then includes just those sites that cause 'Level Three' link stress, i.e. where both weighted impacts (b) and (d) apply. Sites that cause only 'Level One' or 'Level two' stress are judged to be 'deadweight'. Road junction impacts are not used to determine scheme-dependency, because they can duplicate the effects identified on link sections.

4.4.11 The scheme is not configured to address the 'Level One' or 'Level Two' impact locations, as they do not constitute critical or constant problems. The 'Level One' and 'Level Two' problems will be assessed further during GCC's imminent JCS review. Other sources of CIL or developer-funding will be sought to resolve them if necessary.

4.4.12 The procedure used to determine network locations requiring mitigation is as follows:

- Compare scenario 'Q' (full JCS) with 'B' (Baseline background Q growth, no JCS) forecast assignments, to gauge network performance and level-of-service (LoS) outcomes across the core network, in terms of:
  - 'Significant' locations, where forecast changes in flow reveal an incidence of 'stress' in Q, compared with B, (at some 40 links and some 80 junctions), as highlighted by all key indicators of scheme-dependency (above);
- From the 'significant' locations above, identify 'critical' roads, where the most severe (Level Three) stress will occur, i.e. where both impact criteria (b) and (d) apply; and
- From the 'significant' locations, above, set aside the remaining 'non-critical' links, where the impact is not severe and where stress is only 'Level Two' or 'Level One'.



4.4.13 The procedure used to assemble the various forecast travel demand and transport network scenarios for HIF and TAG, comprising 'deadweight' and 'scheme-dependent' JCS land uses, respectively, is as follows:

- Undertake 'select-link' analysis on each 'critical' link in scenario 'Q' (full JCS), to identify the component origin to destination (O-D) trips that constitute each link flow and to establish:
  - What % of total AADT flow on each 'critical' link is contributed by aggregate JCS traffic;
  - Which individual JCS sites contribute O-D trips to each of the 'critical' road links; and
  - What % of aggregate JCS flow is contributed by each JCS site, on each 'critical' link;
- A JCS 'critical mass' threshold of  $\geq 10\%$  flow contributed by an individual site is then applied, to:
  - Retain only those JCS sites that make a substantive contribution to the total JCS traffic flow on 'critical'; and
  - Set aside those remaining JCS sites that do not constitute a substantive proportion of total JCS flow on 'critical' links;
- The retained % 'critical' link flow, which is contributed by JCS sites that exceed the 'critical mass', is re-apportioned to allow for the screening-out of some 'non-critical' sites
- Make a 'mid-point' calculation of how much of each 'critical mass' JCS development should be removed, (as being 'scheme-dependent'), by analysing just the 'worst-case' stress impact of that JCS site, selected from its multiple impact locations across the network;
- Our rationale for this 'mid-point' approach is as follows:
  - It resolves, for each 'critical mass' JCS site in turn, just the most severe incidence of flow-increase and link congestion caused by that site, but not all instances of excessive stress caused by that site; and
  - Once all JCS sites have been considered similarly, it is likely that all points of significant network stress are addressed and included in the scheme-dependency calculations, to some extent; but
  - At some locations of network stress, the aggregate amount of JCS calculated as being 'scheme-dependent', may be underestimated;
- The 'mid-point' approach also avoids the shortcomings of other alternatives, specifically:
  - It is not prudent to address every instance of impact caused by each JCS development; since
  - Each JCS site trip will cause a sequence of multiple stresses along its OD route; and hence
  - If every network stress is addressed, for all JCS sites, this will duplicate and overestimate the impacts of a single OD movement across multiple locations;
  - Nor is it sensible to address only the most severely-stressed location on the network, where there is excessive flow-increase or link congestion, caused by multiple JCS sites together; since
  - This will underestimate the impacts emerging at other 'severe-stress' locations, caused by other JCS OD movements on other routes; and hence
  - It will not fulfil the requirement to identify and include, for scheme-dependency, all parts of the network where 'Level Three' stress occurs as a consequence of JCS.
- Calculate 'deadweight' scenario 'P', as a derivative from scenario 'Q' above and which excludes the scheme-dependent element of demand, by:

- Removing an appropriate proportion of all the O-D movements at the JCS sites that contribute a 'critical mass' of traffic demand to a 'critical' road link, where there is a 'Level Three' stress impact; such that
- The 'critical' road links become 'satisfactory' road links' – i.e.:
  - Where the with-JCS flow increase (Q minus B) becomes  $\leq 10\%$ ; and / or
  - Where the link 'stress' AADT/CRF ratio becomes  $\leq 90\%$ ;
- No attention is paid to mitigating 'critical' road junctions, because:
  - The factors that determine junction performance are complex and not straightforward to resolve; and
  - The actions applied to remedy the 'critical' road links will also mitigate the congested junctions.
- For scenario P, determine how many O-D trips to remove from each of the JCS sites, (which contribute flow to a 'critical' road link), as follows:
  - Subtract (without-JCS scenario 'B' flow, plus 9%) from (with-JCS scenario 'Q' AADT); to establish:
    - The development flow reduction, in scenario P, needed to achieve an aggregate with-JCS total flow uplift from scenario B  $\leq 10\%$ ; or
  - Subtract (90% of CRF) from (with-JCS scenario 'Q' AADT); to establish:
    - The development flow reduction, in scenario P, needed to achieve an aggregate with-JCS link 'stress' AADT/CRF ratio  $\leq 90\%$ .

4.4.14 It is judged that the assigned demand flow reduction needed on a 'critical' road link for scenario P should only be sufficient to achieve either one of the above conditions that represent a 'satisfactory' road link, but not necessarily both.

4.4.15 After calculating the total amount of JCS that is 'scheme-dependent' and determining the reduction in trips required at each JCS site to leave a 'deadweight', the appropriate contraction of each JCS site is achieved by applying a constant proportionate reduction to all the trip OD movements from or to that site. A constant proportion is used, because it is impossible to isolate the relative impacts of individual OD trips on network stress and adjust these ODs accordingly.

4.4.16 Scheme-dependency for JCS is established by simplifying the analysis to a 'single-pass' of CSVTSM, which achieves the following:

- Establishes 'constant' scenario 'Q' and 'B' reference points for calculating impacts;
- Restricts the flux caused by interplay of assignment criteria; and
- Dampens volatile re-assignment effects, (in response to highway congestion), which emerge with multiple model iterations.

4.4.17 The importance of simplifying the modelling appraisal and the scheme-dependency procedure is illustrated by some complex local circumstances, e.g.:

- A JCS development site can cause multiple instances of network stress along a specific OD route used by trips to and from that site, whilst different OD routes also intersect and combine along some sections of the road network, such that:
  - A specific point of stress cannot be attributed to just one site OD movement (designated as scheme-dependent) and cannot be relieved solely by removing that JCS trip from deadweight scenario P;

- Defining and removing a specific JCS OD movement as scheme-dependent will relieve not just one point of stress in deadweight scenario P, it will also reduce the stress at other locations along its route, so that, overall, more traffic than necessary may be removed from some places.
- When a 'full-JCS' forecast assignment, ('X'), is compared with a 'No-JCS' forecast assignment, ('Y'), to establish the network impacts caused by JCS (i.e. 'X' – 'Y'), the findings are unavoidably distorted by the non-JCS trips ('Y') re-assigning when they are joined on the network by JCS trips ('X'), such that:
  - The difference between the assigned network scenario flows ('X' – 'Y') is not simply explained the additional JCS trips;
  - This re-assignment effect confuses the 'select link' analysis undertaken to determine the proportionate contribution of JCS sites towards congestion and stress; and
  - If more assignment iterations are undertaken, (e.g. to calculate the differential impact of removing a specific JCS site from deadweight scenario P), this will distort any scenario comparisons even further.

4.4.18 This same complication would emerge, magnified, if further model assignments were undertaken to calculate JCS 'residual scheme-dependency', if there were 'Level Three' stress impacts that could not be resolved by the proposed scheme package.

4.4.19 Allowance has been made for the variability of assigned network flows, which arises during additional model iterations (of scenario Q), which are needed to undertake select link analysis.

4.4.20 This variability occurs, (even with an identical trip demand / network layout scenario), because the end point of each dynamic model assignment will never converge to a perfectly stable state and because fixed flow (bus and passed queue) components are omitted from the select link procedure.

4.4.21 The allowance for assignment variability is made by:

- Adjusting the JCS % development flow contributions in the extra scenario Q 'select link' OD iterations, (as calculated for each 'Critical' road link above), to match the equivalent difference in modelled total link flow between the full scenario Q and scenario B assignments.
- This select link adjustment is necessary, because it is only by comparing full scenario Q with scenario B that the amount of scheme-dependent development traffic reduction required on each 'Critical' road link can be determined, to remain within the LoS threshold.
- However, the full Q vs B difference only gives a fair approximation of true JCS impact, because the full scenario B assignment also includes re-assignment of background flows, once development traffic has been removed from routes used in scenario Q.

4.4.22 Ultimately, the required forecast travel demand and transport network scenarios for HIF and TAG, comprising 'deadweight' and 'scheme-dependent' JCS land uses, respectively, are assembled as follows:

- Prepare full-JCS notional scenario 'Q', discussed earlier, which includes both 'deadweight' and 'scheme-dependent' development, but which represents only the 'do-minimum' network without any remedial scheme intervention for JCS.
- Prepare 'deadweight' scenario 'P', as a derivative from scenario 'Q' above and which excludes the 'scheme-dependent' element of demand and represents a future no-scheme 'do-minimum' network.
- Prepare notional scenario 'R', which includes the same full-JCS demand as 'Q', but which also represents the M5J10 remedial 'do-something' network scheme package.
- Prepare scenario 'S', which is restricted to the same 'deadweight' demand as 'P', but which also includes the M5J10 'do-something' remedial scheme package.

- 4.4.23 Comparison is made between scenario Q, with full JCS development and scenario B, with no development, to determine network locations where remedial interventions will be needed to mitigate any scheme-dependency issues. The identified scheme package has been modelled as scenario 'R' and amended as necessary, to verify that it will perform satisfactorily and achieve an acceptable network LoS.
- 4.4.24 An ultimate model assignment is also undertaken as scenario 'S', which includes deadweight development trips only, from scenario P, but with the remedial scheme package from scenario R. This scenario S is used to compare with scenario P, to determine transport user welfare outcomes and VfM of the scheme investment, with deadweight development only. It is also used to compare with scenario R, to determine transport external costs associated with scheme-dependent development.

## 5. Scenario Q and Baseline Forecast Demand and Supply

### 5.1. Introduction

- 5.1.1 This section describes how the future year TAG Scenario Q and Baseline networks and matrices (described in Chapters 3 and 4), have been developed using fixed trip demand forecasting techniques, including traffic growth from future developments.
- 5.1.2 For each scenario and modelled future year (2021, 2026, 2031, 2036 and 2041), matrices have been produced for the AM peak, Inter peak and PM peak. Future year matrices have been produced by applying separate forecasting techniques to different parts of the 2013 base matrix and then by combining the constituent parts. Key stages in the matrix forecasting (as described in detail in Chapter 3), for each year and time period, were as follows:

#### Scenario Q

- Modify the trip matrix zoning structure to match future land use arrangements;
- Collation of 'locally-accurate' land use planning data from the Gloucestershire Districts;
- Calculation of NTEM constraining trip growth factors, for a core scenario, by purpose using the TEMPro alternative planning assumption facility; such that the trip growth factors include 'locally-accurate' land use data for sites that have opened, closed, or that will emerge, during the study appraisal period; and such that the trip growth factors also control for any additional site-specific modelling of identified land use developments;
- Calculation and application of NTEM background growth factors, for a core scenario, by purpose using the TEMPro alternative planning assumption facility to exclude identified 'site-specific' developments that are 'near certain', 'more-than-likely', or are designated JCS sites that are relevant to the HIF OBC);
- Calculation and application of NTM LGV and HGV growth factors;
- Derivation and distribution of trip origins and destinations at identified land use developments, using TRICS; and
- Calculation and application of a 'constraint' adjustment to match with TEMPro/NTM 'constrained growth'.

#### Baseline

- In the baseline scenario the trips associated with the potentially dependent development (i.e. JCS and JCS safeguarded development sites) are removed from Scenario Q. This adjustment applies to both the origins and destinations of trips associated with the zones that host the specific developments and so includes 2-way movements from and to the JCS sites.

### 5.2. Trip Matrix Zoning Structure Modifications

- 5.2.1 When integrating new development sites into the forecast model there are two options available to represent the development, namely:
- Incorporate the development within an existing model zone; or
  - Represent the new development as a new stand-alone model zone.
- 5.2.2 The first option has been applied to developments with less than 500 homes and 10,000sqm of commercial floorspace and essentially means that trips from the new development would be treated in the same way as the trips within the existing zone. This is appropriate for less important developments where the expected land use mix is similar to that within the existing zone.

- 5.2.3 The second option has been applied to strategically important developments with the primary benefit being that it enables trips from the new development to be modelled differently from the existing locations. This could be the access arrangements to/from the new development or the distribution of trips.
- 5.2.4 During the development of the base year model a series of zones were set aside to enable specific new development locations to be incorporated into the forecasts. As stated above it is not necessary for all developments to be represented as an independent zone. The developments allocated to new stand-alone zones are listed in below.

Table 1: New Stand-Alone Development Zones

Site Name	Type	Dwellings/ Floorspace (sqm)	Zone Number
North West Cheltenham (JCS)	Housing	4,285	3011
	Employment	43,500	3012
West Cheltenham (JCS)	Housing	1,100	3021
	Employment	206,200	3022
Innsworth (JCS)	Housing	1,473	4011
	Employment	15,184	4012
Twigworth (JCS)	Housing	822	4021
South Churchdown (JCS)	Housing	1,100	4031
	Employment	62,640	4032
North Brockworth (JCS)	Housing	1,500	4041
	Employment	22,000	4042
North West Cheltenham (Safeguarded)	Housing	2,258	3031
	Employment	120,000	3032
West Cheltenham (Safeguarded)	Housing	1,324	3041
	Employment	20,000	3042
Land at North Road West/Grovefield Way	Employment	18,453	3052
Land at Barnwood Link Road	Employment	26,217	4062

### 5.3. Site Specific Developments

#### Development Sites

- 5.3.1 An inventory of future year proposed land-use changes has been documented in a forecasting 'Uncertainty Log'. The 'Uncertainty Log', provides information on the latest assumptions regarding planned developments in the JCS area. The assumptions are based on the information supplied by local planning authorities (i.e. Gloucester City Council, Cheltenham Borough Council and Tewkesbury Borough Council). The development assumptions are used to explicitly model development trips to be included in the future year matrices for the CSVSM forecast model.
- 5.3.2 As outlined in Chapter 3, WebTAG guidance provides information on developments to be included in the demand forecasts, however, many developments will be small, and their resulting traffic impact will be negligible. As such, a certain amount of judgement is required when selecting the developments to be included on a site-specific basis. The developments in the study area that are greater than 100 homes or 1,000sqm of commercial floorspace are included as site-specific developments within the forecasts.
- 5.3.3 The employment and housing sites identified for inclusion as site-specific are shown in Appendix A.

### Development Phasing

5.3.4 The phasing of the planned developments has been based on information provided by the local authorities.

### Development Trip Generation

5.3.5 As detailed in Chapter 3, the local planning data specified in the 'Uncertainty Log' for sites to be represented as site-specific were converted to trips using the TRICS trip rates. These trip rates are summarised in Appendix B.

5.3.6 The resulting trips for each time period and site are summarised in Appendix C for housing and employment developments.

### Development Trip Distribution

5.3.7 When integrating new development sites into the forecast model there are three options available to distribute the development traffic, namely:

- Incorporate the development traffic within an existing model zone;
- Distribute the traffic using the distribution to and from existing comparative parent zone(s); or
- Construct bespoke gravity models to define the spatial distribution, (or adopt gravity distributions calculated by key site developers, if these are approved and assembled using comparable parameters to the traffic model).

5.3.8 For simplicity, most new developments were incorporated into existing model zones. The larger, strategic sites outlined in Table 1 were distributed using existing comparative parent zone(s). Suitable

## 5.4. NTEM Growth of Car Trips

5.4.1 Trip forecasts are based on the validated 2013 CSVTSM base year models and projections to forecast years based on local growth factors derived from the DfT's National Trip End Model (NTEM) which is accessed through the TEMPro version 7.2 program. TEMPRO is a program that provides projections of growth over time for use in local and regional transport models. It presents projections of growth in planning data, car ownership, and resultant growth in trip-making by different modes of transport.

5.4.2 Every few years DfT publishes new sets of regional datasets. The current definitive version of the dataset is NTEM version 7.2 and has been used in as the basis for demand forecasting.

5.4.3 TEMPro makes no assumptions about whether or not individual land use developments go ahead<sup>2</sup>, nor is it updated annually to accurately reflect the true number of households/jobs in recent years. The current NTEM dataset version 7.2 (March 2017). The dwelling growth within TEMPro 7.2 is obtained from the housing trajectories contained within the Authority Monitoring Reports (AMR), Strategic Household Land Availability Assessment or local plan information published by each local authority. Locally, this was the 2011 AMR for Gloucester, 2013 AMR for Cheltenham and the 2014 AMR for Tewkesbury. Employment growth is derived from Office for Budget Responsibility (OBR) forecasts of employment published in 2015.

5.4.4 The data underpinning the TEMPro forecasts were published some time before JCS was adopted in 2017, however, the software includes an 'Alternative Planning Assumptions' facility, whereby the number of households and jobs can be adjusted in order to better reflect existing and future conditions based on more recently available local planning data.

5.4.5 This also provides a mechanism whereby the number of housing/jobs for selective major developments can be excluded from the calculations, in order to avoid double counting, which would otherwise occur by simply adding development traffic on top of TEMPro factored flows.

### Adjusted TEMPRO Ceiling Growth

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<sup>2</sup> TAG Unit M4, Par 7.3.4

5.4.6 The Alternative Planning Assumptions facility within TEMPro was used to update the planning assumptions to better reflect more recently available local planning data.

5.4.7 Table 2 shows the adjusted TEMPRO household and jobs numbers forecast for each of the JCS districts for each of the forecast years.

Table 2: Adjusted TEMPRO Planning Data

District	Year Range	TEMPro		Adjusted		Change	
		HH	Jobs	HH	Jobs	HH	Jobs
Tewkesbury	2013-to-2021	3,510	4,309	6,050	4,619	2,539	310
	2021-to-2026	2,374	813	2,198	1,743	-176	930
	2026-to-2031	2,139	686	949	1,513	-1,190	827
	2031-to-2036	1,847	858	1,847	858	0	0
	2036-to-2041	1,784	858	1,784	858	0	0
Gloucester	2013-to-2021	4,598	6,888	4,447	7,021	-152	132
	2021-to-2026	2,070	1,138	3,948	1,349	1,878	211
	2026-to-2031	1,955	956	1,125	1,141	-831	185
	2031-to-2036	2,028	1,196	2,028	1,196	0	0
	2036-to-2041	2,064	1,198	2,064	1,198	0	0
Cheltenham	2013-to-2021	3,136	5,913	4,175	6,430	1,039	517
	2021-to-2026	1,882	1,126	3,456	4,801	1,574	3,675
	2026-to-2031	1,848	942	2,536	4,841	688	3,899
	2031-to-2036	1,837	1,181	3,265	4,680	1,428	3,499
	2036-to-2041	1,879	1,184	832	1,805	-1,047	621

5.4.8 The resulting ceiling growth rates for each forecast year and time period are shown in Appendix D.

### Background Traffic Growth

5.4.9 Background growth factors were generated using TEMPro 7.2. However, as the adjusted ceiling growth rates in TEMPro include site-specific development within the JCS districts, growth factors needed to be adjusted to avoid double counting. This was done using the 'Alternative Planning Assumptions' facility. The predicted future numbers of households and jobs was adjusted to remove those specifically accounted for as site-specific (see Appendix A).

5.4.10 The resulting ceiling growth rates for each forecast year and time period are shown in Appendix E.

## 5.5. NTM Forecasts (Goods Vehicle Trips)

5.5.1 Since NTEM only provides information on cars, to forecast LGV and HGV matrices the DfT's Road Traffic Forecasts from 2018 (RTF 2018) were used. The RTFs are derived from the National Transport Model (NTM).

5.5.2 The growth factors in RTF Scenario 1 were used for forecasting to 2021 and 2036. RTF does not provide time period segmentation, the same growth factor was therefore applied across all time segments (AM, IP, PM). The RTF growth rates are shown in Table 3.



Table 3: Goods Vehicle Growth Rates

Region	2013-to-2021		2013-to-2026		2013-to-2031		2013-to-2036		2013-to-2041	
	LGV	HGV	LGV	HGV	LGV	HGV	LGV	HGV	LGV	HGV
East Midlands	1.164	0.996	1.225	0.989	1.295	0.994	1.385	1.007	1.471	1.021
Eastern England	1.149	1.025	1.205	1.042	1.273	1.065	1.360	1.097	1.444	1.131
London	1.174	0.972	1.258	0.975	1.335	0.988	1.425	0.996	1.512	1.006
North East	1.156	0.979	1.223	0.977	1.295	0.979	1.385	0.987	1.471	0.998
North West	1.147	0.987	1.203	0.985	1.270	0.990	1.358	1.002	1.442	1.016
South East	1.160	1.025	1.221	1.043	1.293	1.070	1.382	1.104	1.469	1.140
South West	1.140	0.980	1.193	0.980	1.259	0.981	1.346	0.989	1.430	0.999
West Midlands	1.171	0.991	1.243	0.992	1.317	1.001	1.409	1.016	1.497	1.032
Yorks & Humber	1.160	0.990	1.221	0.992	1.291	1.000	1.380	1.015	1.466	1.031
Wales	1.155	0.990	1.213	0.987	1.282	0.990	1.370	1.002	1.456	1.016

## 5.6. Constraining Demand Matrices to Match TEMPro/RTF Ceiling Growth

5.6.1 In line with WebTAG guidance Scaling factors were developed for each user class and forecast year to constrain overall growth to match ceiling forecasts. For car trips this is TEMPro, whilst for goods vehicle trips this is NTM. For the CSVSM forecasts the constraints were applied at district level for car trips and regional level for goods vehicle trips.

5.6.2 The resulting scaling factors for each forecast year and time period are shown in Appendix F.

## 5.7. Combined Background and Development Trip Matrices

5.7.1 The output trip matrices are used for both Scenario Q and Scenario R assignments (i.e. with dependent development), described in Chapters 3 and 4. Checks have been carried out to compare the trip end totals between the 2013 base year and the future years for all time periods to ensure the expected, overall growth between the base year and the future years is in line with that estimated by TEMPro and NTM.

5.7.2 Table 4 and Table 5 gives a summary of the Scenario Q matrix trip end totals and trip matrix growth respectively, for each vehicle type, purpose, time period and forecast year.

Table 4: Scenario Q Trip Matrix Totals

Time Period	Vehicle Type/ Trip Purpose	2013	2021	2026	2031	2036	2041
AM	Car Work	6,125	6,734	7,051	7,259	7,448	7,662
	Car Commute	30,537	32,497	34,114	34,959	35,860	36,807
	Car Other	31,669	33,613	35,567	37,202	38,883	40,036
	LGV	4,763	5,447	5,710	6,032	6,446	6,848
	HGV	4,948	4,873	4,872	4,890	4,943	5,004
	Total	78,042	83,164	87,314	90,343	93,580	96,356
IP	Car Work	8,448	9,022	9,389	9,676	9,890	10,166
	Car Commute	9,524	9,896	10,307	10,603	10,828	11,084
	Car Other	42,906	45,040	47,754	50,204	52,623	54,165
	LGV	4,343	4,980	5,227	5,523	5,903	6,270
	HGV	3,663	3,610	3,612	3,626	3,667	3,713
	Total	68,885	72,550	76,288	79,633	82,910	85,399
	Car Work	6,021	6,446	6,725	6,956	7,135	7,341

Time Period	Vehicle Type/ Trip Purpose	2013	2021	2026	2031	2036	2041
PM	Car Commute	28,241	29,181	30,393	31,353	32,018	32,848
	Car Other	33,348	35,148	37,041	38,819	40,510	41,678
	LGV	4,430	5,063	5,306	5,604	5,989	6,362
	HGV	3,389	3,348	3,353	3,371	3,413	3,461
	Total	75,429	79,186	82,818	86,103	89,066	91,691

Table 5: Scenario Q Trip Matrix Growth

Time Period	Vehicle Type/ Trip Purpose	2013-to-2021	2013-to-2026	2013-to-2031	2013-to-2036	2013-to-2041
AM	Car Work	10%	15%	19%	22%	25%
	Car Commute	6%	12%	14%	17%	21%
	Car Other	6%	12%	17%	23%	26%
	LGV	14%	20%	27%	35%	44%
	HGV	-2%	-2%	-1%	0%	1%
	Total	7%	12%	16%	20%	23%
IP	Car Work	7%	11%	15%	17%	20%
	Car Commute	4%	8%	11%	14%	16%
	Car Other	5%	11%	17%	23%	26%
	LGV	15%	20%	27%	36%	44%
	HGV	-1%	-1%	-1%	0%	1%
	Total	5%	11%	16%	20%	24%
PM	Car Work	7%	12%	16%	19%	22%
	Car Commute	3%	8%	11%	13%	16%
	Car Other	5%	11%	16%	21%	25%
	LGV	14%	20%	27%	35%	44%
	HGV	-1%	-1%	-1%	1%	2%
	Total	5%	10%	14%	18%	22%

- 5.7.3 In Scenario Q, by 2021, there is forecast to be around 6% overall growth over and above the 2013 base. By 2041, the final forecast year, there is predicted to be around 23% growth, if all JCS-related development occurs and if sufficient impact mitigation and transport improvement is introduced to maintain satisfactory performance of the highway network.

## 5.8. Baseline Trip Matrices

- 5.8.1 As outlined in Chapter 4, there is a necessity to measure development impacts against sensibly-judged thresholds of acceptability for transport network performance and Level-of-Service (LoS), congestion-related 'stress' and magnitude of change from a reference 'baseline' scenario. This Baseline Scenario requires trips associated with the potentially dependent development (i.e. JCS and JCS safeguarded development sites) to be removed from the Scenario Q trip matrices. This includes the origins and destinations associated within the zones that host the specific development site, but also the associated trip ends from elsewhere in the matrix.
- 5.8.2 The baseline matrices are only developed for 2041 as the determination of dependency is focused on what sites will be 'unlocked' by the transport scheme, by 2041.
- 5.8.3 Table 6 gives a summary of the Baseline matrix trip end totals and trip matrix growth respectively, for each vehicle type, purpose, time period and forecast year.

Table 6: Baseline Trip Matrix Totals

Time Period	Vehicle Type/ Trip Purpose	2013	2041	2013-to-2041
AM	Car Work	6,125	7,005	14%
	Car Commute	30,537	32,095	5%
	Car Other	31,669	35,822	13%
	LGV	4,763	6,131	29%
	HGV	4,948	4,786	-3%
	Total	78,042	85,839	10%
IP	Car Work	8,448	9,599	14%
	Car Commute	9,524	10,349	9%
	Car Other	42,906	50,510	18%
	LGV	4,343	5,629	30%
	HGV	3,663	3,504	-4%
	Total	68,885	79,590	16%
PM	Car Work	6,021	6,757	12%
	Car Commute	28,241	29,460	4%
	Car Other	33,348	37,202	12%
	LGV	4,430	5,816	31%
	HGV	3,389	3,366	-1%
	Total	75,429	82,602	10%

5.8.4 In the 2041 Baseline Scenario there is forecast to be a 10% overall growth in the AM and PM peak hours and a 16% growth during the inter-peak, over and above the 2013 base, if all JCS-related development traffic is omitted. The corresponding level of growth in Scenario Q by 2041 is predicted to be around 23% in all peaks, if all JCS development occurs and if there is sufficient transport intervention to mitigate the adverse impacts of JCS.

## 5.9. Transport Supply

5.9.1 The transport network is the same for both Scenario Q and Baseline and represents the 'without-scheme' or Do Minimum situation. Details of likely Do Minimum network improvements have been established from local authority planning and transportation officers. Elements of the Do Minimum network, which have been included are outlined below:

- A46 Corridor Improvements east of M5 Junction 9;
- A417 Walls Roundabout Improvements;
- A40 Over Roundabout Improvements;
- A417 C&G Roundabout Improvement Scheme;
- A38 Longford Roundabout Improvement Scheme;
- A419 Chipmans Platt Roundabout Improvement Scheme;
- A419 Old Ends Roundabout Scheme;
- A419 Downton Road Traffic Signal Scheme;
- A419 Horsetrough Roundabout Improvement Scheme;
- A40 / A417 Elmbridge Transport Scheme;

- A4302 Metz Way Scheme;
- Strategic Development Accesses;
- A38 Cross keys Roundabout Improvement Scheme;
- A430 Upgrade;
- B4634 Old Gloucester Road Improvement Scheme; and
- LEP Cyberpark Scheme

## 5.10. Highway Assignment

- 5.10.1 The assignment of the Scenario Q and Baseline matrices onto the Do Minimum model network is an iterative process, with each successive iteration converging upon the optimum equilibrium situation. The completed assignment is then based upon the final iteration. The better the convergence, the more stable the model, with less variation between successive iterations.
- 5.10.2 The summary convergence statistics for the assignment model presented in Appendix G. The assignment statistics for all the models meet the acceptability guidelines and so are considered to represent a good level of convergence.

## 6. Scheme Dependency Determination

### 6.1. Introduction

- 6.1.1 This section describes how the quantification of scheme-dependent development has been undertaken.
- 6.1.2 All results presented within this section represent modelled forecast traffic impacts on a strategically important skeletal network across the Central Severn Vale area of Gloucestershire, comparing Scenario Q against a reference Baseline Scenario for the forecast year 2041 taken from CSVTSM.
- 6.1.3 Scenario Q is the full growth scenario. It contains all committed development together with the addition of the JCS development, allocated and safeguarded as contained in the JCS, as outlined in Chapter 5.
- 6.1.4 The reference Baseline Scenario is derived from Scenario Q, but excludes the trips ends associated with the development that are potentially dependent (i.e. JCS allocated and safeguarded sites). For clarity:
- Total trips in baseline scenario = Total Trips in Scenario Q – Potentially dependent development trips.
- 6.1.5 Key steps in determining development scheme-dependency (as described in detail in Chapter 4) at forecast year 2041 were as follows:

#### Impact Analysis

- Select core skeleton strategic highway network components;
- Derive Level of Service (LoS) acceptability indicators;
- Calculate the weighted impacts associated with the difference in AADT flows between the relevant model scenario assignments;
- Undertake a capacity assessment on each link section and junction of the core skeleton highway network;
- Identify locations where composite forecast changes in flow and CRF indicate that network performance is likely to fall short of an acceptable LoS.

#### Dependent Development Quantification

- Undertake analysis on each link that falls short of an acceptable LoS to identify which potentially dependent sites contribute to the impact;
- Apply a critical mass threshold to screen out sites that do not constitute a substantive impact;
- Determine what level of flow would need to be removed before the impacted areas are likely to operate within their LoS threshold; and
- Set the individual site required flow reduction against the total flow reduction to determine the proportion of development that is dependent and the proportion that could reasonably go ahead (i.e. the Deadweight).

### 6.2. Core skeleton Highway Network

The first stage when undertaking this type of impact analysis is to establish the network, onto which key information will be overlaid and the LoS acceptability will be judged. In this instance, a review was undertaken of the highway network within the area, and key strategic routes, junctions and corridors were identified with minor local road links omitted where model outputs could obscure important strategic differences between scenarios. The core network is shown in Figure 4.

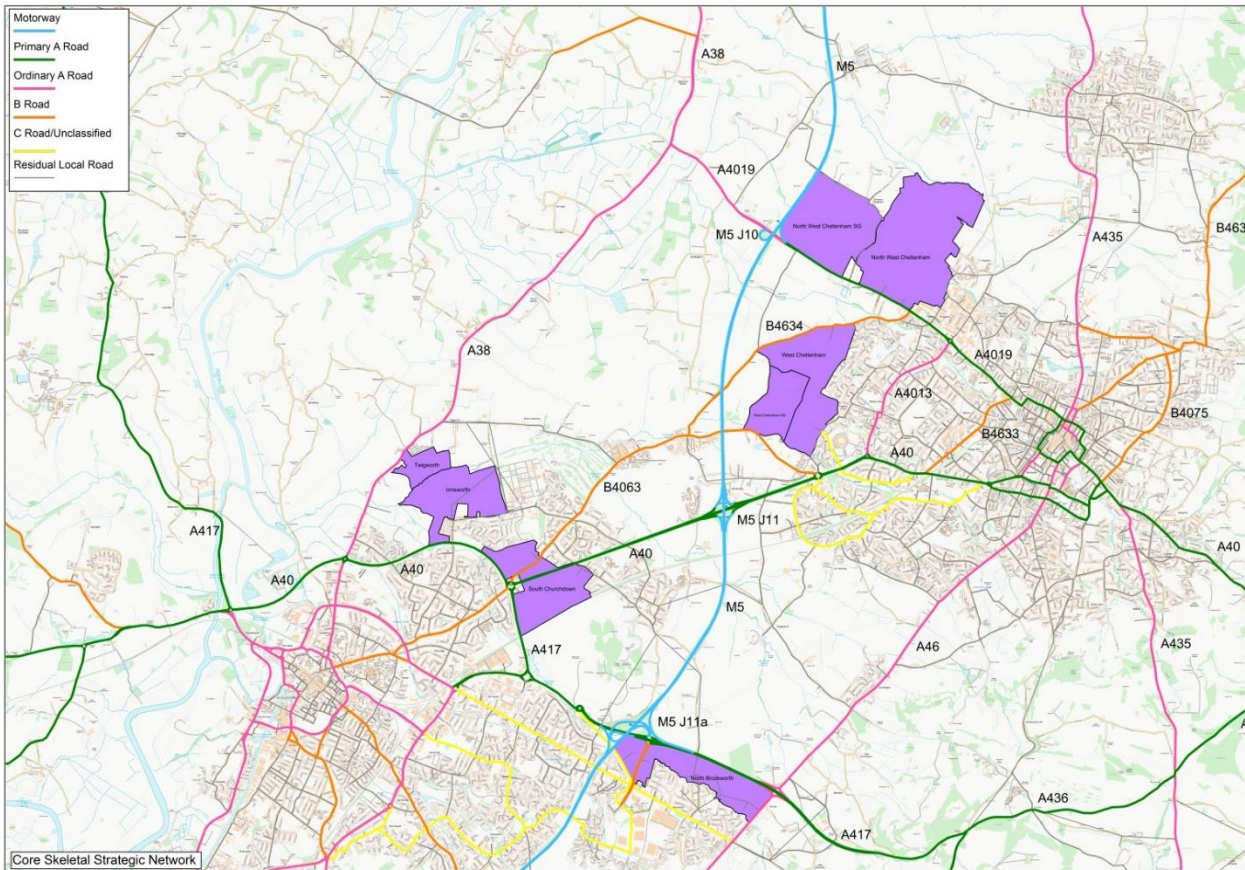


Figure 4: Core Skelton Highway Network

### 6.3. Acceptability Indicators

- 6.3.1 Before any impact analysis can be undertaken it is necessary to specify a range of acceptability for the indicators of network stress, from which JCS impact severity is then judged and dependency levels and remedial scheme requirements can be assessed.
- 6.3.2 The procedure used to determine network locations requiring mitigation uses a cumulative impacts assessment to identify and evaluate the significance of both highway capacity and network flow changes. This assessment involves comparing the network with potential dependent development (Scenario Q) to that with no dependent development (i.e. reference Baseline Scenario) to gauge network performance and identify areas failing to operate at a reasonable level of service.
- 6.3.3 The acceptability indicator adopted from which JCS impacts are judged is as follows:
- Link and Junction Stress >90% and a flow increase >10%.
- 6.3.4 The rationale for the choice of indicator is as follows:
- Beyond 90% flow is likely to become irregular, speed may vary rapidly because of reductions in available gaps and there may be times when vehicles are moving nose to tail and any disruption to traffic flow could create upstream shockwaves; and
  - It is generally accepted that the day to day variation of traffic is frequently around 10%. Therefore, projected changes  $\leq 10\%$  create no discernible impact.
- 6.3.5 For points on the network exceeding this initial threshold, a significance indicator was introduced in order to assess the severity of impacts. The rationale being the full impacts of JCS won't be mitigated by a single network improvement. The indicators are as follows:

- Level One: Stress between 90% and 100%, with flow increase between 10% and 20%;
- Level Two: Stress between 90% and 100%, with flow increase 20% or above; or flow increase between 10% and 20%, with Stress 100% or above; and
- Level Three: Stress 100% or above, with flow increase 20% or above.

6.3.6 The subsequent quantification of 'scheme-dependent' development includes just the sites that cause 'Level Three' impacts (i.e. Stress 100% or above, with flow increase 20% or above), essentially where impacts are the most severe.

## 6.4. Traffic Flow Assessment

6.4.1 Although traffic modelling is undertaken on representative hourly flows (AM, Inter-Peak and PM), for impact analysis (i.e. overall flow change and CRF) traffic flows are required for longer periods, such as 24-hour Annual Average Daily Traffic (AADT) and 24-hour Annual Average Weekday Traffic (AAWT).

6.4.2 Daily traffic flows have been derived from the modelled hourly period using factors based on an analysis of GCC data from locally monitored automatic traffic count (ATC) sites.

6.4.3 Data from these sites were segregated by road types and have been averaged to provide factors for conversion of peak hour modelled flows to both 24-hour AAWT and AADT.

6.4.4 24-hour AAWT flow is calculated as:

- $((AM \text{ flow} * 2.743) + (IP \text{ flow} * 6.000) + (PM \text{ flow} * 2.725)) * (1.213)$

6.4.5 24-hour AADT is derived as:

- $24\text{-hour AAWT} * 0.913$

## 6.5. Capacity Assessment

### Link Assessments







All link assessments have been carried out using 24-hour Annual Average Daily Traffic (AADT) flows. The AADT flow has been compared with the Congestion Reference Flow (CRF). The Congestion Reference Flow of a link is a standard measure and is an estimate of the Annual Average Daily Traffic (AADT) at which the link is likely to be 'congested' in the peak periods on an average day, where congestion is defined as the situation when the hourly traffic demand exceeds the maximum sustainable hourly throughput of the link. At this point, the effect on traffic is likely to be one or more of the following:

- Flows break down with speeds varying considerably;
- Average speed drops significantly; and
- Sustainable throughput is reduced, and queues are likely to form.

Conversely, junction assessments have been conducted in the AM and PM peaks because these periods are considered to be the busiest in terms of traffic flow on both the local and strategic network.

The link capacity assessments have been banded into different colour categories; these bandings reflect the nature of stress or congestion that the road is experiencing. The congestion bands shown are based on the ratio of traffic volumes on a link to the theoretical link capacity. The levels of congestion corresponding to each colour are highlighted in the key in Table 7.

Table 7: Link Congestion Banding Key





Congestion Banding	Volume to capacity (V/C) ratio
	>=100%
	>=90% to <100%
	>=80% to <90%
	>=70% to <80%
	>=60% to <70%
	<60%

**Junction Assessments**

6.5.1 Junction assessments have been conducted for the AM and PM peaks because these periods are considered to be the busiest in terms of traffic flow on the strategic network.

Much like the link capacity assessments, the junction assessments have been banded into different colour categories; these bandings reflect the nature of stress or congestion that the junction is experiencing. The congestion bands shown are based on the ratio of traffic volumes on junction approach arms to the modelled junction capacity. The levels of congestion corresponding to each colour are highlighted in the key in Table 8.

Table 8: Junction Congestion Banding Key

Congestion Banding	Volume to capacity (V/C) ratio
	One or more arms in either peak hour >=100%
	One or more arms in either peak hour between >=90% and <100%
	One or more arms in either peak hour between >=80% and <90%
	All arms in either peak <80%

**6.6. Impact Analysis**

6.6.1 The impact analysis undertaken considers the aggregate impact of the JCS sites that are not under construction regardless of whether these have Planning Permission or not. This is because they have joint implications for future network performance.

**Flow Change Assessment**

6.6.2 Flow difference plots for the Central Severn Vale area of Gloucestershire have been presented for Scenario Q in comparison to the reference Baseline Scenario in Figure 5 and Figure 6.

6.6.3 Scenario Q contains the potentially dependent development and hence shows the impact of the JCS allocated and safeguarded sites. Figure 5 illustrates bandwidths that show the increase in flow, with their size being proportional to the increase. Note that bandwidths are only shown for changes of greater than 500 AADT. Figure 6 shows bands based on the percentage increase in flow from Baseline.

6.6.4 From the results shown in Figure 5 it can be seen that there are large increases in flow across the key primary and secondary route corridors that connect Cheltenham and Gloucester, e.g. A38, A4019, A40, B4634, A4013 and B4633. and to a lesser extent across the both the Cheltenham and Gloucester centres.

6.6.5 From Figure 6 it can be seen that worst affected roads in terms of percentage increase in flow (i.e. >20%) are mainly the A38, A4019, A40 and B4634.



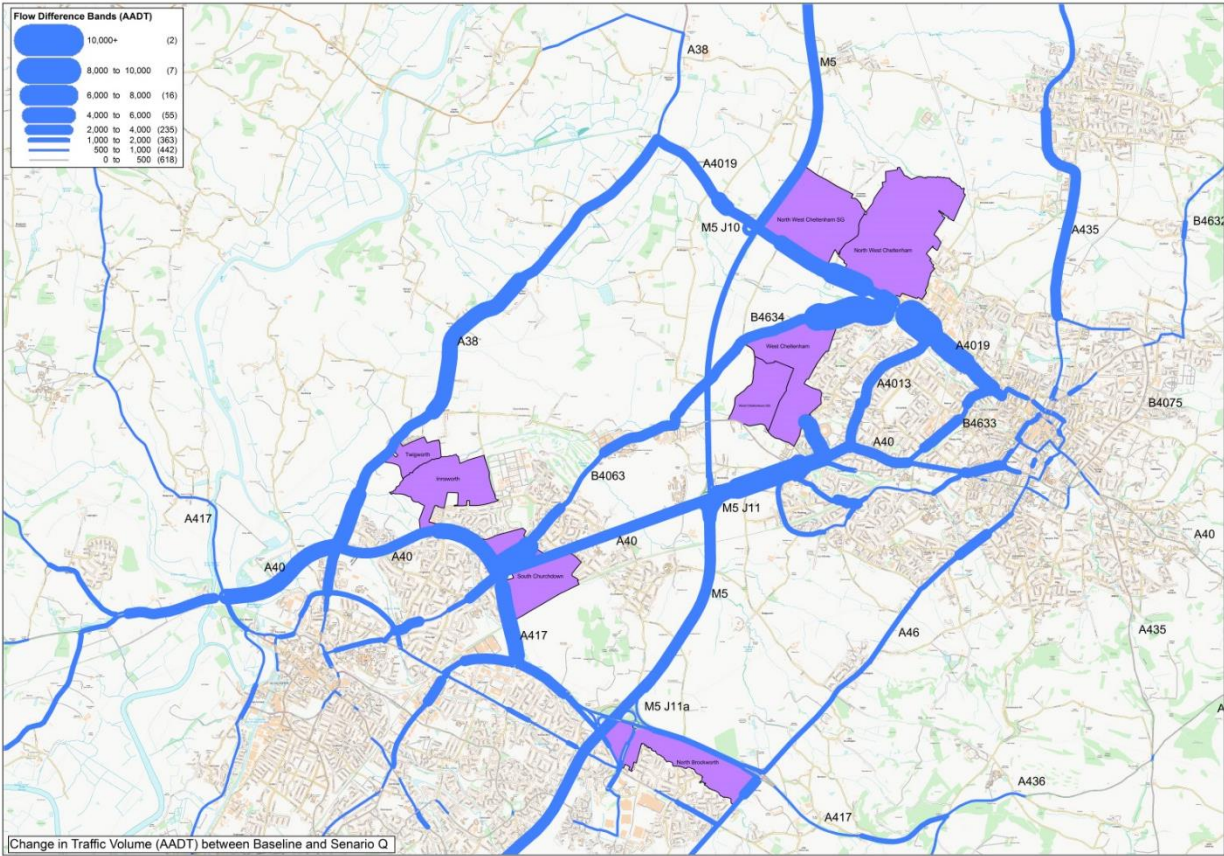


Figure 5: Flow Difference of Scenario Q Compared to Baseline at 2041

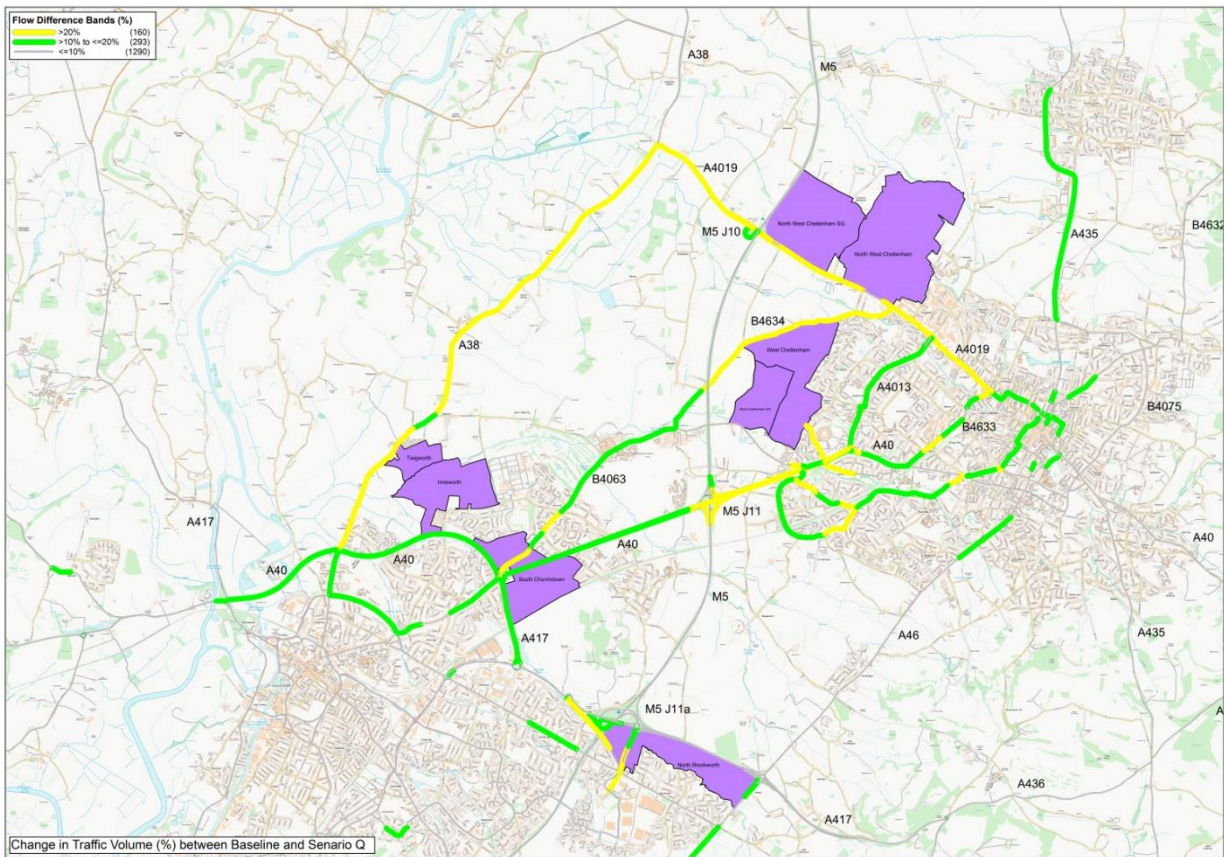


Figure 6: Percentage Flow Difference of Scenario Q Compared to Baseline at 2041

## Capacity Assessment

6.6.6 The following section discusses the capacity assessment results for Scenario Q at 2041. Figure 7 shows the network stress for both links and Junctions.

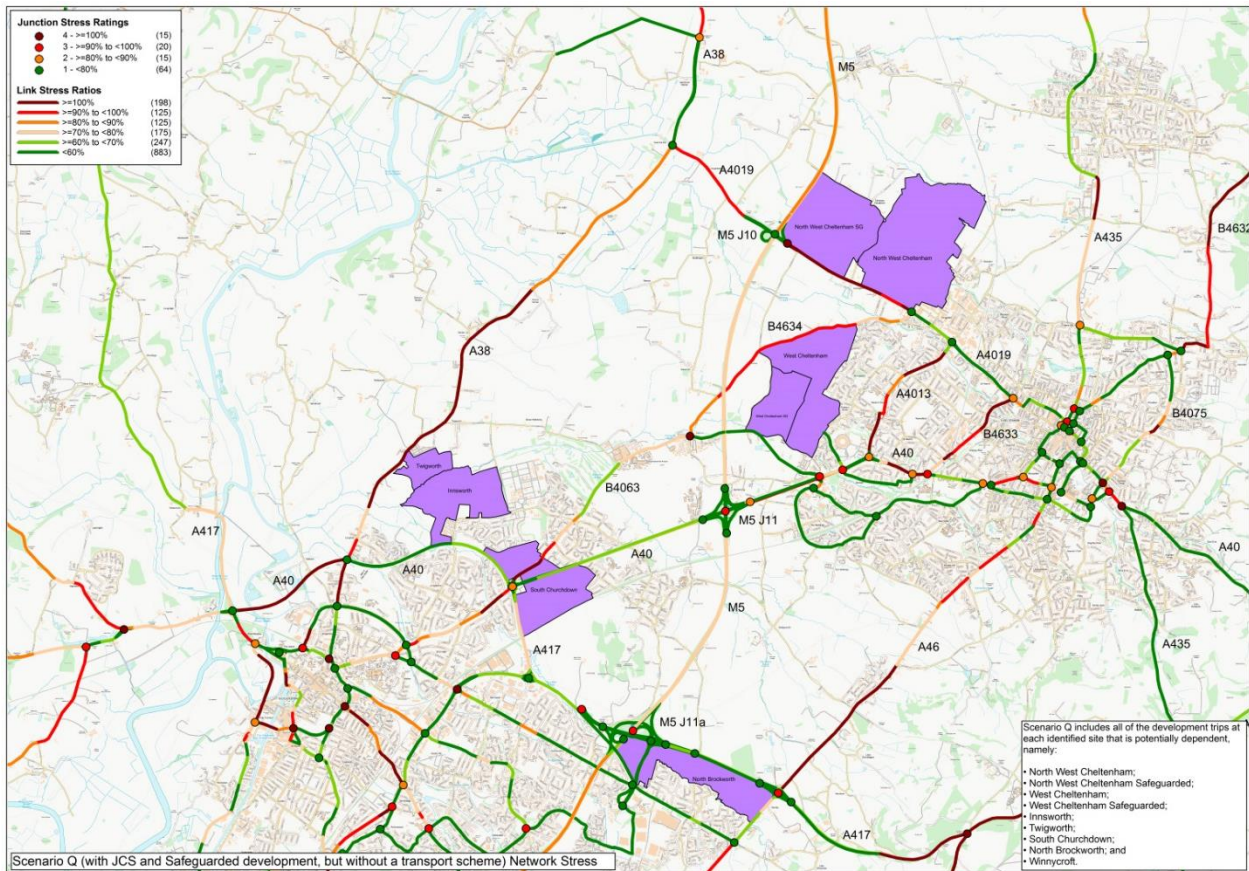


Figure 7: Scenario Q Capacity Assessment

6.6.7 In Scenario Q, network stress between 90% and 100% or  $>100\%$  can be found at the following locations:

### Link Stress $\geq 90\%$ to $< 100\%$

- A38 south of Longford and Deerhurst;
- A40 westbound between Arle Court and M5 Junction 11;
- A4013 at Hester's Way;
- A4015 at Montpellier and Tivoli;
- A4019 at Knightsbridge and Uckington;
- A417 at Pool Meadow;
- A4173 at Tuffley;
- A430 at Hempstead;
- A4301 at High Orchard;
- A438 at Newtown;
- A46 at Green Street, Warden Hill and The Park;

- A48 at Appithorne;
- Albion Street Cheltenham
- B4063 at Innsworth;
- B4072 at St Pauls
- B4073 at Saintbridge;
- B4215 at Highnam;
- B4632 at Southam;
- B4633 at Overton Park; and
- B4634 Old Gloucester Road.

**Link Stress >100%**

- A38, Priors Norton, Twigworth, Longford, and Winfield;
- A40 at St Mark's and Walham;
- A4013 at Arle and Hester's Way;
- A4015 at Montpellier;
- A4019 at Withybridge;
- A417 at Birdlip and Whitcombe;
- A4173 at Tuffley;
- A419 at Churchend;
- A430 at Castle Meads;
- A4301 Westgate Street;
- A435 at Bishops Cleeve;
- A436 at Ullenwood;
- A438 at Newtown;
- A46 at Shurdington and Little Shurdington;
- Albion Street, Cheltenham;
- B4008 at Quedgeley;
- B4063 North and South of Elmbridge Junction;
- B4073 at Barton;
- B4075 at Whaddon;
- B4632 at Southam; and
- B4633 at Alstone.

**Junction Stress  $\geq 90\%$  to  $< 100\%$** 

- A417/A430 traffic signals;
- Abbeymead Avenue/Lobleys Drive traffic signals;
- B4063 London Road/B4063 Cheltenham Road traffic signals;
- A40/B4633 traffic signals;
- A417/M5 Southbound Merge (M5 Junction 11a);
- M5/B4008 Northbound Merge (M5 Junction 12);
- A46 London Road/A40 Sandford Mill Road priority junction;
- B4073 Painswick Road/Heron Way traffic signals;
- A46/A435 traffic signals;
- A46 Fairview Road/Portland Street traffic signals;
- A40/Telstar Way traffic signals;
- A40/A48 roundabout;
- A417/Delta Way roundabout;
- M5/B4008 gyratory;
- M5/A419 gyratory;
- A417/A46 roundabout;
- M5/A40 roundabout;
- A38/Reservoir Road roundabout;
- A38/A4173 roundabout; and
- A40/B4063 roundabout.

**Junction Stress  $> 100\%$** 

- A430/B4072 traffic signals;
- A417/B4070 priority junction;
- A417/A436 roundabout;
- M5/A4019 Eastbound Merge (M5 Junction 10);
- A430/Gouda Way traffic signals;
- A430/B4073 traffic signals;
- A430/A4301 traffic signals;
- B4063/B4634 traffic signals;
- A46/B4070 traffic signals;
- A435 London Road/A40 Old Bath Road traffic signals;

- A40 London Road/A435 Cirencester Road traffic signals;
- A40/B4215 traffic signals;
- A38/A430/B4008 traffic signals;
- A38/Barnwood Road roundabout; and
- M5/A46/A438 roundabout.

### Cumulative Impacts Assessment

6.6.8 A cumulative impacts plot for the Central Severn Vale area of Gloucestershire has been presented for Scenario Q in comparison to the reference Baseline Scenario in Figure 8.

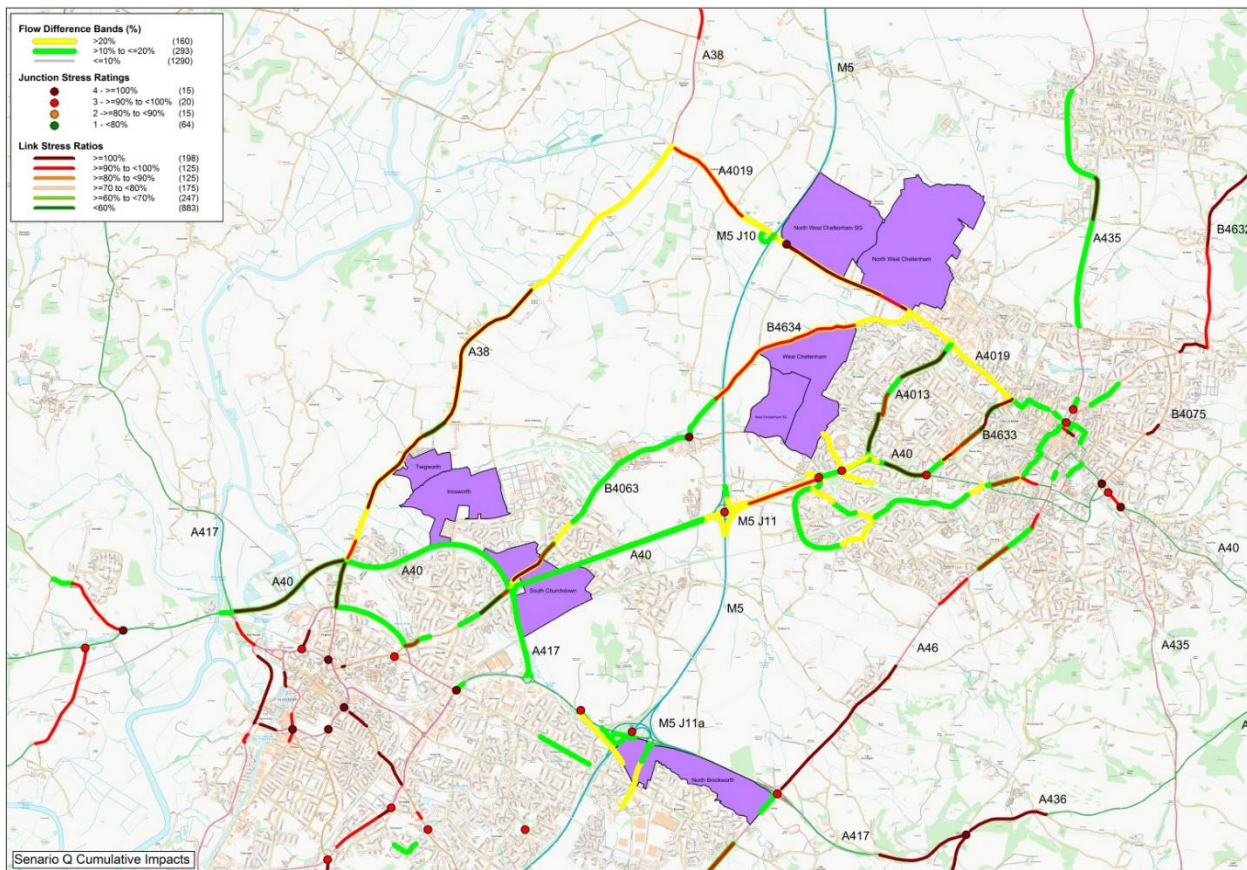


Figure 8: Scenario Q Cumulative Impacts Assessment

6.6.9 The cumulative impacts plot has been used to identify areas of the network that are likely to operate above the LoS threshold with the dependent development. As outlined in Section 6.3 these areas have been categorised by severity and are as follows (shown graphically in Figure 9 to Figure 11):

#### Level One: Link Stress between 90% and 100% with flow increase between 10% and 20%

- A4013 between Orchard Avenue and Marsland Road;
- B4633 between Malvern Road and Queen's Road;
- A40 between Landsdown Crescent and Landsdown Parade;
- A46 between Moarend Park Road and Woodlands Road;
- A46 between Cirencester Road and Green Street;

- B4063 south of Pirton Lane;
- B4063 south of Elmbridge;
- B4063 between Oxstalls Lane and Estcourt Road; and
- A46 between Green Street and Nuthill.

**Level One: Junction Stress between 90% and 100% with flow increase between 10% and 20%**

- A46/A435 traffic signals;
- A417/A46 roundabout;
- A46 Fairview Road/Portland Street traffic signals; and
- A40/B4633 traffic signals.

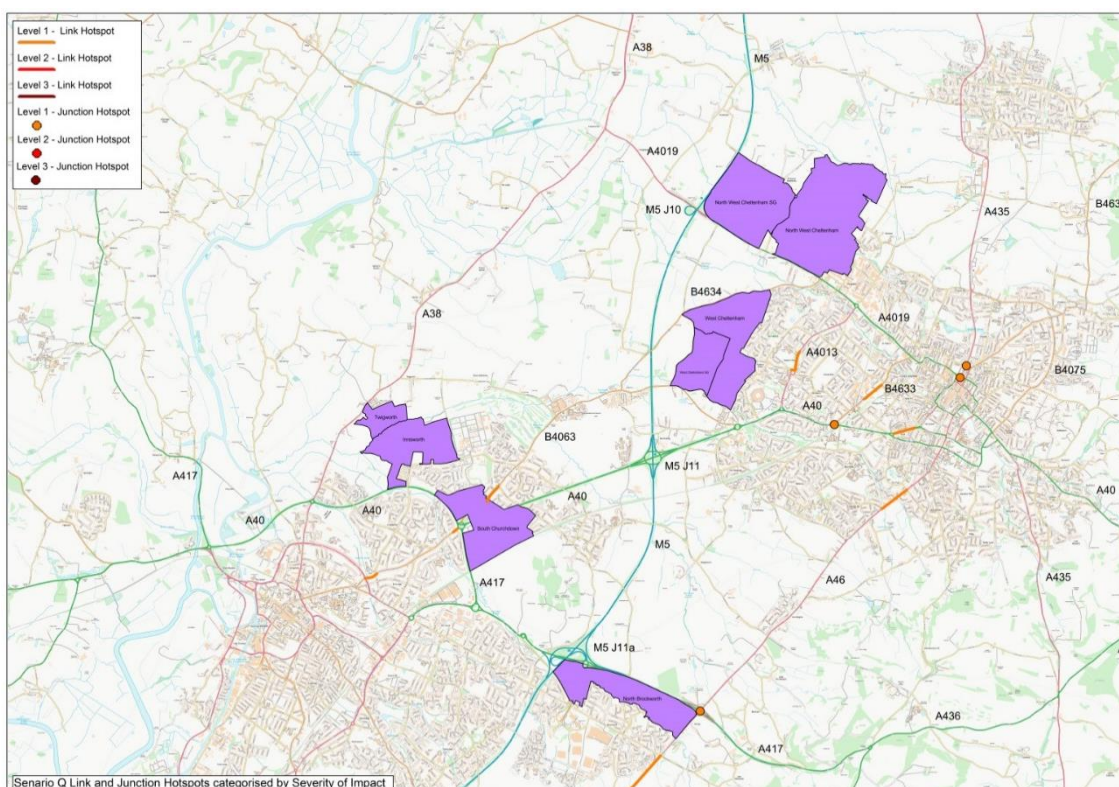


Figure 9: Level One Impact Areas

**Level Two: Link Stress between 90% and 100 with flow increase 20% or above, or flow increase between 10% and 20% with link stress 100% or above**

- A38 between Down Hatherley Land and Sandhurst Lane;
- A38 between Longford Roundabout and Estcourt Road;
- A38 Between Longford Lane and Longford Roundabout;
- A4019 between Coombe Hill and Piffs Elm;
- A435 between Cheltenham Road and Hyde Lane;
- B4634 between Pilgrove Way and Staverton;
- A4013 between Gerge Readings Way and Hester's Way Road;

- A4013 between Marsland Road and Hubble Road;
- B4633 between Honeybourne Way and Arle Road;
- B4633 between St Georges Road and Malvern Road;
- B4633 between Stow Court and Queens Road;
- A40 between Parabola Road and Landsdowne Crescent;
- A40 between Gloucester Road and Benhall Avenue;
- A40 between Arle Court and M5J11;
- B4063 between Elmbridge and Church Road; and
- A40 between Over Roundabout and Longford Roundabout.

**Level Two: Junction Stress between 90% and 100 with flow increase 20% or above, or flow increase between 10% and 20% with junction stress 100% or above**

- A38 Barnwood Road roundabout;
- B4063/B4634 traffic signals;
- A40/B4063 roundabout
- A40/Telstar Way traffic signals;
- A417/Delta Way roundabout; and
- M5/A40 roundabout

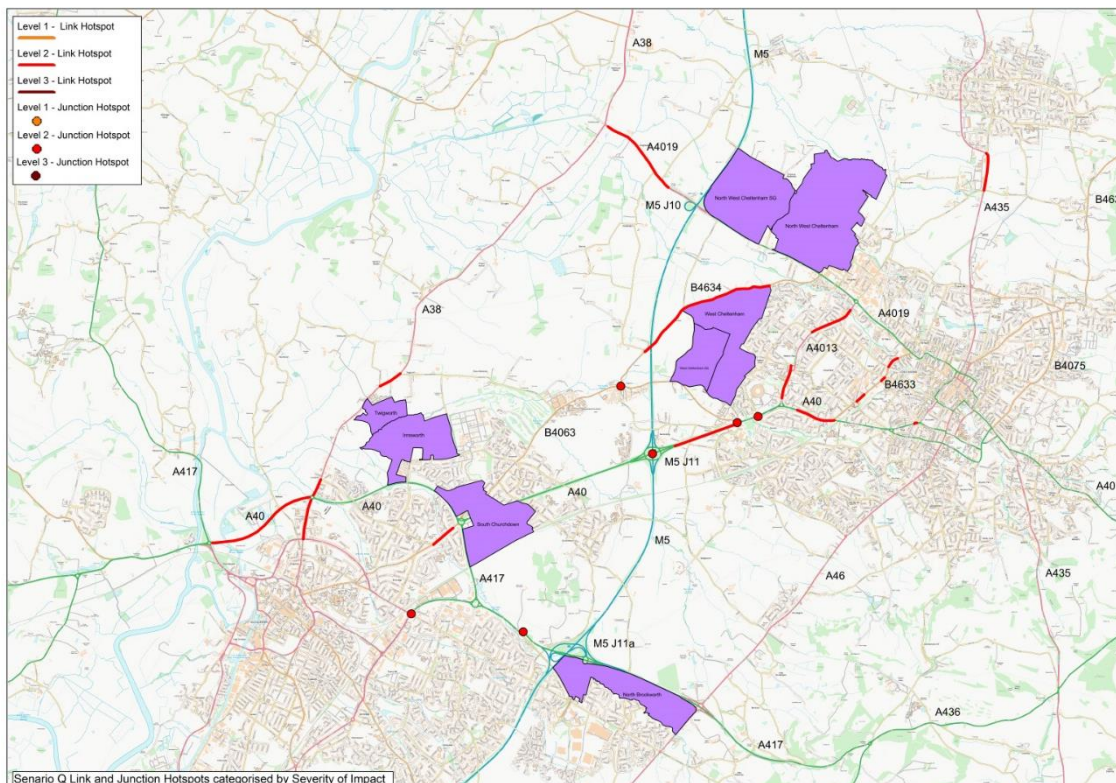


Figure 10: Level Two Impact Areas

### Level Three: Link Stress 100% or above with flow increase 20% or above

- A38 between Priors Norton and Longford;
- A4019 between Withy Bridge Old Gloucester Road;
- B4633 between Tewkesbury Road and Honeybourne Way;
- B4633 between Queens Road and Libertus Road; and
- B4063 between Innsworth and Elmbridge.

### Level Three: Junction Stress 100% or above with flow increase 20% or above

- M5/A4019 Eastbound Merge (M5 Junction 10).

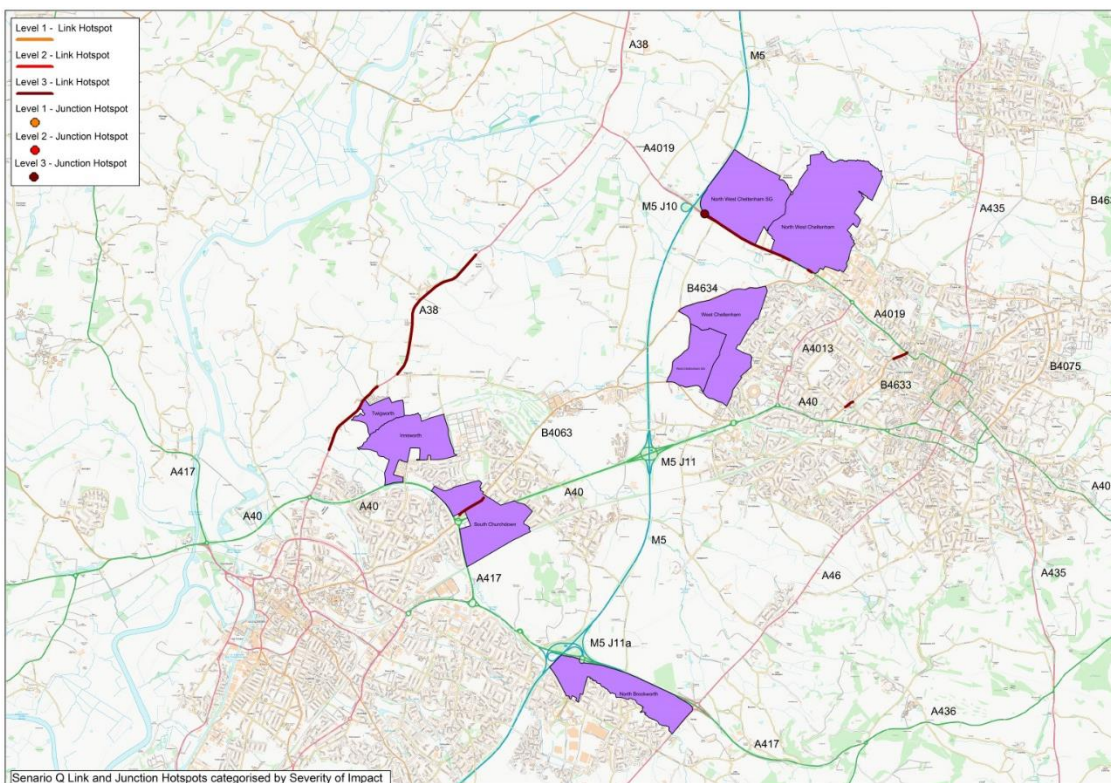


Figure 11: Level Three Impact Areas

6.6.10 The following quantification of 'scheme-dependent' development includes just the sites that cause 'Level Three' impacts (i.e. Stress 100% or above, with flow increase 20% or above), essentially where impacts are the most severe.

## 6.7. Dependent Development Quantification

6.7.1 As outlined in Section 6.1, the key steps in quantifying dependent development is as follows:

- Undertake select link analysis on each 'Level Three' impacted link from Scenario Q to identify which potentially dependent sites contribute to the impact;
- Apply a critical mass threshold to screen out sites that do not constitute a substantive impact; and
- Determine what level of flow would need to be removed before the impacted areas are likely to operate within their LoS threshold;



- Set the individual site required flow reduction against the total flow reduction to determine the proportion of development that is dependent and the proportion that could reasonably go ahead (i.e. the Deadweight).

**Select Link Analysis**

6.7.2 The Select Link Analysis function in CSVTSM has been used to analyse the spatial distribution of vehicles travelling on the selected link. The select link analysis was performed for the locations shown in Figure 11 and was performed using a multi-user class assignment, storing purpose-specific select link matrices, therefore containing all trips passing through each link.

6.7.3 A JCS 'critical mass' threshold of ≥10% flow contributed by an individual site is then applied, to:

- Retain only those JCS sites that make a substantive contribution to the total JCS traffic flow on 'critical' links; and
- Set aside those remaining JCS sites that do not constitute a substantive proportion of total JCS flow on 'critical' links.

6.7.4 Table 9 shows the select link analysis/critical mass outcome for each of the Level Three impacted links. The table shows the aggregate proportion of total traffic that is associated with key development sites, what proportion of the development traffic is associated with individual sites and which developments have an impact which is above the critical mass threshold.

Table 9: Select Link Analysis of Level Three Impacted Links

Link	North West Cheltenham (JCS)	West Cheltenham (JCS)	North West Cheltenham (Safeguarded)	West Cheltenham (Safeguarded)	Innsworth	Twigworth	South Churchdown	North Brockworth	Winnycroft	Proportion of Traffic Associated with Key Development Sites
A38 between Priors Norton and Longford	39%	0%	43%	0%	5%	7%	6%	0%	0%	22%
A4019 between Withy Bridge Old Gloucester Road	43%	2%	51%	0%	1%	1%	1%	0%	0%	41%
B4633 between Tewkesbury Road and Honeybourne Way	45%	2%	44%	1%	3%	1%	4%	0%	0%	8%
B4633 between Queens Road and Libertus Road	8%	50%	7%	22%	5%	2%	6%	0%	0%	11%
Critical Mass Threshold Trigger	✓	✓	✓	✓	x	x	x	x	x	-

6.7.5 It can be seen from Table 9 that the developments having a substantive impact on the most severely affected (i.e. Level Three) links are North West Cheltenham, West Cheltenham and the associated safeguarded sites.

**Flow Reduction Identification**

6.7.6 Following the identification of developments that have a substantive impact on the most severely affected (i.e. Level Three) links it is necessary to make a calculation of how much of each development should be removed, (as being 'scheme-dependent'). This is done by analysing just the 'worst-case' stress impact of that JCS (allocated and safeguarded) site, selected from its multiple impact locations across the network.

6.7.7 The assigned demand flow reduction from JCS sites needed for the 'worst case' road links is calculated as the minimum required to achieve either one of the conditions for a 'satisfactory' road link (i.e. acceptable

AADT/CRF ratio, or acceptable flow increase), but not both conditions. This is because, to achieve both criteria would be likely to require removal of all O-D movements at certain JCS sites, discrediting the co-ordinated plan.

- 6.7.8 Table 10 shows the flow reduction analysis outcome across each of the Level Three impacted links and their associated contributing developments. The table shows the level of flow that would need to be removed before the impacted areas are likely to operate within their LoS threshold. The individual site reductions are then calculated using re-apportioned contributions from Table 9 after allowing for the screening-out of any non-substantive sites.

Table 10: Flow Reduction Analysis for Level Three Impacted Links

Link	Baseline AADT	LoS Flow Threshold (AADT)	Scenario Q AADT	Flow Reduction Required to Meet Flow Threshold	Flow Reduction Required to Meet Capacity Threshold	Flow Reduction Required to Meet Either Threshold	North West Cheltenham (JCS)	West Cheltenham (JCS)	North West Cheltenham (Safeguarded)	West Cheltenham (Safeguarded)
A38 between Priors Norton and Longford	13,151	14,335	17,291	2,956	2,516	2,516	1,205	0	1,311	0
A4019 between Withy Bridge Old Gloucester Road	19,669	21,439	26,191	4,752	7,750	4,752	2,170	0	2,582	0
B4633 between Tewkesbury Road and Honeybourne Way	17,512	19,088	21,170	2,082	2,565	2,082	1,053	0	1,029	0
B4633 between Queens Road and Libertus Road	15,126	16,487	19,031	2,544	3,145	2,544	0	1,760	0	7,84
Maximum Flow Reduction Required							2,170	1,760	2,582	784
Total Development Traffic Using the Corresponding Link							2,807	1,940	3,341	864
Development Reduction Required to Meet Threshold							77%	91%	77%	91%

- 6.7.9 It can be seen from Table 10 that 77% of North West Cheltenham (allocated and safeguarded) And 91% of West Cheltenham (allocated and safeguarded) would need to be removed and therefore be dependent on a transport scheme that resolves the most severe, 'Level Three' impacts.

## 6.8. Dependent Development

- 6.8.1 After calculating the total proportion of each JCS (allocated and safeguarded) site that is 'scheme-dependent' it is possible to determine the reduction in trips required at each site to leave a 'deadweight'. The level of dependent and deadweight development is achieved by applying the appropriate proportionate reduction to the development quantum for that site. Table 11 shows the outcome of the Scenario Q dependency testing.

Table 11: Scenario Q Dependency Test Results

Land Use Category	North West Cheltenham (JCS)	West Cheltenham (JCS)	North West Cheltenham (Safeguarded)	West Cheltenham (Safeguarded)	Innsworth	Twigworth	South Churchdown	North Brockworth	WinneyCroft	All JCS Sites
Deadweight Dwellings	973	102	513	123	1473	822	1100	1500	620	7,226
Deadweight employment land (ha)	5.3	4.2	6.8	0.5	9.1	0	17.4	3.0	0	46.3
Dependent dwellings	3312	998	1745	1201	0	0	0	0	0	7,256
Dependent employment land (ha)	18.1	40.8	23.2	4.5	0	0	0	0	0	86.6
<b>Total Dwellings</b>	4,285	1,100	2,258	1,324	1,473	822	1,100	1,500	620	14,482
<b>Total Employment Land</b>	23.4	45.0	30.0	5.0	9.1	0	17.4	3.0	0	132.9

6.8.2 From the analysis, only 4 of the 9 identified JCS sites have a portion of development that is scheme-dependent. Across the 4 sites (2 locations) which have scheme-dependent homes, there is a planned target of 8,967 dwellings and some 103.4 hectares of employment, of which 7,256 dwellings and 86.6 hectares of employment, equivalent to around 80%, is dependent on a suitable transport scheme.

6.8.3 In respect of scheme-dependency, an 'additionality' parameter has been calculated to represent the combined dampening effect on JCS development of the following two items:

- A reduction for the proportion of JCS development that is non-scheme-dependent (i.e. deadweight), and which would proceed without the scheme; and
- A reduction for the proportion of development released by the scheme that is displaced from elsewhere and which would proceed in a different place without the scheme (i.e. not additional).

6.8.4 However, this 'additionality' parameter, which is estimated for the M5J10 scheme at 69% [80% scheme-dependency (after adjusting for 20% deadweight) x 85% additional value (after adjusting for 15% displacement)], is only derived by including in the calculation those JCS sites which are in some part dependent on the M5J10 scheme and excluding those sites that are wholly deadweight and not reliant on the scheme improvement.

6.8.5 In other words, 69% 'additionality' is calculated for North West and West Cheltenham as:

- Deadweight 19.1%;
- Displaced 15.0%;
- Scheme-Dependent 80.9%;
- Additional 85.0%;
- 'Additionality' (80.9% x 85.0%) 68.8%.

6.8.6 A much lower 'additionality' would result if wholly non-scheme-dependent JCS sites at Innsworth, North Brockhurst, South Churchdown, Twigworth and Winneycroft were also included:

- Deadweight 49.9%;
- Displaced 15.0%;
- Scheme-Dependent 50.1%;
- Additional 85.0%;
- 'Additionality' (50.1% x 85.0%) 42.6%.

## 7. Scenario P Forecast Demand and Scenario P/S/R Supply

### 7.1. Introduction

- 7.1.1 This section describes how the future year TAG Scenario P matrices and Scenario P, S and R networks have been developed.
- 7.1.2 Scenario P is a hypothetical growth scenario, which includes those parts of the dependent sites that can be accommodated before breaching an acceptable level of service on the transport network (i.e. deadweight). The scenario P transport network represents the 'without-scheme' or Do Minimum situation as described in Chapter 5.
- 7.1.3 Scenario R includes full growth, from scenario Q (described in Chapter 5), but includes the identified transport scheme.
- 7.1.4 Scenario S, which includes deadweight development trips only, from scenario P, but with the transport scheme from scenario R. This scenario S is used to compare with scenario P, to determine transport user welfare outcomes and VfM of the scheme investment, with deadweight development only. It is also used to compare with scenario R, to determine transport external costs associated with scheme-dependent development.
- 7.1.5 For each modelled future year (2021, 2026, 2031, 2036 and 2041), Scenario P matrices have been produced for the AM peak, Inter peak and PM peak. This has been achieved by applying a constant proportionate reduction to all the trip OD movements from or to the dependent sites (i.e. 77% from North West Cheltenham and 91% from West Cheltenham (allocated and safeguarded). As described in Chapter 4, a constant proportion is used, because it is impossible to isolate the relative impacts of individual OD trips on network stress and adjust these ODs accordingly.

### 7.2. Trip Matrix Modifications

The impact of applying the proportionate reduction in trip OD movements at the dependent sites can be assessed by comparing the Scenario Q and Scenario P matrices. The resulting trip demands in Scenario P are presented in Table 12 and for each forecast year, time period and purpose.

Table 12: Scenario P Trip Matrix Totals

Time Period	Vehicle Type/ Trip Purpose	2013	2021	2026	2031	2036	2041
AM	Car Work	6,125	6,719	6,921	7,007	7,071	7,256
	Car Commute	30,537	32,395	33,196	33,197	33,241	33,991
	Car Other	31,669	33,530	34,801	35,708	36,587	37,563
	LGV	4,763	5,432	5,586	5,808	6,103	6,473
	HGV	4,948	4,860	4,824	4,810	4,829	4,882
	Total	78,042	82,936	85,327	86,531	87,830	90,165
IP	Car Work	8,448	9,012	9,294	9,491	9,604	9,855
	Car Commute	9,524	9,885	10,199	10,387	10,483	10,708
	Car Other	42,906	44,978	47,143	48,975	50,633	51,999
	LGV	4,343	4,929	5,085	5,301	5,591	5,934
	HGV	3,663	3,593	3,563	3,548	3,559	3,600
	Total	68,885	72,398	75,284	77,702	79,870	82,095
PM	Car Work	6,021	6,435	6,620	6,750	6,820	7,001
	Car Commute	28,241	29,109	29,765	30,140	30,234	30,927
	Car Other	33,348	35,063	36,229	37,213	37,988	38,946
	LGV	4,430	5,053	5,218	5,444	5,745	6,095

Time Period	Vehicle Type/ Trip Purpose	2013	2021	2026	2031	2036	2041
	HGV	3,389	3,344	3,336	3,344	3,371	3,416
	Total	75,429	79,003	81,168	82,890	84,159	86,385

Table 13: Scenario P Trip Matrix Growth

Time Period	Vehicle Type/ Trip Purpose	2013-to-2021	2013-to-2026	2013-to-2031	2013-to-2036	2013-to-2041
AM	Car Work	10%	13%	14%	15%	18%
	Car Commute	6%	9%	9%	9%	11%
	Car Other	6%	10%	13%	16%	19%
	LGV	14%	17%	22%	28%	36%
	HGV	-2%	-3%	-3%	-2%	-1%
	Total	6%	9%	11%	13%	16%
IP	Car Work	7%	10%	12%	14%	17%
	Car Commute	4%	7%	9%	10%	12%
	Car Other	5%	10%	14%	18%	21%
	LGV	13%	17%	22%	29%	37%
	HGV	-2%	-3%	-3%	-3%	-2%
	Total	5%	9%	13%	16%	19%
PM	Car Work	7%	10%	12%	13%	16%
	Car Commute	3%	5%	7%	7%	10%
	Car Other	5%	9%	12%	14%	17%
	LGV	14%	18%	23%	30%	38%
	HGV	-1%	-2%	-1%	-1%	1%
	Total	5%	8%	10%	12%	15%

7.2.1 In Scenario P at 2041 there is forecast to be around 15% overall growth in the AM and PM peak hours and 19% during the inter-peak, over and above the 2013 base, if only the JCS development occurs that can be accommodated on the do-minimum transport network without adverse impact on performance. The corresponding level of growth in the Baseline, with no JCS development (shown in Table 6, section 5.8.4), is 10% in the AM and PM peaks and 16% in the Inter Peak. The level of growth in Scenario Q with full JCS development (shown in Table 5, Section 5.7) by 2041 is predicted to be around 23% in all peaks.

### 7.3. Scenario P Transport Supply

7.3.1 The Scenario P transport network is the same as that used for both Scenario Q and Baseline and represents the 'without-scheme' or Do Minimum situation. Details of the Do Minimum network are outlined in Section 5.9.

### 7.4. Scenario S and R Transport Supply

The transport network is the same for both Scenario S and Scenario R and represents the 'with-scheme' or Do Something situation. Details of Do Something network improvements have been established through the development of the Transport Strategy (DS7) for the adopted JCS. Elements of the Do Something network, which have been included are outlined below (shown graphically in Figure 12):

- M5 Junction 10 to be moved to the north of the current location and converted to all movements;
- Optimise signals and upgrade to A38 Coombe Hill junction;

- New Link Road – New 50mph Dual Carriageway, two lane link road from M5 Junction 10 to the W Cheltenham/ Cyber Park; and
- Upgrade to dual 2-lane, all purpose, carriageway standard of the A4019 to the East of the Link Road.

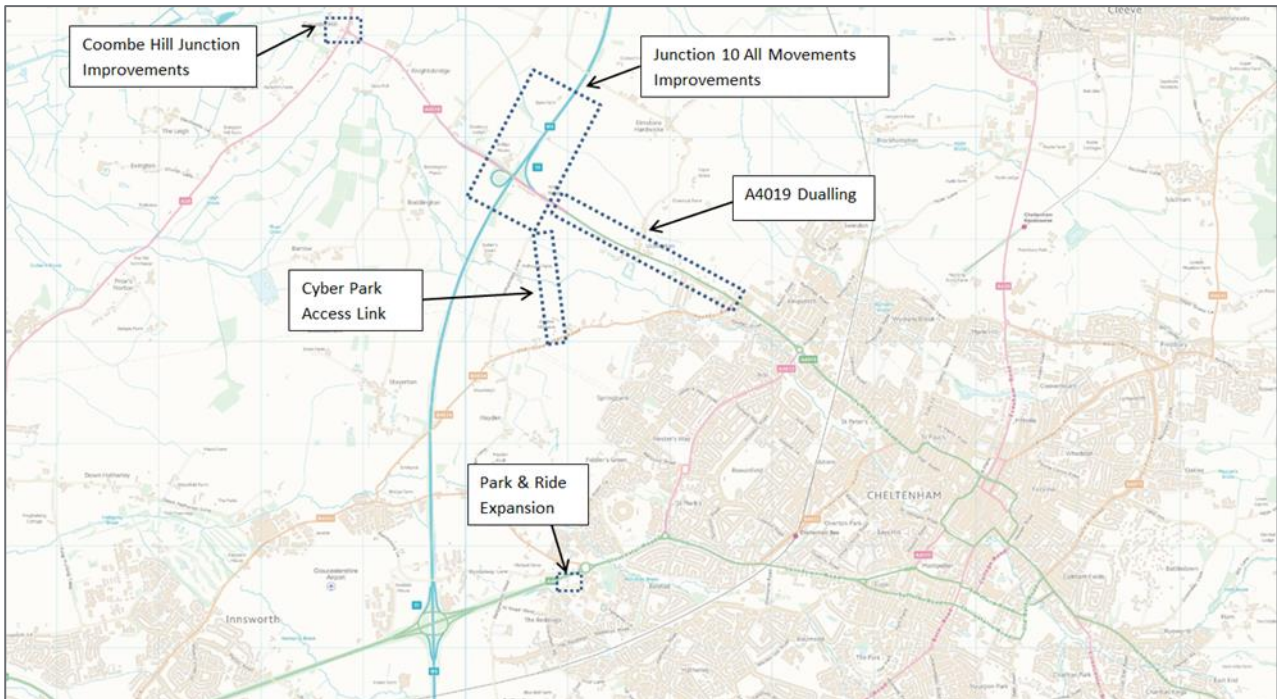


Figure 12: Do Something Scheme Elements

## 7.5. Highway Assignment

- 7.5.1 The assignment of the Scenario P and Scenario Q matrices onto the Scenario P Do Minimum and Scenario S and R Do Something model network is an iterative process, with each successive iteration converging upon the optimum equilibrium situation. The completed assignment is then based upon the final iteration. The better the convergence, the more stable the model, with less variation between successive iterations.
- 7.5.2 The summary convergence statistics for the assignment model presented in Appendix H. The assignment statistics for all the models meet the acceptability guidelines and so are considered to represent a good level of convergence.

## 8. Assignment Results for Scenario P, S and R

### 8.1. Introduction

8.1.1 Outputs from CSVTSM are used to support the economic appraisal of the scheme (Transport and Development). This section summarises the assignment results from the various forecast scenarios at horizon year 2041. The remaining forecast year results are not shown for the sake of brevity.

### 8.2. Scenario P vs Scenario S Flow Comparison

Figure 13 shows the change in AADT flows after introduction of the transport scheme, but with no dependent development at 2041. The changes in flow are shown as bandwidths, with their size being proportional to the increase. Green colours equate to reductions in flow, red colours indicate increases in flow. Flow differences less than 250 vehicles AADT are coloured grey.

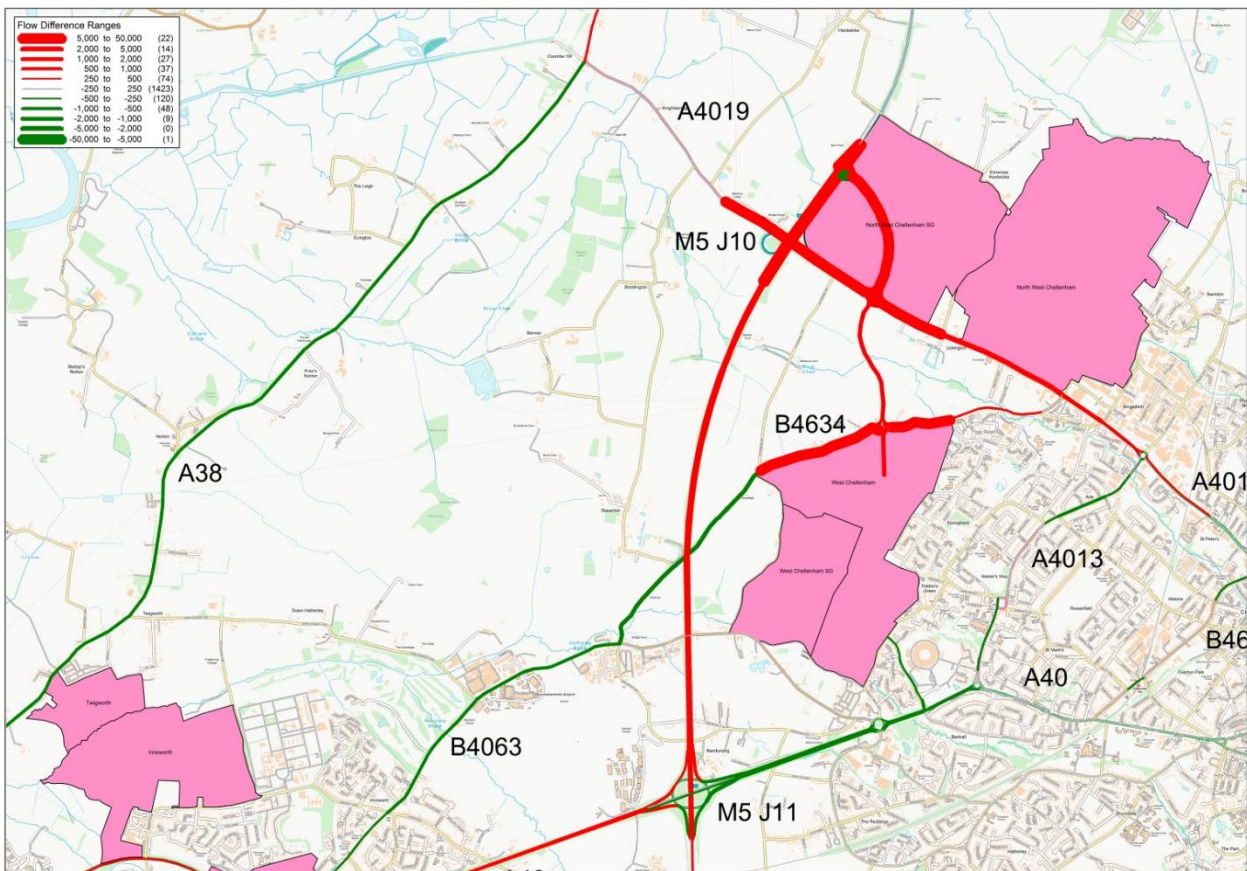


Figure 13: Scenario P vs Scenario S 2041 Flow Comparison

As would be expected, it can be seen that there are increases in flow on the M5, A4019 and A40 (west of M5 Junction 11) with corresponding reductions on the A38, B4063 and A40.

### 8.3. Scenario R vs Scenario S Flow Comparisons

8.3.1 Figure 14 shows the change in AADT flows between with-scheme Scenario R and Scenario S, after introduction of scheme-dependent JCS development. The essentially shows the distributional impact of the dependent development on the network at 2041. It can be seen that there are large increases in flows across key strategic and locally important road links, e.g. M5, A40, A38, A4019 and to a lesser extent across the urban areas of Cheltenham and Gloucester.



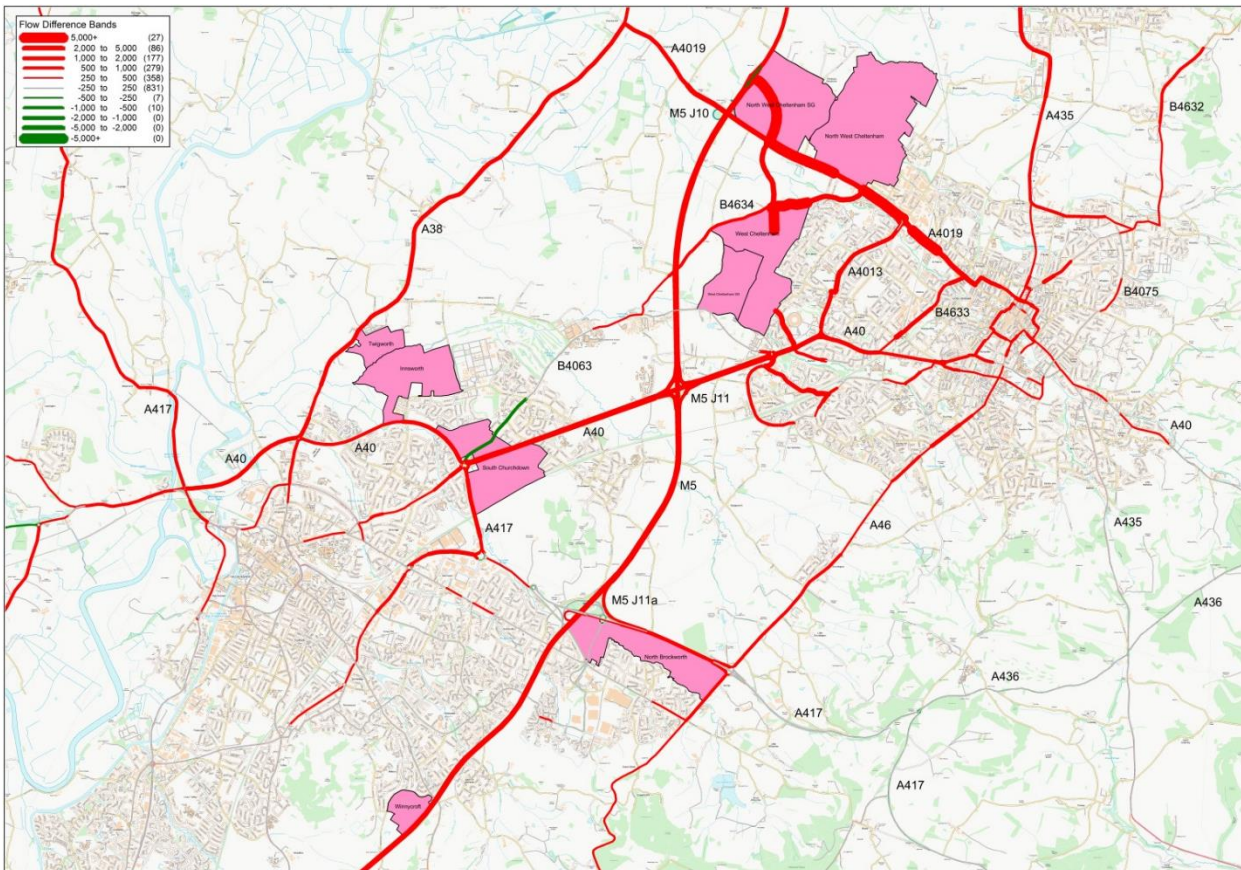


Figure 14: Scenario R vs Scenario S 2041 Flow Comparison

## 8.4. Capacity Assessment - Scenario P vs Scenario S and Scenario R

- 8.4.1 As mentioned in Section 6.5, the ratio of assigned AADT to road link Congestion Reference Flow (CRF) and to modelled junction capacity has been used as a measure of the performance of road links and junctions, this is the ratio of predicted traffic volumes on links and junction approach arms to the maximum realistic capacity, judged against an acceptable level of service. Stress values for Scenarios P, S and R, are illustrated on Figure 15, Figure 16 and Figure 17 respectively.
- 8.4.2 It can be seen from comparing Figure 15 with Figure 16 that in isolation, the transport scheme has negligible impact, but does remove congestion from the A4019 route towards Cheltenham. The scheme will provide overall a better performance and capacity than Do Minimum scenario. The scheme will also give rise to benefits associated with relieving some of the traffic from the A38.
- 8.4.3 Conversely, it can be seen from comparing Figure 15 with Figure 17 that the dependent development has a negligible, almost 'no worse off' impact on the transport network with the M5 Junction scheme in place. Thereby unlocking the strategic site allocations to the North West and West of Cheltenham and adjacent safeguarded land.

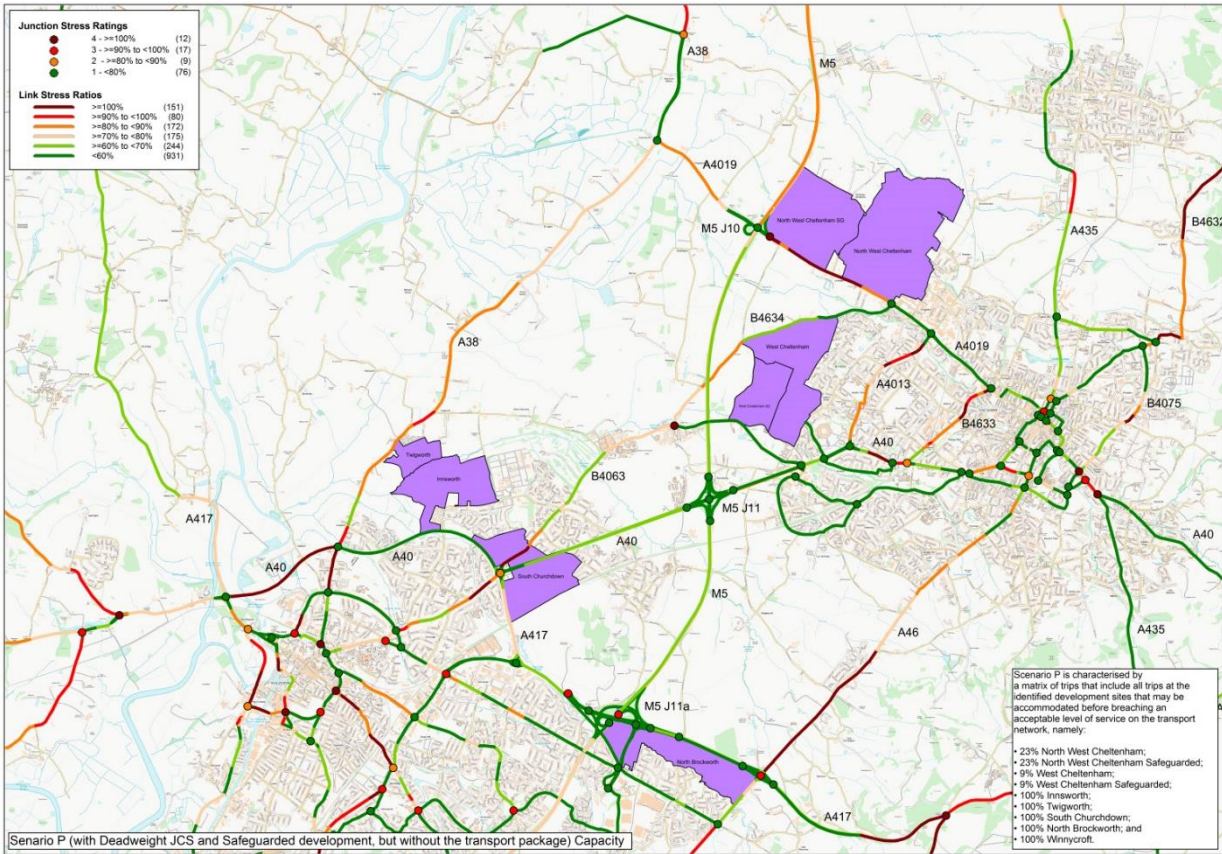


Figure 15: Scenario P 2041 Capacity Assessment

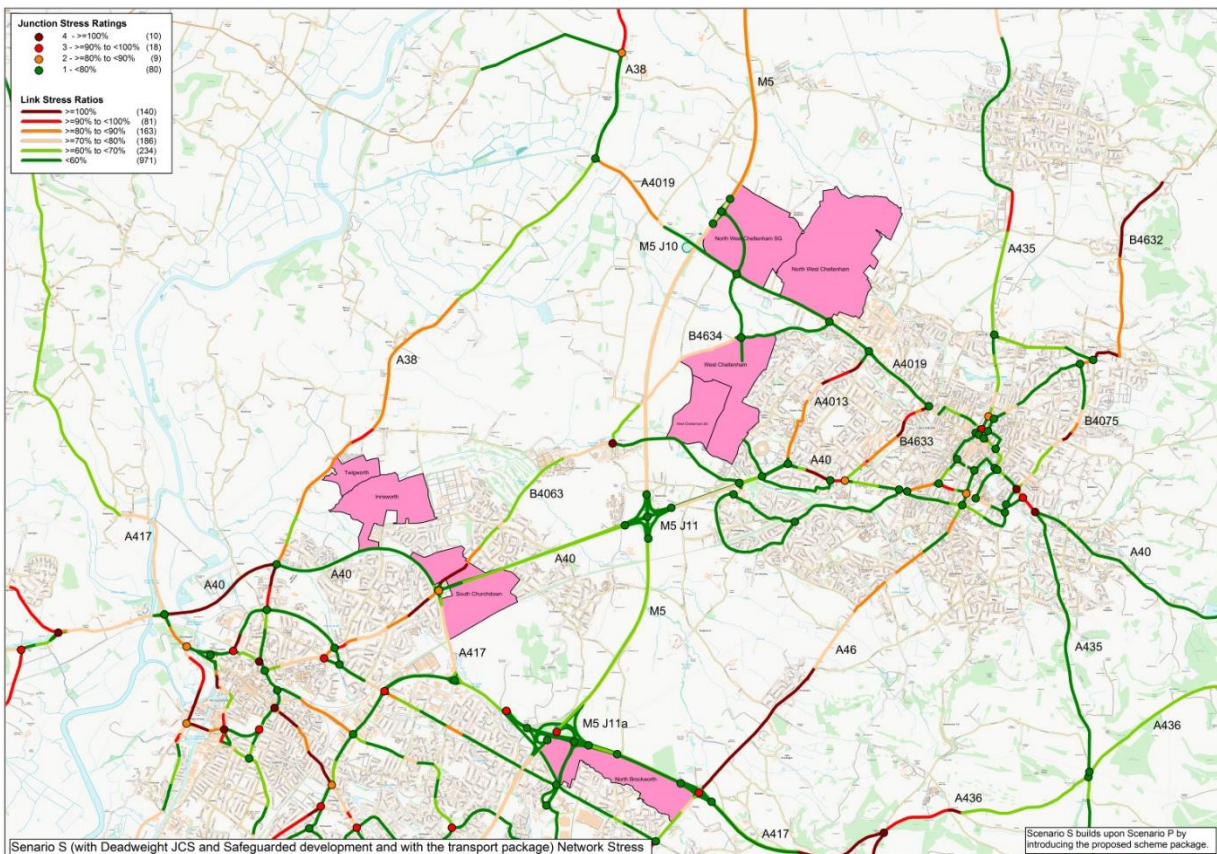


Figure 16: Scenario S 2041 Capacity Assessment

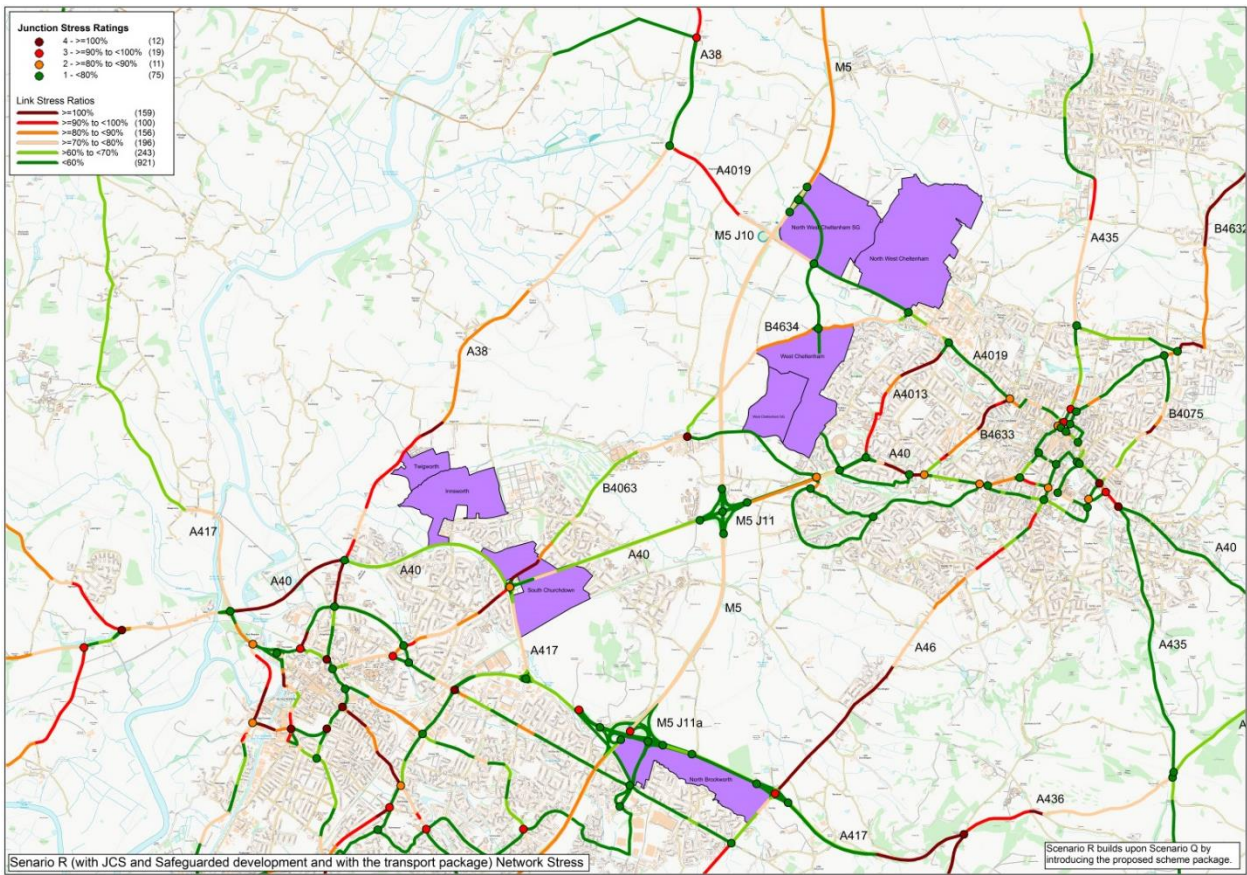


Figure 17: Scenario R 2041 Capacity Assessment

## 9. M5J10 Scheme Outcomes with Existing Users and with JCS Scheme-Dependent Development Traffic

### 9.1. Introduction

- 9.1.1 Taking the traffic model assignments from the various scenarios described in section 8, it is possible to assess the following key outcomes at forecast year 2041:
- How successfully the proposed M5J10 scheme performs in comparison with the existing no-scheme network for existing road users (scenario S compared with scenario P); and
  - How satisfactorily the M5J10 scheme handles the additional network travel demands associated with the segments of JCS development that are scheme-dependent (scenario R compared with scenario S).
- 9.1.2 Scenario comparisons are measured in terms of network flow differences and changes in network 'stress' (where 'stress' entails an excessive ratio of flow to capacity and unacceptable Level of Service). The comparisons indicate if the M5J10 scheme is a worthwhile and effective investment.
- 9.1.3 It is particularly important to understand the above outcomes in respect of the strategic road network (SRN), because the SRN is the main concern of Government stakeholders DfT and HE, who need to be assured of the operational fitness-for-purpose and economic efficiency of the M5J10 scheme, in order to support the HIF funding bid to MHCLG.
- 9.1.4 In the remainder of this section, there is an interpretation of the results from the respective model scenario comparisons and operational appraisal, as described above.

### 9.2. M5J10 Scheme Outcomes with Existing Users

- 9.2.1 The comparison of model scenario S and scenario P traffic flows, shown in Figure 13, without JCS development at North West and West Cheltenham in both scenarios, but respectively with and without the M5J10 scheme, shows that the scheme encourages an increased traffic flow on the M5 through Central Severn Vale and on the A4019E / M5 / A40W route between Cheltenham and Gloucester, thereby relieving the local routes on A4019W, A38S, A40E, B4634 and A4013.
- 9.2.2 A corresponding scenario S vs P comparison, in terms of network RFC and 'stress' can be made by analysing the differences between Figure 16 and Figure 15. This shows that the M5J10 scheme will relieve significant congestion for existing users on A4019E, between B4634 and M5 and some stress on B4634W and A38.
- 9.2.3 The network stress comparison between scenario S and scenario P also confirms that the M5J10 scheme will not cause any adverse impacts for existing users of the SRN, as there are no further instances of significant stress (RFC > 100%) in scenario S that not already present in scenario P.

### 9.3. M5J10 Scheme Outcomes with JCS Scheme-Dependent Development Traffic

- 9.3.1 If the model scenario R and scenario S traffic flows are compared, as shown in Figure 14, with the M5J10 included in both scenarios, but respectively with and without JCS scheme-dependent development at North West and West Cheltenham, it is evident that JCS encourages substantial traffic flow increases across the local and strategic road network, relative to the deadweight situation. However, the greatest flow increases are concentrated on the new scheme elements of the highway network, indicating that with the M5J10 interventions, traffic impacts from JCS are successfully mitigated on local roads least able to handle excess flows.
- 9.3.2 With both JCS development and the M5J10 scheme the largest traffic flow increases are on the M5S through Central Severn Vale, south of A4019 and on the A4019E / M5 / A40W route between Cheltenham and Gloucester, thereby somewhat mitigating impacts on the local routes on A4019W, A38S, A40E, B4634 and A4013.
- 9.3.3 A further scenario R vs S comparison, in terms of network RFC and 'stress' can be made by examining the differences between Figure 17 and Figure 16. This shows that, with M5J10 scheme in place, the addition of

scheme-dependent JCS-related trips will not cause any instances of significant stress that are not already present in scenario P on the existing network, without JCS and without the scheme.

- 9.3.4 The reason why some significant stress occurs in scenario P, which does not necessitate removal of more planned development traffic, is that the scheme-dependency / need-for-mitigation rationale requires there to be a condition of both excessive flow increase and excessive RFC, before a dependency situation can be established. In fact, these significant stress instances (RFC > 100%) in scenario P are not accompanied by excessive flow increase and so they do not represent a 'severe' impact of JCS or a need for transport intervention.

## 10. Summary and Conclusion

### 10.1. Summary

- 10.1.1 This report describes the work that has been undertaken to forecast future traffic demand, predict the operational impacts of JCS land-use development and assess the performance of a remedial transport improvements, to inform Gloucestershire County Council's M50 Junction 10 Forward Funding Housing Infrastructure Fund bid.
- 10.1.2 The traffic forecasts have taken account of the main growth effects for the study area. These include traffic growth associated with development proposals which have been combined with DfT background growth estimated using TEMPro and NTM forecasts for cars and goods vehicles respectively. Traffic forecasts were produced for 2021 through to 2041 at five yearly intervals for all relevant TAG Scenarios. These forecasts include the Core Growth Scenario.
- 10.1.3 Objective and robust techniques have been used to determine the forecast travel demand and network supply scenarios required to satisfy DfT and MoHCLG impact appraisal methods.
- 10.1.4 The M5 Junction 10 Transport Scheme will unlock the strategic site allocations to the North West and West of Cheltenham and adjacent safeguarded land.

### 10.2. Conclusion

- 10.2.1 Overall it is considered that the assumptions adopted for the traffic forecasts and scheme dependency, which are in accordance with the latest WebTAG Guidance, provide a robust assessment and give a reasonably accurate representation of conditions within the study area in the future year scenarios. The forecasts developed for the scheme will be used in the environmental and economic assessment of the scheme.

## Appendix A: Site-Specific Employment and Housing Sites

Development Information															Development Phasing Projections					Phased Household Projections						Phased Job Projections					
Plan/ Application Reference	Block/ Borough	zoning	zoning	Model Zone	Site	Location	Planning Status	Construction Status	Type	Description	Density/ Floor Area Ratio	% Complete by 2017	% Complete by 2021	% Complete by 2025	% Complete by 2030	% Complete by 2035	% Complete by 2040	2017	2021	2025	2030	2035	2040	2017	2021	2025	2030	2035	2040		
1501849M	Cheltenham	397295	22408	313	GOHQ Dairy - Private Road	Baltimore	Approved	Under Construction	Housing	C3	Apartments	311	48%	100%	100%	100%	100%	149	311	311	311	311	311	-	-	-	-	-	-		
1501949M	Cheltenham	394177	22179	341	Strawmill Farm	Frederick	Approved	Under Construction	Housing	C3	Apartments	300	47%	100%	100%	100%	100%	141	300	300	300	300	300	-	-	-	-	-	-	-	
1500849L	Cheltenham	391651	22183	254	Texas Park	St Peter	Approved	Under Construction	Housing	C3	Dwellings	107	24%	100%	100%	100%	100%	28	107	107	107	107	107	-	-	-	-	-	-	-	
1400849L	Towson	391676	21961	450	Land to West of Farm Lane Shuntington	Shuntington	Approved	Not Started	Housing	C3	Dwellings	137	0%	40%	100%	100%	100%	0	173	377	377	377	377	-	-	-	-	-	-	-	
1501429L	Cheltenham	391664	22179	328	North Pike Car Park and Purbeck Road	St Paul	Approved	Not Started	Housing	C3	Dwellings	145	0%	0%	100%	100%	100%	0	0	143	143	143	143	-	-	-	-	-	-	-	
1400900U / 74	Towson/Cheltenham	391277	22134	3013	North West Cheltenham (Site 1a)	-	IC5 Strategic Allocation - Awaiting Decision	Not Started	Housing	C3	Dwellings	4265	0%	3%	43%	90%	100%	0	115	1751	3875	4285	4285	-	-	-	-	-	-	-	
A7 Subquarter	Towson/Cheltenham	391123	221473	3023	West Cheltenham	-	IC5 Strategic Allocation - Application Imminent	Not Started	Housing	C3	Dwellings	1300	0%	7%	53%	90%	100%	0	77	583	965	1300	1300	-	-	-	-	-	-	-	
A8 Subquarter	Towson/Cheltenham	391634	22179	3031	North West Cheltenham	-	IC5 Subquarter Allocation	Not Started	Housing	C3	Dwellings	2218	0%	0%	0%	0%	89%	0	0	0	0	2000	2218	-	-	-	-	-	-	-	
A7 Subquarter	Towson/Cheltenham	390027	22166	3011	West Cheltenham	-	IC5 Subquarter Allocation	Not Started	Housing	C3	Dwellings	1228	0%	0%	0%	0%	17%	0	0	0	0	750	1228	-	-	-	-	-	-	-	
1500649M	Cheltenham	391875	22162	254	Spruce Lane Off St George Road	ST PETERS	Completed	Completed	Employment	B1	Retail Use	1833	100%	100%	100%	100%	100%	-	-	-	-	-	62	61	61	61	61	61	61		
1500649M	Cheltenham	391875	22162	254	Spruce Lane Off St George Road	ST PETERS	Completed	Completed	Employment	C2	Residential Institution	1008	100%	100%	100%	100%	100%	-	-	-	-	-	84	84	84	84	84	84			
1500949L	Cheltenham	391125	22161	269	Park Office - Hawthery Lane	BENALL AND THE RIDINGS	Approved	Completed	Employment	B1	Retail Use	2239	100%	100%	100%	100%	100%	-	-	-	-	-	72	72	72	72	72	72	72		
1501349L	Cheltenham	391596	22163	314	Land Adj To Dursley Primary School West Drive	PITVELE	Approved	Completed	Employment	C2	Residential Institution	1822	100%	100%	100%	100%	100%	-	-	-	-	-	12	12	12	12	12	12			
1501429L	Cheltenham	391593	22168	170	Spruce Lane Off Rutledge Road	WINDON VILLAGE	Approved	Completed	Employment	B8	Storage or Distribution	1760	100%	100%	100%	100%	100%	-	-	-	-	-	48	48	48	48	48	48			
1500450U	Cheltenham	394815	22124	356	C-Ormsay Terrace - Riggs Street	COLLAGE	Approved	Completed	Employment	B1	Retail Use	725	100%	100%	100%	100%	100%	-	-	-	-	-	23	23	23	23	23	23			
1500450U	Cheltenham	394815	22124	356	C-Ormsay Terrace - Riggs Street	COLLAGE	Approved	Completed	Employment	B1	Average School	725	100%	100%	100%	100%	100%	-	-	-	-	-	12	12	12	12	12	12			
1501329L	Cheltenham	391872	22187	262	Cheltenham Lodge - Colgate Malthouse Road	Landown	Approved	Completed	Employment	D2	Assembly and Leisure	1788	100%	100%	100%	100%	100%	-	-	-	-	-	36	36	36	36	36	36			
1501920U	Cheltenham	394176	22167	284	129 - 131 Promenade	Landown	Approved	Completed	Employment	A1	Restaurants/Cafes	206	100%	100%	100%	100%	100%	-	-	-	-	-	11	11	11	11	11	11			
1501820U	Cheltenham	394576	22162	284	129 - 131 Promenade	Landown	Approved	Completed	Employment	C2	Hotel/Average Hotel	826	100%	100%	100%	100%	100%	-	-	-	-	-	23	23	23	23	23	23			
1400849U	Cheltenham	394812	22161	317	West Heath and Fitness - Unit 1 - St George Place Car Park - St George Place	Landown	Approved	Completed	Employment	B8	Storage or Distribution	1275	100%	100%	100%	100%	100%	-	-	-	-	-	16	16	16	16	16	16			
1401820U	Cheltenham	394815	22179	318	Unit 3 - The Brewery - Hewatville Street	St Paul	Approved	Completed	Employment	A1	Restaurants/Cafes	1280	100%	100%	100%	100%	100%	-	-	-	-	-	55	55	55	55	55	55			
1401820U	Cheltenham	394815	22179	318	Unit 2 - The Brewery - Hewatville Street	St Paul	Approved	Completed	Employment	A1	Public House/Wine Bar	630	100%	100%	100%	100%	100%	-	-	-	-	-	27	27	27	27	27	27			
1401820U	Cheltenham	394815	22179	318	Unit 1 - The Brewery - Hewatville Street	St Paul	Approved	Completed	Employment	D2	Assembly and Leisure	1964	100%	100%	100%	100%	100%	-	-	-	-	-	19	19	19	19	19	19			
1401849L	Cheltenham	394815	22179	318	Fitness First - Unit 16 - The Brewery	St Paul	Approved	Completed	Employment	A1	Shop	613	100%	100%	100%	100%	100%	-	-	-	-	-	28	28	28	28	28	28			
1401849L	Cheltenham	394815	22179	318	Fitness First - Unit 16 - The Brewery	St Paul	Approved	Completed	Employment	A1	Restaurants/Cafes	613	100%	100%	100%	100%	100%	-	-	-	-	-	26	26	26	26	26	26			
1401849L	Cheltenham	394815	22179	318	Fitness First - Unit 16 - The Brewery	St Paul	Approved	Completed	Employment	D2	Assembly and Leisure	613	100%	100%	100%	100%	100%	-	-	-	-	-	6	6	6	6	6	6			
1401849U	Cheltenham	394816	21982	350	The Barbican - London Road - GS12 OUT	CHARLTON KING	Approved	Completed	Employment	B2	General Industry	1294	100%	100%	100%	100%	100%	-	-	-	-	-	27	27	27	27	27	27			
1700138L	Cheltenham	394848	22121	318	The Brewery Quarter - High Street (Block B - Units C - D - E)	ST PAULS	Approved	Completed	Employment	A1	Shop	1442	100%	100%	100%	100%	100%	-	-	-	-	-	291	291	291	291	291	291			
1700138L	Cheltenham	394848	22121	318	The Brewery Quarter - High Street (Block B - Units C - D - E)	ST PAULS	Approved	Completed	Employment	A1	Restaurants/Cafes	383	100%	100%	100%	100%	100%	-	-	-	-	-	16	16	16	16	16	16			
1700138L	Cheltenham	394848	22121	318	The Brewery Quarter - High Street (Block B - Units C - D - E)	ST PAULS	Approved	Completed	Employment	B1	Retail Use	1065	100%	100%	100%	100%	100%	-	-	-	-	-	17	17	17	17	17	17			
1700138L	Cheltenham	394848	22121	318	The Brewery Quarter - High Street (Block B - Units C - D - E)	ST PAULS	Approved	Completed	Employment	D2	Average School	1065	100%	100%	100%	100%	100%	-	-	-	-	-	32	32	32	32	32	32			
1700138L	Cheltenham	394848	22121	318	The Brewery Quarter - High Street (Block B - Units C - D - E)	ST PAULS	Approved	Completed	Employment	D2	Assembly and Leisure	1065	100%	100%	100%	100%	100%	-	-	-	-	-	10	10	10	10	10	10			
1700073U	Cheltenham	394938	22169	292	The Barbican - Montpellier Walk	LANDOWN	Approved	Completed	Employment	A1	Restaurants/Cafes	1053	100%	100%	100%	100%	100%	-	-	-	-	-	45	45	45	45	45	45			
1501797U	Cheltenham	391793	22129	366	Land to the North of Middle Road	HILVERSWAY	Approved	Completed	Employment	B1	Retail Use	650	100%	100%	100%	100%	100%	-	-	-	-	-	143	143	143	143	143	143			
1500849L	Cheltenham	391113	22138	278	100 High Street	ALL SAINTS	Approved	Under Construction	Employment	A1	Shop	460	0%	100%	100%	100%	100%	-	-	-	-	-	0	20	20	20	20	20			
1500432L	Cheltenham	391113	22138	278	100 High Street	ALL SAINTS	Approved	Under Construction	Employment	A2	Finance & Professional Services	622	0%	100%	100%	100%	100%	-	-	-	-	-	0	32	32	32	32	32			
1401849U	Cheltenham	394846	21982	350	Centwood Building Offices - The Barbican - London Road	CHARLTON KING	Approved	Under Construction	Employment	B2	General Industry	1515	0%	100%	100%	100%	100%	-	-	-	-	-	0	32	32	32	32	32			
1401849U	Cheltenham	394846	21982	350	Centwood Building Offices - The Barbican - London Road	CHARLTON KING	Approved	Under Construction	Employment	B8	Storage or Distribution	1515	0%	100%	100%	100%	100%	-	-	-	-	-	0	20	20	20	20	20			
1401849U	Cheltenham	394818	22181	292	Land on South Side of Amberg Avenue	LANDOWN	Approved	Under Construction	Employment	A2	Finance & Professional Services	2923	0%	100%	100%	100%	100%	-	-	-	-	-	0	156	156	156	156	156			
1401849U	Cheltenham	394818	22181	292	Land on South Side of Amberg Avenue	LANDOWN	Approved	Under Construction	Employment	B1	Retail Use	2924	0%	100%	100%	100%	100%	-	-	-	-	-	0	93	93	93	93	93			
1401849U	Cheltenham	394815	22173	318	Unit C - The Brewery - Hewatville Street	ST PAULS	Approved	Under Construction	Employment	A1	Shop	512	0%	100%	100%	100%	100%	-	-	-	-	-	0	23	23	23	23	23			
1401849U	Cheltenham	394815	22173	318	Unit C - The Brewery - Hewatville Street	ST PAULS	Approved	Under Construction	Employment	D2	Average School	512	0%	100%	100%	100%	100%	-	-	-	-	-	0	8	8	8	8	8			
1700049L	Cheltenham	393884	22114	368	Centwood BMW - Towson Road	WINDON VILLAGE	Approved	Under Construction	Employment	A1	Shop	2948	0%	100%	100%	100%	100%	-	-	-	-	-	0	124	124	124	124	124			
1700049L	Cheltenham	393884	22114	368	Centwood BMW - Towson Road	WINDON VILLAGE	Approved	Under Construction	Employment	A1	Restaurants/Cafes	1117	0%	100%	100%	100%	100%	-	-	-	-	-	0	5	5	5	5	5			
1701849L	Cheltenham	391655	22179	275	Gloucester Cheltenham Campus - Princess Elizabeth Way	HILVERSWAY	Approved	Under Construction	Employment	B1	Retail Use	1007	0%	100%	100%	100%	100%	-	-	-	-	-	0	32	32	32	32	32			
1501484L	Cheltenham	391255	22143	269	Former Woodward International - Hawthery Lane	BENALL AND THE RIDINGS	Approved	Not Started	Employment	B1	Retail Use	1384	0%	0%	100%	100%	100%	-	-	-	-	-	0	107	107	107	107	107			
1501484L	Cheltenham	391666	2																												



Development Information														Development Planning Provisions					Planned Household Provisions						Planned Job Provisions				
Policy/ Application Reference	Status/ Borough	Existing	Netting	Model Zone	Site	Location	Planning Status	Construction Status	Type	Description	Density/ Floorarea Dept information	% Complete By 2017	% Complete By 2021	% Complete By 2024	% Complete By 2026	% Complete By 2041	2017	2021	2024	2026	2041	2047	2051	2054	2061	2064			
140014/OUT	Gloucester	384802	214047	151	Kingway - Framework 4 Area 6B3	Quedgey Fieldcourt	Approved	Not Started	Housing	C3	Dwellings	130	80%	100%	100%	100%	100%	111	130	130	130	130	130	-	-	-	-		
140015/OUT	Gloucester	382363	214148	189	Land south of George Road	Tuffley	Approved	Not Started	Housing	C3	Dwellings	200	0%	70%	100%	100%	100%	100%	0	175	250	250	250	250	-	-	-	-	
140016/OUT	Gloucester	382422	217865	750	Land At Bakers Quay (Methley Wharf And Millrace) Located By Scouring Drive (Methley Wharf & Millrace)	Walding	Approved	Not Started	Housing	C3	Dwellings	340	0%	51%	100%	100%	100%	100%	0	175	340	340	340	340	-	-	-	-	
140017/OUT	Gloucester	384753	214235	165	Abbasvie, off Myers Lane	Strickings	Waiting decision	Not Started	Housing	C3	Dwellings	200	0%	30%	100%	100%	100%	100%	0	75	250	250	250	250	-	-	-	-	
150074/OUT / A1	Testborough/Gloucester	381561	221482	6011	Innosouth - JC3 Allocation Site	-	JC3 Strategic Allocation - Approved	Not Started	Housing	C3	Dwellings	1475	0%	10%	75%	100%	100%	100%	0	142	1069	1475	1475	1475	-	-	-	-	
150119/OUT / A1b	Testborough/Gloucester	384867	221064	4031	Tudgorth - JC3 Allocation Site	-	JC3 Strategic Allocation - Approved	Not Started	Housing	C3	Dwellings	822	0%	13%	75%	100%	100%	100%	0	103	533	822	822	822	-	-	-	-	
A2	Testborough/Gloucester	384859	220527	4031	South Churchdown - JC3 Allocation Site	-	JC3 Strategic Allocation	Not Started	Housing	C3	Dwellings	1100	0%	14%	75%	100%	100%	100%	0	127	800	1100	1100	1100	-	-	-	-	
150126/OUT / A1	Testborough/Gloucester	384859	217840	4031	North Brockworth - JC3 Allocation Site	-	JC3 Strategic Allocation - Approved	Not Started	Housing	C3	Dwellings	1000	0%	21%	75%	100%	100%	100%	0	175	1141	1000	1000	1000	-	-	-	-	
140144/OUT / A6	Gloucester	384221	214689	4051	Winyworth - JC3 Allocation Site	-	JC3 Strategic Allocation - Approved	Not Started	Housing	C3	Dwellings	1000	0%	40%	85%	100%	100%	100%	0	149	140	651	420	420	-	-	-	-	
140147/OUT / A6	Gloucester	384221	214689	4051	Winyworth - JC3 Allocation Site	-	JC3 Strategic Allocation - Awaiting Decision	Not Started	Housing	C3	Dwellings	200	0%	40%	85%	100%	100%	100%	0	81	142	200	200	200	-	-	-	-	
150084/OUT	Gloucester	384500	212000	152	Falcon point - Workwards	-	Approved	Not started	Employment	B2	General Industry	6488	0%	100%	100%	100%	100%	100%	-	-	-	-	-	-	-	-	-	-	
150144/OUT	Gloucester	382422	217865	750	Bakers Quay	-	Approved	Under construction	Employment	A3	Restaurants/Cafe	5731	30%	100%	100%	100%	100%	100%	-	-	-	-	-	74	246	246	246	246	
150144/OUT	Gloucester	382422	217865	750	Bakers Quay	-	Approved	Under construction	Employment	A3	Hotel (Average stars)	3758	30%	100%	100%	100%	100%	100%	-	-	-	-	-	10	105	105	105	105	
140018/OUT	Gloucester	382913	218370	117	21 - 25 & 27 - 28 Commercial Road	-	Approved	Not started	Employment	A3	Restaurants/Cafe	5244	0%	100%	100%	100%	100%	100%	-	-	-	-	-	-	0	69	69	69	
140000/OUT	Gloucester	382929	217967	732	Paul Centre	-	Approved	Under construction	Employment	A1	Shop	9518	50%	100%	100%	100%	100%	100%	-	-	-	-	-	214	428	428	428		
140000/OUT	Gloucester	382929	217967	732	Paul Centre	-	Approved	Under construction	Employment	A1	Shop	110	0%	100%	100%	100%	100%	100%	-	-	-	-	-	-	0	5	5		
150013/INM	Gloucester	384402	214047	151	East of A38 and Back Lane	-	Approved	Not started	Employment	B1	Mixed Use	1430	0%	100%	100%	100%	100%	100%	-	-	-	-	-	-	0	109	109		
150013/INM	Gloucester	384402	214047	151	East of A38 and Back Lane	-	Approved	Not started	Employment	B2	Storage or Distribution	1430	0%	100%	100%	100%	100%	100%	-	-	-	-	-	-	-	0	44		
140018/OUT	Gloucester	384864	218062	165	Holway (single storey)	-	Approved	Under construction	Employment	B1/B2/B8	Mixed B Classes	4672	20%	100%	100%	100%	100%	100%	-	-	-	-	-	-	12	115			
140018/OUT	Gloucester	384860	218047	4032	Land at Barnwood Old Road	-	Approved	Not started	Employment	B2	Office	5279	0%	100%	100%	100%	100%	100%	-	-	-	-	-	-	0	360			
140100/OUT	Gloucester	384460	218047	4032	adjacent to Walk Factory	-	Not started	Employment	B2	General Industry	20558	0%	100%	100%	100%	100%	100%	-	-	-	-	-	-	-	0	434			
140018/OUT	Gloucester	384460	218047	4032	adjacent to Walk Factory	-	Not started	Employment	B2	General Industry	20558	0%	100%	100%	100%	100%	100%	-	-	-	-	-	-	-	0	434			
140009/OUT	Gloucester	383896	219226	205	St Albans Road	-	Approved	Not started	Employment	B1/B8	Mixed B Classes	2354	0%	100%	100%	100%	100%	100%	-	-	-	-	-	-	0	60			
140012/OUT	Gloucester	384612	220540	210	Mission School, Longford	-	Approved	Not started	Employment	D1	Average School	1430	0%	100%	100%	100%	100%	100%	-	-	-	-	-	-	0	23			
150119/OUT	Gloucester	384643	219347	140	University of Gloucestershire, Details Lane	-	Approved	Under construction	Employment	C3	Residential Institution	14200	0%	100%	100%	100%	100%	100%	-	-	-	-	-	-	0	108			
150119/OUT	Gloucester	384643	219347	140	University of Gloucestershire, Details Lane	-	Approved	Under construction	Employment	D2	Assembly and Leisure	3570	0%	100%	100%	100%	100%	100%	-	-	-	-	-	-	0	34			
140144/OUT	Gloucester	384202	215082	143	Land at Olympia Park, Ovingdean	-	Approved	Completed	Employment	A1/A5	Mixed Town Centre Uses	1021	100%	100%	100%	100%	100%	100%	-	-	-	-	-	-	46				
140144/OUT	Gloucester	384271	218177	146	Imperial Gate Business Park Building B & C	-	Approved	Completed	Employment	B1a	Office	4039	100%	100%	100%	100%	100%	100%	-	-	-	-	-	-	254				
150013/OUT	Gloucester	384583	215551	135	Ryknock House, Lower Tuffley Lane	-	Approved	Completed	Employment	B1a	Office	1174	100%	100%	100%	100%	100%	100%	-	-	-	-	-	-	74				
150013/OUT	Gloucester	384583	215551	135	Ryknock House, Lower Tuffley Lane	-	Approved	Completed	Employment	B1a	Office	1174	100%	100%	100%	100%	100%	100%	-	-	-	-	-	-	74				
150013/OUT	Gloucester	384583	215551	135	Ryknock House, Lower Tuffley Lane	-	Approved	Completed	Employment	B1a	Office	1174	100%	100%	100%	100%	100%	100%	-	-	-	-	-	-	74				
140018/OUT	Gloucester	384836	217784	152	Land to East of Stephenson Drive, Ovingdean	-	Approved	Completed	Employment	B	Mixed B Classes	1762	100%	100%	100%	100%	100%	100%	-	-	-	-	-	-	43				
140018/OUT	Gloucester	384836	217784	152	Land to East of Stephenson Drive, Ovingdean	-	Approved	Completed	Employment	B	Mixed B Classes	1762	100%	100%	100%	100%	100%	100%	-	-	-	-	-	-	43				
140018/OUT	Gloucester	384836	217784	152	Land to East of Stephenson Drive, Ovingdean	-	Approved	Completed	Employment	B	Mixed B Classes	1762	100%	100%	100%	100%	100%	100%	-	-	-	-	-	-	43				
140009/OUT	Gloucester	383896	219226	205	Gilman Street off Oslands Road	-	Approved	Completed	Employment	A1	Shop	1020	100%	100%	100%	100%	100%	100%	-	-	-	-	-	-	46				
140009/OUT	Gloucester	383896	219226	205	Gilman Street off Oslands Road	-	Approved	Completed	Employment	A1/B8	Mixed B Classes	2354	100%	100%	100%	100%	100%	100%	-	-	-	-	-	-	46				
A2	Testborough/Gloucester	384617	219860	4032	South Churchdown - JC3 Allocation Site - Employment 17 A/b	-	JC3 Strategic Allocation	Not Started	Employment	B1	Mixed Use	23200	0%	10%	60%	100%	100%	100%	-	-	-	-	-	-	-	0			
A2	Testborough/Gloucester	384617	219860	4032	South Churchdown - JC3 Allocation Site - Employment 17 A/b	-	JC3 Strategic Allocation	Not Started	Employment	B2	General Industry	13000	0%	15%	60%	100%	100%	100%	-	-	-	-	-	-	-	0			
A2	Testborough/Gloucester	384617	219860	4032	South Churchdown - JC3 Allocation Site - Employment 17 A/b	-	JC3 Strategic Allocation	Not Started	Employment	B8	Storage or Distribution	17800	0%	15%	60%	100%	100%	100%	-	-	-	-	-	-	-	0			
150074/OUT / A1	Testborough/Gloucester	381561	221482	6011	Innosouth - JC3 Allocation Site - Employment Zone, 9 & 1a	-	JC3 Strategic Allocation - Approved	Not Started	Employment	B1	Mixed Use	15184	0%	25%	65%	100%	100%	100%	-	-	-	-	-	-	-	0			
150074/OUT / A1	Testborough/Gloucester	381561	221482	6011	Innosouth - JC3 Allocation Site - Employment Zone, 9 & 1a	-	JC3 Strategic Allocation - Approved	Not Started	Employment	B8	Storage or Distribution	3036	0%	25%	65%	100%	100%	100%	-	-	-	-	-	-	-	0			
150126/OUT / A1	Testborough/Gloucester	384899	217511	6942	North Brockworth - JC3 Allocation Site - Employment Zone, 10/b	-	JC3 Strategic Allocation - Approved	Not Started	Employment	B1/B8	Mixed B Classes	22000	0%	15%	60%	100%	100%	100%	-	-	-	-	-	-	-	0			
150009/INM	Testborough	384894	215062	444	Land to the rear of Ivica	Brookworth	Approved	Completed	Housing	C3	Dwellings	109	100%	100%	100%	100%	100%	100%	109	109	109	109	109	109	-	-	-	-	
150043/INM	Testborough	384822	215063	485	Coopers Edge - Phase 2 & 3	Huckleton	Approved	Completed	Housing	C3	Dwellings	122	100%	100%	100%	100%	100%	100%	122	122	122	122	122	122	-	-	-	-	
150043/INM	Testborough	384822	220770	485	Land off Longford	Longford	Approved	Completed	Housing	C3	Dwellings	291	100%	100%	100%	100%	100%	100%	291	291	291	291	291	291	-	-	-	-	
150043/INM	Testborough	384816	220068	483	Horsdown Mews Phase 1	Longford	Approved	Completed	Housing	C3	Dwellings	106	100%	100%	100%	100%	100%	100%	106	106	106	106	106	106	-	-	-	-	
150126/INM	Testborough	384855	215657	485	Coopers Edge - Phase 2A, 2Aa, 2Aa, 2Aa, 22A, 22A, 22B	Brookworth	Approved	Under Construction	Housing	C3	Dwellings	214	30%	100%	100%	100%	100%	100%	75	214	214	214	214	214	-	-	-	-	
150022/INM	Testborough	384759	214650	485	Coopers Edge Land Parvula 1 & 2 Brookworth Airfield Brookworth Gloucestershire GL2 0 2P	Huckleton	Approved	Under Construction	Housing	C3	Dwellings	110	40%	100%	100%	100%	100%	100%	40	111	111	111	111	111	-	-	-	-	
150043/OUT	Testborough	384654	220228	430	Horsdown Mews Phase 2	Longford	Approved	Under Construction	Housing	C																			

## Appendix B: Development Trip Rates

Land Use				Trip Rate Unit		Trip Rates (pcus)					
						AM Peak (0800-0900)					
						Car		LGV		HGV	
						O	D	O	D	O	D
A1Shops	A1	Shops	per sqm	0.018831	0.023750	0.001000	0.001260	0.000320	0.000380		
A1/A3Mixed Town Centre Uses	A1/A3	Mixed Town Centre Uses	per sqm	0.018831	0.023750	0.001000	0.001260	0.000320	0.000380		
A1/A3/B1Mixed Town Centre Uses	A1/A3/B1	Mixed Town Centre Uses	per sqm	0.001060	0.014870	0.000440	0.000450	0.000080	0.000080		
A1/B1aMixed Town Centre Uses	A1/B1a	Mixed Town Centre Uses	per sqm	0.001060	0.014870	0.000440	0.000450	0.000080	0.000080		
A1-A5Mixed Town Centre Uses	A1-A5	Mixed Town Centre Uses	per sqm	0.018831	0.023750	0.001000	0.001260	0.000320	0.000380		
A2Finance & Professional Services	A2	Finance & Professional Services	per sqm	0.001060	0.014870	0.000440	0.000450	0.000080	0.000080		
A3Restaurants/Cafés	A3	Restaurants/Cafés	per sqm	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000		
A4Public House/Wine Bar	A4	Public House/Wine Bar	per sqm	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000		
BMixed B Classes	B	Mixed B Classes	per sqm	0.000700	0.007830	0.000260	0.000400	0.000040	0.000060		
B1Mixed Use	B1	Mixed Use	per sqm	0.001060	0.014870	0.000440	0.000450	0.000080	0.000080		
B1/B2/B8Mixed B Classes	B1/B2/B8	Mixed B Classes	per sqm	0.000700	0.007830	0.000260	0.000400	0.000040	0.000060		
B1/B8Mixed B Classes	B1/B8	Mixed B Classes	per sqm	0.000700	0.007830	0.000260	0.000400	0.000040	0.000060		
B1aOffice	B1a	Office	per sqm	0.001060	0.014870	0.000440	0.000450	0.000080	0.000080		
B1a/B1bMixed B Classes	B1a/B1b	Mixed B Classes	per sqm	0.000700	0.007830	0.000260	0.000400	0.000040	0.000060		
B1a/B1cMixed B Classes	B1a/B1c	Mixed B Classes	per sqm	0.001060	0.014870	0.000440	0.000450	0.000080	0.000080		
B1bR&D	B1b	R&D	per sqm	0.000700	0.007830	0.000260	0.000400	0.000040	0.000060		
B1cLight Industry	B1c	Light Industry	per sqm	0.000340	0.003054	0.000020	0.000136	0.000260	0.000400		
B1c/B2/B8Mixed B Classes	B1c/B2/B8	Mixed B Classes	per sqm	0.000310	0.001280	0.000990	0.000950	0.000360	0.000320		
B2General Industry	B2	General Industry	per sqm	0.000310	0.001280	0.000990	0.000950	0.000360	0.000320		
B2/B8Mixed B Classes	B2/B8	Mixed B Classes	per sqm	0.000310	0.001280	0.000990	0.000950	0.000360	0.000320		
B8Storage or Distribution	B8	Storage or Distribution	per sqm	0.000258	0.000826	0.000102	0.000214	0.000560	0.000600		
C1Hotel (Average stars)	C1	Hotel (Average stars)	per sqm	0.003666	0.002397	0.000414	0.000273	0.000120	0.000120		
C2Residential Institution	C2	Residential Institution	per sqm	0.000088	0.000196	0.000008	0.000004	0.000016	0.000016		
C3Dwellings	C3	Dwellings	per dwelling	0.263000	0.086000	0.023000	0.020000	0.004000	0.004000		
C3Apartments	C3	Apartments	per dwelling	0.137000	0.035000	0.007000	0.007000	0.002000	0.004000		
D1Average School	D1	Average School	per sqm	0.031260	0.040070	0.000590	0.000660	0.000040	0.000040		
D2Assembly and Leisure	D2	Assembly and Leisure	per sqm	0.004360	0.004922	0.000140	0.000158	0.000340	0.000400		

Land Use				Trip Rates (pcus)					
				Inter Peak (Avg Hr 1000-1600)					
				Car		LGV		HGV	
				O	D	O	D	O	D
A1Shops	A1	Shops	per sqm	0.039297	0.039852	0.002076	0.002105	0.000300	0.000280
A1/A3Mixed Town Centre Uses	A1/A3	Mixed Town Centre Uses	per sqm	0.039297	0.039852	0.002076	0.002105	0.000300	0.000280
A1/A3/B1Mixed Town Centre Uses	A1/A3/B1	Mixed Town Centre Uses	per sqm	0.003630	0.002850	0.000340	0.000340	0.000040	0.000040
A1/B1aMixed Town Centre Uses	A1/B1a	Mixed Town Centre Uses	per sqm	0.003630	0.002850	0.000340	0.000340	0.000040	0.000040
A1-A5Mixed Town Centre Uses	A1-A5	Mixed Town Centre Uses	per sqm	0.039297	0.039852	0.002076	0.002105	0.000300	0.000280
A2Finance & Professional Services	A2	Finance & Professional Services	per sqm	0.003630	0.002850	0.000340	0.000340	0.000040	0.000040
A3Restaurants/Cafés	A3	Restaurants/Cafés	per sqm	0.008940	0.011050	0.001240	0.001300	0.000220	0.000220
A4Public House/Wine Bar	A4	Public House/Wine Bar	per sqm	0.010508	0.012364	0.000609	0.000784	0.000500	0.000500
BMixed B Classes	B	Mixed B Classes	per sqm	0.001010	0.000870	0.000290	0.000290	0.000060	0.000060
B1Mixed Use	B1	Mixed Use	per sqm	0.003630	0.002850	0.000340	0.000340	0.000040	0.000040
B1/B2/B8Mixed B Classes	B1/B2/B8	Mixed B Classes	per sqm	0.001010	0.000870	0.000290	0.000290	0.000060	0.000060
B1/B8Mixed B Classes	B1/B8	Mixed B Classes	per sqm	0.001010	0.000870	0.000290	0.000290	0.000060	0.000060
B1aOffice	B1a	Office	per sqm	0.003630	0.002850	0.000340	0.000340	0.000040	0.000040
B1a/B1bMixed B Classes	B1a/B1b	Mixed B Classes	per sqm	0.001010	0.000870	0.000290	0.000290	0.000060	0.000060
B1a/B1cMixed B Classes	B1a/B1c	Mixed B Classes	per sqm	0.003630	0.002850	0.000340	0.000340	0.000040	0.000040
B1bR&D	B1b	R&D	per sqm	0.001010	0.000870	0.000290	0.000290	0.000060	0.000060
B1cLight Industry	B1c	Light Industry	per sqm	0.000918	0.000733	0.000045	0.000039	0.000320	0.000380
B1c/B2/B8Mixed B Classes	B1c/B2/B8	Mixed B Classes	per sqm	0.000860	0.000740	0.000800	0.000820	0.000340	0.000360
B2General Industry	B2	General Industry	per sqm	0.000860	0.000740	0.000800	0.000820	0.000340	0.000360
B2/B8Mixed B Classes	B2/B8	Mixed B Classes	per sqm	0.000860	0.000740	0.000800	0.000820	0.000340	0.000360
B8Storage or Distribution	B8	Storage or Distribution	per sqm	0.000387	0.000310	0.000128	0.000121	0.000560	0.000660
C1Hotel (Average stars)	C1	Hotel (Average stars)	per sqm	0.002085	0.001798	0.000238	0.000205	0.000120	0.000100
C2Residential Institution	C2	Residential Institution	per sqm	0.000200	0.000176	0.000028	0.000028	0.000004	0.000004
C3Dwellings	C3	Dwellings	per dwelling	0.104000	0.109000	0.022000	0.020000	0.004000	0.004000
C3Apartments	C3	Apartments	per dwelling	0.051000	0.053000	0.011000	0.011000	0.002000	0.002000
D1Average School	D1	Average School	per sqm	0.006950	0.006230	0.000345	0.000360	0.000100	0.000100
D2Assembly and Leisure	D2	Assembly and Leisure	per sqm	0.010045	0.011382	0.000320	0.000361	0.000600	0.000580

Land Use			Trip Rate Unit	Trip Rates (pcus)					
				PM Peak (1700-1800)					
				Car		LGV		HGV	
				O	D	O	D	O	D
A1Shops	A1	Shops	per sqm	0.045405	0.043535	0.002395	0.002296	0.000200	0.000160
A1/A3Mixed Town Centre Uses	A1/A3	Mixed Town Centre Uses	per sqm	0.045405	0.043535	0.002395	0.002296	0.000200	0.000160
A1/A3/B1Mixed Town Centre Uses	A1/A3/B1	Mixed Town Centre Uses	per sqm	0.012770	0.001180	0.000210	0.000190	0.000000	0.000000
A1/B1aMixed Town Centre Uses	A1/B1a	Mixed Town Centre Uses	per sqm	0.012770	0.001180	0.000210	0.000190	0.000000	0.000000
A1-A5Mixed Town Centre Uses	A1-A5	Mixed Town Centre Uses	per sqm	0.045405	0.043535	0.002395	0.002296	0.000200	0.000160
A2Finance & Professional Services	A2	Finance & Professional Services	per sqm	0.012770	0.001180	0.000210	0.000190	0.000000	0.000000
A3Restaurants/Cafés	A3	Restaurants/Cafés	per sqm	0.004190	0.011380	0.000400	0.001000	0.000000	0.000000
A4Public House/Wine Bar	A4	Public House/Wine Bar	per sqm	0.015470	0.027601	0.001160	0.000459	0.000000	0.000000
BMixed B Classes	B	Mixed B Classes	per sqm	0.005870	0.000450	0.000160	0.000080	0.000040	0.000020
B1Mixed Use	B1	Mixed Use	per sqm	0.012770	0.001180	0.000210	0.000190	0.000000	0.000000
B1/B2/B8Mixed B Classes	B1/B2/B8	Mixed B Classes	per sqm	0.005870	0.000450	0.000160	0.000080	0.000040	0.000020
B1/B8Mixed B Classes	B1/B8	Mixed B Classes	per sqm	0.005870	0.000450	0.000160	0.000080	0.000040	0.000020
B1aOffice	B1a	Office	per sqm	0.012770	0.001180	0.000210	0.000190	0.000000	0.000000
B1a/B1bMixed B Classes	B1a/B1b	Mixed B Classes	per sqm	0.005870	0.000450	0.000160	0.000080	0.000040	0.000020
B1a/B1cMixed B Classes	B1a/B1c	Mixed B Classes	per sqm	0.012770	0.001180	0.000210	0.000190	0.000000	0.000000
B1bR&D	B1b	R&D	per sqm	0.005870	0.000450	0.000160	0.000080	0.000040	0.000020
B1cLight Industry	B1c	Light Industry	per sqm	0.002754	0.000556	0.000116	0.000024	0.000040	0.000060
B1c/B2/B8Mixed B Classes	B1c/B2/B8	Mixed B Classes	per sqm	0.001120	0.000260	0.000510	0.000270	0.000180	0.000120
B2General Industry	B2	General Industry	per sqm	0.001120	0.000260	0.000510	0.000270	0.000180	0.000120
B2/B8Mixed B Classes	B2/B8	Mixed B Classes	per sqm	0.001120	0.000260	0.000510	0.000270	0.000180	0.000120
B8Storage or Distribution	B8	Storage or Distribution	per sqm	0.000692	0.000139	0.000178	0.000061	0.000480	0.000360
C1Hotel (Average stars)	C1	Hotel (Average stars)	per sqm	0.002088	0.003519	0.000232	0.000391	0.000000	0.000000
C2Residential Institution	C2	Residential Institution	per sqm	0.000124	0.000092	0.000020	0.000012	0.000000	0.000000
C3Dwellings	C3	Dwellings	per dwelling	0.108000	0.228000	0.014000	0.028000	0.002000	0.002000
C3Apartments	C3	Apartments	per dwelling	0.066000	0.126000	0.004000	0.004000	0.000000	0.000000
D1Average School	D1	Average School	per sqm	0.003970	0.002280	0.000160	0.000110	0.000000	0.000000
D2Assembly and Leisure	D2	Assembly and Leisure	per sqm	0.013741	0.019883	0.000429	0.000617	0.000240	0.000140

## Appendix C: Site-Specific Development Trips

Policy/ Application Reference	2021					
	AM Peak (0800-0900)					
	Car		LGV		HGV	
	O	D	O	D	O	D
13/01683/REM	42.61	10.89	2.18	2.18	0.62	1.24
15/01794/REM	41.10	10.50	2.10	2.10	0.60	1.20
13/00106/FUL	28.14	9.20	2.46	2.14	0.43	0.43
14/00838/FUL	45.61	14.91	3.99	3.47	0.69	0.69
12/01612/FUL	0.00	0.00	0.00	0.00	0.00	0.00
16/02000/OUT / A4	30.35	9.92	2.65	2.31	0.46	0.46
A7	20.25	6.62	1.77	1.54	0.31	0.31
A4 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A7 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
11/00809/REM	2.05	28.74	0.85	0.87	0.15	0.15
11/00809/REM	0.97	2.16	0.09	0.04	0.18	0.18
12/00091/FUL	2.39	33.59	0.99	1.02	0.18	0.18
08/01342/FUL	0.14	0.32	0.01	0.01	0.03	0.03
11/01429/FUL	0.97	3.10	0.39	0.81	2.11	2.26
10/00245/COU	0.77	10.78	0.32	0.33	0.06	0.06
10/00245/COU	22.66	29.05	0.43	0.48	0.03	0.03
11/01125/FUL	16.52	18.64	0.53	0.60	1.29	1.52
12/01392/COU	0.00	0.00	0.00	0.00	0.00	0.00
12/01392/COU	3.03	1.98	0.34	0.23	0.10	0.10
14/00840/COU	0.33	1.05	0.13	0.27	0.71	0.77
14/01922/COU	0.00	0.00	0.00	0.00	0.00	0.00
14/01922/COU	0.00	0.00	0.00	0.00	0.00	0.00
14/01922/COU	8.57	9.68	0.28	0.31	0.67	0.79





Policy/ Application Reference	2021					
	AM Peak (0800-0900)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/01162/FUL	0.00	0.00	0.00	0.00	0.00	0.00
16/02275/FUL	0.00	0.00	0.00	0.00	0.00	0.00
16/02275/FUL	0.00	0.00	0.00	0.00	0.00	0.00
16/02275/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/00764/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01523/FUL	29.64	37.38	1.57	1.98	0.50	0.60
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01459/FUL	0.00	0.00	0.00	0.00	0.00	0.00
18/01180/FUL / E3	3.90	54.72	1.62	1.66	0.29	0.29
18/01004/FUL / E3	6.99	98.04	2.90	2.97	0.53	0.53
18/01004/FUL / E3	0.00	0.00	0.00	0.00	0.00	0.00
18/01004/FUL / E3	38.36	48.38	2.04	2.57	0.65	0.77
18/01004/FUL / E3	25.01	32.06	0.47	0.53	0.03	0.03
18/01004/FUL / E3	0.00	0.00	0.00	0.00	0.00	0.00
16/02000/OUT / A4	1.14	16.02	0.47	0.48	0.09	0.09
16/02000/OUT / A4	0.35	0.23	0.04	0.03	0.01	0.01
A7	5.67	79.52	2.35	2.41	0.43	0.43
A7	4.06	45.38	1.51	2.32	0.23	0.35

Policy/ Application Reference	2021					
	AM Peak (0800-0900)					
	Car		LGV		HGV	
	O	D	O	D	O	D
A7	1.12	10.05	0.06	0.45	0.86	1.32
A4 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A4 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A7 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A7 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
09/00897/REM	34.19	11.18	2.99	2.60	0.52	0.52
10/00468/REM	31.56	10.32	2.76	2.40	0.48	0.48
14/01477/REM	34.45	11.27	3.01	2.62	0.52	0.52
07/00472/OUT / 15/00286/REM	45.24	14.79	3.96	3.44	0.69	0.69
10/00467/REM	31.56	10.32	2.76	2.40	0.48	0.48
11/00107/FUL / 15/00362/FUL 16/00088/FUL	68.38	22.36	5.98	5.20	1.04	1.04
15/01144/FUL	43.66	14.28	3.82	3.32	0.66	0.66
15/01591/FUL	34.19	11.18	2.99	2.60	0.52	0.52
16/00165/OUT	46.03	15.05	4.03	3.50	0.70	0.70
14/00709/FUL	46.03	15.05	4.03	3.50	0.70	0.70
16/00948/OUT	19.73	6.45	1.73	1.50	0.30	0.30
15/00749/OUT / A1	37.25	12.18	3.26	2.83	0.57	0.57
15/01149/OUT / A1b	27.16	8.88	2.38	2.07	0.41	0.41
A2	41.33	13.51	3.61	3.14	0.63	0.63
12/01256/OUT / A3	98.63	32.25	8.63	7.50	1.50	1.50
14/01063/OUT / A6	44.54	14.56	3.90	3.39	0.68	0.68
14/01470/OUT / A6	21.21	6.94	1.85	1.61	0.32	0.32
15/00892/FUL	2.07	8.56	6.62	6.35	2.41	2.14

Policy/ Application Reference	2021					
	AM Peak (0800-0900)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/01144/FUL	0.00	0.00	0.00	0.00	0.00	0.00
15/01144/FUL	13.78	9.01	1.56	1.03	0.45	0.45
16/00381/FUL	0.00	0.00	0.00	0.00	0.00	0.00
16/00005/OUT	179.23	226.05	9.51	11.99	3.05	3.62
16/00005/OUT	2.07	2.61	0.11	0.14	0.04	0.04
15/00112/REM	3.64	51.00	1.51	1.54	0.27	0.27
15/00112/REM	0.88	2.83	0.35	0.74	1.92	2.06
16/00158/FUL	2.84	31.73	1.05	1.62	0.16	0.24
14/01035/OUT	6.02	84.45	2.50	2.56	0.45	0.45
14/01035/OUT	6.37	26.29	20.33	19.51	7.39	6.57
16/00957/FUL	1.65	18.43	0.61	0.94	0.09	0.14
16/00322/FUL	44.70	57.30	0.84	0.94	0.06	0.06
15/01190/OUT	1.25	2.79	0.11	0.06	0.23	0.23
15/01190/OUT	15.56	17.57	0.50	0.57	1.21	1.43
14/01158/FUL	19.23	24.25	1.02	1.29	0.33	0.39
14/01163/FUL	4.28	60.06	1.78	1.82	0.32	0.32
15/00657/FUL	1.24	17.46	0.52	0.53	0.09	0.09
16/01022/FUL	1.19	13.35	0.44	0.68	0.07	0.10
16/00957/FUL	19.21	24.23	1.02	1.29	0.33	0.39
16/00957/FUL	1.65	18.43	0.61	0.94	0.09	0.14
A2	4.98	69.86	2.07	2.11	0.38	0.38
A2	0.65	2.67	2.07	1.98	0.75	0.67
A2	0.67	2.15	0.27	0.56	1.46	1.57

Policy/ Application Reference	2021					
	AM Peak (0800-0900)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/00749/OUT / A1	4.02	56.45	1.67	1.71	0.30	0.30
15/00749/OUT / A1	0.24	0.76	0.09	0.20	0.52	0.55
12/01256/OUT / A3	2.31	25.84	0.86	1.32	0.13	0.20
13/00939/APP	52.34	17.11	4.58	3.98	0.80	0.80
13/00163/APP	32.09	10.49	2.81	2.44	0.49	0.49
11/00385/FUL	76.53	25.03	6.69	5.82	1.16	1.16
15/00814/APP	27.88	9.12	2.44	2.12	0.42	0.42
15/01274/APP	56.28	18.40	4.92	4.28	0.86	0.86
16/00292/APP	29.72	9.72	2.60	2.26	0.45	0.45
16/00853/FUL	51.81	16.94	4.53	3.94	0.79	0.79
15/01002/APP	32.88	10.75	2.88	2.50	0.50	0.50
15/01378/OUT	19.73	6.45	1.73	1.50	0.30	0.30
15/00575/APP	33.93	11.09	2.97	2.58	0.52	0.52
10/01216/OUT	49.97	16.34	4.37	3.80	0.76	0.76
14/00316/APP	34.98	11.44	3.06	2.66	0.53	0.53
10/01381/APP 11/00691/APP	44.18	14.45	3.86	3.36	0.67	0.67
16/00739/APP	29.72	9.72	2.60	2.26	0.45	0.45
16/00227/APP	61.54	20.12	5.38	4.68	0.94	0.94
16/00177/FUL	62.07	20.30	5.43	4.72	0.94	0.94
13/00986/APP	28.93	9.46	2.53	2.20	0.44	0.44
16/00379/APP	33.14	10.84	2.90	2.52	0.50	0.50
12/00640/FUL	0.00	0.00	0.00	0.00	0.00	0.00
15/00755/FUL	5.33	59.61	1.98	3.05	0.30	0.46

Policy/ Application Reference	2021					
	Inter Peak (Avg Hr 1000-1600)					
	Car		LGV		HGV	
	O	D	O	D	O	D
13/01683/REM	15.86	16.48	3.42	3.42	0.62	0.62
15/01794/REM	15.30	15.90	3.30	3.30	0.60	0.60
13/00106/FUL	11.13	11.66	2.35	2.14	0.43	0.43
14/00838/FUL	18.04	18.90	3.82	3.47	0.69	0.69
12/01612/FUL	0.00	0.00	0.00	0.00	0.00	0.00
16/02000/OUT / A4	12.00	12.58	2.54	2.31	0.46	0.46
A7	8.01	8.39	1.69	1.54	0.31	0.31
A4 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A7 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
11/00809/REM	7.02	5.51	0.66	0.66	0.08	0.08
11/00809/REM	2.20	1.94	0.31	0.31	0.04	0.04
12/00091/FUL	8.20	6.44	0.77	0.77	0.09	0.09
08/01342/FUL	0.33	0.29	0.05	0.05	0.01	0.01
11/01429/FUL	1.46	1.17	0.48	0.46	2.11	2.48
10/00245/COU	2.63	2.07	0.25	0.25	0.03	0.03
10/00245/COU	5.04	4.52	0.25	0.26	0.07	0.07
11/01125/FUL	38.05	43.12	1.21	1.37	2.27	2.20
12/01392/COU	2.24	2.76	0.31	0.33	0.06	0.06
12/01392/COU	1.72	1.49	0.20	0.17	0.10	0.08
14/00840/COU	0.49	0.40	0.16	0.15	0.71	0.84
14/01922/COU	11.44	14.14	1.59	1.66	0.28	0.28
14/01922/COU	6.62	7.79	0.38	0.49	0.32	0.32
14/01922/COU	19.75	22.38	0.63	0.71	1.18	1.14



Policy/ Application Reference	2021					
	Inter Peak (Avg Hr 1000-1600)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/01162/FUL	0.00	0.00	0.00	0.00	0.00	0.00
16/02275/FUL	0.00	0.00	0.00	0.00	0.00	0.00
16/02275/FUL	0.00	0.00	0.00	0.00	0.00	0.00
16/02275/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/00764/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01523/FUL	61.85	62.73	3.27	3.31	0.47	0.44
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01459/FUL	0.00	0.00	0.00	0.00	0.00	0.00
18/01180/FUL / E3	13.36	10.49	1.25	1.25	0.15	0.15
18/01004/FUL / E3	23.93	18.79	2.24	2.24	0.26	0.26
18/01004/FUL / E3	2.57	3.17	0.36	0.37	0.06	0.06
18/01004/FUL / E3	80.05	81.18	4.23	4.29	0.61	0.57
18/01004/FUL / E3	5.56	4.98	0.28	0.29	0.08	0.08
18/01004/FUL / E3	0.00	0.00	0.00	0.00	0.00	0.00
16/02000/OUT / A4	3.91	3.07	0.37	0.37	0.04	0.04
16/02000/OUT / A4	0.20	0.17	0.02	0.02	0.01	0.01
A7	19.41	15.24	1.82	1.82	0.21	0.21
A7	5.85	5.04	1.68	1.68	0.35	0.35

Policy/ Application Reference	2021					
	Inter Peak (Avg Hr 1000-1600)					
	Car		LGV		HGV	
	O	D	O	D	O	D
A7	3.02	2.41	0.15	0.13	1.05	1.25
A4 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A4 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A7 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A7 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
09/00897/REM	13.52	14.17	2.86	2.60	0.52	0.52
10/00468/REM	12.48	13.08	2.64	2.40	0.48	0.48
14/01477/REM	13.62	14.28	2.88	2.62	0.52	0.52
07/00472/OUT / 15/00286/REM	17.89	18.75	3.78	3.44	0.69	0.69
10/00467/REM	12.48	13.08	2.64	2.40	0.48	0.48
11/00107/FUL / 15/00362/FUL 16/00088/FUL	27.04	28.34	5.72	5.20	1.04	1.04
15/01144/FUL	17.26	18.09	3.65	3.32	0.66	0.66
15/01591/FUL	13.52	14.17	2.86	2.60	0.52	0.52
16/00165/OUT	18.20	19.08	3.85	3.50	0.70	0.70
14/00709/FUL	18.20	19.08	3.85	3.50	0.70	0.70
16/00948/OUT	7.80	8.18	1.65	1.50	0.30	0.30
15/00749/OUT / A1	14.73	15.44	3.12	2.83	0.57	0.57
15/01149/OUT / A1b	10.74	11.26	2.27	2.07	0.41	0.41
A2	16.34	17.13	3.46	3.14	0.63	0.63
12/01256/OUT / A3	39.00	40.88	8.25	7.50	1.50	1.50
14/01063/OUT / A6	17.61	18.46	3.73	3.39	0.68	0.68
14/01470/OUT / A6	8.39	8.79	1.77	1.61	0.32	0.32
15/00892/FUL	5.75	4.95	5.35	5.48	2.27	2.41



Policy/ Application Reference	2021					
	Inter Peak (Avg Hr 1000-1600)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/01144/FUL	51.43	63.57	7.13	7.48	1.27	1.27
15/01144/FUL	7.84	6.76	0.89	0.77	0.45	0.38
16/00381/FUL	14.52	17.95	2.01	2.11	0.36	0.36
16/00005/OUT	374.03	379.31	19.76	20.03	2.86	2.67
16/00005/OUT	4.32	4.38	0.23	0.23	0.03	0.03
15/00112/REM	12.45	9.78	1.17	1.17	0.14	0.14
15/00112/REM	1.33	1.06	0.44	0.42	1.92	2.26
16/00158/FUL	4.09	3.53	1.18	1.18	0.24	0.24
14/01035/OUT	20.61	16.19	1.93	1.93	0.23	0.23
14/01035/OUT	17.66	15.20	16.43	16.84	6.98	7.39
16/00957/FUL	2.38	2.05	0.68	0.68	0.14	0.14
16/00322/FUL	9.94	8.91	0.49	0.51	0.14	0.14
15/01190/OUT	2.85	2.50	0.40	0.40	0.06	0.06
15/01190/OUT	35.86	40.63	1.14	1.29	2.14	2.07
14/01158/FUL	40.12	40.69	2.12	2.15	0.31	0.29
14/01163/FUL	14.66	11.51	1.37	1.37	0.16	0.16
15/00657/FUL	4.26	3.35	0.40	0.40	0.05	0.05
16/01022/FUL	1.72	1.48	0.49	0.49	0.10	0.10
16/00957/FUL	40.08	40.65	2.12	2.15	0.31	0.29
16/00957/FUL	2.38	2.05	0.68	0.68	0.14	0.14
A2	17.05	13.39	1.60	1.60	0.19	0.19
A2	1.80	1.55	1.67	1.71	0.71	0.75
A2	1.01	0.81	0.33	0.32	1.46	1.72

Policy/ Application Reference	2021					
	Inter Peak (Avg Hr 1000-1600)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/00749/OUT / A1	13.78	10.82	1.29	1.29	0.15	0.15
15/00749/OUT / A1	0.36	0.29	0.12	0.11	0.52	0.61
12/01256/OUT / A3	3.33	2.87	0.96	0.96	0.20	0.20
13/00939/APP	20.70	21.69	4.38	3.98	0.80	0.80
13/00163/APP	12.69	13.30	2.68	2.44	0.49	0.49
11/00385/FUL	30.26	31.72	6.40	5.82	1.16	1.16
15/00814/APP	11.02	11.55	2.33	2.12	0.42	0.42
15/01274/APP	22.26	23.33	4.71	4.28	0.86	0.86
16/00292/APP	11.75	12.32	2.49	2.26	0.45	0.45
16/00853/FUL	20.49	21.47	4.33	3.94	0.79	0.79
15/01002/APP	13.00	13.63	2.75	2.50	0.50	0.50
15/01378/OUT	7.80	8.18	1.65	1.50	0.30	0.30
15/00575/APP	13.42	14.06	2.84	2.58	0.52	0.52
10/01216/OUT	19.76	20.71	4.18	3.80	0.76	0.76
14/00316/APP	13.83	14.50	2.93	2.66	0.53	0.53
10/01381/APP 11/00691/APP	17.47	18.31	3.70	3.36	0.67	0.67
16/00739/APP	11.75	12.32	2.49	2.26	0.45	0.45
16/00227/APP	24.34	25.51	5.15	4.68	0.94	0.94
16/00177/FUL	24.54	25.72	5.19	4.72	0.94	0.94
13/00986/APP	11.44	11.99	2.42	2.20	0.44	0.44
16/00379/APP	13.10	13.73	2.77	2.52	0.50	0.50
12/00640/FUL	0.00	0.00	0.00	0.00	0.00	0.00
15/00755/FUL	7.69	6.62	2.21	2.21	0.46	0.46

Policy/ Application Reference	2021					
	PM Peak (1700-1800)					
	Car		LGV		HGV	
	O	D	O	D	O	D
13/01683/REM	20.53	39.19	1.24	1.24	0.00	0.00
15/01794/REM	19.80	37.80	1.20	1.20	0.00	0.00
13/00106/FUL	11.56	24.40	1.50	3.00	0.21	0.21
14/00838/FUL	18.73	39.54	2.43	4.86	0.35	0.35
12/01612/FUL	0.00	0.00	0.00	0.00	0.00	0.00
16/02000/OUT / A4	12.46	26.31	1.62	3.23	0.23	0.23
A7	8.32	17.56	1.08	2.16	0.15	0.15
A4 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A7 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
11/00809/REM	24.68	2.28	0.41	0.37	0.00	0.00
11/00809/REM	1.36	1.01	0.22	0.13	0.00	0.00
12/00091/FUL	28.85	2.67	0.47	0.43	0.00	0.00
08/01342/FUL	0.20	0.15	0.03	0.02	0.00	0.00
11/01429/FUL	2.60	0.52	0.67	0.23	1.80	1.35
10/00245/COU	9.26	0.86	0.15	0.14	0.00	0.00
10/00245/COU	2.88	1.65	0.12	0.08	0.00	0.00
11/01125/FUL	52.05	75.32	1.62	2.34	0.91	0.53
12/01392/COU	1.05	2.85	0.10	0.25	0.00	0.00
12/01392/COU	1.72	2.91	0.19	0.32	0.00	0.00
14/00840/COU	0.88	0.18	0.23	0.08	0.61	0.46
14/01922/COU	5.36	14.57	0.51	1.28	0.00	0.00
14/01922/COU	9.75	17.39	0.73	0.29	0.00	0.00
14/01922/COU	27.02	39.09	0.84	1.21	0.47	0.28



Policy/ Application Reference	2021					
	PM Peak (1700-1800)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/01162/FUL	0.00	0.00	0.00	0.00	0.00	0.00
16/02275/FUL	0.00	0.00	0.00	0.00	0.00	0.00
16/02275/FUL	0.00	0.00	0.00	0.00	0.00	0.00
16/02275/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/00764/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01523/FUL	71.47	68.52	3.77	3.61	0.31	0.25
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01459/FUL	0.00	0.00	0.00	0.00	0.00	0.00
18/01180/FUL / E3	46.99	4.34	0.77	0.70	0.00	0.00
18/01004/FUL / E3	84.19	7.78	1.38	1.25	0.00	0.00
18/01004/FUL / E3	1.20	3.27	0.11	0.29	0.00	0.00
18/01004/FUL / E3	92.49	88.68	4.88	4.68	0.41	0.33
18/01004/FUL / E3	3.18	1.82	0.13	0.09	0.00	0.00
18/01004/FUL / E3	0.00	0.00	0.00	0.00	0.00	0.00
16/02000/OUT / A4	13.75	1.27	0.23	0.20	0.00	0.00
16/02000/OUT / A4	0.20	0.33	0.02	0.04	0.00	0.00
A7	68.29	6.31	1.12	1.02	0.00	0.00
A7	34.02	2.61	0.93	0.46	0.23	0.12

Policy/ Application Reference	2021					
	PM Peak (1700-1800)					
	Car		LGV		HGV	
	O	D	O	D	O	D
A7	9.06	1.83	0.38	0.08	0.13	0.20
A4 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A4 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A7 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A7 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
09/00897/REM	14.04	29.64	1.82	3.64	0.26	0.26
10/00468/REM	12.96	27.36	1.68	3.36	0.24	0.24
14/01477/REM	14.15	29.87	1.83	3.67	0.26	0.26
07/00472/OUT / 15/00286/REM	18.58	39.22	2.41	4.82	0.34	0.34
10/00467/REM	12.96	27.36	1.68	3.36	0.24	0.24
11/00107/FUL / 15/00362/FUL 16/00088/FUL	28.08	59.28	3.64	7.28	0.52	0.52
15/01144/FUL	17.93	37.85	2.32	4.65	0.33	0.33
15/01591/FUL	14.04	29.64	1.82	3.64	0.26	0.26
16/00165/OUT	18.90	39.90	2.45	4.90	0.35	0.35
14/00709/FUL	18.90	39.90	2.45	4.90	0.35	0.35
16/00948/OUT	8.10	17.10	1.05	2.10	0.15	0.15
15/00749/OUT / A1	15.30	32.29	1.98	3.97	0.28	0.28
15/01149/OUT / A1b	11.15	23.54	1.45	2.89	0.21	0.21
A2	16.97	35.83	2.20	4.40	0.31	0.31
12/01256/OUT / A3	40.50	85.50	5.25	10.50	0.75	0.75
14/01063/OUT / A6	18.29	38.61	2.37	4.74	0.34	0.34
14/01470/OUT / A6	8.71	18.39	1.13	2.26	0.16	0.16
15/00892/FUL	7.49	1.74	3.41	1.81	1.20	0.80

Policy/ Application Reference	2021					
	PM Peak (1700-1800)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/01144/FUL	24.11	65.47	2.30	5.75	0.00	0.00
15/01144/FUL	7.85	13.23	0.87	1.47	0.00	0.00
16/00381/FUL	6.80	18.48	0.65	1.62	0.00	0.00
16/00005/OUT	432.16	414.36	22.80	21.85	1.90	1.52
16/00005/OUT	4.99	4.79	0.26	0.25	0.02	0.02
15/00112/REM	43.80	4.05	0.72	0.65	0.00	0.00
15/00112/REM	2.37	0.48	0.61	0.21	1.65	1.23
16/00158/FUL	23.79	1.82	0.65	0.32	0.16	0.08
14/01035/OUT	72.52	6.70	1.19	1.08	0.00	0.00
14/01035/OUT	23.00	5.34	10.47	5.55	3.70	2.46
16/00957/FUL	13.82	1.06	0.38	0.19	0.09	0.05
16/00322/FUL	5.68	3.26	0.23	0.16	0.00	0.00
15/01190/OUT	1.76	1.31	0.28	0.17	0.00	0.00
15/01190/OUT	49.06	70.98	1.53	2.20	0.86	0.50
14/01158/FUL	46.36	44.45	2.45	2.34	0.20	0.16
14/01163/FUL	51.58	4.77	0.85	0.77	0.00	0.00
15/00657/FUL	14.99	1.39	0.25	0.22	0.00	0.00
16/01022/FUL	10.01	0.77	0.27	0.14	0.07	0.03
16/00957/FUL	46.31	44.41	2.44	2.34	0.20	0.16
16/00957/FUL	13.82	1.06	0.38	0.19	0.09	0.05
A2	59.99	5.54	0.99	0.89	0.00	0.00
A2	2.34	0.54	1.06	0.56	0.38	0.25
A2	1.81	0.36	0.46	0.16	1.25	0.94

Policy/ Application Reference	2021					
	PM Peak (1700-1800)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/00749/OUT / A1	48.47	4.48	0.80	0.72	0.00	0.00
15/00749/OUT / A1	0.64	0.13	0.16	0.06	0.44	0.33
12/01256/OUT / A3	19.37	1.49	0.53	0.26	0.13	0.07
13/00939/APP	21.49	45.37	2.79	5.57	0.40	0.40
13/00163/APP	13.18	27.82	1.71	3.42	0.24	0.24
11/00385/FUL	31.43	66.35	4.07	8.15	0.58	0.58
15/00814/APP	11.45	24.17	1.48	2.97	0.21	0.21
15/01274/APP	23.11	48.79	3.00	5.99	0.43	0.43
16/00292/APP	12.20	25.76	1.58	3.16	0.23	0.23
16/00853/FUL	21.28	44.92	2.76	5.52	0.39	0.39
15/01002/APP	13.50	28.50	1.75	3.50	0.25	0.25
15/01378/OUT	8.10	17.10	1.05	2.10	0.15	0.15
15/00575/APP	13.93	29.41	1.81	3.61	0.26	0.26
10/01216/OUT	20.52	43.32	2.66	5.32	0.38	0.38
14/00316/APP	14.36	30.32	1.86	3.72	0.27	0.27
10/01381/APP 11/00691/APP	18.14	38.30	2.35	4.70	0.34	0.34
16/00739/APP	12.20	25.76	1.58	3.16	0.23	0.23
16/00227/APP	25.27	53.35	3.28	6.55	0.47	0.47
16/00177/FUL	25.49	53.81	3.30	6.61	0.47	0.47
13/00986/APP	11.88	25.08	1.54	3.08	0.22	0.22
16/00379/APP	13.61	28.73	1.76	3.53	0.25	0.25
12/00640/FUL	0.00	0.00	0.00	0.00	0.00	0.00
15/00755/FUL	44.69	3.43	1.22	0.61	0.30	0.15



Policy/ Application Reference	2026					
	AM Peak (0800-0900)					
	Car		LGV		HGV	
	O	D	O	D	O	D
13/01683/REM	42.61	10.89	2.18	2.18	0.62	1.24
15/01794/REM	41.10	10.50	2.10	2.10	0.60	1.20
13/00106/FUL	28.14	9.20	2.46	2.14	0.43	0.43
14/00838/FUL	99.15	32.42	8.67	7.54	1.51	1.51
12/01612/FUL	37.61	12.30	3.29	2.86	0.57	0.57
16/02000/OUT / A4	460.41	150.55	40.26	35.01	7.00	7.00
A7	153.33	50.14	13.41	11.66	2.33	2.33
A4 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A7 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
11/00809/REM	2.05	28.74	0.85	0.87	0.15	0.15
11/00809/REM	0.97	2.16	0.09	0.04	0.18	0.18
12/00091/FUL	2.39	33.59	0.99	1.02	0.18	0.18
08/01342/FUL	0.14	0.32	0.01	0.01	0.03	0.03
11/01429/FUL	0.97	3.10	0.39	0.81	2.11	2.26
10/00245/COU	0.77	10.78	0.32	0.33	0.06	0.06
10/00245/COU	22.66	29.05	0.43	0.48	0.03	0.03
11/01125/FUL	16.52	18.64	0.53	0.60	1.29	1.52
12/01392/COU	0.00	0.00	0.00	0.00	0.00	0.00
12/01392/COU	3.03	1.98	0.34	0.23	0.10	0.10
14/00840/COU	0.33	1.05	0.13	0.27	0.71	0.77
14/01922/COU	0.00	0.00	0.00	0.00	0.00	0.00
14/01922/COU	0.00	0.00	0.00	0.00	0.00	0.00
14/01922/COU	8.57	9.68	0.28	0.31	0.67	0.79

Policy/ Application Reference	2026					
	AM Peak (0800-0900)					
	Car		LGV		HGV	
	O	D	O	D	O	D
16/01490/FUL	11.54	14.56	0.61	0.77	0.20	0.23
16/01490/FUL	0.00	0.00	0.00	0.00	0.00	0.00
16/01490/FUL	2.67	3.02	0.09	0.10	0.21	0.25
16/01603/COU	0.40	1.66	1.28	1.23	0.47	0.41
17/02128/FUL	121.68	153.47	6.46	8.14	2.07	2.46
17/02128/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/02128/FUL	1.13	15.84	0.47	0.48	0.09	0.09
17/02128/FUL	33.29	42.67	0.63	0.70	0.04	0.04
17/02128/FUL	4.64	5.24	0.15	0.17	0.36	0.43
17/00927/COU	0.00	0.00	0.00	0.00	0.00	0.00
15/01701/FUL	4.77	66.92	1.98	2.03	0.36	0.36
12/00432/FUL	8.29	10.45	0.44	0.55	0.14	0.17
12/00432/FUL	0.64	8.95	0.26	0.27	0.05	0.05
16/01006/COU	0.47	1.94	1.50	1.44	0.55	0.48
16/01006/COU	0.39	1.25	0.16	0.32	0.85	0.91
16/01417/FUL /E1	3.10	43.47	1.29	1.32	0.23	0.23
16/01417/FUL /E1	3.10	43.48	1.29	1.32	0.23	0.23
16/02020/FUL	9.64	12.16	0.51	0.65	0.16	0.19
16/02020/FUL	16.01	20.52	0.30	0.34	0.02	0.02
17/00936/FUL	55.89	70.49	2.97	3.74	0.95	1.13
17/00936/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01357/FUL	1.07	14.97	0.44	0.45	0.08	0.08
12/01488/FUL	3.59	50.32	1.49	1.52	0.27	0.27

Policy/ Application Reference	2026					
	AM Peak (0800-0900)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/01162/FUL	4.53	5.12	0.15	0.16	0.35	0.42
16/02275/FUL	2.54	35.69	1.06	1.08	0.19	0.19
16/02275/FUL	0.59	2.44	1.89	1.81	0.69	0.61
16/02275/FUL	0.49	1.58	0.20	0.41	1.07	1.15
17/00764/FUL	34.99	44.13	1.86	2.34	0.59	0.71
17/01523/FUL	29.64	37.38	1.57	1.98	0.50	0.60
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01459/FUL	34.99	44.13	1.86	2.34	0.59	0.71
18/01180/FUL / E3	3.90	54.72	1.62	1.66	0.29	0.29
18/01004/FUL / E3	6.99	98.04	2.90	2.97	0.53	0.53
18/01004/FUL / E3	0.00	0.00	0.00	0.00	0.00	0.00
18/01004/FUL / E3	38.36	48.38	2.04	2.57	0.65	0.77
18/01004/FUL / E3	25.01	32.06	0.47	0.53	0.03	0.03
18/01004/FUL / E3	9.26	129.90	3.84	3.93	0.70	0.70
16/02000/OUT / A4	17.32	243.00	7.19	7.35	1.31	1.31
16/02000/OUT / A4	5.24	3.43	0.59	0.39	0.17	0.17
A7	42.92	602.12	17.82	18.22	3.24	3.24
A7	30.72	343.61	11.41	17.55	1.76	2.63

Policy/ Application Reference	2026					
	AM Peak (0800-0900)					
	Car		LGV		HGV	
	O	D	O	D	O	D
A7	8.48	76.09	0.49	3.38	6.48	9.96
A4 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A4 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A7 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A7 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
09/00897/REM	34.19	11.18	2.99	2.60	0.52	0.52
10/00468/REM	31.56	10.32	2.76	2.40	0.48	0.48
14/01477/REM	34.45	11.27	3.01	2.62	0.52	0.52
07/00472/OUT / 15/00286/REM	45.24	14.79	3.96	3.44	0.69	0.69
10/00467/REM	34.98	11.44	3.06	2.66	0.53	0.53
11/00107/FUL / 15/00362/FUL 16/00088/FUL	68.38	22.36	5.98	5.20	1.04	1.04
15/01144/FUL	43.66	14.28	3.82	3.32	0.66	0.66
15/01591/FUL	34.19	11.18	2.99	2.60	0.52	0.52
16/00165/OUT	65.75	21.50	5.75	5.00	1.00	1.00
14/00709/FUL	89.42	29.24	7.82	6.80	1.36	1.36
16/00948/OUT	65.75	21.50	5.75	5.00	1.00	1.00
15/00749/OUT / A1	275.81	90.19	24.12	20.97	4.19	4.19
15/01149/OUT / A1b	155.94	50.99	13.64	11.86	2.37	2.37
A2	210.27	68.76	18.39	15.99	3.20	3.20
12/01256/OUT / A3	300.21	98.17	26.25	22.83	4.57	4.57
14/01063/OUT / A6	89.45	29.25	7.82	6.80	1.36	1.36
14/01470/OUT / A6	42.60	13.93	3.73	3.24	0.65	0.65
15/00892/FUL	2.07	8.56	6.62	6.35	2.41	2.14

Policy/ Application Reference	2026					
	AM Peak (0800-0900)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/01144/FUL	0.00	0.00	0.00	0.00	0.00	0.00
15/01144/FUL	13.78	9.01	1.56	1.03	0.45	0.45
16/00381/FUL	0.00	0.00	0.00	0.00	0.00	0.00
16/00005/OUT	179.23	226.05	9.51	11.99	3.05	3.62
16/00005/OUT	2.07	2.61	0.11	0.14	0.04	0.04
15/00112/REM	3.64	51.00	1.51	1.54	0.27	0.27
15/00112/REM	0.88	2.83	0.35	0.74	1.92	2.06
16/00158/FUL	2.84	31.73	1.05	1.62	0.16	0.24
14/01035/OUT	6.02	84.45	2.50	2.56	0.45	0.45
14/01035/OUT	6.37	26.29	20.33	19.51	7.39	6.57
16/00957/FUL	1.65	18.43	0.61	0.94	0.09	0.14
16/00322/FUL	44.70	57.30	0.84	0.94	0.06	0.06
15/01190/OUT	1.25	2.79	0.11	0.06	0.23	0.23
15/01190/OUT	15.56	17.57	0.50	0.57	1.21	1.43
14/01158/FUL	19.23	24.25	1.02	1.29	0.33	0.39
14/01163/FUL	4.28	60.06	1.78	1.82	0.32	0.32
15/00657/FUL	1.24	17.46	0.52	0.53	0.09	0.09
16/01022/FUL	1.19	13.35	0.44	0.68	0.07	0.10
16/00957/FUL	19.21	24.23	1.02	1.29	0.33	0.39
16/00957/FUL	1.65	18.43	0.61	0.94	0.09	0.14
A2	19.92	279.44	8.27	8.46	1.50	1.50
A2	2.59	10.69	8.27	7.93	3.01	2.67
A2	2.69	8.62	1.07	2.24	5.85	6.26

Policy/ Application Reference	2026					
	AM Peak (0800-0900)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/00749/OUT / A1	10.46	146.76	4.34	4.44	0.79	0.79
15/00749/OUT / A1	0.62	1.98	0.25	0.52	1.35	1.44
12/01256/OUT / A3	9.24	103.36	3.43	5.28	0.53	0.79
13/00939/APP	52.34	17.11	4.58	3.98	0.80	0.80
13/00163/APP	32.09	10.49	2.81	2.44	0.49	0.49
11/00385/FUL	76.53	25.03	6.69	5.82	1.16	1.16
15/00814/APP	27.88	9.12	2.44	2.12	0.42	0.42
15/01274/APP	56.28	18.40	4.92	4.28	0.86	0.86
16/00292/APP	29.72	9.72	2.60	2.26	0.45	0.45
16/00853/FUL	51.81	16.94	4.53	3.94	0.79	0.79
15/01002/APP	39.45	12.90	3.45	3.00	0.60	0.60
15/01378/OUT	27.88	9.12	2.44	2.12	0.42	0.42
15/00575/APP	33.93	11.09	2.97	2.58	0.52	0.52
10/01216/OUT	49.97	16.34	4.37	3.80	0.76	0.76
14/00316/APP	34.98	11.44	3.06	2.66	0.53	0.53
10/01381/APP 11/00691/APP	44.18	14.45	3.86	3.36	0.67	0.67
16/00739/APP	29.72	9.72	2.60	2.26	0.45	0.45
16/00227/APP	61.54	20.12	5.38	4.68	0.94	0.94
16/00177/FUL	68.64	22.45	6.00	5.22	1.04	1.04
13/00986/APP	28.93	9.46	2.53	2.20	0.44	0.44
16/00379/APP	33.14	10.84	2.90	2.52	0.50	0.50
12/00640/FUL	120.29	151.72	6.38	8.05	2.04	2.43
15/00755/FUL	5.33	59.61	1.98	3.05	0.30	0.46

Policy/ Application Reference	2026					
	Inter Peak (Avg Hr 1000-1600)					
	Car		LGV		HGV	
	O	D	O	D	O	D
13/01683/REM	15.86	16.48	3.42	3.42	0.62	0.62
15/01794/REM	15.30	15.90	3.30	3.30	0.60	0.60
13/00106/FUL	11.13	11.66	2.35	2.14	0.43	0.43
14/00838/FUL	39.21	41.09	8.29	7.54	1.51	1.51
12/01612/FUL	14.87	15.59	3.15	2.86	0.57	0.57
16/02000/OUT / A4	182.06	190.82	38.51	35.01	7.00	7.00
A7	60.63	63.55	12.83	11.66	2.33	2.33
A4 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A7 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
11/00809/REM	7.02	5.51	0.66	0.66	0.08	0.08
11/00809/REM	2.20	1.94	0.31	0.31	0.04	0.04
12/00091/FUL	8.20	6.44	0.77	0.77	0.09	0.09
08/01342/FUL	0.33	0.29	0.05	0.05	0.01	0.01
11/01429/FUL	1.46	1.17	0.48	0.46	2.11	2.48
10/00245/COU	2.63	2.07	0.25	0.25	0.03	0.03
10/00245/COU	5.04	4.52	0.25	0.26	0.07	0.07
11/01125/FUL	38.05	43.12	1.21	1.37	2.27	2.20
12/01392/COU	2.24	2.76	0.31	0.33	0.06	0.06
12/01392/COU	1.72	1.49	0.20	0.17	0.10	0.08
14/00840/COU	0.49	0.40	0.16	0.15	0.71	0.84
14/01922/COU	11.44	14.14	1.59	1.66	0.28	0.28
14/01922/COU	6.62	7.79	0.38	0.49	0.32	0.32
14/01922/COU	19.75	22.38	0.63	0.71	1.18	1.14

Policy/ Application Reference	2026					
	Inter Peak (Avg Hr 1000-1600)					
	Car		LGV		HGV	
	O	D	O	D	O	D
16/01490/FUL	24.09	24.43	1.27	1.29	0.18	0.17
16/01490/FUL	5.48	6.77	0.76	0.80	0.13	0.13
16/01490/FUL	6.16	6.98	0.20	0.22	0.37	0.36
16/01603/COU	1.11	0.96	1.04	1.06	0.44	0.47
17/02128/FUL	253.94	257.52	13.42	13.60	1.94	1.81
17/02128/FUL	3.42	4.23	0.47	0.50	0.08	0.08
17/02128/FUL	3.87	3.04	0.36	0.36	0.04	0.04
17/02128/FUL	7.40	6.63	0.37	0.38	0.11	0.11
17/02128/FUL	10.70	12.12	0.34	0.38	0.64	0.62
17/00927/COU	9.41	11.64	1.31	1.37	0.23	0.23
15/01701/FUL	16.34	12.83	1.53	1.53	0.18	0.18
12/00432/FUL	17.29	17.53	0.91	0.93	0.13	0.12
12/00432/FUL	2.19	1.72	0.20	0.20	0.02	0.02
16/01006/COU	1.30	1.12	1.21	1.24	0.52	0.55
16/01006/COU	0.59	0.47	0.19	0.18	0.85	1.00
16/01417/FUL /E1	10.61	8.33	0.99	0.99	0.12	0.12
16/01417/FUL /E1	10.61	8.33	0.99	0.99	0.12	0.12
16/02020/FUL	20.12	20.40	1.06	1.08	0.15	0.14
16/02020/FUL	3.56	3.19	0.18	0.18	0.05	0.05
17/00936/FUL	116.63	118.28	6.16	6.25	0.89	0.83
17/00936/FUL	0.99	1.23	0.14	0.14	0.02	0.02
17/01357/FUL	3.66	2.87	0.34	0.34	0.04	0.04
12/01488/FUL	12.28	9.64	1.15	1.15	0.14	0.14



Policy/ Application Reference	2026					
	Inter Peak (Avg Hr 1000-1600)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/01162/FUL	10.45	11.84	0.33	0.38	0.62	0.60
16/02275/FUL	8.71	6.84	0.82	0.82	0.10	0.10
16/02275/FUL	1.64	1.41	1.53	1.57	0.65	0.69
16/02275/FUL	0.74	0.59	0.24	0.23	1.07	1.26
17/00764/FUL	73.01	74.04	3.86	3.91	0.56	0.52
17/01523/FUL	61.85	62.73	3.27	3.31	0.47	0.44
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01459/FUL	73.01	74.04	3.86	3.91	0.56	0.52
18/01180/FUL / E3	13.36	10.49	1.25	1.25	0.15	0.15
18/01004/FUL / E3	23.93	18.79	2.24	2.24	0.26	0.26
18/01004/FUL / E3	2.57	3.17	0.36	0.37	0.06	0.06
18/01004/FUL / E3	80.05	81.18	4.23	4.29	0.61	0.57
18/01004/FUL / E3	5.56	4.98	0.28	0.29	0.08	0.08
18/01004/FUL / E3	31.71	24.90	2.97	2.97	0.35	0.35
16/02000/OUT / A4	59.32	46.57	5.56	5.56	0.65	0.65
16/02000/OUT / A4	2.98	2.57	0.34	0.29	0.17	0.14
A7	146.99	115.40	13.77	13.77	1.62	1.62
A7	44.32	38.18	12.73	12.73	2.63	2.63

Policy/ Application Reference	2026					
	Inter Peak (Avg Hr 1000-1600)					
	Car		LGV		HGV	
	O	D	O	D	O	D
A7	22.86	18.26	1.12	0.96	7.97	9.47
A4 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A4 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A7 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A7 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
09/00897/REM	13.52	14.17	2.86	2.60	0.52	0.52
10/00468/REM	12.48	13.08	2.64	2.40	0.48	0.48
14/01477/REM	13.62	14.28	2.88	2.62	0.52	0.52
07/00472/OUT / 15/00286/REM	17.89	18.75	3.78	3.44	0.69	0.69
10/00467/REM	13.83	14.50	2.93	2.66	0.53	0.53
11/00107/FUL / 15/00362/FUL 16/00088/FUL	27.04	28.34	5.72	5.20	1.04	1.04
15/01144/FUL	17.26	18.09	3.65	3.32	0.66	0.66
15/01591/FUL	13.52	14.17	2.86	2.60	0.52	0.52
16/00165/OUT	26.00	27.25	5.50	5.00	1.00	1.00
14/00709/FUL	35.36	37.06	7.48	6.80	1.36	1.36
16/00948/OUT	26.00	27.25	5.50	5.00	1.00	1.00
15/00749/OUT / A1	109.07	114.31	23.07	20.97	4.19	4.19
15/01149/OUT / A1b	61.67	64.63	13.04	11.86	2.37	2.37
A2	83.15	87.15	17.59	15.99	3.20	3.20
12/01256/OUT / A3	118.71	124.42	25.11	22.83	4.57	4.57
14/01063/OUT / A6	35.37	37.07	7.48	6.80	1.36	1.36
14/01470/OUT / A6	16.84	17.65	3.56	3.24	0.65	0.65
15/00892/FUL	5.75	4.95	5.35	5.48	2.27	2.41

Policy/ Application Reference	2026					
	Inter Peak (Avg Hr 1000-1600)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/01144/FUL	51.43	63.57	7.13	7.48	1.27	1.27
15/01144/FUL	7.84	6.76	0.89	0.77	0.45	0.38
16/00381/FUL	14.52	17.95	2.01	2.11	0.36	0.36
16/00005/OUT	374.03	379.31	19.76	20.03	2.86	2.67
16/00005/OUT	4.32	4.38	0.23	0.23	0.03	0.03
15/00112/REM	12.45	9.78	1.17	1.17	0.14	0.14
15/00112/REM	1.33	1.06	0.44	0.42	1.92	2.26
16/00158/FUL	4.09	3.53	1.18	1.18	0.24	0.24
14/01035/OUT	20.61	16.19	1.93	1.93	0.23	0.23
14/01035/OUT	17.66	15.20	16.43	16.84	6.98	7.39
16/00957/FUL	2.38	2.05	0.68	0.68	0.14	0.14
16/00322/FUL	9.94	8.91	0.49	0.51	0.14	0.14
15/01190/OUT	2.85	2.50	0.40	0.40	0.06	0.06
15/01190/OUT	35.86	40.63	1.14	1.29	2.14	2.07
14/01158/FUL	40.12	40.69	2.12	2.15	0.31	0.29
14/01163/FUL	14.66	11.51	1.37	1.37	0.16	0.16
15/00657/FUL	4.26	3.35	0.40	0.40	0.05	0.05
16/01022/FUL	1.72	1.48	0.49	0.49	0.10	0.10
16/00957/FUL	40.08	40.65	2.12	2.15	0.31	0.29
16/00957/FUL	2.38	2.05	0.68	0.68	0.14	0.14
A2	68.21	53.56	6.39	6.39	0.75	0.75
A2	7.18	6.18	6.68	6.85	2.84	3.01
A2	4.05	3.24	1.34	1.26	5.85	6.89

Policy/ Application Reference	2026					
	Inter Peak (Avg Hr 1000-1600)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/00749/OUT / A1	35.83	28.13	3.36	3.36	0.39	0.39
15/00749/OUT / A1	0.93	0.74	0.31	0.29	1.35	1.59
12/01256/OUT / A3	13.33	11.48	3.83	3.83	0.79	0.79
13/00939/APP	20.70	21.69	4.38	3.98	0.80	0.80
13/00163/APP	12.69	13.30	2.68	2.44	0.49	0.49
11/00385/FUL	30.26	31.72	6.40	5.82	1.16	1.16
15/00814/APP	11.02	11.55	2.33	2.12	0.42	0.42
15/01274/APP	22.26	23.33	4.71	4.28	0.86	0.86
16/00292/APP	11.75	12.32	2.49	2.26	0.45	0.45
16/00853/FUL	20.49	21.47	4.33	3.94	0.79	0.79
15/01002/APP	15.60	16.35	3.30	3.00	0.60	0.60
15/01378/OUT	11.02	11.55	2.33	2.12	0.42	0.42
15/00575/APP	13.42	14.06	2.84	2.58	0.52	0.52
10/01216/OUT	19.76	20.71	4.18	3.80	0.76	0.76
14/00316/APP	13.83	14.50	2.93	2.66	0.53	0.53
10/01381/APP 11/00691/APP	17.47	18.31	3.70	3.36	0.67	0.67
16/00739/APP	11.75	12.32	2.49	2.26	0.45	0.45
16/00227/APP	24.34	25.51	5.15	4.68	0.94	0.94
16/00177/FUL	27.14	28.45	5.74	5.22	1.04	1.04
13/00986/APP	11.44	11.99	2.42	2.20	0.44	0.44
16/00379/APP	13.10	13.73	2.77	2.52	0.50	0.50
12/00640/FUL	251.03	254.57	13.26	13.45	1.92	1.79
15/00755/FUL	7.69	6.62	2.21	2.21	0.46	0.46

Policy/ Application Reference	2026					
	PM Peak (1700-1800)					
	Car		LGV		HGV	
	O	D	O	D	O	D
13/01683/REM	20.53	39.19	1.24	1.24	0.00	0.00
15/01794/REM	19.80	37.80	1.20	1.20	0.00	0.00
13/00106/FUL	11.56	24.40	1.50	3.00	0.21	0.21
14/00838/FUL	40.72	85.96	5.28	10.56	0.75	0.75
12/01612/FUL	15.44	32.60	2.00	4.00	0.29	0.29
16/02000/OUT / A4	189.07	399.14	24.51	49.02	3.50	3.50
A7	62.96	132.92	8.16	16.32	1.17	1.17
A4 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A7 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
11/00809/REM	24.68	2.28	0.41	0.37	0.00	0.00
11/00809/REM	1.36	1.01	0.22	0.13	0.00	0.00
12/00091/FUL	28.85	2.67	0.47	0.43	0.00	0.00
08/01342/FUL	0.20	0.15	0.03	0.02	0.00	0.00
11/01429/FUL	2.60	0.52	0.67	0.23	1.80	1.35
10/00245/COU	9.26	0.86	0.15	0.14	0.00	0.00
10/00245/COU	2.88	1.65	0.12	0.08	0.00	0.00
11/01125/FUL	52.05	75.32	1.62	2.34	0.91	0.53
12/01392/COU	1.05	2.85	0.10	0.25	0.00	0.00
12/01392/COU	1.72	2.91	0.19	0.32	0.00	0.00
14/00840/COU	0.88	0.18	0.23	0.08	0.61	0.46
14/01922/COU	5.36	14.57	0.51	1.28	0.00	0.00
14/01922/COU	9.75	17.39	0.73	0.29	0.00	0.00
14/01922/COU	27.02	39.09	0.84	1.21	0.47	0.28

Policy/ Application Reference	2026					
	PM Peak (1700-1800)					
	Car		LGV		HGV	
	O	D	O	D	O	D
16/01490/FUL	27.83	26.69	1.47	1.41	0.12	0.10
16/01490/FUL	2.57	6.98	0.25	0.61	0.00	0.00
16/01490/FUL	8.42	12.19	0.26	0.38	0.15	0.09
16/01603/COU	1.45	0.34	0.66	0.35	0.23	0.16
17/02128/FUL	293.41	281.32	15.48	14.83	1.29	1.03
17/02128/FUL	1.60	4.36	0.15	0.38	0.00	0.00
17/02128/FUL	13.60	1.26	0.22	0.20	0.00	0.00
17/02128/FUL	4.23	2.43	0.17	0.12	0.00	0.00
17/02128/FUL	14.63	21.18	0.46	0.66	0.26	0.15
17/00927/COU	4.41	11.98	0.42	1.05	0.00	0.00
15/01701/FUL	57.47	5.31	0.95	0.86	0.00	0.00
12/00432/FUL	19.98	19.16	1.05	1.01	0.09	0.07
12/00432/FUL	7.69	0.71	0.13	0.11	0.00	0.00
16/01006/COU	1.70	0.39	0.77	0.41	0.27	0.18
16/01006/COU	1.05	0.21	0.27	0.09	0.73	0.55
16/01417/FUL /E1	37.33	3.45	0.61	0.56	0.00	0.00
16/01417/FUL /E1	37.34	3.45	0.61	0.56	0.00	0.00
16/02020/FUL	23.25	22.29	1.23	1.18	0.10	0.08
16/02020/FUL	2.03	1.17	0.08	0.06	0.00	0.00
17/00936/FUL	134.76	129.21	7.11	6.81	0.59	0.47
17/00936/FUL	0.47	1.26	0.04	0.11	0.00	0.00
17/01357/FUL	12.86	1.19	0.21	0.19	0.00	0.00
12/01488/FUL	43.21	3.99	0.71	0.64	0.00	0.00

Policy/ Application Reference	2026					
	PM Peak (1700-1800)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/01162/FUL	14.29	20.68	0.45	0.64	0.25	0.15
16/02275/FUL	30.65	2.83	0.50	0.46	0.00	0.00
16/02275/FUL	2.14	0.50	0.97	0.52	0.34	0.23
16/02275/FUL	1.32	0.27	0.34	0.12	0.92	0.69
17/00764/FUL	84.36	80.89	4.45	4.27	0.37	0.30
17/01523/FUL	71.47	68.52	3.77	3.61	0.31	0.25
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01459/FUL	84.36	80.89	4.45	4.27	0.37	0.30
18/01180/FUL / E3	46.99	4.34	0.77	0.70	0.00	0.00
18/01004/FUL / E3	84.19	7.78	1.38	1.25	0.00	0.00
18/01004/FUL / E3	1.20	3.27	0.11	0.29	0.00	0.00
18/01004/FUL / E3	92.49	88.68	4.88	4.68	0.41	0.33
18/01004/FUL / E3	3.18	1.82	0.13	0.09	0.00	0.00
18/01004/FUL / E3	111.56	10.31	1.83	1.66	0.00	0.00
16/02000/OUT / A4	208.68	19.28	3.43	3.10	0.00	0.00
16/02000/OUT / A4	2.99	5.03	0.33	0.56	0.00	0.00
A7	517.08	47.78	8.50	7.69	0.00	0.00
A7	257.60	19.75	7.02	3.51	1.76	0.88

Policy/ Application Reference	2026					
	PM Peak (1700-1800)					
	Car		LGV		HGV	
	O	D	O	D	O	D
A7	68.61	13.84	2.88	0.61	1.00	1.49
A4 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A4 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A7 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A7 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
09/00897/REM	14.04	29.64	1.82	3.64	0.26	0.26
10/00468/REM	12.96	27.36	1.68	3.36	0.24	0.24
14/01477/REM	14.15	29.87	1.83	3.67	0.26	0.26
07/00472/OUT / 15/00286/REM	18.58	39.22	2.41	4.82	0.34	0.34
10/00467/REM	14.36	30.32	1.86	3.72	0.27	0.27
11/00107/FUL / 15/00362/FUL 16/00088/FUL	28.08	59.28	3.64	7.28	0.52	0.52
15/01144/FUL	17.93	37.85	2.32	4.65	0.33	0.33
15/01591/FUL	14.04	29.64	1.82	3.64	0.26	0.26
16/00165/OUT	27.00	57.00	3.50	7.00	0.50	0.50
14/00709/FUL	36.72	77.52	4.76	9.52	0.68	0.68
16/00948/OUT	27.00	57.00	3.50	7.00	0.50	0.50
15/00749/OUT / A1	113.26	239.10	14.68	29.36	2.10	2.10
15/01149/OUT / A1b	64.04	135.19	8.30	16.60	1.19	1.19
A2	86.35	182.29	11.19	22.39	1.60	1.60
12/01256/OUT / A3	123.28	260.26	15.98	31.96	2.28	2.28
14/01063/OUT / A6	36.73	77.55	4.76	9.52	0.68	0.68
14/01470/OUT / A6	17.49	36.93	2.27	4.53	0.32	0.32
15/00892/FUL	7.49	1.74	3.41	1.81	1.20	0.80



Policy/ Application Reference	2026					
	PM Peak (1700-1800)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/01144/FUL	24.11	65.47	2.30	5.75	0.00	0.00
15/01144/FUL	7.85	13.23	0.87	1.47	0.00	0.00
16/00381/FUL	6.80	18.48	0.65	1.62	0.00	0.00
16/00005/OUT	432.16	414.36	22.80	21.85	1.90	1.52
16/00005/OUT	4.99	4.79	0.26	0.25	0.02	0.02
15/00112/REM	43.80	4.05	0.72	0.65	0.00	0.00
15/00112/REM	2.37	0.48	0.61	0.21	1.65	1.23
16/00158/FUL	23.79	1.82	0.65	0.32	0.16	0.08
14/01035/OUT	72.52	6.70	1.19	1.08	0.00	0.00
14/01035/OUT	23.00	5.34	10.47	5.55	3.70	2.46
16/00957/FUL	13.82	1.06	0.38	0.19	0.09	0.05
16/00322/FUL	5.68	3.26	0.23	0.16	0.00	0.00
15/01190/OUT	1.76	1.31	0.28	0.17	0.00	0.00
15/01190/OUT	49.06	70.98	1.53	2.20	0.86	0.50
14/01158/FUL	46.36	44.45	2.45	2.34	0.20	0.16
14/01163/FUL	51.58	4.77	0.85	0.77	0.00	0.00
15/00657/FUL	14.99	1.39	0.25	0.22	0.00	0.00
16/01022/FUL	10.01	0.77	0.27	0.14	0.07	0.03
16/00957/FUL	46.31	44.41	2.44	2.34	0.20	0.16
16/00957/FUL	13.82	1.06	0.38	0.19	0.09	0.05
A2	239.97	22.17	3.95	3.57	0.00	0.00
A2	9.35	2.17	4.26	2.26	1.50	1.00
A2	7.23	1.45	1.85	0.63	5.01	3.76

Policy/ Application Reference	2026					
	PM Peak (1700-1800)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/00749/OUT / A1	126.03	11.65	2.07	1.88	0.00	0.00
15/00749/OUT / A1	1.66	0.33	0.43	0.15	1.15	0.86
12/01256/OUT / A3	77.48	5.94	2.11	1.06	0.53	0.26
13/00939/APP	21.49	45.37	2.79	5.57	0.40	0.40
13/00163/APP	13.18	27.82	1.71	3.42	0.24	0.24
11/00385/FUL	31.43	66.35	4.07	8.15	0.58	0.58
15/00814/APP	11.45	24.17	1.48	2.97	0.21	0.21
15/01274/APP	23.11	48.79	3.00	5.99	0.43	0.43
16/00292/APP	12.20	25.76	1.58	3.16	0.23	0.23
16/00853/FUL	21.28	44.92	2.76	5.52	0.39	0.39
15/01002/APP	16.20	34.20	2.10	4.20	0.30	0.30
15/01378/OUT	11.45	24.17	1.48	2.97	0.21	0.21
15/00575/APP	13.93	29.41	1.81	3.61	0.26	0.26
10/01216/OUT	20.52	43.32	2.66	5.32	0.38	0.38
14/00316/APP	14.36	30.32	1.86	3.72	0.27	0.27
10/01381/APP 11/00691/APP	18.14	38.30	2.35	4.70	0.34	0.34
16/00739/APP	12.20	25.76	1.58	3.16	0.23	0.23
16/00227/APP	25.27	53.35	3.28	6.55	0.47	0.47
16/00177/FUL	28.19	59.51	3.65	7.31	0.52	0.52
13/00986/APP	11.88	25.08	1.54	3.08	0.22	0.22
16/00379/APP	13.61	28.73	1.76	3.53	0.25	0.25
12/00640/FUL	290.05	278.10	15.30	14.66	1.28	1.02
15/00755/FUL	44.69	3.43	1.22	0.61	0.30	0.15

Policy/ Application Reference	2031					
	AM Peak (0800-0900)					
	Car		LGV		HGV	
	O	D	O	D	O	D
13/01683/REM	42.61	10.89	2.18	2.18	0.62	1.24
15/01794/REM	41.10	10.50	2.10	2.10	0.60	1.20
13/00106/FUL	28.14	9.20	2.46	2.14	0.43	0.43
14/00838/FUL	99.15	32.42	8.67	7.54	1.51	1.51
12/01612/FUL	37.61	12.30	3.29	2.86	0.57	0.57
16/02000/OUT / A4	1019.18	333.27	89.13	77.50	15.50	15.50
A7	261.63	85.55	22.88	19.90	3.98	3.98
A4 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A7 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
11/00809/REM	2.05	28.74	0.85	0.87	0.15	0.15
11/00809/REM	0.97	2.16	0.09	0.04	0.18	0.18
12/00091/FUL	2.39	33.59	0.99	1.02	0.18	0.18
08/01342/FUL	0.14	0.32	0.01	0.01	0.03	0.03
11/01429/FUL	0.97	3.10	0.39	0.81	2.11	2.26
10/00245/COU	0.77	10.78	0.32	0.33	0.06	0.06
10/00245/COU	22.66	29.05	0.43	0.48	0.03	0.03
11/01125/FUL	16.52	18.64	0.53	0.60	1.29	1.52
12/01392/COU	0.00	0.00	0.00	0.00	0.00	0.00
12/01392/COU	3.03	1.98	0.34	0.23	0.10	0.10
14/00840/COU	0.33	1.05	0.13	0.27	0.71	0.77
14/01922/COU	0.00	0.00	0.00	0.00	0.00	0.00
14/01922/COU	0.00	0.00	0.00	0.00	0.00	0.00
14/01922/COU	8.57	9.68	0.28	0.31	0.67	0.79

Policy/ Application Reference	2031					
	AM Peak (0800-0900)					
	Car		LGV		HGV	
	O	D	O	D	O	D
16/01490/FUL	11.54	14.56	0.61	0.77	0.20	0.23
16/01490/FUL	0.00	0.00	0.00	0.00	0.00	0.00
16/01490/FUL	2.67	3.02	0.09	0.10	0.21	0.25
16/01603/COU	0.40	1.66	1.28	1.23	0.47	0.41
17/02128/FUL	121.68	153.47	6.46	8.14	2.07	2.46
17/02128/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/02128/FUL	1.13	15.84	0.47	0.48	0.09	0.09
17/02128/FUL	33.29	42.67	0.63	0.70	0.04	0.04
17/02128/FUL	4.64	5.24	0.15	0.17	0.36	0.43
17/00927/COU	0.00	0.00	0.00	0.00	0.00	0.00
15/01701/FUL	4.77	66.92	1.98	2.03	0.36	0.36
12/00432/FUL	8.29	10.45	0.44	0.55	0.14	0.17
12/00432/FUL	0.64	8.95	0.26	0.27	0.05	0.05
16/01006/COU	0.47	1.94	1.50	1.44	0.55	0.48
16/01006/COU	0.39	1.25	0.16	0.32	0.85	0.91
16/01417/FUL /E1	3.10	43.47	1.29	1.32	0.23	0.23
16/01417/FUL /E1	3.10	43.48	1.29	1.32	0.23	0.23
16/02020/FUL	9.64	12.16	0.51	0.65	0.16	0.19
16/02020/FUL	16.01	20.52	0.30	0.34	0.02	0.02
17/00936/FUL	55.89	70.49	2.97	3.74	0.95	1.13
17/00936/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01357/FUL	1.07	14.97	0.44	0.45	0.08	0.08
12/01488/FUL	3.59	50.32	1.49	1.52	0.27	0.27

Policy/ Application Reference	2031					
	AM Peak (0800-0900)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/01162/FUL	4.53	5.12	0.15	0.16	0.35	0.42
16/02275/FUL	2.54	35.69	1.06	1.08	0.19	0.19
16/02275/FUL	0.59	2.44	1.89	1.81	0.69	0.61
16/02275/FUL	0.49	1.58	0.20	0.41	1.07	1.15
17/00764/FUL	34.99	44.13	1.86	2.34	0.59	0.71
17/01523/FUL	29.64	37.38	1.57	1.98	0.50	0.60
17/01044/FUL	19.11	24.11	1.01	1.28	0.32	0.39
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	1.08	15.11	0.45	0.46	0.08	0.08
17/01044/FUL	0.31	1.30	1.01	0.97	0.37	0.33
17/01044/FUL	0.26	0.84	0.10	0.22	0.57	0.61
17/01044/FUL	31.76	40.71	0.60	0.67	0.04	0.04
17/01459/FUL	34.99	44.13	1.86	2.34	0.59	0.71
18/01180/FUL / E3	3.90	54.72	1.62	1.66	0.29	0.29
18/01004/FUL / E3	6.99	98.04	2.90	2.97	0.53	0.53
18/01004/FUL / E3	0.00	0.00	0.00	0.00	0.00	0.00
18/01004/FUL / E3	38.36	48.38	2.04	2.57	0.65	0.77
18/01004/FUL / E3	25.01	32.06	0.47	0.53	0.03	0.03
18/01004/FUL / E3	9.26	129.90	3.84	3.93	0.70	0.70
16/02000/OUT / A4	38.35	537.92	15.92	16.28	2.89	2.89
16/02000/OUT / A4	11.60	7.59	1.31	0.86	0.38	0.38
A7	80.98	1136.07	33.62	34.38	6.11	6.11
A7	57.96	648.32	21.53	33.12	3.31	4.97

Policy/ Application Reference	2031					
	AM Peak (0800-0900)					
	Car		LGV		HGV	
	O	D	O	D	O	D
A7	16.00	143.56	0.92	6.37	12.22	18.80
A4 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A4 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A7 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A7 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
09/00897/REM	34.19	11.18	2.99	2.60	0.52	0.52
10/00468/REM	31.56	10.32	2.76	2.40	0.48	0.48
14/01477/REM	34.45	11.27	3.01	2.62	0.52	0.52
07/00472/OUT / 15/00286/REM	45.24	14.79	3.96	3.44	0.69	0.69
10/00467/REM	34.98	11.44	3.06	2.66	0.53	0.53
11/00107/FUL / 15/00362/FUL 16/00088/FUL	68.38	22.36	5.98	5.20	1.04	1.04
15/01144/FUL	43.66	14.28	3.82	3.32	0.66	0.66
15/01591/FUL	34.19	11.18	2.99	2.60	0.52	0.52
16/00165/OUT	65.75	21.50	5.75	5.00	1.00	1.00
14/00709/FUL	89.42	29.24	7.82	6.80	1.36	1.36
16/00948/OUT	65.75	21.50	5.75	5.00	1.00	1.00
15/00749/OUT / A1	387.40	126.68	33.88	29.46	5.89	5.89
15/01149/OUT / A1b	216.19	70.69	18.91	16.44	3.29	3.29
A2	289.30	94.60	25.30	22.00	4.40	4.40
12/01256/OUT / A3	394.50	129.00	34.50	30.00	6.00	6.00
14/01063/OUT / A6	110.46	36.12	9.66	8.40	1.68	1.68
14/01470/OUT / A6	52.60	17.20	4.60	4.00	0.80	0.80
15/00892/FUL	2.07	8.56	6.62	6.35	2.41	2.14

Policy/ Application Reference	2031					
	AM Peak (0800-0900)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/01144/FUL	0.00	0.00	0.00	0.00	0.00	0.00
15/01144/FUL	13.78	9.01	1.56	1.03	0.45	0.45
16/00381/FUL	0.00	0.00	0.00	0.00	0.00	0.00
16/00005/OUT	179.23	226.05	9.51	11.99	3.05	3.62
16/00005/OUT	2.07	2.61	0.11	0.14	0.04	0.04
15/00112/REM	3.64	51.00	1.51	1.54	0.27	0.27
15/00112/REM	0.88	2.83	0.35	0.74	1.92	2.06
16/00158/FUL	2.84	31.73	1.05	1.62	0.16	0.24
14/01035/OUT	6.02	84.45	2.50	2.56	0.45	0.45
14/01035/OUT	6.37	26.29	20.33	19.51	7.39	6.57
16/00957/FUL	1.65	18.43	0.61	0.94	0.09	0.14
16/00322/FUL	44.70	57.30	0.84	0.94	0.06	0.06
15/01190/OUT	1.25	2.79	0.11	0.06	0.23	0.23
15/01190/OUT	15.56	17.57	0.50	0.57	1.21	1.43
14/01158/FUL	19.23	24.25	1.02	1.29	0.33	0.39
14/01163/FUL	4.28	60.06	1.78	1.82	0.32	0.32
15/00657/FUL	1.24	17.46	0.52	0.53	0.09	0.09
16/01022/FUL	1.19	13.35	0.44	0.68	0.07	0.10
16/00957/FUL	19.21	24.23	1.02	1.29	0.33	0.39
16/00957/FUL	1.65	18.43	0.61	0.94	0.09	0.14
A2	33.20	465.73	13.78	14.09	2.51	2.51
A2	4.32	17.82	13.78	13.22	5.01	4.45
A2	4.48	14.37	1.78	3.73	9.74	10.44

Policy/ Application Reference	2031					
	AM Peak (0800-0900)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/00749/OUT / A1	16.10	225.79	6.68	6.83	1.21	1.21
15/00749/OUT / A1	0.95	3.05	0.38	0.79	2.07	2.22
12/01256/OUT / A3	15.40	172.26	5.72	8.80	0.88	1.32
13/00939/APP	52.34	17.11	4.58	3.98	0.80	0.80
13/00163/APP	32.09	10.49	2.81	2.44	0.49	0.49
11/00385/FUL	76.53	25.03	6.69	5.82	1.16	1.16
15/00814/APP	27.88	9.12	2.44	2.12	0.42	0.42
15/01274/APP	56.28	18.40	4.92	4.28	0.86	0.86
16/00292/APP	29.72	9.72	2.60	2.26	0.45	0.45
16/00853/FUL	51.81	16.94	4.53	3.94	0.79	0.79
15/01002/APP	39.45	12.90	3.45	3.00	0.60	0.60
15/01378/OUT	27.88	9.12	2.44	2.12	0.42	0.42
15/00575/APP	33.93	11.09	2.97	2.58	0.52	0.52
10/01216/OUT	49.97	16.34	4.37	3.80	0.76	0.76
14/00316/APP	34.98	11.44	3.06	2.66	0.53	0.53
10/01381/APP 11/00691/APP	44.18	14.45	3.86	3.36	0.67	0.67
16/00739/APP	29.72	9.72	2.60	2.26	0.45	0.45
16/00227/APP	61.54	20.12	5.38	4.68	0.94	0.94
16/00177/FUL	68.64	22.45	6.00	5.22	1.04	1.04
13/00986/APP	28.93	9.46	2.53	2.20	0.44	0.44
16/00379/APP	33.14	10.84	2.90	2.52	0.50	0.50
12/00640/FUL	120.29	151.72	6.38	8.05	2.04	2.43
15/00755/FUL	5.33	59.61	1.98	3.05	0.30	0.46



Policy/ Application Reference	2031					
	Inter Peak (Avg Hr 1000-1600)					
	Car		LGV		HGV	
	O	D	O	D	O	D
13/01683/REM	15.86	16.48	3.42	3.42	0.62	0.62
15/01794/REM	15.30	15.90	3.30	3.30	0.60	0.60
13/00106/FUL	11.13	11.66	2.35	2.14	0.43	0.43
14/00838/FUL	39.21	41.09	8.29	7.54	1.51	1.51
12/01612/FUL	14.87	15.59	3.15	2.86	0.57	0.57
16/02000/OUT / A4	403.02	422.40	85.25	77.50	15.50	15.50
A7	103.46	108.43	21.89	19.90	3.98	3.98
A4 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A7 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
11/00809/REM	7.02	5.51	0.66	0.66	0.08	0.08
11/00809/REM	2.20	1.94	0.31	0.31	0.04	0.04
12/00091/FUL	8.20	6.44	0.77	0.77	0.09	0.09
08/01342/FUL	0.33	0.29	0.05	0.05	0.01	0.01
11/01429/FUL	1.46	1.17	0.48	0.46	2.11	2.48
10/00245/COU	2.63	2.07	0.25	0.25	0.03	0.03
10/00245/COU	5.04	4.52	0.25	0.26	0.07	0.07
11/01125/FUL	38.05	43.12	1.21	1.37	2.27	2.20
12/01392/COU	2.24	2.76	0.31	0.33	0.06	0.06
12/01392/COU	1.72	1.49	0.20	0.17	0.10	0.08
14/00840/COU	0.49	0.40	0.16	0.15	0.71	0.84
14/01922/COU	11.44	14.14	1.59	1.66	0.28	0.28
14/01922/COU	6.62	7.79	0.38	0.49	0.32	0.32
14/01922/COU	19.75	22.38	0.63	0.71	1.18	1.14

Policy/ Application Reference	2031					
	Inter Peak (Avg Hr 1000-1600)					
	Car		LGV		HGV	
	O	D	O	D	O	D
16/01490/FUL	24.09	24.43	1.27	1.29	0.18	0.17
16/01490/FUL	5.48	6.77	0.76	0.80	0.13	0.13
16/01490/FUL	6.16	6.98	0.20	0.22	0.37	0.36
16/01603/COU	1.11	0.96	1.04	1.06	0.44	0.47
17/02128/FUL	253.94	257.52	13.42	13.60	1.94	1.81
17/02128/FUL	3.42	4.23	0.47	0.50	0.08	0.08
17/02128/FUL	3.87	3.04	0.36	0.36	0.04	0.04
17/02128/FUL	7.40	6.63	0.37	0.38	0.11	0.11
17/02128/FUL	10.70	12.12	0.34	0.38	0.64	0.62
17/00927/COU	9.41	11.64	1.31	1.37	0.23	0.23
15/01701/FUL	16.34	12.83	1.53	1.53	0.18	0.18
12/00432/FUL	17.29	17.53	0.91	0.93	0.13	0.12
12/00432/FUL	2.19	1.72	0.20	0.20	0.02	0.02
16/01006/COU	1.30	1.12	1.21	1.24	0.52	0.55
16/01006/COU	0.59	0.47	0.19	0.18	0.85	1.00
16/01417/FUL /E1	10.61	8.33	0.99	0.99	0.12	0.12
16/01417/FUL /E1	10.61	8.33	0.99	0.99	0.12	0.12
16/02020/FUL	20.12	20.40	1.06	1.08	0.15	0.14
16/02020/FUL	3.56	3.19	0.18	0.18	0.05	0.05
17/00936/FUL	116.63	118.28	6.16	6.25	0.89	0.83
17/00936/FUL	0.99	1.23	0.14	0.14	0.02	0.02
17/01357/FUL	3.66	2.87	0.34	0.34	0.04	0.04
12/01488/FUL	12.28	9.64	1.15	1.15	0.14	0.14

Policy/ Application Reference	2031					
	Inter Peak (Avg Hr 1000-1600)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/01162/FUL	10.45	11.84	0.33	0.38	0.62	0.60
16/02275/FUL	8.71	6.84	0.82	0.82	0.10	0.10
16/02275/FUL	1.64	1.41	1.53	1.57	0.65	0.69
16/02275/FUL	0.74	0.59	0.24	0.23	1.07	1.26
17/00764/FUL	73.01	74.04	3.86	3.91	0.56	0.52
17/01523/FUL	61.85	62.73	3.27	3.31	0.47	0.44
17/01044/FUL	39.89	40.45	2.11	2.14	0.30	0.28
17/01044/FUL	9.08	11.23	1.26	1.32	0.22	0.22
17/01044/FUL	3.69	2.90	0.35	0.35	0.04	0.04
17/01044/FUL	0.87	0.75	0.81	0.83	0.35	0.37
17/01044/FUL	0.39	0.31	0.13	0.12	0.57	0.67
17/01044/FUL	7.06	6.33	0.35	0.37	0.10	0.10
17/01459/FUL	73.01	74.04	3.86	3.91	0.56	0.52
18/01180/FUL / E3	13.36	10.49	1.25	1.25	0.15	0.15
18/01004/FUL / E3	23.93	18.79	2.24	2.24	0.26	0.26
18/01004/FUL / E3	2.57	3.17	0.36	0.37	0.06	0.06
18/01004/FUL / E3	80.05	81.18	4.23	4.29	0.61	0.57
18/01004/FUL / E3	5.56	4.98	0.28	0.29	0.08	0.08
18/01004/FUL / E3	31.71	24.90	2.97	2.97	0.35	0.35
16/02000/OUT / A4	131.31	103.10	12.30	12.30	1.45	1.45
16/02000/OUT / A4	6.60	5.69	0.75	0.65	0.38	0.32
A7	277.33	217.74	25.98	25.98	3.06	3.06
A7	83.63	72.04	24.01	24.01	4.97	4.97

Policy/ Application Reference	2031					
	Inter Peak (Avg Hr 1000-1600)					
	Car		LGV		HGV	
	O	D	O	D	O	D
A7	43.13	34.46	2.12	1.82	15.04	17.86
A4 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A4 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A7 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A7 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
09/00897/REM	13.52	14.17	2.86	2.60	0.52	0.52
10/00468/REM	12.48	13.08	2.64	2.40	0.48	0.48
14/01477/REM	13.62	14.28	2.88	2.62	0.52	0.52
07/00472/OUT / 15/00286/REM	17.89	18.75	3.78	3.44	0.69	0.69
10/00467/REM	13.83	14.50	2.93	2.66	0.53	0.53
11/00107/FUL / 15/00362/FUL 16/00088/FUL	27.04	28.34	5.72	5.20	1.04	1.04
15/01144/FUL	17.26	18.09	3.65	3.32	0.66	0.66
15/01591/FUL	13.52	14.17	2.86	2.60	0.52	0.52
16/00165/OUT	26.00	27.25	5.50	5.00	1.00	1.00
14/00709/FUL	35.36	37.06	7.48	6.80	1.36	1.36
16/00948/OUT	26.00	27.25	5.50	5.00	1.00	1.00
15/00749/OUT / A1	153.19	160.56	32.41	29.46	5.89	5.89
15/01149/OUT / A1b	85.49	89.60	18.08	16.44	3.29	3.29
A2	114.40	119.90	24.20	22.00	4.40	4.40
12/01256/OUT / A3	156.00	163.50	33.00	30.00	6.00	6.00
14/01063/OUT / A6	43.68	45.78	9.24	8.40	1.68	1.68
14/01470/OUT / A6	20.80	21.80	4.40	4.00	0.80	0.80
15/00892/FUL	5.75	4.95	5.35	5.48	2.27	2.41

Policy/ Application Reference	2031					
	Inter Peak (Avg Hr 1000-1600)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/01144/FUL	51.43	63.57	7.13	7.48	1.27	1.27
15/01144/FUL	7.84	6.76	0.89	0.77	0.45	0.38
16/00381/FUL	14.52	17.95	2.01	2.11	0.36	0.36
16/00005/OUT	374.03	379.31	19.76	20.03	2.86	2.67
16/00005/OUT	4.32	4.38	0.23	0.23	0.03	0.03
15/00112/REM	12.45	9.78	1.17	1.17	0.14	0.14
15/00112/REM	1.33	1.06	0.44	0.42	1.92	2.26
16/00158/FUL	4.09	3.53	1.18	1.18	0.24	0.24
14/01035/OUT	20.61	16.19	1.93	1.93	0.23	0.23
14/01035/OUT	17.66	15.20	16.43	16.84	6.98	7.39
16/00957/FUL	2.38	2.05	0.68	0.68	0.14	0.14
16/00322/FUL	9.94	8.91	0.49	0.51	0.14	0.14
15/01190/OUT	2.85	2.50	0.40	0.40	0.06	0.06
15/01190/OUT	35.86	40.63	1.14	1.29	2.14	2.07
14/01158/FUL	40.12	40.69	2.12	2.15	0.31	0.29
14/01163/FUL	14.66	11.51	1.37	1.37	0.16	0.16
15/00657/FUL	4.26	3.35	0.40	0.40	0.05	0.05
16/01022/FUL	1.72	1.48	0.49	0.49	0.10	0.10
16/00957/FUL	40.08	40.65	2.12	2.15	0.31	0.29
16/00957/FUL	2.38	2.05	0.68	0.68	0.14	0.14
A2	113.69	89.26	10.65	10.65	1.25	1.25
A2	11.97	10.30	11.14	11.41	4.73	5.01
A2	6.74	5.39	2.23	2.11	9.74	11.48

Policy/ Application Reference	2031					
	Inter Peak (Avg Hr 1000-1600)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/00749/OUT / A1	55.12	43.27	5.16	5.16	0.61	0.61
15/00749/OUT / A1	1.43	1.15	0.47	0.45	2.07	2.44
12/01256/OUT / A3	22.22	19.14	6.38	6.38	1.32	1.32
13/00939/APP	20.70	21.69	4.38	3.98	0.80	0.80
13/00163/APP	12.69	13.30	2.68	2.44	0.49	0.49
11/00385/FUL	30.26	31.72	6.40	5.82	1.16	1.16
15/00814/APP	11.02	11.55	2.33	2.12	0.42	0.42
15/01274/APP	22.26	23.33	4.71	4.28	0.86	0.86
16/00292/APP	11.75	12.32	2.49	2.26	0.45	0.45
16/00853/FUL	20.49	21.47	4.33	3.94	0.79	0.79
15/01002/APP	15.60	16.35	3.30	3.00	0.60	0.60
15/01378/OUT	11.02	11.55	2.33	2.12	0.42	0.42
15/00575/APP	13.42	14.06	2.84	2.58	0.52	0.52
10/01216/OUT	19.76	20.71	4.18	3.80	0.76	0.76
14/00316/APP	13.83	14.50	2.93	2.66	0.53	0.53
10/01381/APP 11/00691/APP	17.47	18.31	3.70	3.36	0.67	0.67
16/00739/APP	11.75	12.32	2.49	2.26	0.45	0.45
16/00227/APP	24.34	25.51	5.15	4.68	0.94	0.94
16/00177/FUL	27.14	28.45	5.74	5.22	1.04	1.04
13/00986/APP	11.44	11.99	2.42	2.20	0.44	0.44
16/00379/APP	13.10	13.73	2.77	2.52	0.50	0.50
12/00640/FUL	251.03	254.57	13.26	13.45	1.92	1.79
15/00755/FUL	7.69	6.62	2.21	2.21	0.46	0.46

Policy/ Application Reference	2031					
	PM Peak (1700-1800)					
	Car		LGV		HGV	
	O	D	O	D	O	D
13/01683/REM	20.53	39.19	1.24	1.24	0.00	0.00
15/01794/REM	19.80	37.80	1.20	1.20	0.00	0.00
13/00106/FUL	11.56	24.40	1.50	3.00	0.21	0.21
14/00838/FUL	40.72	85.96	5.28	10.56	0.75	0.75
12/01612/FUL	15.44	32.60	2.00	4.00	0.29	0.29
16/02000/OUT / A4	418.52	883.55	54.25	108.51	7.75	7.75
A7	107.44	226.81	13.93	27.85	1.99	1.99
A4 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A7 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
11/00809/REM	24.68	2.28	0.41	0.37	0.00	0.00
11/00809/REM	1.36	1.01	0.22	0.13	0.00	0.00
12/00091/FUL	28.85	2.67	0.47	0.43	0.00	0.00
08/01342/FUL	0.20	0.15	0.03	0.02	0.00	0.00
11/01429/FUL	2.60	0.52	0.67	0.23	1.80	1.35
10/00245/COU	9.26	0.86	0.15	0.14	0.00	0.00
10/00245/COU	2.88	1.65	0.12	0.08	0.00	0.00
11/01125/FUL	52.05	75.32	1.62	2.34	0.91	0.53
12/01392/COU	1.05	2.85	0.10	0.25	0.00	0.00
12/01392/COU	1.72	2.91	0.19	0.32	0.00	0.00
14/00840/COU	0.88	0.18	0.23	0.08	0.61	0.46
14/01922/COU	5.36	14.57	0.51	1.28	0.00	0.00
14/01922/COU	9.75	17.39	0.73	0.29	0.00	0.00
14/01922/COU	27.02	39.09	0.84	1.21	0.47	0.28

Policy/ Application Reference	2031					
	PM Peak (1700-1800)					
	Car		LGV		HGV	
	O	D	O	D	O	D
16/01490/FUL	27.83	26.69	1.47	1.41	0.12	0.10
16/01490/FUL	2.57	6.98	0.25	0.61	0.00	0.00
16/01490/FUL	8.42	12.19	0.26	0.38	0.15	0.09
16/01603/COU	1.45	0.34	0.66	0.35	0.23	0.16
17/02128/FUL	293.41	281.32	15.48	14.83	1.29	1.03
17/02128/FUL	1.60	4.36	0.15	0.38	0.00	0.00
17/02128/FUL	13.60	1.26	0.22	0.20	0.00	0.00
17/02128/FUL	4.23	2.43	0.17	0.12	0.00	0.00
17/02128/FUL	14.63	21.18	0.46	0.66	0.26	0.15
17/00927/COU	4.41	11.98	0.42	1.05	0.00	0.00
15/01701/FUL	57.47	5.31	0.95	0.86	0.00	0.00
12/00432/FUL	19.98	19.16	1.05	1.01	0.09	0.07
12/00432/FUL	7.69	0.71	0.13	0.11	0.00	0.00
16/01006/COU	1.70	0.39	0.77	0.41	0.27	0.18
16/01006/COU	1.05	0.21	0.27	0.09	0.73	0.55
16/01417/FUL /E1	37.33	3.45	0.61	0.56	0.00	0.00
16/01417/FUL /E1	37.34	3.45	0.61	0.56	0.00	0.00
16/02020/FUL	23.25	22.29	1.23	1.18	0.10	0.08
16/02020/FUL	2.03	1.17	0.08	0.06	0.00	0.00
17/00936/FUL	134.76	129.21	7.11	6.81	0.59	0.47
17/00936/FUL	0.47	1.26	0.04	0.11	0.00	0.00
17/01357/FUL	12.86	1.19	0.21	0.19	0.00	0.00
12/01488/FUL	43.21	3.99	0.71	0.64	0.00	0.00



Policy/ Application Reference	2031					
	PM Peak (1700-1800)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/01162/FUL	14.29	20.68	0.45	0.64	0.25	0.15
16/02275/FUL	30.65	2.83	0.50	0.46	0.00	0.00
16/02275/FUL	2.14	0.50	0.97	0.52	0.34	0.23
16/02275/FUL	1.32	0.27	0.34	0.12	0.92	0.69
17/00764/FUL	84.36	80.89	4.45	4.27	0.37	0.30
17/01523/FUL	71.47	68.52	3.77	3.61	0.31	0.25
17/01044/FUL	46.09	44.19	2.43	2.33	0.20	0.16
17/01044/FUL	4.26	11.56	0.41	1.02	0.00	0.00
17/01044/FUL	12.97	1.20	0.21	0.19	0.00	0.00
17/01044/FUL	1.14	0.26	0.52	0.27	0.18	0.12
17/01044/FUL	0.70	0.14	0.18	0.06	0.49	0.37
17/01044/FUL	4.03	2.32	0.16	0.11	0.00	0.00
17/01459/FUL	84.36	80.89	4.45	4.27	0.37	0.30
18/01180/FUL / E3	46.99	4.34	0.77	0.70	0.00	0.00
18/01004/FUL / E3	84.19	7.78	1.38	1.25	0.00	0.00
18/01004/FUL / E3	1.20	3.27	0.11	0.29	0.00	0.00
18/01004/FUL / E3	92.49	88.68	4.88	4.68	0.41	0.33
18/01004/FUL / E3	3.18	1.82	0.13	0.09	0.00	0.00
18/01004/FUL / E3	111.56	10.31	1.83	1.66	0.00	0.00
16/02000/OUT / A4	461.95	42.69	7.60	6.87	0.00	0.00
16/02000/OUT / A4	6.61	11.14	0.73	1.24	0.00	0.00
A7	975.63	90.15	16.04	14.52	0.00	0.00
A7	486.04	37.26	13.25	6.62	3.31	1.66

Policy/ Application Reference	2031					
	PM Peak (1700-1800)					
	Car		LGV		HGV	
	O	D	O	D	O	D
A7	129.46	26.11	5.43	1.15	1.88	2.82
A4 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A4 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A7 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
A7 Safeguarded	0.00	0.00	0.00	0.00	0.00	0.00
09/00897/REM	14.04	29.64	1.82	3.64	0.26	0.26
10/00468/REM	12.96	27.36	1.68	3.36	0.24	0.24
14/01477/REM	14.15	29.87	1.83	3.67	0.26	0.26
07/00472/OUT / 15/00286/REM	18.58	39.22	2.41	4.82	0.34	0.34
10/00467/REM	14.36	30.32	1.86	3.72	0.27	0.27
11/00107/FUL / 15/00362/FUL 16/00088/FUL	28.08	59.28	3.64	7.28	0.52	0.52
15/01144/FUL	17.93	37.85	2.32	4.65	0.33	0.33
15/01591/FUL	14.04	29.64	1.82	3.64	0.26	0.26
16/00165/OUT	27.00	57.00	3.50	7.00	0.50	0.50
14/00709/FUL	36.72	77.52	4.76	9.52	0.68	0.68
16/00948/OUT	27.00	57.00	3.50	7.00	0.50	0.50
15/00749/OUT / A1	159.08	335.84	20.62	41.24	2.95	2.95
15/01149/OUT / A1b	88.78	187.42	11.51	23.02	1.64	1.64
A2	118.80	250.80	15.40	30.80	2.20	2.20
12/01256/OUT / A3	162.00	342.00	21.00	42.00	3.00	3.00
14/01063/OUT / A6	45.36	95.76	5.88	11.76	0.84	0.84
14/01470/OUT / A6	21.60	45.60	2.80	5.60	0.40	0.40
15/00892/FUL	7.49	1.74	3.41	1.81	1.20	0.80

Policy/ Application Reference	2031					
	PM Peak (1700-1800)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/01144/FUL	24.11	65.47	2.30	5.75	0.00	0.00
15/01144/FUL	7.85	13.23	0.87	1.47	0.00	0.00
16/00381/FUL	6.80	18.48	0.65	1.62	0.00	0.00
16/00005/OUT	432.16	414.36	22.80	21.85	1.90	1.52
16/00005/OUT	4.99	4.79	0.26	0.25	0.02	0.02
15/00112/REM	43.80	4.05	0.72	0.65	0.00	0.00
15/00112/REM	2.37	0.48	0.61	0.21	1.65	1.23
16/00158/FUL	23.79	1.82	0.65	0.32	0.16	0.08
14/01035/OUT	72.52	6.70	1.19	1.08	0.00	0.00
14/01035/OUT	23.00	5.34	10.47	5.55	3.70	2.46
16/00957/FUL	13.82	1.06	0.38	0.19	0.09	0.05
16/00322/FUL	5.68	3.26	0.23	0.16	0.00	0.00
15/01190/OUT	1.76	1.31	0.28	0.17	0.00	0.00
15/01190/OUT	49.06	70.98	1.53	2.20	0.86	0.50
14/01158/FUL	46.36	44.45	2.45	2.34	0.20	0.16
14/01163/FUL	51.58	4.77	0.85	0.77	0.00	0.00
15/00657/FUL	14.99	1.39	0.25	0.22	0.00	0.00
16/01022/FUL	10.01	0.77	0.27	0.14	0.07	0.03
16/00957/FUL	46.31	44.41	2.44	2.34	0.20	0.16
16/00957/FUL	13.82	1.06	0.38	0.19	0.09	0.05
A2	399.96	36.96	6.58	5.95	0.00	0.00
A2	15.59	3.62	7.10	3.76	2.51	1.67
A2	12.05	2.42	3.09	1.06	8.35	6.26

Policy/ Application Reference	2031					
	PM Peak (1700-1800)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/00749/OUT / A1	193.90	17.92	3.19	2.88	0.00	0.00
15/00749/OUT / A1	2.56	0.51	0.66	0.22	1.77	1.33
12/01256/OUT / A3	129.14	9.90	3.52	1.76	0.88	0.44
13/00939/APP	21.49	45.37	2.79	5.57	0.40	0.40
13/00163/APP	13.18	27.82	1.71	3.42	0.24	0.24
11/00385/FUL	31.43	66.35	4.07	8.15	0.58	0.58
15/00814/APP	11.45	24.17	1.48	2.97	0.21	0.21
15/01274/APP	23.11	48.79	3.00	5.99	0.43	0.43
16/00292/APP	12.20	25.76	1.58	3.16	0.23	0.23
16/00853/FUL	21.28	44.92	2.76	5.52	0.39	0.39
15/01002/APP	16.20	34.20	2.10	4.20	0.30	0.30
15/01378/OUT	11.45	24.17	1.48	2.97	0.21	0.21
15/00575/APP	13.93	29.41	1.81	3.61	0.26	0.26
10/01216/OUT	20.52	43.32	2.66	5.32	0.38	0.38
14/00316/APP	14.36	30.32	1.86	3.72	0.27	0.27
10/01381/APP 11/00691/APP	18.14	38.30	2.35	4.70	0.34	0.34
16/00739/APP	12.20	25.76	1.58	3.16	0.23	0.23
16/00227/APP	25.27	53.35	3.28	6.55	0.47	0.47
16/00177/FUL	28.19	59.51	3.65	7.31	0.52	0.52
13/00986/APP	11.88	25.08	1.54	3.08	0.22	0.22
16/00379/APP	13.61	28.73	1.76	3.53	0.25	0.25
12/00640/FUL	290.05	278.10	15.30	14.66	1.28	1.02
15/00755/FUL	44.69	3.43	1.22	0.61	0.30	0.15

Policy/ Application Reference	2036					
	AM Peak (0800-0900)					
	Car		LGV		HGV	
	O	D	O	D	O	D
13/01683/REM	42.61	10.89	2.18	2.18	0.62	1.24
15/01794/REM	41.10	10.50	2.10	2.10	0.60	1.20
13/00106/FUL	28.14	9.20	2.46	2.14	0.43	0.43
14/00838/FUL	99.15	32.42	8.67	7.54	1.51	1.51
12/01612/FUL	37.61	12.30	3.29	2.86	0.57	0.57
16/02000/OUT / A4	1126.96	368.51	98.56	85.70	17.14	17.14
A7	289.30	94.60	25.30	22.00	4.40	4.40
A4 Safeguarded	526.00	172.00	46.00	40.00	8.00	8.00
A7 Safeguarded	197.25	64.50	17.25	15.00	3.00	3.00
11/00809/REM	2.05	28.74	0.85	0.87	0.15	0.15
11/00809/REM	0.97	2.16	0.09	0.04	0.18	0.18
12/00091/FUL	2.39	33.59	0.99	1.02	0.18	0.18
08/01342/FUL	0.14	0.32	0.01	0.01	0.03	0.03
11/01429/FUL	0.97	3.10	0.39	0.81	2.11	2.26
10/00245/COU	0.77	10.78	0.32	0.33	0.06	0.06
10/00245/COU	22.66	29.05	0.43	0.48	0.03	0.03
11/01125/FUL	16.52	18.64	0.53	0.60	1.29	1.52
12/01392/COU	0.00	0.00	0.00	0.00	0.00	0.00
12/01392/COU	3.03	1.98	0.34	0.23	0.10	0.10
14/00840/COU	0.33	1.05	0.13	0.27	0.71	0.77
14/01922/COU	0.00	0.00	0.00	0.00	0.00	0.00
14/01922/COU	0.00	0.00	0.00	0.00	0.00	0.00
14/01922/COU	8.57	9.68	0.28	0.31	0.67	0.79

Policy/ Application Reference	2036					
	AM Peak (0800-0900)					
	Car		LGV		HGV	
	O	D	O	D	O	D
16/01490/FUL	11.54	14.56	0.61	0.77	0.20	0.23
16/01490/FUL	0.00	0.00	0.00	0.00	0.00	0.00
16/01490/FUL	2.67	3.02	0.09	0.10	0.21	0.25
16/01603/COU	0.40	1.66	1.28	1.23	0.47	0.41
17/02128/FUL	121.68	153.47	6.46	8.14	2.07	2.46
17/02128/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/02128/FUL	1.13	15.84	0.47	0.48	0.09	0.09
17/02128/FUL	33.29	42.67	0.63	0.70	0.04	0.04
17/02128/FUL	4.64	5.24	0.15	0.17	0.36	0.43
17/00927/COU	0.00	0.00	0.00	0.00	0.00	0.00
15/01701/FUL	4.77	66.92	1.98	2.03	0.36	0.36
12/00432/FUL	8.29	10.45	0.44	0.55	0.14	0.17
12/00432/FUL	0.64	8.95	0.26	0.27	0.05	0.05
16/01006/COU	0.47	1.94	1.50	1.44	0.55	0.48
16/01006/COU	0.39	1.25	0.16	0.32	0.85	0.91
16/01417/FUL /E1	3.10	43.47	1.29	1.32	0.23	0.23
16/01417/FUL /E1	3.10	43.48	1.29	1.32	0.23	0.23
16/02020/FUL	9.64	12.16	0.51	0.65	0.16	0.19
16/02020/FUL	16.01	20.52	0.30	0.34	0.02	0.02
17/00936/FUL	55.89	70.49	2.97	3.74	0.95	1.13
17/00936/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01357/FUL	1.07	14.97	0.44	0.45	0.08	0.08
12/01488/FUL	3.59	50.32	1.49	1.52	0.27	0.27

Policy/ Application Reference	2036					
	AM Peak (0800-0900)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/01162/FUL	4.53	5.12	0.15	0.16	0.35	0.42
16/02275/FUL	2.54	35.69	1.06	1.08	0.19	0.19
16/02275/FUL	0.59	2.44	1.89	1.81	0.69	0.61
16/02275/FUL	0.49	1.58	0.20	0.41	1.07	1.15
17/00764/FUL	34.99	44.13	1.86	2.34	0.59	0.71
17/01523/FUL	29.64	37.38	1.57	1.98	0.50	0.60
17/01044/FUL	19.11	24.11	1.01	1.28	0.32	0.39
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	1.08	15.11	0.45	0.46	0.08	0.08
17/01044/FUL	0.31	1.30	1.01	0.97	0.37	0.33
17/01044/FUL	0.26	0.84	0.10	0.22	0.57	0.61
17/01044/FUL	31.76	40.71	0.60	0.67	0.04	0.04
17/01459/FUL	34.99	44.13	1.86	2.34	0.59	0.71
18/01180/FUL / E3	3.90	54.72	1.62	1.66	0.29	0.29
18/01004/FUL / E3	6.99	98.04	2.90	2.97	0.53	0.53
18/01004/FUL / E3	0.00	0.00	0.00	0.00	0.00	0.00
18/01004/FUL / E3	38.36	48.38	2.04	2.57	0.65	0.77
18/01004/FUL / E3	25.01	32.06	0.47	0.53	0.03	0.03
18/01004/FUL / E3	9.26	129.90	3.84	3.93	0.70	0.70
16/02000/OUT / A4	42.40	594.80	17.60	18.00	3.20	3.20
16/02000/OUT / A4	12.83	8.39	1.45	0.96	0.42	0.42
A7	80.98	1136.07	33.62	34.38	6.11	6.11
A7	57.96	648.32	21.53	33.12	3.31	4.97

Policy/ Application Reference	2036					
	AM Peak (0800-0900)					
	Car		LGV		HGV	
	O	D	O	D	O	D
A7	16.00	143.56	0.92	6.37	12.22	18.80
A4 Safeguarded	79.25	1111.68	32.89	33.64	5.98	5.98
A4 Safeguarded	9.93	41.01	31.72	30.44	11.53	10.25
A7 Safeguarded	8.46	118.66	3.51	3.59	0.64	0.64
A7 Safeguarded	1.06	4.38	3.39	3.25	1.23	1.09
09/00897/REM	34.19	11.18	2.99	2.60	0.52	0.52
10/00468/REM	31.56	10.32	2.76	2.40	0.48	0.48
14/01477/REM	34.45	11.27	3.01	2.62	0.52	0.52
07/00472/OUT / 15/00286/REM	45.24	14.79	3.96	3.44	0.69	0.69
10/00467/REM	34.98	11.44	3.06	2.66	0.53	0.53
11/00107/FUL / 15/00362/FUL 16/00088/FUL	68.38	22.36	5.98	5.20	1.04	1.04
15/01144/FUL	43.66	14.28	3.82	3.32	0.66	0.66
15/01591/FUL	34.19	11.18	2.99	2.60	0.52	0.52
16/00165/OUT	65.75	21.50	5.75	5.00	1.00	1.00
14/00709/FUL	89.42	29.24	7.82	6.80	1.36	1.36
16/00948/OUT	65.75	21.50	5.75	5.00	1.00	1.00
15/00749/OUT / A1	387.40	126.68	33.88	29.46	5.89	5.89
15/01149/OUT / A1b	216.19	70.69	18.91	16.44	3.29	3.29
A2	289.30	94.60	25.30	22.00	4.40	4.40
12/01256/OUT / A3	394.50	129.00	34.50	30.00	6.00	6.00
14/01063/OUT / A6	110.46	36.12	9.66	8.40	1.68	1.68
14/01470/OUT / A6	52.60	17.20	4.60	4.00	0.80	0.80
15/00892/FUL	2.07	8.56	6.62	6.35	2.41	2.14



Policy/ Application Reference	2036					
	AM Peak (0800-0900)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/01144/FUL	0.00	0.00	0.00	0.00	0.00	0.00
15/01144/FUL	13.78	9.01	1.56	1.03	0.45	0.45
16/00381/FUL	0.00	0.00	0.00	0.00	0.00	0.00
16/00005/OUT	179.23	226.05	9.51	11.99	3.05	3.62
16/00005/OUT	2.07	2.61	0.11	0.14	0.04	0.04
15/00112/REM	3.64	51.00	1.51	1.54	0.27	0.27
15/00112/REM	0.88	2.83	0.35	0.74	1.92	2.06
16/00158/FUL	2.84	31.73	1.05	1.62	0.16	0.24
14/01035/OUT	6.02	84.45	2.50	2.56	0.45	0.45
14/01035/OUT	6.37	26.29	20.33	19.51	7.39	6.57
16/00957/FUL	1.65	18.43	0.61	0.94	0.09	0.14
16/00322/FUL	44.70	57.30	0.84	0.94	0.06	0.06
15/01190/OUT	1.25	2.79	0.11	0.06	0.23	0.23
15/01190/OUT	15.56	17.57	0.50	0.57	1.21	1.43
14/01158/FUL	19.23	24.25	1.02	1.29	0.33	0.39
14/01163/FUL	4.28	60.06	1.78	1.82	0.32	0.32
15/00657/FUL	1.24	17.46	0.52	0.53	0.09	0.09
16/01022/FUL	1.19	13.35	0.44	0.68	0.07	0.10
16/00957/FUL	19.21	24.23	1.02	1.29	0.33	0.39
16/00957/FUL	1.65	18.43	0.61	0.94	0.09	0.14
A2	33.20	465.73	13.78	14.09	2.51	2.51
A2	4.32	17.82	13.78	13.22	5.01	4.45
A2	4.48	14.37	1.78	3.73	9.74	10.44

Policy/ Application Reference	2036					
	AM Peak (0800-0900)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/00749/OUT / A1	16.10	225.79	6.68	6.83	1.21	1.21
15/00749/OUT / A1	0.95	3.05	0.38	0.79	2.07	2.22
12/01256/OUT / A3	15.40	172.26	5.72	8.80	0.88	1.32
13/00939/APP	52.34	17.11	4.58	3.98	0.80	0.80
13/00163/APP	32.09	10.49	2.81	2.44	0.49	0.49
11/00385/FUL	76.53	25.03	6.69	5.82	1.16	1.16
15/00814/APP	27.88	9.12	2.44	2.12	0.42	0.42
15/01274/APP	56.28	18.40	4.92	4.28	0.86	0.86
16/00292/APP	29.72	9.72	2.60	2.26	0.45	0.45
16/00853/FUL	51.81	16.94	4.53	3.94	0.79	0.79
15/01002/APP	39.45	12.90	3.45	3.00	0.60	0.60
15/01378/OUT	27.88	9.12	2.44	2.12	0.42	0.42
15/00575/APP	33.93	11.09	2.97	2.58	0.52	0.52
10/01216/OUT	49.97	16.34	4.37	3.80	0.76	0.76
14/00316/APP	34.98	11.44	3.06	2.66	0.53	0.53
10/01381/APP 11/00691/APP	44.18	14.45	3.86	3.36	0.67	0.67
16/00739/APP	29.72	9.72	2.60	2.26	0.45	0.45
16/00227/APP	61.54	20.12	5.38	4.68	0.94	0.94
16/00177/FUL	68.64	22.45	6.00	5.22	1.04	1.04
13/00986/APP	28.93	9.46	2.53	2.20	0.44	0.44
16/00379/APP	33.14	10.84	2.90	2.52	0.50	0.50
12/00640/FUL	120.29	151.72	6.38	8.05	2.04	2.43
15/00755/FUL	5.33	59.61	1.98	3.05	0.30	0.46

Policy/ Application Reference	2036					
	Inter Peak (Avg Hr 1000-1600)					
	Car		LGV		HGV	
	O	D	O	D	O	D
13/01683/REM	15.86	16.48	3.42	3.42	0.62	0.62
15/01794/REM	15.30	15.90	3.30	3.30	0.60	0.60
13/00106/FUL	11.13	11.66	2.35	2.14	0.43	0.43
14/00838/FUL	39.21	41.09	8.29	7.54	1.51	1.51
12/01612/FUL	14.87	15.59	3.15	2.86	0.57	0.57
16/02000/OUT / A4	445.64	467.07	94.27	85.70	17.14	17.14
A7	114.40	119.90	24.20	22.00	4.40	4.40
A4 Safeguarded	208.00	218.00	44.00	40.00	8.00	8.00
A7 Safeguarded	78.00	81.75	16.50	15.00	3.00	3.00
11/00809/REM	7.02	5.51	0.66	0.66	0.08	0.08
11/00809/REM	2.20	1.94	0.31	0.31	0.04	0.04
12/00091/FUL	8.20	6.44	0.77	0.77	0.09	0.09
08/01342/FUL	0.33	0.29	0.05	0.05	0.01	0.01
11/01429/FUL	1.46	1.17	0.48	0.46	2.11	2.48
10/00245/COU	2.63	2.07	0.25	0.25	0.03	0.03
10/00245/COU	5.04	4.52	0.25	0.26	0.07	0.07
11/01125/FUL	38.05	43.12	1.21	1.37	2.27	2.20
12/01392/COU	2.24	2.76	0.31	0.33	0.06	0.06
12/01392/COU	1.72	1.49	0.20	0.17	0.10	0.08
14/00840/COU	0.49	0.40	0.16	0.15	0.71	0.84
14/01922/COU	11.44	14.14	1.59	1.66	0.28	0.28
14/01922/COU	6.62	7.79	0.38	0.49	0.32	0.32
14/01922/COU	19.75	22.38	0.63	0.71	1.18	1.14

Policy/ Application Reference	2036					
	Inter Peak (Avg Hr 1000-1600)					
	Car		LGV		HGV	
	O	D	O	D	O	D
16/01490/FUL	24.09	24.43	1.27	1.29	0.18	0.17
16/01490/FUL	5.48	6.77	0.76	0.80	0.13	0.13
16/01490/FUL	6.16	6.98	0.20	0.22	0.37	0.36
16/01603/COU	1.11	0.96	1.04	1.06	0.44	0.47
17/02128/FUL	253.94	257.52	13.42	13.60	1.94	1.81
17/02128/FUL	3.42	4.23	0.47	0.50	0.08	0.08
17/02128/FUL	3.87	3.04	0.36	0.36	0.04	0.04
17/02128/FUL	7.40	6.63	0.37	0.38	0.11	0.11
17/02128/FUL	10.70	12.12	0.34	0.38	0.64	0.62
17/00927/COU	9.41	11.64	1.31	1.37	0.23	0.23
15/01701/FUL	16.34	12.83	1.53	1.53	0.18	0.18
12/00432/FUL	17.29	17.53	0.91	0.93	0.13	0.12
12/00432/FUL	2.19	1.72	0.20	0.20	0.02	0.02
16/01006/COU	1.30	1.12	1.21	1.24	0.52	0.55
16/01006/COU	0.59	0.47	0.19	0.18	0.85	1.00
16/01417/FUL /E1	10.61	8.33	0.99	0.99	0.12	0.12
16/01417/FUL /E1	10.61	8.33	0.99	0.99	0.12	0.12
16/02020/FUL	20.12	20.40	1.06	1.08	0.15	0.14
16/02020/FUL	3.56	3.19	0.18	0.18	0.05	0.05
17/00936/FUL	116.63	118.28	6.16	6.25	0.89	0.83
17/00936/FUL	0.99	1.23	0.14	0.14	0.02	0.02
17/01357/FUL	3.66	2.87	0.34	0.34	0.04	0.04
12/01488/FUL	12.28	9.64	1.15	1.15	0.14	0.14

Policy/ Application Reference	2036					
	Inter Peak (Avg Hr 1000-1600)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/01162/FUL	10.45	11.84	0.33	0.38	0.62	0.60
16/02275/FUL	8.71	6.84	0.82	0.82	0.10	0.10
16/02275/FUL	1.64	1.41	1.53	1.57	0.65	0.69
16/02275/FUL	0.74	0.59	0.24	0.23	1.07	1.26
17/00764/FUL	73.01	74.04	3.86	3.91	0.56	0.52
17/01523/FUL	61.85	62.73	3.27	3.31	0.47	0.44
17/01044/FUL	39.89	40.45	2.11	2.14	0.30	0.28
17/01044/FUL	9.08	11.23	1.26	1.32	0.22	0.22
17/01044/FUL	3.69	2.90	0.35	0.35	0.04	0.04
17/01044/FUL	0.87	0.75	0.81	0.83	0.35	0.37
17/01044/FUL	0.39	0.31	0.13	0.12	0.57	0.67
17/01044/FUL	7.06	6.33	0.35	0.37	0.10	0.10
17/01459/FUL	73.01	74.04	3.86	3.91	0.56	0.52
18/01180/FUL / E3	13.36	10.49	1.25	1.25	0.15	0.15
18/01004/FUL / E3	23.93	18.79	2.24	2.24	0.26	0.26
18/01004/FUL / E3	2.57	3.17	0.36	0.37	0.06	0.06
18/01004/FUL / E3	80.05	81.18	4.23	4.29	0.61	0.57
18/01004/FUL / E3	5.56	4.98	0.28	0.29	0.08	0.08
18/01004/FUL / E3	31.71	24.90	2.97	2.97	0.35	0.35
16/02000/OUT / A4	145.20	114.00	13.60	13.60	1.60	1.60
16/02000/OUT / A4	7.30	6.29	0.83	0.72	0.42	0.35
A7	277.33	217.74	25.98	25.98	3.06	3.06
A7	83.63	72.04	24.01	24.01	4.97	4.97

Policy/ Application Reference	2036					
	Inter Peak (Avg Hr 1000-1600)					
	Car		LGV		HGV	
	O	D	O	D	O	D
A7	43.13	34.46	2.12	1.82	15.04	17.86
A4 Safeguarded	271.38	213.07	25.42	25.42	2.99	2.99
A4 Safeguarded	27.55	23.71	25.63	26.27	10.89	11.53
A7 Safeguarded	28.97	22.74	2.71	2.71	0.32	0.32
A7 Safeguarded	2.94	2.53	2.74	2.80	1.16	1.23
09/00897/REM	13.52	14.17	2.86	2.60	0.52	0.52
10/00468/REM	12.48	13.08	2.64	2.40	0.48	0.48
14/01477/REM	13.62	14.28	2.88	2.62	0.52	0.52
07/00472/OUT / 15/00286/REM	17.89	18.75	3.78	3.44	0.69	0.69
10/00467/REM	13.83	14.50	2.93	2.66	0.53	0.53
11/00107/FUL / 15/00362/FUL 16/00088/FUL	27.04	28.34	5.72	5.20	1.04	1.04
15/01144/FUL	17.26	18.09	3.65	3.32	0.66	0.66
15/01591/FUL	13.52	14.17	2.86	2.60	0.52	0.52
16/00165/OUT	26.00	27.25	5.50	5.00	1.00	1.00
14/00709/FUL	35.36	37.06	7.48	6.80	1.36	1.36
16/00948/OUT	26.00	27.25	5.50	5.00	1.00	1.00
15/00749/OUT / A1	153.19	160.56	32.41	29.46	5.89	5.89
15/01149/OUT / A1b	85.49	89.60	18.08	16.44	3.29	3.29
A2	114.40	119.90	24.20	22.00	4.40	4.40
12/01256/OUT / A3	156.00	163.50	33.00	30.00	6.00	6.00
14/01063/OUT / A6	43.68	45.78	9.24	8.40	1.68	1.68
14/01470/OUT / A6	20.80	21.80	4.40	4.00	0.80	0.80
15/00892/FUL	5.75	4.95	5.35	5.48	2.27	2.41

Policy/ Application Reference	2036					
	Inter Peak (Avg Hr 1000-1600)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/01144/FUL	51.43	63.57	7.13	7.48	1.27	1.27
15/01144/FUL	7.84	6.76	0.89	0.77	0.45	0.38
16/00381/FUL	14.52	17.95	2.01	2.11	0.36	0.36
16/00005/OUT	374.03	379.31	19.76	20.03	2.86	2.67
16/00005/OUT	4.32	4.38	0.23	0.23	0.03	0.03
15/00112/REM	12.45	9.78	1.17	1.17	0.14	0.14
15/00112/REM	1.33	1.06	0.44	0.42	1.92	2.26
16/00158/FUL	4.09	3.53	1.18	1.18	0.24	0.24
14/01035/OUT	20.61	16.19	1.93	1.93	0.23	0.23
14/01035/OUT	17.66	15.20	16.43	16.84	6.98	7.39
16/00957/FUL	2.38	2.05	0.68	0.68	0.14	0.14
16/00322/FUL	9.94	8.91	0.49	0.51	0.14	0.14
15/01190/OUT	2.85	2.50	0.40	0.40	0.06	0.06
15/01190/OUT	35.86	40.63	1.14	1.29	2.14	2.07
14/01158/FUL	40.12	40.69	2.12	2.15	0.31	0.29
14/01163/FUL	14.66	11.51	1.37	1.37	0.16	0.16
15/00657/FUL	4.26	3.35	0.40	0.40	0.05	0.05
16/01022/FUL	1.72	1.48	0.49	0.49	0.10	0.10
16/00957/FUL	40.08	40.65	2.12	2.15	0.31	0.29
16/00957/FUL	2.38	2.05	0.68	0.68	0.14	0.14
A2	113.69	89.26	10.65	10.65	1.25	1.25
A2	11.97	10.30	11.14	11.41	4.73	5.01
A2	6.74	5.39	2.23	2.11	9.74	11.48

Policy/ Application Reference	2036					
	Inter Peak (Avg Hr 1000-1600)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/00749/OUT / A1	55.12	43.27	5.16	5.16	0.61	0.61
15/00749/OUT / A1	1.43	1.15	0.47	0.45	2.07	2.44
12/01256/OUT / A3	22.22	19.14	6.38	6.38	1.32	1.32
13/00939/APP	20.70	21.69	4.38	3.98	0.80	0.80
13/00163/APP	12.69	13.30	2.68	2.44	0.49	0.49
11/00385/FUL	30.26	31.72	6.40	5.82	1.16	1.16
15/00814/APP	11.02	11.55	2.33	2.12	0.42	0.42
15/01274/APP	22.26	23.33	4.71	4.28	0.86	0.86
16/00292/APP	11.75	12.32	2.49	2.26	0.45	0.45
16/00853/FUL	20.49	21.47	4.33	3.94	0.79	0.79
15/01002/APP	15.60	16.35	3.30	3.00	0.60	0.60
15/01378/OUT	11.02	11.55	2.33	2.12	0.42	0.42
15/00575/APP	13.42	14.06	2.84	2.58	0.52	0.52
10/01216/OUT	19.76	20.71	4.18	3.80	0.76	0.76
14/00316/APP	13.83	14.50	2.93	2.66	0.53	0.53
10/01381/APP 11/00691/APP	17.47	18.31	3.70	3.36	0.67	0.67
16/00739/APP	11.75	12.32	2.49	2.26	0.45	0.45
16/00227/APP	24.34	25.51	5.15	4.68	0.94	0.94
16/00177/FUL	27.14	28.45	5.74	5.22	1.04	1.04
13/00986/APP	11.44	11.99	2.42	2.20	0.44	0.44
16/00379/APP	13.10	13.73	2.77	2.52	0.50	0.50
12/00640/FUL	251.03	254.57	13.26	13.45	1.92	1.79
15/00755/FUL	7.69	6.62	2.21	2.21	0.46	0.46



Policy/ Application Reference	2036					
	PM Peak (1700-1800)					
	Car		LGV		HGV	
	O	D	O	D	O	D
13/01683/REM	20.53	39.19	1.24	1.24	0.00	0.00
15/01794/REM	19.80	37.80	1.20	1.20	0.00	0.00
13/00106/FUL	11.56	24.40	1.50	3.00	0.21	0.21
14/00838/FUL	40.72	85.96	5.28	10.56	0.75	0.75
12/01612/FUL	15.44	32.60	2.00	4.00	0.29	0.29
16/02000/OUT / A4	462.78	976.98	59.99	119.98	8.57	8.57
A7	118.80	250.80	15.40	30.80	2.20	2.20
A4 Safeguarded	216.00	456.00	28.00	56.00	4.00	4.00
A7 Safeguarded	81.00	171.00	10.50	21.00	1.50	1.50
11/00809/REM	24.68	2.28	0.41	0.37	0.00	0.00
11/00809/REM	1.36	1.01	0.22	0.13	0.00	0.00
12/00091/FUL	28.85	2.67	0.47	0.43	0.00	0.00
08/01342/FUL	0.20	0.15	0.03	0.02	0.00	0.00
11/01429/FUL	2.60	0.52	0.67	0.23	1.80	1.35
10/00245/COU	9.26	0.86	0.15	0.14	0.00	0.00
10/00245/COU	2.88	1.65	0.12	0.08	0.00	0.00
11/01125/FUL	52.05	75.32	1.62	2.34	0.91	0.53
12/01392/COU	1.05	2.85	0.10	0.25	0.00	0.00
12/01392/COU	1.72	2.91	0.19	0.32	0.00	0.00
14/00840/COU	0.88	0.18	0.23	0.08	0.61	0.46
14/01922/COU	5.36	14.57	0.51	1.28	0.00	0.00
14/01922/COU	9.75	17.39	0.73	0.29	0.00	0.00
14/01922/COU	27.02	39.09	0.84	1.21	0.47	0.28

Policy/ Application Reference	2036					
	PM Peak (1700-1800)					
	Car		LGV		HGV	
	O	D	O	D	O	D
16/01490/FUL	27.83	26.69	1.47	1.41	0.12	0.10
16/01490/FUL	2.57	6.98	0.25	0.61	0.00	0.00
16/01490/FUL	8.42	12.19	0.26	0.38	0.15	0.09
16/01603/COU	1.45	0.34	0.66	0.35	0.23	0.16
17/02128/FUL	293.41	281.32	15.48	14.83	1.29	1.03
17/02128/FUL	1.60	4.36	0.15	0.38	0.00	0.00
17/02128/FUL	13.60	1.26	0.22	0.20	0.00	0.00
17/02128/FUL	4.23	2.43	0.17	0.12	0.00	0.00
17/02128/FUL	14.63	21.18	0.46	0.66	0.26	0.15
17/00927/COU	4.41	11.98	0.42	1.05	0.00	0.00
15/01701/FUL	57.47	5.31	0.95	0.86	0.00	0.00
12/00432/FUL	19.98	19.16	1.05	1.01	0.09	0.07
12/00432/FUL	7.69	0.71	0.13	0.11	0.00	0.00
16/01006/COU	1.70	0.39	0.77	0.41	0.27	0.18
16/01006/COU	1.05	0.21	0.27	0.09	0.73	0.55
16/01417/FUL /E1	37.33	3.45	0.61	0.56	0.00	0.00
16/01417/FUL /E1	37.34	3.45	0.61	0.56	0.00	0.00
16/02020/FUL	23.25	22.29	1.23	1.18	0.10	0.08
16/02020/FUL	2.03	1.17	0.08	0.06	0.00	0.00
17/00936/FUL	134.76	129.21	7.11	6.81	0.59	0.47
17/00936/FUL	0.47	1.26	0.04	0.11	0.00	0.00
17/01357/FUL	12.86	1.19	0.21	0.19	0.00	0.00
12/01488/FUL	43.21	3.99	0.71	0.64	0.00	0.00

Policy/ Application Reference	2036					
	PM Peak (1700-1800)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/01162/FUL	14.29	20.68	0.45	0.64	0.25	0.15
16/02275/FUL	30.65	2.83	0.50	0.46	0.00	0.00
16/02275/FUL	2.14	0.50	0.97	0.52	0.34	0.23
16/02275/FUL	1.32	0.27	0.34	0.12	0.92	0.69
17/00764/FUL	84.36	80.89	4.45	4.27	0.37	0.30
17/01523/FUL	71.47	68.52	3.77	3.61	0.31	0.25
17/01044/FUL	46.09	44.19	2.43	2.33	0.20	0.16
17/01044/FUL	4.26	11.56	0.41	1.02	0.00	0.00
17/01044/FUL	12.97	1.20	0.21	0.19	0.00	0.00
17/01044/FUL	1.14	0.26	0.52	0.27	0.18	0.12
17/01044/FUL	0.70	0.14	0.18	0.06	0.49	0.37
17/01044/FUL	4.03	2.32	0.16	0.11	0.00	0.00
17/01459/FUL	84.36	80.89	4.45	4.27	0.37	0.30
18/01180/FUL / E3	46.99	4.34	0.77	0.70	0.00	0.00
18/01004/FUL / E3	84.19	7.78	1.38	1.25	0.00	0.00
18/01004/FUL / E3	1.20	3.27	0.11	0.29	0.00	0.00
18/01004/FUL / E3	92.49	88.68	4.88	4.68	0.41	0.33
18/01004/FUL / E3	3.18	1.82	0.13	0.09	0.00	0.00
18/01004/FUL / E3	111.56	10.31	1.83	1.66	0.00	0.00
16/02000/OUT / A4	510.80	47.20	8.40	7.60	0.00	0.00
16/02000/OUT / A4	7.31	12.32	0.81	1.37	0.00	0.00
A7	975.63	90.15	16.04	14.52	0.00	0.00
A7	486.04	37.26	13.25	6.62	3.31	1.66

Policy/ Application Reference	2036					
	PM Peak (1700-1800)					
	Car		LGV		HGV	
	O	D	O	D	O	D
A7	129.46	26.11	5.43	1.15	1.88	2.82
A4 Safeguarded	954.69	88.22	15.70	14.20	0.00	0.00
A4 Safeguarded	35.88	8.33	16.34	8.65	5.77	3.84
A7 Safeguarded	101.90	9.42	1.68	1.52	0.00	0.00
A7 Safeguarded	3.83	0.89	1.74	0.92	0.62	0.41
09/00897/REM	14.04	29.64	1.82	3.64	0.26	0.26
10/00468/REM	12.96	27.36	1.68	3.36	0.24	0.24
14/01477/REM	14.15	29.87	1.83	3.67	0.26	0.26
07/00472/OUT / 15/00286/REM	18.58	39.22	2.41	4.82	0.34	0.34
10/00467/REM	14.36	30.32	1.86	3.72	0.27	0.27
11/00107/FUL / 15/00362/FUL 16/00088/FUL	28.08	59.28	3.64	7.28	0.52	0.52
15/01144/FUL	17.93	37.85	2.32	4.65	0.33	0.33
15/01591/FUL	14.04	29.64	1.82	3.64	0.26	0.26
16/00165/OUT	27.00	57.00	3.50	7.00	0.50	0.50
14/00709/FUL	36.72	77.52	4.76	9.52	0.68	0.68
16/00948/OUT	27.00	57.00	3.50	7.00	0.50	0.50
15/00749/OUT / A1	159.08	335.84	20.62	41.24	2.95	2.95
15/01149/OUT / A1b	88.78	187.42	11.51	23.02	1.64	1.64
A2	118.80	250.80	15.40	30.80	2.20	2.20
12/01256/OUT / A3	162.00	342.00	21.00	42.00	3.00	3.00
14/01063/OUT / A6	45.36	95.76	5.88	11.76	0.84	0.84
14/01470/OUT / A6	21.60	45.60	2.80	5.60	0.40	0.40
15/00892/FUL	7.49	1.74	3.41	1.81	1.20	0.80

Policy/ Application Reference	2036					
	PM Peak (1700-1800)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/01144/FUL	24.11	65.47	2.30	5.75	0.00	0.00
15/01144/FUL	7.85	13.23	0.87	1.47	0.00	0.00
16/00381/FUL	6.80	18.48	0.65	1.62	0.00	0.00
16/00005/OUT	432.16	414.36	22.80	21.85	1.90	1.52
16/00005/OUT	4.99	4.79	0.26	0.25	0.02	0.02
15/00112/REM	43.80	4.05	0.72	0.65	0.00	0.00
15/00112/REM	2.37	0.48	0.61	0.21	1.65	1.23
16/00158/FUL	23.79	1.82	0.65	0.32	0.16	0.08
14/01035/OUT	72.52	6.70	1.19	1.08	0.00	0.00
14/01035/OUT	23.00	5.34	10.47	5.55	3.70	2.46
16/00957/FUL	13.82	1.06	0.38	0.19	0.09	0.05
16/00322/FUL	5.68	3.26	0.23	0.16	0.00	0.00
15/01190/OUT	1.76	1.31	0.28	0.17	0.00	0.00
15/01190/OUT	49.06	70.98	1.53	2.20	0.86	0.50
14/01158/FUL	46.36	44.45	2.45	2.34	0.20	0.16
14/01163/FUL	51.58	4.77	0.85	0.77	0.00	0.00
15/00657/FUL	14.99	1.39	0.25	0.22	0.00	0.00
16/01022/FUL	10.01	0.77	0.27	0.14	0.07	0.03
16/00957/FUL	46.31	44.41	2.44	2.34	0.20	0.16
16/00957/FUL	13.82	1.06	0.38	0.19	0.09	0.05
A2	399.96	36.96	6.58	5.95	0.00	0.00
A2	15.59	3.62	7.10	3.76	2.51	1.67
A2	12.05	2.42	3.09	1.06	8.35	6.26

Policy/ Application Reference	2036					
	PM Peak (1700-1800)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/00749/OUT / A1	193.90	17.92	3.19	2.88	0.00	0.00
15/00749/OUT / A1	2.56	0.51	0.66	0.22	1.77	1.33
12/01256/OUT / A3	129.14	9.90	3.52	1.76	0.88	0.44
13/00939/APP	21.49	45.37	2.79	5.57	0.40	0.40
13/00163/APP	13.18	27.82	1.71	3.42	0.24	0.24
11/00385/FUL	31.43	66.35	4.07	8.15	0.58	0.58
15/00814/APP	11.45	24.17	1.48	2.97	0.21	0.21
15/01274/APP	23.11	48.79	3.00	5.99	0.43	0.43
16/00292/APP	12.20	25.76	1.58	3.16	0.23	0.23
16/00853/FUL	21.28	44.92	2.76	5.52	0.39	0.39
15/01002/APP	16.20	34.20	2.10	4.20	0.30	0.30
15/01378/OUT	11.45	24.17	1.48	2.97	0.21	0.21
15/00575/APP	13.93	29.41	1.81	3.61	0.26	0.26
10/01216/OUT	20.52	43.32	2.66	5.32	0.38	0.38
14/00316/APP	14.36	30.32	1.86	3.72	0.27	0.27
10/01381/APP 11/00691/APP	18.14	38.30	2.35	4.70	0.34	0.34
16/00739/APP	12.20	25.76	1.58	3.16	0.23	0.23
16/00227/APP	25.27	53.35	3.28	6.55	0.47	0.47
16/00177/FUL	28.19	59.51	3.65	7.31	0.52	0.52
13/00986/APP	11.88	25.08	1.54	3.08	0.22	0.22
16/00379/APP	13.61	28.73	1.76	3.53	0.25	0.25
12/00640/FUL	290.05	278.10	15.30	14.66	1.28	1.02
15/00755/FUL	44.69	3.43	1.22	0.61	0.30	0.15

Policy/ Application Reference	2041					
	AM Peak (0800-0900)					
	Car		LGV		HGV	
	O	D	O	D	O	D
13/01683/REM	42.61	10.89	2.18	2.18	0.62	1.24
15/01794/REM	41.10	10.50	2.10	2.10	0.60	1.20
13/00106/FUL	28.14	9.20	2.46	2.14	0.43	0.43
14/00838/FUL	99.15	32.42	8.67	7.54	1.51	1.51
12/01612/FUL	37.61	12.30	3.29	2.86	0.57	0.57
16/02000/OUT / A4	1126.96	368.51	98.56	85.70	17.14	17.14
A7	289.30	94.60	25.30	22.00	4.40	4.40
A4 Safeguarded	593.85	194.19	51.93	45.16	9.03	9.03
A7 Safeguarded	348.21	113.86	30.45	26.48	5.30	5.30
11/00809/REM	2.05	28.74	0.85	0.87	0.15	0.15
11/00809/REM	0.97	2.16	0.09	0.04	0.18	0.18
12/00091/FUL	2.39	33.59	0.99	1.02	0.18	0.18
08/01342/FUL	0.14	0.32	0.01	0.01	0.03	0.03
11/01429/FUL	0.97	3.10	0.39	0.81	2.11	2.26
10/00245/COU	0.77	10.78	0.32	0.33	0.06	0.06
10/00245/COU	22.66	29.05	0.43	0.48	0.03	0.03
11/01125/FUL	16.52	18.64	0.53	0.60	1.29	1.52
12/01392/COU	0.00	0.00	0.00	0.00	0.00	0.00
12/01392/COU	3.03	1.98	0.34	0.23	0.10	0.10
14/00840/COU	0.33	1.05	0.13	0.27	0.71	0.77
14/01922/COU	0.00	0.00	0.00	0.00	0.00	0.00
14/01922/COU	0.00	0.00	0.00	0.00	0.00	0.00
14/01922/COU	8.57	9.68	0.28	0.31	0.67	0.79

Policy/ Application Reference	2041					
	AM Peak (0800-0900)					
	Car		LGV		HGV	
	O	D	O	D	O	D
16/01490/FUL	11.54	14.56	0.61	0.77	0.20	0.23
16/01490/FUL	0.00	0.00	0.00	0.00	0.00	0.00
16/01490/FUL	2.67	3.02	0.09	0.10	0.21	0.25
16/01603/COU	0.40	1.66	1.28	1.23	0.47	0.41
17/02128/FUL	121.68	153.47	6.46	8.14	2.07	2.46
17/02128/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/02128/FUL	1.13	15.84	0.47	0.48	0.09	0.09
17/02128/FUL	33.29	42.67	0.63	0.70	0.04	0.04
17/02128/FUL	4.64	5.24	0.15	0.17	0.36	0.43
17/00927/COU	0.00	0.00	0.00	0.00	0.00	0.00
15/01701/FUL	4.77	66.92	1.98	2.03	0.36	0.36
12/00432/FUL	8.29	10.45	0.44	0.55	0.14	0.17
12/00432/FUL	0.64	8.95	0.26	0.27	0.05	0.05
16/01006/COU	0.47	1.94	1.50	1.44	0.55	0.48
16/01006/COU	0.39	1.25	0.16	0.32	0.85	0.91
16/01417/FUL /E1	3.10	43.47	1.29	1.32	0.23	0.23
16/01417/FUL /E1	3.10	43.48	1.29	1.32	0.23	0.23
16/02020/FUL	9.64	12.16	0.51	0.65	0.16	0.19
16/02020/FUL	16.01	20.52	0.30	0.34	0.02	0.02
17/00936/FUL	55.89	70.49	2.97	3.74	0.95	1.13
17/00936/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01357/FUL	1.07	14.97	0.44	0.45	0.08	0.08
12/01488/FUL	3.59	50.32	1.49	1.52	0.27	0.27



Policy/ Application Reference	2041					
	AM Peak (0800-0900)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/01162/FUL	4.53	5.12	0.15	0.16	0.35	0.42
16/02275/FUL	2.54	35.69	1.06	1.08	0.19	0.19
16/02275/FUL	0.59	2.44	1.89	1.81	0.69	0.61
16/02275/FUL	0.49	1.58	0.20	0.41	1.07	1.15
17/00764/FUL	34.99	44.13	1.86	2.34	0.59	0.71
17/01523/FUL	29.64	37.38	1.57	1.98	0.50	0.60
17/01044/FUL	19.11	24.11	1.01	1.28	0.32	0.39
17/01044/FUL	0.00	0.00	0.00	0.00	0.00	0.00
17/01044/FUL	1.08	15.11	0.45	0.46	0.08	0.08
17/01044/FUL	0.31	1.30	1.01	0.97	0.37	0.33
17/01044/FUL	0.26	0.84	0.10	0.22	0.57	0.61
17/01044/FUL	31.76	40.71	0.60	0.67	0.04	0.04
17/01459/FUL	34.99	44.13	1.86	2.34	0.59	0.71
18/01180/FUL / E3	3.90	54.72	1.62	1.66	0.29	0.29
18/01004/FUL / E3	6.99	98.04	2.90	2.97	0.53	0.53
18/01004/FUL / E3	0.00	0.00	0.00	0.00	0.00	0.00
18/01004/FUL / E3	38.36	48.38	2.04	2.57	0.65	0.77
18/01004/FUL / E3	25.01	32.06	0.47	0.53	0.03	0.03
18/01004/FUL / E3	9.26	129.90	3.84	3.93	0.70	0.70
16/02000/OUT / A4	42.40	594.80	17.60	18.00	3.20	3.20
16/02000/OUT / A4	12.83	8.39	1.45	0.96	0.42	0.42
A7	80.98	1136.07	33.62	34.38	6.11	6.11
A7	57.96	648.32	21.53	33.12	3.31	4.97

Policy/ Application Reference	2041					
	AM Peak (0800-0900)					
	Car		LGV		HGV	
	O	D	O	D	O	D
A7	16.00	143.56	0.92	6.37	12.22	18.80
A4 Safeguarded	89.04	1249.08	36.96	37.80	6.72	6.72
A4 Safeguarded	11.16	46.08	35.64	34.20	12.96	11.52
A7 Safeguarded	14.84	208.18	6.16	6.30	1.12	1.12
A7 Safeguarded	1.86	7.68	5.94	5.70	2.16	1.92
09/00897/REM	34.19	11.18	2.99	2.60	0.52	0.52
10/00468/REM	31.56	10.32	2.76	2.40	0.48	0.48
14/01477/REM	34.45	11.27	3.01	2.62	0.52	0.52
07/00472/OUT / 15/00286/REM	45.24	14.79	3.96	3.44	0.69	0.69
10/00467/REM	34.98	11.44	3.06	2.66	0.53	0.53
11/00107/FUL / 15/00362/FUL 16/00088/FUL	68.38	22.36	5.98	5.20	1.04	1.04
15/01144/FUL	43.66	14.28	3.82	3.32	0.66	0.66
15/01591/FUL	34.19	11.18	2.99	2.60	0.52	0.52
16/00165/OUT	65.75	21.50	5.75	5.00	1.00	1.00
14/00709/FUL	89.42	29.24	7.82	6.80	1.36	1.36
16/00948/OUT	65.75	21.50	5.75	5.00	1.00	1.00
15/00749/OUT / A1	387.40	126.68	33.88	29.46	5.89	5.89
15/01149/OUT / A1b	216.19	70.69	18.91	16.44	3.29	3.29
A2	289.30	94.60	25.30	22.00	4.40	4.40
12/01256/OUT / A3	394.50	129.00	34.50	30.00	6.00	6.00
14/01063/OUT / A6	110.46	36.12	9.66	8.40	1.68	1.68
14/01470/OUT / A6	52.60	17.20	4.60	4.00	0.80	0.80
15/00892/FUL	2.07	8.56	6.62	6.35	2.41	2.14

Policy/ Application Reference	2041					
	AM Peak (0800-0900)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/01144/FUL	0.00	0.00	0.00	0.00	0.00	0.00
15/01144/FUL	13.78	9.01	1.56	1.03	0.45	0.45
16/00381/FUL	0.00	0.00	0.00	0.00	0.00	0.00
16/00005/OUT	179.23	226.05	9.51	11.99	3.05	3.62
16/00005/OUT	2.07	2.61	0.11	0.14	0.04	0.04
15/00112/REM	3.64	51.00	1.51	1.54	0.27	0.27
15/00112/REM	0.88	2.83	0.35	0.74	1.92	2.06
16/00158/FUL	2.84	31.73	1.05	1.62	0.16	0.24
14/01035/OUT	6.02	84.45	2.50	2.56	0.45	0.45
14/01035/OUT	6.37	26.29	20.33	19.51	7.39	6.57
16/00957/FUL	1.65	18.43	0.61	0.94	0.09	0.14
16/00322/FUL	44.70	57.30	0.84	0.94	0.06	0.06
15/01190/OUT	1.25	2.79	0.11	0.06	0.23	0.23
15/01190/OUT	15.56	17.57	0.50	0.57	1.21	1.43
14/01158/FUL	19.23	24.25	1.02	1.29	0.33	0.39
14/01163/FUL	4.28	60.06	1.78	1.82	0.32	0.32
15/00657/FUL	1.24	17.46	0.52	0.53	0.09	0.09
16/01022/FUL	1.19	13.35	0.44	0.68	0.07	0.10
16/00957/FUL	19.21	24.23	1.02	1.29	0.33	0.39
16/00957/FUL	1.65	18.43	0.61	0.94	0.09	0.14
A2	33.20	465.73	13.78	14.09	2.51	2.51
A2	4.32	17.82	13.78	13.22	5.01	4.45
A2	4.48	14.37	1.78	3.73	9.74	10.44

Policy/ Application Reference	2041					
	AM Peak (0800-0900)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/00749/OUT / A1	16.10	225.79	6.68	6.83	1.21	1.21
15/00749/OUT / A1	0.95	3.05	0.38	0.79	2.07	2.22
12/01256/OUT / A3	15.40	172.26	5.72	8.80	0.88	1.32
13/00939/APP	52.34	17.11	4.58	3.98	0.80	0.80
13/00163/APP	32.09	10.49	2.81	2.44	0.49	0.49
11/00385/FUL	76.53	25.03	6.69	5.82	1.16	1.16
15/00814/APP	27.88	9.12	2.44	2.12	0.42	0.42
15/01274/APP	56.28	18.40	4.92	4.28	0.86	0.86
16/00292/APP	29.72	9.72	2.60	2.26	0.45	0.45
16/00853/FUL	51.81	16.94	4.53	3.94	0.79	0.79
15/01002/APP	39.45	12.90	3.45	3.00	0.60	0.60
15/01378/OUT	27.88	9.12	2.44	2.12	0.42	0.42
15/00575/APP	33.93	11.09	2.97	2.58	0.52	0.52
10/01216/OUT	49.97	16.34	4.37	3.80	0.76	0.76
14/00316/APP	34.98	11.44	3.06	2.66	0.53	0.53
10/01381/APP 11/00691/APP	44.18	14.45	3.86	3.36	0.67	0.67
16/00739/APP	29.72	9.72	2.60	2.26	0.45	0.45
16/00227/APP	61.54	20.12	5.38	4.68	0.94	0.94
16/00177/FUL	68.64	22.45	6.00	5.22	1.04	1.04
13/00986/APP	28.93	9.46	2.53	2.20	0.44	0.44
16/00379/APP	33.14	10.84	2.90	2.52	0.50	0.50
12/00640/FUL	120.29	151.72	6.38	8.05	2.04	2.43
15/00755/FUL	5.33	59.61	1.98	3.05	0.30	0.46

Policy/ Application Reference	2041					
	Inter Peak (Avg Hr 1000-1600)					
	Car		LGV		HGV	
	O	D	O	D	O	D
13/01683/REM	15.86	16.48	3.42	3.42	0.62	0.62
15/01794/REM	15.30	15.90	3.30	3.30	0.60	0.60
13/00106/FUL	11.13	11.66	2.35	2.14	0.43	0.43
14/00838/FUL	39.21	41.09	8.29	7.54	1.51	1.51
12/01612/FUL	14.87	15.59	3.15	2.86	0.57	0.57
16/02000/OUT / A4	445.64	467.07	94.27	85.70	17.14	17.14
A7	114.40	119.90	24.20	22.00	4.40	4.40
A4 Safeguarded	234.83	246.12	49.68	45.16	9.03	9.03
A7 Safeguarded	137.70	144.32	29.13	26.48	5.30	5.30
11/00809/REM	7.02	5.51	0.66	0.66	0.08	0.08
11/00809/REM	2.20	1.94	0.31	0.31	0.04	0.04
12/00091/FUL	8.20	6.44	0.77	0.77	0.09	0.09
08/01342/FUL	0.33	0.29	0.05	0.05	0.01	0.01
11/01429/FUL	1.46	1.17	0.48	0.46	2.11	2.48
10/00245/COU	2.63	2.07	0.25	0.25	0.03	0.03
10/00245/COU	5.04	4.52	0.25	0.26	0.07	0.07
11/01125/FUL	38.05	43.12	1.21	1.37	2.27	2.20
12/01392/COU	2.24	2.76	0.31	0.33	0.06	0.06
12/01392/COU	1.72	1.49	0.20	0.17	0.10	0.08
14/00840/COU	0.49	0.40	0.16	0.15	0.71	0.84
14/01922/COU	11.44	14.14	1.59	1.66	0.28	0.28
14/01922/COU	6.62	7.79	0.38	0.49	0.32	0.32
14/01922/COU	19.75	22.38	0.63	0.71	1.18	1.14

Policy/ Application Reference	2041					
	Inter Peak (Avg Hr 1000-1600)					
	Car		LGV		HGV	
	O	D	O	D	O	D
16/01490/FUL	24.09	24.43	1.27	1.29	0.18	0.17
16/01490/FUL	5.48	6.77	0.76	0.80	0.13	0.13
16/01490/FUL	6.16	6.98	0.20	0.22	0.37	0.36
16/01603/COU	1.11	0.96	1.04	1.06	0.44	0.47
17/02128/FUL	253.94	257.52	13.42	13.60	1.94	1.81
17/02128/FUL	3.42	4.23	0.47	0.50	0.08	0.08
17/02128/FUL	3.87	3.04	0.36	0.36	0.04	0.04
17/02128/FUL	7.40	6.63	0.37	0.38	0.11	0.11
17/02128/FUL	10.70	12.12	0.34	0.38	0.64	0.62
17/00927/COU	9.41	11.64	1.31	1.37	0.23	0.23
15/01701/FUL	16.34	12.83	1.53	1.53	0.18	0.18
12/00432/FUL	17.29	17.53	0.91	0.93	0.13	0.12
12/00432/FUL	2.19	1.72	0.20	0.20	0.02	0.02
16/01006/COU	1.30	1.12	1.21	1.24	0.52	0.55
16/01006/COU	0.59	0.47	0.19	0.18	0.85	1.00
16/01417/FUL /E1	10.61	8.33	0.99	0.99	0.12	0.12
16/01417/FUL /E1	10.61	8.33	0.99	0.99	0.12	0.12
16/02020/FUL	20.12	20.40	1.06	1.08	0.15	0.14
16/02020/FUL	3.56	3.19	0.18	0.18	0.05	0.05
17/00936/FUL	116.63	118.28	6.16	6.25	0.89	0.83
17/00936/FUL	0.99	1.23	0.14	0.14	0.02	0.02
17/01357/FUL	3.66	2.87	0.34	0.34	0.04	0.04
12/01488/FUL	12.28	9.64	1.15	1.15	0.14	0.14

Policy/ Application Reference	2041					
	Inter Peak (Avg Hr 1000-1600)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/01162/FUL	10.45	11.84	0.33	0.38	0.62	0.60
16/02275/FUL	8.71	6.84	0.82	0.82	0.10	0.10
16/02275/FUL	1.64	1.41	1.53	1.57	0.65	0.69
16/02275/FUL	0.74	0.59	0.24	0.23	1.07	1.26
17/00764/FUL	73.01	74.04	3.86	3.91	0.56	0.52
17/01523/FUL	61.85	62.73	3.27	3.31	0.47	0.44
17/01044/FUL	39.89	40.45	2.11	2.14	0.30	0.28
17/01044/FUL	9.08	11.23	1.26	1.32	0.22	0.22
17/01044/FUL	3.69	2.90	0.35	0.35	0.04	0.04
17/01044/FUL	0.87	0.75	0.81	0.83	0.35	0.37
17/01044/FUL	0.39	0.31	0.13	0.12	0.57	0.67
17/01044/FUL	7.06	6.33	0.35	0.37	0.10	0.10
17/01459/FUL	73.01	74.04	3.86	3.91	0.56	0.52
18/01180/FUL / E3	13.36	10.49	1.25	1.25	0.15	0.15
18/01004/FUL / E3	23.93	18.79	2.24	2.24	0.26	0.26
18/01004/FUL / E3	2.57	3.17	0.36	0.37	0.06	0.06
18/01004/FUL / E3	80.05	81.18	4.23	4.29	0.61	0.57
18/01004/FUL / E3	5.56	4.98	0.28	0.29	0.08	0.08
18/01004/FUL / E3	31.71	24.90	2.97	2.97	0.35	0.35
16/02000/OUT / A4	145.20	114.00	13.60	13.60	1.60	1.60
16/02000/OUT / A4	7.30	6.29	0.83	0.72	0.42	0.35
A7	277.33	217.74	25.98	25.98	3.06	3.06
A7	83.63	72.04	24.01	24.01	4.97	4.97

Policy/ Application Reference	2041					
	Inter Peak (Avg Hr 1000-1600)					
	Car		LGV		HGV	
	O	D	O	D	O	D
A7	43.13	34.46	2.12	1.82	15.04	17.86
A4 Safeguarded	304.92	239.40	28.56	28.56	3.36	3.36
A4 Safeguarded	30.96	26.64	28.80	29.52	12.24	12.96
A7 Safeguarded	50.82	39.90	4.76	4.76	0.56	0.56
A7 Safeguarded	5.16	4.44	4.80	4.92	2.04	2.16
09/00897/REM	13.52	14.17	2.86	2.60	0.52	0.52
10/00468/REM	12.48	13.08	2.64	2.40	0.48	0.48
14/01477/REM	13.62	14.28	2.88	2.62	0.52	0.52
07/00472/OUT / 15/00286/REM	17.89	18.75	3.78	3.44	0.69	0.69
10/00467/REM	13.83	14.50	2.93	2.66	0.53	0.53
11/00107/FUL / 15/00362/FUL 16/00088/FUL	27.04	28.34	5.72	5.20	1.04	1.04
15/01144/FUL	17.26	18.09	3.65	3.32	0.66	0.66
15/01591/FUL	13.52	14.17	2.86	2.60	0.52	0.52
16/00165/OUT	26.00	27.25	5.50	5.00	1.00	1.00
14/00709/FUL	35.36	37.06	7.48	6.80	1.36	1.36
16/00948/OUT	26.00	27.25	5.50	5.00	1.00	1.00
15/00749/OUT / A1	153.19	160.56	32.41	29.46	5.89	5.89
15/01149/OUT / A1b	85.49	89.60	18.08	16.44	3.29	3.29
A2	114.40	119.90	24.20	22.00	4.40	4.40
12/01256/OUT / A3	156.00	163.50	33.00	30.00	6.00	6.00
14/01063/OUT / A6	43.68	45.78	9.24	8.40	1.68	1.68
14/01470/OUT / A6	20.80	21.80	4.40	4.00	0.80	0.80
15/00892/FUL	5.75	4.95	5.35	5.48	2.27	2.41



Policy/ Application Reference	2041					
	Inter Peak (Avg Hr 1000-1600)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/01144/FUL	51.43	63.57	7.13	7.48	1.27	1.27
15/01144/FUL	7.84	6.76	0.89	0.77	0.45	0.38
16/00381/FUL	14.52	17.95	2.01	2.11	0.36	0.36
16/00005/OUT	374.03	379.31	19.76	20.03	2.86	2.67
16/00005/OUT	4.32	4.38	0.23	0.23	0.03	0.03
15/00112/REM	12.45	9.78	1.17	1.17	0.14	0.14
15/00112/REM	1.33	1.06	0.44	0.42	1.92	2.26
16/00158/FUL	4.09	3.53	1.18	1.18	0.24	0.24
14/01035/OUT	20.61	16.19	1.93	1.93	0.23	0.23
14/01035/OUT	17.66	15.20	16.43	16.84	6.98	7.39
16/00957/FUL	2.38	2.05	0.68	0.68	0.14	0.14
16/00322/FUL	9.94	8.91	0.49	0.51	0.14	0.14
15/01190/OUT	2.85	2.50	0.40	0.40	0.06	0.06
15/01190/OUT	35.86	40.63	1.14	1.29	2.14	2.07
14/01158/FUL	40.12	40.69	2.12	2.15	0.31	0.29
14/01163/FUL	14.66	11.51	1.37	1.37	0.16	0.16
15/00657/FUL	4.26	3.35	0.40	0.40	0.05	0.05
16/01022/FUL	1.72	1.48	0.49	0.49	0.10	0.10
16/00957/FUL	40.08	40.65	2.12	2.15	0.31	0.29
16/00957/FUL	2.38	2.05	0.68	0.68	0.14	0.14
A2	113.69	89.26	10.65	10.65	1.25	1.25
A2	11.97	10.30	11.14	11.41	4.73	5.01
A2	6.74	5.39	2.23	2.11	9.74	11.48

Policy/ Application Reference	2041					
	Inter Peak (Avg Hr 1000-1600)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/00749/OUT / A1	55.12	43.27	5.16	5.16	0.61	0.61
15/00749/OUT / A1	1.43	1.15	0.47	0.45	2.07	2.44
12/01256/OUT / A3	22.22	19.14	6.38	6.38	1.32	1.32
13/00939/APP	20.70	21.69	4.38	3.98	0.80	0.80
13/00163/APP	12.69	13.30	2.68	2.44	0.49	0.49
11/00385/FUL	30.26	31.72	6.40	5.82	1.16	1.16
15/00814/APP	11.02	11.55	2.33	2.12	0.42	0.42
15/01274/APP	22.26	23.33	4.71	4.28	0.86	0.86
16/00292/APP	11.75	12.32	2.49	2.26	0.45	0.45
16/00853/FUL	20.49	21.47	4.33	3.94	0.79	0.79
15/01002/APP	15.60	16.35	3.30	3.00	0.60	0.60
15/01378/OUT	11.02	11.55	2.33	2.12	0.42	0.42
15/00575/APP	13.42	14.06	2.84	2.58	0.52	0.52
10/01216/OUT	19.76	20.71	4.18	3.80	0.76	0.76
14/00316/APP	13.83	14.50	2.93	2.66	0.53	0.53
10/01381/APP 11/00691/APP	17.47	18.31	3.70	3.36	0.67	0.67
16/00739/APP	11.75	12.32	2.49	2.26	0.45	0.45
16/00227/APP	24.34	25.51	5.15	4.68	0.94	0.94
16/00177/FUL	27.14	28.45	5.74	5.22	1.04	1.04
13/00986/APP	11.44	11.99	2.42	2.20	0.44	0.44
16/00379/APP	13.10	13.73	2.77	2.52	0.50	0.50
12/00640/FUL	251.03	254.57	13.26	13.45	1.92	1.79
15/00755/FUL	7.69	6.62	2.21	2.21	0.46	0.46

Policy/ Application Reference	2041					
	PM Peak (1700-1800)					
	Car		LGV		HGV	
	O	D	O	D	O	D
13/01683/REM	20.53	39.19	1.24	1.24	0.00	0.00
15/01794/REM	19.80	37.80	1.20	1.20	0.00	0.00
13/00106/FUL	11.56	24.40	1.50	3.00	0.21	0.21
14/00838/FUL	40.72	85.96	5.28	10.56	0.75	0.75
12/01612/FUL	15.44	32.60	2.00	4.00	0.29	0.29
16/02000/OUT / A4	462.78	976.98	59.99	119.98	8.57	8.57
A7	118.80	250.80	15.40	30.80	2.20	2.20
A4 Safeguarded	243.86	514.82	31.61	63.22	4.52	4.52
A7 Safeguarded	142.99	301.87	18.54	37.07	2.65	2.65
11/00809/REM	24.68	2.28	0.41	0.37	0.00	0.00
11/00809/REM	1.36	1.01	0.22	0.13	0.00	0.00
12/00091/FUL	28.85	2.67	0.47	0.43	0.00	0.00
08/01342/FUL	0.20	0.15	0.03	0.02	0.00	0.00
11/01429/FUL	2.60	0.52	0.67	0.23	1.80	1.35
10/00245/COU	9.26	0.86	0.15	0.14	0.00	0.00
10/00245/COU	2.88	1.65	0.12	0.08	0.00	0.00
11/01125/FUL	52.05	75.32	1.62	2.34	0.91	0.53
12/01392/COU	1.05	2.85	0.10	0.25	0.00	0.00
12/01392/COU	1.72	2.91	0.19	0.32	0.00	0.00
14/00840/COU	0.88	0.18	0.23	0.08	0.61	0.46
14/01922/COU	5.36	14.57	0.51	1.28	0.00	0.00
14/01922/COU	9.75	17.39	0.73	0.29	0.00	0.00
14/01922/COU	27.02	39.09	0.84	1.21	0.47	0.28

Policy/ Application Reference	2041					
	PM Peak (1700-1800)					
	Car		LGV		HGV	
	O	D	O	D	O	D
16/01490/FUL	27.83	26.69	1.47	1.41	0.12	0.10
16/01490/FUL	2.57	6.98	0.25	0.61	0.00	0.00
16/01490/FUL	8.42	12.19	0.26	0.38	0.15	0.09
16/01603/COU	1.45	0.34	0.66	0.35	0.23	0.16
17/02128/FUL	293.41	281.32	15.48	14.83	1.29	1.03
17/02128/FUL	1.60	4.36	0.15	0.38	0.00	0.00
17/02128/FUL	13.60	1.26	0.22	0.20	0.00	0.00
17/02128/FUL	4.23	2.43	0.17	0.12	0.00	0.00
17/02128/FUL	14.63	21.18	0.46	0.66	0.26	0.15
17/00927/COU	4.41	11.98	0.42	1.05	0.00	0.00
15/01701/FUL	57.47	5.31	0.95	0.86	0.00	0.00
12/00432/FUL	19.98	19.16	1.05	1.01	0.09	0.07
12/00432/FUL	7.69	0.71	0.13	0.11	0.00	0.00
16/01006/COU	1.70	0.39	0.77	0.41	0.27	0.18
16/01006/COU	1.05	0.21	0.27	0.09	0.73	0.55
16/01417/FUL /E1	37.33	3.45	0.61	0.56	0.00	0.00
16/01417/FUL /E1	37.34	3.45	0.61	0.56	0.00	0.00
16/02020/FUL	23.25	22.29	1.23	1.18	0.10	0.08
16/02020/FUL	2.03	1.17	0.08	0.06	0.00	0.00
17/00936/FUL	134.76	129.21	7.11	6.81	0.59	0.47
17/00936/FUL	0.47	1.26	0.04	0.11	0.00	0.00
17/01357/FUL	12.86	1.19	0.21	0.19	0.00	0.00
12/01488/FUL	43.21	3.99	0.71	0.64	0.00	0.00

Policy/ Application Reference	2041					
	PM Peak (1700-1800)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/01162/FUL	14.29	20.68	0.45	0.64	0.25	0.15
16/02275/FUL	30.65	2.83	0.50	0.46	0.00	0.00
16/02275/FUL	2.14	0.50	0.97	0.52	0.34	0.23
16/02275/FUL	1.32	0.27	0.34	0.12	0.92	0.69
17/00764/FUL	84.36	80.89	4.45	4.27	0.37	0.30
17/01523/FUL	71.47	68.52	3.77	3.61	0.31	0.25
17/01044/FUL	46.09	44.19	2.43	2.33	0.20	0.16
17/01044/FUL	4.26	11.56	0.41	1.02	0.00	0.00
17/01044/FUL	12.97	1.20	0.21	0.19	0.00	0.00
17/01044/FUL	1.14	0.26	0.52	0.27	0.18	0.12
17/01044/FUL	0.70	0.14	0.18	0.06	0.49	0.37
17/01044/FUL	4.03	2.32	0.16	0.11	0.00	0.00
17/01459/FUL	84.36	80.89	4.45	4.27	0.37	0.30
18/01180/FUL / E3	46.99	4.34	0.77	0.70	0.00	0.00
18/01004/FUL / E3	84.19	7.78	1.38	1.25	0.00	0.00
18/01004/FUL / E3	1.20	3.27	0.11	0.29	0.00	0.00
18/01004/FUL / E3	92.49	88.68	4.88	4.68	0.41	0.33
18/01004/FUL / E3	3.18	1.82	0.13	0.09	0.00	0.00
18/01004/FUL / E3	111.56	10.31	1.83	1.66	0.00	0.00
16/02000/OUT / A4	510.80	47.20	8.40	7.60	0.00	0.00
16/02000/OUT / A4	7.31	12.32	0.81	1.37	0.00	0.00
A7	975.63	90.15	16.04	14.52	0.00	0.00
A7	486.04	37.26	13.25	6.62	3.31	1.66

Policy/ Application Reference	2041					
	PM Peak (1700-1800)					
	Car		LGV		HGV	
	O	D	O	D	O	D
A7	129.46	26.11	5.43	1.15	1.88	2.82
A4 Safeguarded	1072.68	99.12	17.64	15.96	0.00	0.00
A4 Safeguarded	40.32	9.36	18.36	9.72	6.48	4.32
A7 Safeguarded	178.78	16.52	2.94	2.66	0.00	0.00
A7 Safeguarded	6.72	1.56	3.06	1.62	1.08	0.72
09/00897/REM	14.04	29.64	1.82	3.64	0.26	0.26
10/00468/REM	12.96	27.36	1.68	3.36	0.24	0.24
14/01477/REM	14.15	29.87	1.83	3.67	0.26	0.26
07/00472/OUT / 15/00286/REM	18.58	39.22	2.41	4.82	0.34	0.34
10/00467/REM	14.36	30.32	1.86	3.72	0.27	0.27
11/00107/FUL / 15/00362/FUL 16/00088/FUL	28.08	59.28	3.64	7.28	0.52	0.52
15/01144/FUL	17.93	37.85	2.32	4.65	0.33	0.33
15/01591/FUL	14.04	29.64	1.82	3.64	0.26	0.26
16/00165/OUT	27.00	57.00	3.50	7.00	0.50	0.50
14/00709/FUL	36.72	77.52	4.76	9.52	0.68	0.68
16/00948/OUT	27.00	57.00	3.50	7.00	0.50	0.50
15/00749/OUT / A1	159.08	335.84	20.62	41.24	2.95	2.95
15/01149/OUT / A1b	88.78	187.42	11.51	23.02	1.64	1.64
A2	118.80	250.80	15.40	30.80	2.20	2.20
12/01256/OUT / A3	162.00	342.00	21.00	42.00	3.00	3.00
14/01063/OUT / A6	45.36	95.76	5.88	11.76	0.84	0.84
14/01470/OUT / A6	21.60	45.60	2.80	5.60	0.40	0.40
15/00892/FUL	7.49	1.74	3.41	1.81	1.20	0.80

Policy/ Application Reference	2041					
	PM Peak (1700-1800)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/01144/FUL	24.11	65.47	2.30	5.75	0.00	0.00
15/01144/FUL	7.85	13.23	0.87	1.47	0.00	0.00
16/00381/FUL	6.80	18.48	0.65	1.62	0.00	0.00
16/00005/OUT	432.16	414.36	22.80	21.85	1.90	1.52
16/00005/OUT	4.99	4.79	0.26	0.25	0.02	0.02
15/00112/REM	43.80	4.05	0.72	0.65	0.00	0.00
15/00112/REM	2.37	0.48	0.61	0.21	1.65	1.23
16/00158/FUL	23.79	1.82	0.65	0.32	0.16	0.08
14/01035/OUT	72.52	6.70	1.19	1.08	0.00	0.00
14/01035/OUT	23.00	5.34	10.47	5.55	3.70	2.46
16/00957/FUL	13.82	1.06	0.38	0.19	0.09	0.05
16/00322/FUL	5.68	3.26	0.23	0.16	0.00	0.00
15/01190/OUT	1.76	1.31	0.28	0.17	0.00	0.00
15/01190/OUT	49.06	70.98	1.53	2.20	0.86	0.50
14/01158/FUL	46.36	44.45	2.45	2.34	0.20	0.16
14/01163/FUL	51.58	4.77	0.85	0.77	0.00	0.00
15/00657/FUL	14.99	1.39	0.25	0.22	0.00	0.00
16/01022/FUL	10.01	0.77	0.27	0.14	0.07	0.03
16/00957/FUL	46.31	44.41	2.44	2.34	0.20	0.16
16/00957/FUL	13.82	1.06	0.38	0.19	0.09	0.05
A2	399.96	36.96	6.58	5.95	0.00	0.00
A2	15.59	3.62	7.10	3.76	2.51	1.67
A2	12.05	2.42	3.09	1.06	8.35	6.26

Policy/ Application Reference	2041					
	PM Peak (1700-1800)					
	Car		LGV		HGV	
	O	D	O	D	O	D
15/00749/OUT / A1	193.90	17.92	3.19	2.88	0.00	0.00
15/00749/OUT / A1	2.56	0.51	0.66	0.22	1.77	1.33
12/01256/OUT / A3	129.14	9.90	3.52	1.76	0.88	0.44
13/00939/APP	21.49	45.37	2.79	5.57	0.40	0.40
13/00163/APP	13.18	27.82	1.71	3.42	0.24	0.24
11/00385/FUL	31.43	66.35	4.07	8.15	0.58	0.58
15/00814/APP	11.45	24.17	1.48	2.97	0.21	0.21
15/01274/APP	23.11	48.79	3.00	5.99	0.43	0.43
16/00292/APP	12.20	25.76	1.58	3.16	0.23	0.23
16/00853/FUL	21.28	44.92	2.76	5.52	0.39	0.39
15/01002/APP	16.20	34.20	2.10	4.20	0.30	0.30
15/01378/OUT	11.45	24.17	1.48	2.97	0.21	0.21
15/00575/APP	13.93	29.41	1.81	3.61	0.26	0.26
10/01216/OUT	20.52	43.32	2.66	5.32	0.38	0.38
14/00316/APP	14.36	30.32	1.86	3.72	0.27	0.27
10/01381/APP 11/00691/APP	18.14	38.30	2.35	4.70	0.34	0.34
16/00739/APP	12.20	25.76	1.58	3.16	0.23	0.23
16/00227/APP	25.27	53.35	3.28	6.55	0.47	0.47
16/00177/FUL	28.19	59.51	3.65	7.31	0.52	0.52
13/00986/APP	11.88	25.08	1.54	3.08	0.22	0.22
16/00379/APP	13.61	28.73	1.76	3.53	0.25	0.25
12/00640/FUL	290.05	278.10	15.30	14.66	1.28	1.02
15/00755/FUL	44.69	3.43	1.22	0.61	0.30	0.15



## Appendix D: TEMPro Ceiling Growth Rates

Area Description	Name	AM Peak Period (0700-1000) 2013 to 2021					
		Employers Business		Commuter		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
Region	EAST	1.060	1.065	1.015	1.021	1.078	1.080
County	Derbyshire	1.050	1.052	1.005	1.008	1.045	1.044
County	Leicestershire	1.056	1.064	1.014	1.021	1.041	1.042
County	Lincolnshire	1.007	1.005	0.964	0.962	1.028	1.028
County	Northamptonshire	1.069	1.062	1.027	1.019	1.062	1.059
County	Nottinghamshire	1.055	1.052	1.013	1.008	1.049	1.051
Region	LON	1.129	1.114	1.082	1.065	1.087	1.084
Region	NE	1.071	1.071	1.028	1.028	1.030	1.030
Region	NW	1.070	1.070	1.028	1.028	1.037	1.037
Region	SCOTLAND	1.039	1.039	1.004	1.004	1.029	1.029
County	Berkshire	1.080	1.085	1.028	1.040	1.070	1.071
County	Buckinghamshire	1.087	1.094	1.037	1.046	1.079	1.073
County	East Sussex	1.052	1.049	1.011	1.007	1.073	1.076
County	Hampshire	1.068	1.071	1.021	1.026	1.066	1.066
County	Kent	1.103	1.108	1.059	1.059	1.073	1.072
County	Oxfordshire	1.102	1.069	1.062	1.020	1.097	1.068
County	Surrey	1.053	1.079	1.002	1.033	1.049	1.065
County	West Sussex	1.055	1.054	1.010	1.010	1.083	1.080
County	Bristol	1.066	1.056	1.025	1.013	1.043	1.042
County	Cornwall	1.056	1.059	1.013	1.018	1.049	1.051
County	Devon	1.058	1.056	1.019	1.016	1.052	1.051
County	Dorset	1.036	1.034	0.996	0.995	1.040	1.041
Authority	Cheltenham	1.111	1.083	1.071	1.037	1.057	1.046
Authority	Cotswold	1.044	1.076	0.993	1.031	1.026	1.040
Authority	Forest of Dean	1.058	1.083	1.003	1.040	1.026	1.034
Authority	Gloucester	1.114	1.090	1.074	1.045	1.059	1.049
Authority	Stroud	1.063	1.082	1.012	1.038	1.033	1.041
Authority	Tewkesbury	1.137	1.084	1.107	1.038	1.109	1.067
County	Somerset	1.057	1.060	1.014	1.018	1.054	1.055
Authority	Wiltshire	1.036	1.049	0.991	1.006	1.047	1.051
County	Mid Wales	1.004	1.008	0.963	0.970	1.018	1.002

Area Description	Name	AM Peak Period (0700-1000) 2013 to 2021					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
County	North Wales	1.028	1.027	0.984	0.983	1.031	1.032
County	South East Wales	1.055	1.055	1.014	1.014	1.045	1.045
County	South West Wales	1.023	1.023	0.982	0.982	1.041	1.044
Authority	Herefordshire, County of	1.008	1.013	0.964	0.972	1.044	1.052
County	Shropshire	1.062	1.062	1.019	1.019	1.051	1.051
County	Staffordshire	1.034	1.042	0.991	1.002	1.040	1.045
County	Warwickshire	1.042	1.058	0.992	1.013	1.069	1.077
County	West Midlands	1.081	1.069	1.042	1.028	1.050	1.046
County	Worcestershire	1.027	1.031	0.984	0.990	1.047	1.046
Authority	Malvern Hills	1.029	1.015	0.990	0.974	1.068	1.049
Authority	Wychavon	1.022	1.015	0.983	0.972	1.063	1.052
Region	YH	1.072	1.072	1.030	1.030	1.041	1.041

Area Description	Name	Inter Peak Period (1000-1600) 2013 to 2021					
		Employers Business		Commuter		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
Region	EAST	1.053	1.051	1.015	1.013	1.086	1.086
County	Derbyshire	1.038	1.038	1.003	1.002	1.049	1.048
County	Leicestershire	1.048	1.048	1.011	1.010	1.048	1.048
County	Lincolnshire	0.994	0.993	0.958	0.958	1.037	1.036
County	Northamptonshire	1.050	1.050	1.016	1.017	1.066	1.067
County	Nottinghamshire	1.040	1.040	1.006	1.006	1.052	1.052
Region	LON	1.105	1.103	1.069	1.070	1.085	1.086
Region	NE	1.053	1.053	1.016	1.016	1.033	1.033
Region	NW	1.052	1.052	1.018	1.018	1.038	1.038
Region	SCOTLAND	1.024	1.024	0.989	0.989	1.040	1.040
County	Berkshire	1.071	1.070	1.032	1.030	1.072	1.071
County	Buckinghamshire	1.078	1.078	1.037	1.036	1.080	1.081
County	East Sussex	1.040	1.039	1.007	1.007	1.082	1.082
County	Hampshire	1.058	1.058	1.021	1.019	1.068	1.067
County	Kent	1.091	1.093	1.051	1.052	1.073	1.074
County	Oxfordshire	1.063	1.065	1.035	1.042	1.085	1.087
County	Surrey	1.061	1.059	1.018	1.011	1.058	1.057
County	West Sussex	1.043	1.043	1.008	1.008	1.090	1.090
County	Bristol	1.045	1.046	1.011	1.014	1.040	1.041
County	Cornwall	1.045	1.045	1.010	1.008	1.050	1.049
County	Devon	1.043	1.043	1.009	1.009	1.054	1.055
County	Dorset	1.024	1.024	0.991	0.991	1.043	1.043
Authority	Cheltenham	1.072	1.075	1.043	1.050	1.046	1.048
Authority	Cotswold	1.053	1.052	1.014	1.006	1.034	1.032
Authority	Forest of Dean	1.061	1.061	1.019	1.014	1.032	1.029
Authority	Gloucester	1.079	1.080	1.049	1.054	1.045	1.047
Authority	Stroud	1.063	1.061	1.022	1.018	1.036	1.035
Authority	Tewkesbury	1.083	1.082	1.059	1.068	1.082	1.085
County	Somerset	1.047	1.047	1.012	1.011	1.058	1.057
Authority	Wiltshire	1.033	1.034	0.998	0.994	1.051	1.050
County	Mid Wales	0.996	0.996	0.965	0.965	1.023	1.024

Area Description	Name	Inter Peak Period (1000-1600) 2013 to 2021					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
County	North Wales	1.016	1.016	0.983	0.982	1.036	1.036
County	South East Wales	1.042	1.042	1.007	1.007	1.048	1.048
County	South West Wales	1.014	1.013	0.982	0.982	1.047	1.046
Authority	Herefordshire, County of	1.003	1.001	0.969	0.966	1.056	1.055
County	Shropshire	1.048	1.048	1.015	1.015	1.056	1.055
County	Staffordshire	1.028	1.027	0.993	0.990	1.046	1.045
County	Warwickshire	1.041	1.042	1.002	0.998	1.077	1.076
County	West Midlands	1.054	1.054	1.024	1.027	1.049	1.050
County	Worcestershire	1.018	1.019	0.984	0.983	1.057	1.056
Authority	Malvern Hills	1.009	1.010	0.981	0.984	1.074	1.075
Authority	Wychavon	1.007	1.008	0.976	0.979	1.070	1.070
Region	YH	1.056	1.056	1.022	1.022	1.044	1.044

Area Description	Name	PM Peak Period (1600-1900) 2013 to 2021					
		Employers Business		Commuter		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
Region	EAST	1.059	1.054	1.017	1.011	1.059	1.054
County	Derbyshire	1.045	1.043	1.004	1.001	1.045	1.043
County	Leicestershire	1.054	1.050	1.016	1.009	1.054	1.050
County	Lincolnshire	0.998	1.000	0.958	0.960	0.998	1.000
County	Northamptonshire	1.055	1.059	1.016	1.023	1.055	1.059
County	Nottinghamshire	1.044	1.047	1.004	1.008	1.044	1.047
Region	LON	1.107	1.116	1.065	1.080	1.107	1.116
Region	NE	1.060	1.060	1.021	1.021	1.060	1.060
Region	NW	1.059	1.059	1.022	1.022	1.059	1.059
Region	SCOTLAND	1.030	1.030	0.995	0.995	1.030	1.030
County	Berkshire	1.077	1.072	1.036	1.025	1.077	1.072
County	Buckinghamshire	1.086	1.079	1.042	1.034	1.086	1.079
County	East Sussex	1.044	1.045	1.004	1.007	1.044	1.045
County	Hampshire	1.064	1.061	1.022	1.017	1.064	1.061
County	Kent	1.098	1.096	1.054	1.054	1.098	1.096
County	Oxfordshire	1.064	1.089	1.020	1.061	1.064	1.089
County	Surrey	1.070	1.050	1.029	0.997	1.070	1.050
County	West Sussex	1.048	1.049	1.006	1.007	1.048	1.049
County	Bristol	1.048	1.057	1.008	1.020	1.048	1.057
County	Cornwall	1.052	1.049	1.012	1.008	1.052	1.049
County	Devon	1.049	1.050	1.010	1.012	1.049	1.050
County	Dorset	1.029	1.029	0.990	0.991	1.029	1.029
Authority	Cheltenham	1.076	1.099	1.034	1.067	1.048	1.053
Authority	Cotswold	1.065	1.042	1.027	0.988	1.065	1.042
Authority	Forest of Dean	1.073	1.053	1.033	1.000	1.073	1.053
Authority	Gloucester	1.084	1.102	1.042	1.069	1.048	1.052
Authority	Stroud	1.073	1.057	1.032	1.008	1.073	1.057
Authority	Tewkesbury	1.081	1.121	1.037	1.103	1.078	1.096
County	Somerset	1.053	1.051	1.013	1.010	1.053	1.051
Authority	Wiltshire	1.041	1.031	1.001	0.987	1.041	1.031
County	Mid Wales	1.003	1.000	0.967	0.962	1.003	1.000

Area Description	Name	PM Peak Period (1600-1900) 2013 to 2021					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
County	North Wales	1.022	1.022	0.980	0.981	1.022	1.022
County	South East Wales	1.048	1.048	1.008	1.009	1.048	1.048
County	South West Wales	1.019	1.019	0.979	0.979	1.019	1.019
Authority	Herefordshire, County of	1.009	1.003	0.969	0.960	1.009	1.003
County	Shropshire	1.055	1.055	1.016	1.016	1.055	1.055
County	Staffordshire	1.035	1.028	0.997	0.986	1.035	1.028
County	Warwickshire	1.049	1.037	1.007	0.988	1.049	1.037
County	West Midlands	1.059	1.067	1.023	1.036	1.059	1.067
County	Worcestershire	1.024	1.022	0.986	0.981	1.024	1.022
Authority	Malvern Hills	1.012	1.023	0.973	0.990	1.012	1.023
Authority	Wychavon	1.010	1.018	0.970	0.982	1.010	1.018
Region	YH	1.063	1.063	1.025	1.025	1.063	1.063

Area Description	Name	AM Peak Period (0700-1000) 2013 to 2026					
		Employers Business		Commuter		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
Region	EAST	1.087	1.095	1.038	1.048	1.148	1.151
County	Derbyshire	1.082	1.085	1.034	1.038	1.091	1.089
County	Leicestershire	1.083	1.096	1.038	1.052	1.085	1.089
County	Lincolnshire	1.035	1.034	0.988	0.988	1.074	1.076
County	Northamptonshire	1.108	1.094	1.066	1.050	1.119	1.111
County	Nottinghamshire	1.089	1.084	1.045	1.038	1.096	1.098
Region	LON	1.166	1.144	1.119	1.093	1.154	1.150
Region	NE	1.109	1.109	1.063	1.063	1.069	1.069
Region	NW	1.105	1.105	1.061	1.061	1.074	1.074
Region	SCOTLAND	1.077	1.077	1.039	1.039	1.074	1.074
County	Berkshire	1.112	1.116	1.059	1.068	1.129	1.127
County	Buckinghamshire	1.120	1.124	1.069	1.073	1.146	1.134
County	East Sussex	1.083	1.082	1.041	1.037	1.126	1.130
County	Hampshire	1.104	1.111	1.053	1.062	1.119	1.120
County	Kent	1.125	1.136	1.076	1.084	1.133	1.134
County	Oxfordshire	1.144	1.100	1.104	1.049	1.168	1.127
County	Surrey	1.070	1.109	1.015	1.060	1.096	1.121
County	West Sussex	1.088	1.087	1.040	1.040	1.140	1.136
County	Bristol	1.106	1.087	1.065	1.042	1.100	1.097
County	Cornwall	1.091	1.092	1.045	1.047	1.093	1.093
County	Devon	1.088	1.087	1.046	1.045	1.097	1.097
County	Dorset	1.064	1.062	1.022	1.020	1.078	1.079
Authority	Cheltenham	1.188	1.167	1.139	1.115	1.136	1.135
Authority	Cotswold	1.058	1.107	0.999	1.059	1.054	1.076
Authority	Forest of Dean	1.084	1.115	1.023	1.068	1.059	1.071
Authority	Gloucester	1.178	1.127	1.140	1.078	1.131	1.101
Authority	Stroud	1.091	1.113	1.035	1.066	1.073	1.082
Authority	Tewkesbury	1.182	1.134	1.146	1.083	1.165	1.125
County	Somerset	1.086	1.091	1.040	1.046	1.104	1.107
Authority	Wiltshire	1.052	1.078	1.002	1.033	1.093	1.100
County	Mid Wales	1.020	1.034	0.973	0.993	1.044	1.032



Area Description	Name	AM Peak Period (0700-1000) 2013 to 2026					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
County	North Wales	1.058	1.055	1.011	1.009	1.065	1.066
County	South East Wales	1.089	1.087	1.047	1.045	1.089	1.089
County	South West Wales	1.054	1.054	1.010	1.010	1.079	1.082
Authority	Herefordshire, County of	1.046	1.042	1.000	0.997	1.087	1.087
County	Shropshire	1.095	1.094	1.049	1.047	1.096	1.095
County	Staffordshire	1.061	1.074	1.014	1.031	1.079	1.086
County	Warwickshire	1.064	1.089	1.010	1.041	1.117	1.129
County	West Midlands	1.121	1.103	1.081	1.059	1.100	1.093
County	Worcestershire	1.047	1.061	0.999	1.016	1.075	1.080
Authority	Malvern Hills	1.066	1.044	1.026	0.999	1.111	1.084
Authority	Wychavon	1.032	1.042	0.985	0.996	1.077	1.079
Region	YH	1.110	1.110	1.065	1.065	1.085	1.085

Area Description	Name	Inter Peak Period (0700-1000) 2013 to 2026					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
Region	EAST	1.082	1.080	1.038	1.036	1.163	1.162
County	Derbyshire	1.069	1.069	1.029	1.028	1.096	1.096
County	Leicestershire	1.077	1.078	1.035	1.033	1.097	1.098
County	Lincolnshire	1.021	1.021	0.981	0.981	1.087	1.085
County	Northamptonshire	1.082	1.082	1.046	1.049	1.124	1.125
County	Nottinghamshire	1.071	1.071	1.033	1.034	1.101	1.102
Region	LON	1.137	1.134	1.100	1.102	1.154	1.156
Region	NE	1.087	1.087	1.046	1.046	1.074	1.074
Region	NW	1.084	1.084	1.046	1.046	1.078	1.078
Region	SCOTLAND	1.059	1.059	1.019	1.019	1.087	1.087
County	Berkshire	1.101	1.100	1.059	1.058	1.135	1.134
County	Buckinghamshire	1.108	1.108	1.064	1.064	1.149	1.150
County	East Sussex	1.071	1.070	1.033	1.033	1.139	1.138
County	Hampshire	1.095	1.095	1.052	1.051	1.123	1.123
County	Kent	1.117	1.119	1.070	1.070	1.141	1.140
County	Oxfordshire	1.096	1.098	1.066	1.076	1.155	1.157
County	Surrey	1.087	1.085	1.038	1.028	1.114	1.112
County	West Sussex	1.074	1.075	1.035	1.036	1.150	1.150
County	Bristol	1.077	1.078	1.042	1.046	1.099	1.100
County	Cornwall	1.076	1.076	1.036	1.035	1.094	1.093
County	Devon	1.072	1.072	1.033	1.033	1.102	1.102
County	Dorset	1.051	1.050	1.014	1.014	1.082	1.082
Authority	Cheltenham	1.151	1.154	1.112	1.118	1.132	1.133
Authority	Cotswold	1.077	1.077	1.031	1.019	1.068	1.065
Authority	Forest of Dean	1.089	1.089	1.041	1.034	1.068	1.066
Authority	Gloucester	1.120	1.121	1.093	1.103	1.107	1.108
Authority	Stroud	1.092	1.090	1.045	1.041	1.078	1.076
Authority	Tewkesbury	1.129	1.128	1.099	1.107	1.141	1.144
County	Somerset	1.076	1.076	1.036	1.035	1.112	1.112
Authority	Wiltshire	1.057	1.058	1.016	1.009	1.102	1.101
County	Mid Wales	1.018	1.018	0.981	0.979	1.053	1.054

Area Description	Name	Inter Peak Period (0700-1000) 2013 to 2026					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
County	North Wales	1.043	1.043	1.006	1.006	1.071	1.071
County	South East Wales	1.073	1.073	1.035	1.035	1.094	1.094
County	South West Wales	1.043	1.043	1.008	1.008	1.088	1.087
Authority	Herefordshire, County of	1.032	1.030	0.995	0.994	1.096	1.096
County	Shropshire	1.079	1.079	1.041	1.042	1.102	1.102
County	Staffordshire	1.057	1.055	1.016	1.012	1.090	1.088
County	Warwickshire	1.069	1.069	1.024	1.018	1.132	1.130
County	West Midlands	1.086	1.087	1.055	1.059	1.101	1.102
County	Worcestershire	1.043	1.043	1.001	0.999	1.090	1.089
Authority	Malvern Hills	1.037	1.039	1.006	1.012	1.115	1.116
Authority	Wychavon	1.027	1.028	0.987	0.987	1.092	1.092
Region	YH	1.090	1.090	1.053	1.053	1.091	1.091

Area Description	Name	PM Peak Period (0700-1000) 2013 to 2026					
		Employers Business		Commuter		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
Region	EAST	1.089	1.081	1.041	1.032	1.128	1.128
County	Derbyshire	1.076	1.074	1.031	1.027	1.079	1.079
County	Leicestershire	1.085	1.076	1.043	1.030	1.082	1.080
County	Lincolnshire	1.026	1.027	0.982	0.981	1.060	1.057
County	Northamptonshire	1.087	1.096	1.044	1.059	1.106	1.111
County	Nottinghamshire	1.076	1.080	1.032	1.037	1.085	1.085
Region	LON	1.137	1.150	1.091	1.116	1.143	1.142
Region	NE	1.096	1.096	1.053	1.053	1.070	1.070
Region	NW	1.092	1.092	1.052	1.052	1.072	1.072
Region	SCOTLAND	1.067	1.067	1.027	1.027	1.074	1.074
County	Berkshire	1.107	1.104	1.062	1.054	1.112	1.112
County	Buckinghamshire	1.116	1.112	1.067	1.064	1.125	1.134
County	East Sussex	1.076	1.076	1.031	1.034	1.111	1.109
County	Hampshire	1.102	1.097	1.055	1.047	1.104	1.104
County	Kent	1.125	1.118	1.076	1.069	1.123	1.125
County	Oxfordshire	1.096	1.130	1.047	1.101	1.129	1.147
County	Surrey	1.098	1.069	1.054	1.008	1.098	1.086
County	West Sussex	1.080	1.082	1.034	1.035	1.118	1.121
County	Bristol	1.078	1.095	1.035	1.057	1.083	1.083
County	Cornwall	1.083	1.082	1.038	1.037	1.083	1.082
County	Devon	1.079	1.079	1.036	1.036	1.086	1.087
County	Dorset	1.056	1.056	1.013	1.014	1.066	1.065
Authority	Cheltenham	1.157	1.174	1.109	1.131	1.129	1.129
Authority	Cotswold	1.093	1.057	1.051	0.992	1.063	1.055
Authority	Forest of Dean	1.102	1.079	1.058	1.018	1.062	1.055
Authority	Gloucester	1.122	1.160	1.076	1.134	1.103	1.114
Authority	Stroud	1.103	1.084	1.058	1.030	1.070	1.068
Authority	Tewkesbury	1.129	1.166	1.080	1.140	1.131	1.149
County	Somerset	1.083	1.079	1.039	1.034	1.095	1.092
Authority	Wiltshire	1.068	1.049	1.025	0.997	1.081	1.079
County	Mid Wales	1.028	1.017	0.988	0.970	1.036	1.035

Area Description	Name	PM Peak Period (0700-1000) 2013 to 2026					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
County	North Wales	1.049	1.051	1.004	1.006	1.057	1.057
County	South East Wales	1.080	1.081	1.036	1.038	1.082	1.082
County	South West Wales	1.049	1.049	1.005	1.004	1.070	1.069
Authority	Herefordshire, County of	1.037	1.038	0.992	0.994	1.071	1.072
County	Shropshire	1.086	1.087	1.042	1.043	1.087	1.088
County	Staffordshire	1.065	1.054	1.023	1.006	1.071	1.069
County	Warwickshire	1.079	1.060	1.033	1.004	1.104	1.101
County	West Midlands	1.091	1.104	1.052	1.073	1.092	1.094
County	Worcestershire	1.051	1.041	1.009	0.993	1.068	1.065
Authority	Malvern Hills	1.040	1.058	0.996	1.025	1.085	1.097
Authority	Wychavon	1.034	1.028	0.991	0.981	1.066	1.067
Region	YH	1.098	1.098	1.057	1.057	1.084	1.084

Area Description	Name	AM Peak Period (0700-1000) 2013 to 2031					
		Employers Business		Commuter		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
Region	EAST	1.110	1.122	1.057	1.072	1.210	1.215
County	Derbyshire	1.112	1.115	1.060	1.066	1.136	1.134
County	Leicestershire	1.107	1.123	1.061	1.077	1.129	1.135
County	Lincolnshire	1.059	1.059	1.010	1.011	1.120	1.123
County	Northamptonshire	1.139	1.121	1.095	1.075	1.173	1.161
County	Nottinghamshire	1.120	1.114	1.074	1.066	1.142	1.144
Region	LON	1.203	1.171	1.155	1.119	1.223	1.216
Region	NE	1.142	1.142	1.093	1.093	1.107	1.107
Region	NW	1.134	1.134	1.088	1.088	1.111	1.111
Region	SCOTLAND	1.110	1.110	1.071	1.071	1.114	1.114
County	Berkshire	1.141	1.143	1.086	1.094	1.188	1.185
County	Buckinghamshire	1.150	1.151	1.098	1.097	1.213	1.195
County	East Sussex	1.116	1.111	1.073	1.064	1.181	1.183
County	Hampshire	1.127	1.138	1.074	1.087	1.167	1.168
County	Kent	1.143	1.162	1.090	1.106	1.193	1.195
County	Oxfordshire	1.179	1.127	1.138	1.074	1.236	1.186
County	Surrey	1.087	1.135	1.029	1.084	1.146	1.178
County	West Sussex	1.114	1.116	1.062	1.067	1.189	1.187
County	Bristol	1.148	1.113	1.107	1.066	1.157	1.152
County	Cornwall	1.122	1.120	1.074	1.072	1.135	1.135
County	Devon	1.114	1.115	1.069	1.070	1.141	1.142
County	Dorset	1.089	1.087	1.046	1.044	1.120	1.122
Authority	Cheltenham	1.246	1.245	1.184	1.187	1.209	1.228
Authority	Cotswold	1.063	1.128	0.999	1.077	1.088	1.116
Authority	Forest of Dean	1.097	1.137	1.031	1.087	1.094	1.110
Authority	Gloucester	1.198	1.152	1.155	1.100	1.170	1.145
Authority	Stroud	1.106	1.135	1.048	1.085	1.112	1.124
Authority	Tewkesbury	1.224	1.173	1.184	1.119	1.226	1.185
County	Somerset	1.111	1.117	1.062	1.070	1.155	1.160
Authority	Wiltshire	1.064	1.102	1.009	1.055	1.138	1.149
County	Mid Wales	1.032	1.058	0.980	1.015	1.064	1.057

Area Description	Name	AM Peak Period (0700-1000) 2013 to 2031					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
County	North Wales	1.084	1.080	1.036	1.031	1.094	1.095
County	South East Wales	1.118	1.115	1.075	1.072	1.128	1.128
County	South West Wales	1.080	1.080	1.036	1.035	1.113	1.116
Authority	Herefordshire, County of	1.078	1.067	1.031	1.020	1.130	1.123
County	Shropshire	1.123	1.120	1.074	1.071	1.138	1.137
County	Staffordshire	1.084	1.102	1.034	1.057	1.116	1.125
County	Warwickshire	1.086	1.116	1.029	1.067	1.167	1.182
County	West Midlands	1.156	1.133	1.116	1.088	1.149	1.139
County	Worcestershire	1.064	1.086	1.012	1.039	1.103	1.114
Authority	Malvern Hills	1.096	1.069	1.054	1.021	1.149	1.118
Authority	Wychavon	1.041	1.066	0.990	1.017	1.095	1.108
Region	YH	1.140	1.140	1.094	1.094	1.129	1.129

Area Description	Name	Inter Peak Period (0700-1000) 2013 to 2031					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
Region	EAST	1.107	1.106	1.059	1.056	1.231	1.230
County	Derbyshire	1.098	1.098	1.053	1.052	1.143	1.142
County	Leicestershire	1.103	1.103	1.057	1.055	1.145	1.145
County	Lincolnshire	1.045	1.045	1.002	1.001	1.135	1.134
County	Northamptonshire	1.110	1.109	1.071	1.075	1.179	1.180
County	Nottinghamshire	1.100	1.100	1.058	1.059	1.149	1.149
Region	LON	1.167	1.163	1.130	1.134	1.224	1.227
Region	NE	1.117	1.117	1.072	1.072	1.112	1.112
Region	NW	1.111	1.111	1.070	1.070	1.115	1.115
Region	SCOTLAND	1.090	1.090	1.044	1.044	1.129	1.129
County	Berkshire	1.129	1.128	1.083	1.083	1.198	1.197
County	Buckinghamshire	1.135	1.136	1.089	1.089	1.218	1.219
County	East Sussex	1.101	1.099	1.061	1.061	1.195	1.195
County	Hampshire	1.121	1.121	1.073	1.071	1.175	1.174
County	Kent	1.141	1.143	1.088	1.086	1.208	1.207
County	Oxfordshire	1.125	1.127	1.093	1.104	1.223	1.226
County	Surrey	1.111	1.109	1.058	1.045	1.171	1.169
County	West Sussex	1.102	1.103	1.058	1.059	1.204	1.204
County	Bristol	1.107	1.108	1.071	1.079	1.155	1.158
County	Cornwall	1.103	1.103	1.060	1.060	1.135	1.135
County	Devon	1.098	1.098	1.054	1.054	1.148	1.148
County	Dorset	1.076	1.075	1.035	1.036	1.126	1.126
Authority	Cheltenham	1.222	1.225	1.172	1.172	1.217	1.217
Authority	Cotswold	1.094	1.093	1.042	1.027	1.107	1.104
Authority	Forest of Dean	1.108	1.108	1.055	1.046	1.107	1.105
Authority	Gloucester	1.144	1.144	1.111	1.120	1.150	1.151
Authority	Stroud	1.111	1.109	1.061	1.055	1.120	1.119
Authority	Tewkesbury	1.168	1.167	1.135	1.144	1.201	1.205
County	Somerset	1.101	1.101	1.057	1.057	1.167	1.166
Authority	Wiltshire	1.078	1.079	1.031	1.021	1.154	1.152
County	Mid Wales	1.038	1.037	0.995	0.991	1.077	1.077



Area Description	Name	Inter Peak Period (0700-1000) 2013 to 2031					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
County	North Wales	1.066	1.066	1.028	1.028	1.101	1.101
County	South East Wales	1.100	1.101	1.060	1.060	1.135	1.135
County	South West Wales	1.069	1.068	1.031	1.031	1.124	1.124
Authority	Herefordshire, County of	1.057	1.055	1.019	1.018	1.136	1.135
County	Shropshire	1.104	1.104	1.063	1.063	1.145	1.145
County	Staffordshire	1.082	1.081	1.037	1.032	1.129	1.128
County	Warwickshire	1.094	1.095	1.045	1.038	1.186	1.184
County	West Midlands	1.116	1.117	1.083	1.088	1.152	1.153
County	Worcestershire	1.065	1.065	1.017	1.014	1.123	1.122
Authority	Malvern Hills	1.062	1.063	1.028	1.035	1.152	1.153
Authority	Wychavon	1.045	1.046	0.999	0.996	1.116	1.116
Region	YH	1.119	1.119	1.078	1.078	1.137	1.137

Area Description	Name	PM Peak Period (0700-1000) 2013 to 2031					
		Employers Business		Commuter		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
Region	EAST	1.115	1.104	1.063	1.049	1.184	1.184
County	Derbyshire	1.106	1.103	1.055	1.051	1.120	1.120
County	Leicestershire	1.111	1.101	1.066	1.050	1.123	1.120
County	Lincolnshire	1.051	1.051	1.003	1.001	1.102	1.098
County	Northamptonshire	1.114	1.126	1.068	1.087	1.152	1.159
County	Nottinghamshire	1.105	1.110	1.056	1.064	1.126	1.126
Region	LON	1.166	1.184	1.115	1.151	1.204	1.203
Region	NE	1.127	1.127	1.080	1.080	1.105	1.105
Region	NW	1.120	1.120	1.077	1.077	1.106	1.106
Region	SCOTLAND	1.099	1.099	1.054	1.054	1.112	1.112
County	Berkshire	1.134	1.132	1.086	1.079	1.163	1.165
County	Buckinghamshire	1.143	1.142	1.090	1.091	1.180	1.194
County	East Sussex	1.105	1.108	1.056	1.064	1.160	1.158
County	Hampshire	1.128	1.120	1.078	1.066	1.147	1.147
County	Kent	1.150	1.137	1.097	1.081	1.176	1.179
County	Oxfordshire	1.124	1.163	1.071	1.133	1.185	1.207
County	Surrey	1.124	1.087	1.076	1.019	1.147	1.131
County	West Sussex	1.108	1.107	1.059	1.055	1.164	1.166
County	Bristol	1.106	1.134	1.058	1.097	1.132	1.132
County	Cornwall	1.110	1.112	1.061	1.064	1.121	1.121
County	Devon	1.105	1.105	1.058	1.056	1.127	1.127
County	Dorset	1.080	1.081	1.035	1.037	1.104	1.103
Authority	Cheltenham	1.232	1.234	1.176	1.172	1.207	1.200
Authority	Cotswold	1.113	1.064	1.068	0.990	1.095	1.084
Authority	Forest of Dean	1.123	1.093	1.075	1.025	1.095	1.086
Authority	Gloucester	1.146	1.181	1.096	1.147	1.138	1.147
Authority	Stroud	1.124	1.101	1.075	1.040	1.106	1.103
Authority	Tewkesbury	1.168	1.207	1.114	1.176	1.185	1.204
County	Somerset	1.109	1.104	1.061	1.054	1.141	1.138
Authority	Wiltshire	1.091	1.062	1.045	1.001	1.122	1.119
County	Mid Wales	1.051	1.030	1.007	0.975	1.059	1.056

Area Description	Name	PM Peak Period (0700-1000) 2013 to 2031					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
County	North Wales	1.073	1.076	1.025	1.029	1.086	1.086
County	South East Wales	1.108	1.110	1.061	1.064	1.119	1.120
County	South West Wales	1.075	1.075	1.028	1.028	1.104	1.103
Authority	Herefordshire, County of	1.062	1.068	1.013	1.024	1.106	1.109
County	Shropshire	1.112	1.113	1.063	1.066	1.125	1.126
County	Staffordshire	1.091	1.077	1.046	1.024	1.106	1.104
County	Warwickshire	1.106	1.083	1.057	1.021	1.149	1.146
County	West Midlands	1.120	1.138	1.079	1.105	1.136	1.139
County	Worcestershire	1.075	1.059	1.029	1.003	1.097	1.092
Authority	Malvern Hills	1.064	1.086	1.016	1.051	1.119	1.132
Authority	Wychavon	1.056	1.040	1.009	0.983	1.088	1.085
Region	YH	1.128	1.128	1.083	1.083	1.124	1.124

Area Description	Name	AM Peak Period (0700-1000) 2013 to 2036					
		Employers Business		Commuter		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
Region	EAST	1.139	1.155	1.082	1.101	1.271	1.278
County	Derbyshire	1.144	1.149	1.089	1.097	1.177	1.175
County	Leicestershire	1.136	1.153	1.087	1.105	1.171	1.178
County	Lincolnshire	1.087	1.088	1.035	1.037	1.161	1.165
County	Northamptonshire	1.171	1.151	1.125	1.103	1.222	1.207
County	Nottinghamshire	1.158	1.149	1.110	1.097	1.186	1.187
Region	LON	1.246	1.204	1.197	1.149	1.290	1.281
Region	NE	1.183	1.183	1.131	1.131	1.140	1.140
Region	NW	1.168	1.168	1.120	1.120	1.145	1.145
Region	SCOTLAND	1.149	1.149	1.107	1.107	1.152	1.152
County	Berkshire	1.172	1.173	1.115	1.123	1.244	1.238
County	Buckinghamshire	1.183	1.183	1.129	1.126	1.275	1.253
County	East Sussex	1.150	1.142	1.104	1.092	1.234	1.235
County	Hampshire	1.150	1.162	1.094	1.109	1.212	1.214
County	Kent	1.167	1.194	1.109	1.134	1.251	1.255
County	Oxfordshire	1.217	1.157	1.174	1.102	1.300	1.242
County	Surrey	1.106	1.165	1.045	1.112	1.191	1.232
County	West Sussex	1.142	1.146	1.086	1.095	1.238	1.239
County	Bristol	1.196	1.146	1.157	1.098	1.213	1.203
County	Cornwall	1.156	1.152	1.107	1.101	1.176	1.173
County	Devon	1.144	1.146	1.096	1.099	1.180	1.181
County	Dorset	1.116	1.112	1.070	1.066	1.154	1.156
Authority	Cheltenham	1.304	1.310	1.236	1.248	1.289	1.318
Authority	Cotswold	1.067	1.142	0.999	1.091	1.116	1.152
Authority	Forest of Dean	1.100	1.151	1.030	1.100	1.124	1.145
Authority	Gloucester	1.220	1.167	1.177	1.115	1.217	1.188
Authority	Stroud	1.118	1.150	1.057	1.099	1.149	1.162
Authority	Tewkesbury	1.247	1.188	1.209	1.133	1.275	1.228
County	Somerset	1.139	1.147	1.089	1.098	1.200	1.206
Authority	Wiltshire	1.079	1.131	1.019	1.083	1.176	1.191
County	Mid Wales	1.047	1.086	0.990	1.041	1.080	1.078

Area Description	Name	AM Peak Period (0700-1000) 2013 to 2036					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
County	North Wales	1.114	1.109	1.064	1.058	1.119	1.119
County	South East Wales	1.152	1.148	1.108	1.103	1.164	1.163
County	South West Wales	1.111	1.111	1.065	1.064	1.144	1.147
Authority	Herefordshire, County of	1.110	1.092	1.062	1.042	1.169	1.158
County	Shropshire	1.144	1.141	1.094	1.090	1.176	1.174
County	Staffordshire	1.111	1.135	1.057	1.088	1.151	1.162
County	Warwickshire	1.112	1.149	1.051	1.098	1.212	1.231
County	West Midlands	1.198	1.169	1.156	1.121	1.198	1.185
County	Worcestershire	1.085	1.114	1.028	1.065	1.132	1.149
Authority	Malvern Hills	1.124	1.095	1.081	1.044	1.187	1.152
Authority	Wychavon	1.055	1.090	0.998	1.039	1.116	1.137
Region	YH	1.174	1.174	1.124	1.124	1.170	1.170

Area Description	Name	Inter Peak Period (0700-1000) 2013 to 2036					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
Region	EAST	1.138	1.137	1.084	1.080	1.297	1.295
County	Derbyshire	1.129	1.129	1.080	1.078	1.184	1.183
County	Leicestershire	1.132	1.132	1.082	1.079	1.188	1.189
County	Lincolnshire	1.073	1.072	1.025	1.024	1.177	1.176
County	Northamptonshire	1.139	1.139	1.097	1.101	1.228	1.229
County	Nottinghamshire	1.133	1.133	1.088	1.089	1.191	1.191
Region	LON	1.202	1.198	1.164	1.170	1.292	1.296
Region	NE	1.154	1.154	1.104	1.104	1.144	1.144
Region	NW	1.142	1.142	1.097	1.097	1.149	1.149
Region	SCOTLAND	1.126	1.126	1.074	1.074	1.166	1.166
County	Berkshire	1.159	1.158	1.109	1.109	1.255	1.254
County	Buckinghamshire	1.166	1.168	1.116	1.117	1.281	1.282
County	East Sussex	1.132	1.130	1.088	1.089	1.250	1.249
County	Hampshire	1.144	1.144	1.092	1.089	1.223	1.222
County	Kent	1.170	1.173	1.111	1.107	1.272	1.269
County	Oxfordshire	1.156	1.159	1.121	1.134	1.284	1.288
County	Surrey	1.138	1.135	1.080	1.065	1.223	1.221
County	West Sussex	1.130	1.131	1.082	1.082	1.257	1.257
County	Bristol	1.143	1.143	1.107	1.116	1.208	1.211
County	Cornwall	1.133	1.133	1.087	1.087	1.174	1.173
County	Devon	1.127	1.127	1.079	1.079	1.186	1.187
County	Dorset	1.100	1.099	1.056	1.057	1.161	1.161
Authority	Cheltenham	1.284	1.286	1.225	1.224	1.303	1.304
Authority	Cotswold	1.105	1.104	1.049	1.031	1.141	1.137
Authority	Forest of Dean	1.118	1.118	1.060	1.049	1.142	1.139
Authority	Gloucester	1.160	1.160	1.125	1.135	1.197	1.198
Authority	Stroud	1.125	1.123	1.070	1.065	1.160	1.158
Authority	Tewkesbury	1.184	1.184	1.150	1.161	1.248	1.253
County	Somerset	1.129	1.130	1.082	1.081	1.213	1.212
Authority	Wiltshire	1.102	1.104	1.048	1.036	1.196	1.193
County	Mid Wales	1.060	1.059	1.012	1.006	1.095	1.095

Area Description	Name	Inter Peak Period (0700-1000) 2013 to 2036					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
County	North Wales	1.093	1.093	1.052	1.053	1.125	1.125
County	South East Wales	1.132	1.132	1.088	1.089	1.171	1.171
County	South West Wales	1.098	1.097	1.058	1.058	1.155	1.155
Authority	Herefordshire, County of	1.083	1.081	1.042	1.043	1.171	1.171
County	Shropshire	1.123	1.123	1.079	1.079	1.183	1.183
County	Staffordshire	1.111	1.110	1.061	1.055	1.165	1.163
County	Warwickshire	1.124	1.125	1.069	1.061	1.235	1.233
County	West Midlands	1.150	1.151	1.115	1.121	1.200	1.202
County	Worcestershire	1.089	1.089	1.036	1.031	1.155	1.154
Authority	Malvern Hills	1.086	1.087	1.050	1.058	1.187	1.189
Authority	Wychavon	1.065	1.066	1.013	1.009	1.140	1.140
Region	YH	1.150	1.150	1.105	1.105	1.178	1.178

Area Description	Name	PM Peak Period (0700-1000) 2013 to 2036					
		Employers Business		Commuter		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
Region	EAST	1.147	1.133	1.090	1.071	1.238	1.238
County	Derbyshire	1.139	1.134	1.084	1.077	1.158	1.158
County	Leicestershire	1.141	1.129	1.092	1.074	1.161	1.158
County	Lincolnshire	1.079	1.078	1.026	1.024	1.140	1.136
County	Northamptonshire	1.144	1.157	1.094	1.115	1.194	1.202
County	Nottinghamshire	1.139	1.146	1.085	1.096	1.165	1.166
Region	LON	1.199	1.224	1.145	1.192	1.265	1.263
Region	NE	1.166	1.166	1.114	1.114	1.138	1.138
Region	NW	1.151	1.151	1.106	1.106	1.139	1.139
Region	SCOTLAND	1.136	1.136	1.086	1.086	1.148	1.148
County	Berkshire	1.164	1.163	1.112	1.106	1.211	1.214
County	Buckinghamshire	1.174	1.174	1.117	1.120	1.233	1.249
County	East Sussex	1.136	1.141	1.082	1.093	1.207	1.205
County	Hampshire	1.152	1.142	1.097	1.082	1.187	1.187
County	Kent	1.181	1.161	1.122	1.098	1.228	1.232
County	Oxfordshire	1.154	1.199	1.096	1.167	1.237	1.263
County	Surrey	1.153	1.108	1.102	1.033	1.192	1.173
County	West Sussex	1.137	1.135	1.083	1.076	1.209	1.211
County	Bristol	1.139	1.179	1.088	1.144	1.180	1.182
County	Cornwall	1.142	1.145	1.087	1.093	1.158	1.158
County	Devon	1.136	1.134	1.083	1.081	1.163	1.162
County	Dorset	1.105	1.107	1.055	1.059	1.136	1.135
Authority	Cheltenham	1.295	1.291	1.233	1.219	1.284	1.273
Authority	Cotswold	1.127	1.070	1.079	0.988	1.123	1.109
Authority	Forest of Dean	1.137	1.097	1.085	1.021	1.122	1.112
Authority	Gloucester	1.162	1.201	1.108	1.165	1.175	1.185
Authority	Stroud	1.139	1.113	1.086	1.048	1.138	1.134
Authority	Tewkesbury	1.183	1.230	1.126	1.199	1.223	1.246
County	Somerset	1.138	1.132	1.086	1.077	1.182	1.179
Authority	Wiltshire	1.118	1.079	1.068	1.009	1.158	1.154
County	Mid Wales	1.076	1.046	1.030	0.983	1.078	1.073



Area Description	Name	PM Peak Period (0700-1000) 2013 to 2036					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
County	North Wales	1.101	1.105	1.049	1.055	1.112	1.112
County	South East Wales	1.140	1.143	1.090	1.094	1.154	1.155
County	South West Wales	1.106	1.105	1.055	1.055	1.135	1.135
Authority	Herefordshire, County of	1.087	1.099	1.034	1.052	1.139	1.144
County	Shropshire	1.132	1.134	1.079	1.083	1.157	1.158
County	Staffordshire	1.122	1.104	1.073	1.045	1.139	1.136
County	Warwickshire	1.137	1.109	1.084	1.041	1.192	1.187
County	West Midlands	1.155	1.176	1.110	1.143	1.181	1.185
County	Worcestershire	1.101	1.080	1.051	1.017	1.126	1.120
Authority	Malvern Hills	1.090	1.114	1.037	1.076	1.151	1.166
Authority	Wychavon	1.079	1.054	1.028	0.990	1.112	1.106
Region	YH	1.160	1.160	1.111	1.111	1.163	1.163

Area Description	Name	AM Peak Period (0700-1000) 2013 to 2041					
		Employers Business		Commuter		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
Region	EAST	1.171	1.190	1.110	1.131	1.323	1.331
County	Derbyshire	1.178	1.185	1.119	1.129	1.220	1.220
County	Leicestershire	1.168	1.187	1.116	1.136	1.214	1.223
County	Lincolnshire	1.118	1.120	1.062	1.065	1.204	1.209
County	Northamptonshire	1.208	1.185	1.159	1.134	1.271	1.255
County	Nottinghamshire	1.195	1.184	1.144	1.129	1.233	1.233
Region	LON	1.286	1.240	1.235	1.182	1.347	1.333
Region	NE	1.225	1.225	1.169	1.169	1.191	1.191
Region	NW	1.206	1.206	1.155	1.155	1.192	1.192
Region	SCOTLAND	1.188	1.188	1.143	1.143	1.189	1.189
County	Berkshire	1.206	1.207	1.146	1.153	1.289	1.283
County	Buckinghamshire	1.221	1.217	1.163	1.157	1.324	1.300
County	East Sussex	1.189	1.179	1.143	1.125	1.278	1.277
County	Hampshire	1.182	1.197	1.123	1.141	1.252	1.255
County	Kent	1.202	1.231	1.139	1.166	1.298	1.304
County	Oxfordshire	1.261	1.190	1.217	1.132	1.355	1.288
County	Surrey	1.131	1.199	1.064	1.142	1.226	1.274
County	West Sussex	1.176	1.183	1.116	1.128	1.279	1.281
County	Bristol	1.235	1.179	1.195	1.129	1.269	1.252
County	Cornwall	1.190	1.185	1.138	1.130	1.218	1.214
County	Devon	1.176	1.179	1.124	1.128	1.220	1.221
County	Dorset	1.149	1.145	1.102	1.096	1.192	1.195
Authority	Cheltenham	1.333	1.355	1.257	1.288	1.318	1.359
Authority	Cotswold	1.092	1.176	1.019	1.121	1.142	1.185
Authority	Forest of Dean	1.126	1.185	1.050	1.130	1.151	1.177
Authority	Gloucester	1.261	1.202	1.215	1.146	1.259	1.224
Authority	Stroud	1.148	1.184	1.084	1.130	1.181	1.196
Authority	Tewkesbury	1.287	1.223	1.247	1.164	1.315	1.265
County	Somerset	1.170	1.179	1.116	1.127	1.243	1.250
Authority	Wiltshire	1.105	1.164	1.041	1.112	1.215	1.234
County	Mid Wales	1.069	1.114	1.008	1.066	1.094	1.097

Area Description	Name	AM Peak Period (0700-1000) 2013 to 2041					
		Employers Business		Commuter		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
County	North Wales	1.144	1.138	1.091	1.084	1.141	1.141
County	South East Wales	1.188	1.183	1.141	1.135	1.197	1.195
County	South West Wales	1.142	1.142	1.093	1.093	1.171	1.174
Authority	Herefordshire, County of	1.147	1.123	1.097	1.070	1.213	1.197
County	Shropshire	1.180	1.176	1.126	1.122	1.223	1.220
County	Staffordshire	1.144	1.169	1.086	1.119	1.193	1.205
County	Warwickshire	1.145	1.183	1.080	1.129	1.264	1.285
County	West Midlands	1.237	1.205	1.193	1.155	1.247	1.233
County	Worcestershire	1.111	1.146	1.051	1.094	1.167	1.187
Authority	Malvern Hills	1.163	1.126	1.120	1.072	1.232	1.192
Authority	Wychavon	1.075	1.121	1.014	1.066	1.145	1.172
Region	YH	1.213	1.213	1.160	1.160	1.217	1.217

Area Description	Name	Inter Peak Period (0700-1000) 2013 to 2041					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
Region	EAST	1.171	1.169	1.110	1.106	1.349	1.347
County	Derbyshire	1.162	1.162	1.107	1.105	1.227	1.226
County	Leicestershire	1.163	1.164	1.108	1.105	1.232	1.232
County	Lincolnshire	1.102	1.101	1.050	1.049	1.220	1.219
County	Northamptonshire	1.171	1.171	1.125	1.130	1.275	1.276
County	Nottinghamshire	1.167	1.166	1.116	1.118	1.236	1.236
Region	LON	1.238	1.233	1.197	1.203	1.342	1.346
Region	NE	1.193	1.193	1.136	1.136	1.193	1.193
Region	NW	1.176	1.176	1.127	1.127	1.195	1.195
Region	SCOTLAND	1.161	1.161	1.104	1.104	1.201	1.201
County	Berkshire	1.190	1.190	1.136	1.135	1.298	1.297
County	Buckinghamshire	1.200	1.201	1.143	1.145	1.328	1.328
County	East Sussex	1.167	1.165	1.118	1.119	1.290	1.290
County	Hampshire	1.176	1.176	1.118	1.114	1.261	1.259
County	Kent	1.204	1.207	1.137	1.134	1.318	1.315
County	Oxfordshire	1.191	1.193	1.152	1.167	1.333	1.337
County	Surrey	1.168	1.165	1.103	1.086	1.260	1.258
County	West Sussex	1.163	1.164	1.109	1.108	1.296	1.296
County	Bristol	1.176	1.176	1.136	1.147	1.259	1.262
County	Cornwall	1.164	1.164	1.113	1.113	1.214	1.214
County	Devon	1.156	1.156	1.103	1.103	1.225	1.226
County	Dorset	1.131	1.130	1.083	1.084	1.197	1.198
Authority	Cheltenham	1.320	1.323	1.251	1.247	1.337	1.337
Authority	Cotswold	1.133	1.132	1.072	1.052	1.170	1.166
Authority	Forest of Dean	1.147	1.147	1.083	1.070	1.171	1.168
Authority	Gloucester	1.192	1.193	1.154	1.165	1.234	1.235
Authority	Stroud	1.155	1.153	1.095	1.089	1.192	1.190
Authority	Tewkesbury	1.217	1.216	1.179	1.191	1.285	1.290
County	Somerset	1.159	1.159	1.107	1.105	1.256	1.256
Authority	Wiltshire	1.131	1.133	1.072	1.058	1.237	1.234
County	Mid Wales	1.084	1.084	1.032	1.023	1.110	1.109

Area Description	Name	Inter Peak Period (0700-1000) 2013 to 2041					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
County	North Wales	1.120	1.120	1.075	1.076	1.144	1.144
County	South East Wales	1.164	1.164	1.116	1.117	1.201	1.202
County	South West Wales	1.127	1.127	1.083	1.083	1.180	1.180
Authority	Herefordshire, County of	1.113	1.111	1.069	1.071	1.212	1.212
County	Shropshire	1.156	1.156	1.107	1.108	1.228	1.227
County	Staffordshire	1.143	1.142	1.087	1.081	1.206	1.205
County	Warwickshire	1.156	1.157	1.097	1.089	1.288	1.287
County	West Midlands	1.184	1.185	1.146	1.152	1.249	1.251
County	Worcestershire	1.117	1.117	1.058	1.052	1.191	1.190
Authority	Malvern Hills	1.117	1.119	1.078	1.088	1.229	1.232
Authority	Wychavon	1.091	1.092	1.032	1.026	1.172	1.172
Region	YH	1.186	1.186	1.135	1.135	1.225	1.225

Area Description	Name	PM Peak Period (0700-1000) 2013 to 2041					
		Employers Business		Commuter		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
Region	EAST	1.180	1.164	1.117	1.096	1.284	1.284
County	Derbyshire	1.173	1.167	1.112	1.103	1.197	1.197
County	Leicestershire	1.173	1.160	1.120	1.100	1.201	1.197
County	Lincolnshire	1.110	1.108	1.052	1.048	1.180	1.175
County	Northamptonshire	1.177	1.192	1.122	1.146	1.237	1.246
County	Nottinghamshire	1.173	1.182	1.114	1.127	1.207	1.208
Region	LON	1.235	1.262	1.175	1.227	1.312	1.311
Region	NE	1.206	1.206	1.148	1.148	1.184	1.184
Region	NW	1.187	1.187	1.136	1.136	1.182	1.182
Region	SCOTLAND	1.173	1.173	1.118	1.118	1.184	1.184
County	Berkshire	1.196	1.196	1.138	1.134	1.249	1.254
County	Buckinghamshire	1.208	1.210	1.145	1.151	1.275	1.292
County	East Sussex	1.171	1.178	1.112	1.127	1.246	1.244
County	Hampshire	1.185	1.174	1.125	1.108	1.222	1.222
County	Kent	1.216	1.195	1.151	1.124	1.270	1.274
County	Oxfordshire	1.188	1.241	1.124	1.206	1.282	1.310
County	Surrey	1.185	1.133	1.129	1.049	1.228	1.205
County	West Sussex	1.172	1.167	1.113	1.102	1.246	1.247
County	Bristol	1.171	1.216	1.115	1.178	1.224	1.228
County	Cornwall	1.173	1.177	1.114	1.121	1.196	1.197
County	Devon	1.166	1.164	1.109	1.105	1.199	1.199
County	Dorset	1.136	1.139	1.082	1.087	1.171	1.170
Authority	Cheltenham	1.335	1.320	1.267	1.235	1.318	1.302
Authority	Cotswold	1.158	1.094	1.106	1.004	1.152	1.136
Authority	Forest of Dean	1.168	1.123	1.112	1.040	1.151	1.139
Authority	Gloucester	1.195	1.238	1.136	1.200	1.211	1.223
Authority	Stroud	1.170	1.143	1.114	1.072	1.169	1.165
Authority	Tewkesbury	1.217	1.267	1.154	1.233	1.260	1.284
County	Somerset	1.169	1.162	1.112	1.102	1.222	1.218
Authority	Wiltshire	1.149	1.105	1.095	1.028	1.196	1.189
County	Mid Wales	1.103	1.068	1.053	0.998	1.096	1.090

Area Description	Name	PM Peak Period (0700-1000) 2013 to 2041					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
County	North Wales	1.129	1.134	1.073	1.079	1.133	1.133
County	South East Wales	1.173	1.177	1.118	1.123	1.185	1.187
County	South West Wales	1.136	1.136	1.081	1.081	1.161	1.161
Authority	Herefordshire, County of	1.118	1.133	1.059	1.084	1.177	1.183
County	Shropshire	1.166	1.169	1.108	1.112	1.199	1.200
County	Staffordshire	1.155	1.135	1.101	1.071	1.178	1.174
County	Warwickshire	1.170	1.141	1.113	1.067	1.239	1.234
County	West Midlands	1.189	1.213	1.140	1.176	1.226	1.230
County	Worcestershire	1.131	1.106	1.077	1.036	1.160	1.152
Authority	Malvern Hills	1.120	1.151	1.063	1.112	1.190	1.208
Authority	Wychavon	1.107	1.075	1.051	1.003	1.142	1.133
Region	YH	1.197	1.197	1.143	1.143	1.206	1.206

## Appendix E: TEMPro Background Growth Rates



Area Description	Name	AM Peak Period (0700-1000) 2013 to 2021					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
Region	EAST	1.060	1.065	1.015	1.021	1.078	1.080
County	Derbyshire	1.050	1.052	1.005	1.008	1.045	1.044
County	Leicestershire	1.056	1.064	1.014	1.021	1.041	1.042
County	Lincolnshire	1.007	1.005	0.964	0.962	1.028	1.028
County	Northamptonshire	1.069	1.062	1.027	1.019	1.062	1.059
County	Nottinghamshire	1.055	1.052	1.013	1.008	1.049	1.051
Region	LON	1.129	1.114	1.082	1.065	1.087	1.084
Region	NE	1.071	1.071	1.028	1.028	1.030	1.030
Region	NW	1.070	1.070	1.028	1.028	1.037	1.037
Region	SCOTLAND	1.039	1.039	1.004	1.004	1.029	1.029
County	Berkshire	1.080	1.085	1.028	1.040	1.070	1.071
County	Buckinghamshire	1.087	1.094	1.037	1.046	1.079	1.073
County	East Sussex	1.052	1.049	1.011	1.007	1.073	1.076
County	Hampshire	1.068	1.071	1.021	1.026	1.066	1.066
County	Kent	1.103	1.108	1.059	1.059	1.073	1.072
County	Oxfordshire	1.102	1.069	1.062	1.020	1.097	1.068
County	Surrey	1.053	1.079	1.002	1.033	1.049	1.065
County	West Sussex	1.055	1.054	1.010	1.010	1.083	1.080
County	Bristol	1.066	1.056	1.025	1.013	1.043	1.042
County	Cornwall	1.056	1.059	1.013	1.018	1.049	1.051
County	Devon	1.058	1.056	1.019	1.016	1.052	1.051
County	Dorset	1.036	1.034	0.996	0.995	1.040	1.041
Authority	Cheltenham	1.084	1.040	1.050	0.997	1.033	1.009
E02004600	Cheltenham 001	1.066	1.034	1.041	0.995	1.026	1.014
E02004601	Cheltenham 002	1.094	1.029	1.061	0.996	1.045	1.024
E02004602	Cheltenham 003	1.119	1.040	1.071	1.003	1.033	1.004
E02004603	Cheltenham 004	1.114	1.038	1.093	1.000	1.029	1.007
E02004604	Cheltenham 005	1.138	1.038	1.103	1.004	1.032	0.995
E02004605	Cheltenham 006	1.142	1.035	1.115	1.000	1.060	1.036
E02004606	Cheltenham 007	1.089	1.036	1.050	0.998	1.026	1.000
E02004607	Cheltenham 008	1.084	1.041	1.037	0.999	1.031	1.017
E02004608	Cheltenham 009	1.057	1.045	1.032	0.997	1.022	1.001
E02004609	Cheltenham 010	1.058	1.050	1.027	0.994	1.041	1.058
E02004610	Cheltenham 011	1.074	1.032	1.042	0.996	1.033	1.006
E02004611	Cheltenham 012	1.083	1.041	1.041	0.997	1.032	1.011
E02004612	Cheltenham 013	1.090	1.042	1.042	1.001	1.039	1.024
E02004613	Cheltenham 014	1.083	1.035	1.049	0.998	1.036	1.003
E02004614	Cheltenham 015	1.082	1.044	1.044	1.000	1.030	0.997
Authority	Cotswold	1.044	1.076	0.993	1.031	1.026	1.040
Authority	Forest of Dean	1.058	1.083	1.003	1.040	1.026	1.034
Authority	Gloucester	1.072	1.049	1.033	1.005	1.019	1.009
E02004636	Gloucester 001	1.052	1.040	1.002	1.002	1.015	1.019
E02004637	Gloucester 002	1.075	1.051	1.051	1.010	1.006	0.969
E02004638	Gloucester 003	1.068	1.043	1.019	1.005	1.010	0.993
E02004639	Gloucester 004	1.062	1.048	1.051	1.005	1.029	1.025
E02004640	Gloucester 005	1.117	1.051	1.095	1.009	1.037	1.027
E02004641	Gloucester 006	1.087	1.051	1.043	1.008	1.035	1.015
E02004642	Gloucester 007	1.056	1.046	1.022	1.003	1.010	1.011
E02004643	Gloucester 008	1.134	1.053	1.084	1.014	1.024	0.989

Area Description	Name	AM Peak Period (0700-1000) 2013 to 2021					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
E02004644	Gloucester 009	1.080	1.045	1.047	1.005	1.019	0.999
E02004645	Gloucester 010	1.046	1.041	0.994	1.001	1.006	1.008
E02004646	Gloucester 011	1.136	1.049	1.087	1.014	1.042	1.009
E02004647	Gloucester 012	1.105	1.044	1.062	1.009	1.034	1.013
E02004648	Gloucester 013	1.084	1.043	1.041	1.007	1.026	1.013
E02004649	Gloucester 014	1.037	1.046	0.987	1.001	0.993	0.994
E02004650	Gloucester 015	1.049	1.052	1.003	1.003	1.007	1.020
Authority	Stroud	1.063	1.082	1.012	1.038	1.033	1.041
Authority	Tewkesbury	1.068	1.071	1.023	1.025	1.034	1.037
E02004666	Tewkesbury 001	1.052	1.068	1.008	1.023	1.020	1.037
E02004667	Tewkesbury 002	1.090	1.073	1.041	1.028	1.058	1.051
E02004668	Tewkesbury 003	1.077	1.068	1.032	1.026	1.043	1.035
E02004669	Tewkesbury 004	1.057	1.067	1.007	1.025	1.024	1.037
E02004670	Tewkesbury 005	1.073	1.071	1.031	1.025	1.034	1.036
E02004671	Tewkesbury 006	1.063	1.086	1.010	1.026	1.022	1.028
E02004672	Tewkesbury 007	1.067	1.065	1.022	1.023	1.033	1.025
E02004673	Tewkesbury 008	1.075	1.079	1.035	1.026	1.048	1.048
E02004674	Tewkesbury 009	1.067	1.078	1.025	1.026	1.035	1.037
County	Somerset	1.057	1.060	1.014	1.018	1.054	1.055
Authority	Wiltshire	1.036	1.049	0.991	1.006	1.047	1.051
County	Mid Wales	1.004	1.008	0.963	0.970	1.018	1.002
County	North Wales	1.028	1.027	0.984	0.983	1.031	1.032
County	South East Wales	1.055	1.055	1.014	1.014	1.045	1.045
County	South West Wales	1.023	1.023	0.982	0.982	1.041	1.044
Authority	Herefordshire, County of	1.008	1.013	0.964	0.972	1.044	1.052
County	Shropshire	1.062	1.062	1.019	1.019	1.051	1.051
County	Staffordshire	1.034	1.042	0.991	1.002	1.040	1.045
County	Warwickshire	1.042	1.058	0.992	1.013	1.069	1.077
County	West Midlands	1.081	1.069	1.042	1.028	1.050	1.046
County	Worcestershire	1.027	1.031	0.984	0.990	1.047	1.046
Authority	Malvern Hills	1.029	1.015	0.990	0.974	1.068	1.049
Authority	Wychavon	1.022	1.015	0.983	0.972	1.063	1.052
Region	YH	1.072	1.072	1.030	1.030	1.041	1.041

Area Description	Name	Inter Peak Period (0700-1000) 2013 to 2021					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
Region	EAST	1.053	1.051	1.015	1.013	1.086	1.086
County	Derbyshire	1.038	1.038	1.003	1.002	1.049	1.048
County	Leicestershire	1.048	1.048	1.011	1.010	1.048	1.048
County	Lincolnshire	0.994	0.993	0.958	0.958	1.037	1.036
County	Northamptonshire	1.050	1.050	1.016	1.017	1.066	1.067
County	Nottinghamshire	1.040	1.040	1.006	1.006	1.052	1.052
Region	LON	1.105	1.103	1.069	1.070	1.085	1.086
Region	NE	1.053	1.053	1.016	1.016	1.033	1.033
Region	NW	1.052	1.052	1.018	1.018	1.038	1.038
Region	SCOTLAND	1.024	1.024	0.989	0.989	1.040	1.040
County	Berkshire	1.071	1.070	1.032	1.030	1.072	1.071
County	Buckinghamshire	1.078	1.078	1.037	1.036	1.080	1.081
County	East Sussex	1.040	1.039	1.007	1.007	1.082	1.082
County	Hampshire	1.058	1.058	1.021	1.019	1.068	1.067
County	Kent	1.091	1.093	1.051	1.052	1.073	1.074
County	Oxfordshire	1.063	1.065	1.035	1.042	1.085	1.087
County	Surrey	1.061	1.059	1.018	1.011	1.058	1.057
County	West Sussex	1.043	1.043	1.008	1.008	1.090	1.090
County	Bristol	1.045	1.046	1.011	1.014	1.040	1.041
County	Cornwall	1.045	1.045	1.010	1.008	1.050	1.049
County	Devon	1.043	1.043	1.009	1.009	1.054	1.055
County	Dorset	1.024	1.024	0.991	0.991	1.043	1.043
Authority	Cheltenham	1.034	1.037	1.011	1.021	1.015	1.017
E02004600	Cheltenham 001	1.027	1.022	1.003	1.010	1.009	1.008
E02004601	Cheltenham 002	1.039	1.031	1.023	1.035	1.036	1.040
E02004602	Cheltenham 003	1.059	1.054	1.034	1.046	1.012	1.017
E02004603	Cheltenham 004	1.040	1.040	1.020	1.044	1.015	1.018
E02004604	Cheltenham 005	1.054	1.050	1.044	1.066	1.006	1.013
E02004605	Cheltenham 006	1.056	1.043	1.047	1.063	1.035	1.040
E02004606	Cheltenham 007	1.036	1.033	1.010	1.022	1.002	1.003
E02004607	Cheltenham 008	1.039	1.039	1.012	1.018	1.012	1.011
E02004608	Cheltenham 009	1.024	1.034	0.998	1.005	1.004	1.004
E02004609	Cheltenham 010	1.026	1.046	0.999	1.002	1.035	1.042
E02004610	Cheltenham 011	1.027	1.026	1.006	1.016	1.018	1.027
E02004611	Cheltenham 012	1.041	1.042	1.013	1.021	1.018	1.022
E02004612	Cheltenham 013	1.051	1.048	1.021	1.027	1.024	1.024
E02004613	Cheltenham 014	1.036	1.032	1.014	1.024	1.018	1.020
E02004614	Cheltenham 015	1.041	1.041	1.015	1.022	1.006	1.008
Authority	Cotswold	1.053	1.052	1.014	1.006	1.034	1.032
Authority	Forest of Dean	1.061	1.061	1.019	1.014	1.032	1.029
Authority	Gloucester	1.038	1.039	1.009	1.014	1.005	1.007
E02004636	Gloucester 001	1.035	1.028	0.995	0.994	1.011	1.012
E02004637	Gloucester 002	1.034	1.039	1.010	1.024	0.976	0.975
E02004638	Gloucester 003	1.040	1.035	1.003	1.008	0.997	0.999
E02004639	Gloucester 004	1.031	1.034	1.008	1.013	1.018	1.020
E02004640	Gloucester 005	1.051	1.050	1.035	1.050	1.019	1.019
E02004641	Gloucester 006	1.050	1.049	1.021	1.025	1.019	1.019
E02004642	Gloucester 007	1.034	1.031	1.002	1.004	0.999	1.001
E02004643	Gloucester 008	1.067	1.065	1.044	1.058	0.992	0.996

Area Description	Name	Inter Peak Period (0700-1000) 2013 to 2021					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
E02004644	Gloucester 009	1.038	1.035	1.011	1.020	0.999	1.001
E02004645	Gloucester 010	1.035	1.030	0.987	0.987	0.999	0.999
E02004646	Gloucester 011	1.070	1.064	1.049	1.063	1.020	1.025
E02004647	Gloucester 012	1.053	1.048	1.029	1.040	1.018	1.024
E02004648	Gloucester 013	1.045	1.040	1.018	1.024	1.012	1.011
E02004649	Gloucester 014	1.029	1.028	0.983	0.984	0.987	0.990
E02004650	Gloucester 015	1.034	1.037	0.997	0.994	1.003	1.005
Authority	Stroud	1.063	1.061	1.022	1.018	1.036	1.035
Authority	Tewkesbury	1.055	1.055	1.019	1.018	1.031	1.031
E02004666	Tewkesbury 001	1.051	1.049	1.010	1.008	1.022	1.020
E02004667	Tewkesbury 002	1.065	1.063	1.033	1.030	1.045	1.043
E02004668	Tewkesbury 003	1.058	1.055	1.029	1.026	1.037	1.036
E02004669	Tewkesbury 004	1.053	1.049	1.016	1.012	1.028	1.026
E02004670	Tewkesbury 005	1.058	1.058	1.022	1.022	1.032	1.032
E02004671	Tewkesbury 006	1.058	1.068	1.017	1.012	1.021	1.020
E02004672	Tewkesbury 007	1.053	1.048	1.014	1.015	1.023	1.024
E02004673	Tewkesbury 008	1.058	1.065	1.025	1.025	1.042	1.042
E02004674	Tewkesbury 009	1.054	1.063	1.018	1.019	1.028	1.029
County	Somerset	1.047	1.047	1.012	1.011	1.058	1.057
Authority	Wiltshire	1.033	1.034	0.998	0.994	1.051	1.050
County	Mid Wales	0.996	0.996	0.965	0.965	1.023	1.024
County	North Wales	1.016	1.016	0.983	0.982	1.036	1.036
County	South East Wales	1.042	1.042	1.007	1.007	1.048	1.048
County	South West Wales	1.014	1.013	0.982	0.982	1.047	1.046
Authority	Herefordshire, County of	1.003	1.001	0.969	0.966	1.056	1.055
County	Shropshire	1.048	1.048	1.015	1.015	1.056	1.055
County	Staffordshire	1.028	1.027	0.993	0.990	1.046	1.045
County	Warwickshire	1.041	1.042	1.002	0.998	1.077	1.076
County	West Midlands	1.054	1.054	1.024	1.027	1.049	1.050
County	Worcestershire	1.018	1.019	0.984	0.983	1.057	1.056
Authority	Malvern Hills	1.009	1.010	0.981	0.984	1.074	1.075
Authority	Wychavon	1.007	1.008	0.976	0.979	1.070	1.070
Region	YH	1.056	1.056	1.022	1.022	1.044	1.044

Area Description	Name	PM Peak Period (0700-1000) 2013 to 2021					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
Region	EAST	1.059	1.054	1.017	1.011	1.059	1.054
County	Derbyshire	1.045	1.043	1.004	1.001	1.045	1.043
County	Leicestershire	1.054	1.050	1.016	1.009	1.054	1.050
County	Lincolnshire	0.998	1.000	0.958	0.960	0.998	1.000
County	Northamptonshire	1.055	1.059	1.016	1.023	1.055	1.059
County	Nottinghamshire	1.044	1.047	1.004	1.008	1.044	1.047
Region	LON	1.107	1.116	1.065	1.080	1.107	1.116
Region	NE	1.060	1.060	1.021	1.021	1.060	1.060
Region	NW	1.059	1.059	1.022	1.022	1.059	1.059
Region	SCOTLAND	1.030	1.030	0.995	0.995	1.030	1.030
County	Berkshire	1.077	1.072	1.036	1.025	1.077	1.072
County	Buckinghamshire	1.086	1.079	1.042	1.034	1.086	1.079
County	East Sussex	1.044	1.045	1.004	1.007	1.044	1.045
County	Hampshire	1.064	1.061	1.022	1.017	1.064	1.061
County	Kent	1.098	1.096	1.054	1.054	1.098	1.096
County	Oxfordshire	1.064	1.089	1.020	1.061	1.064	1.089
County	Surrey	1.070	1.050	1.029	0.997	1.070	1.050
County	West Sussex	1.048	1.049	1.006	1.007	1.048	1.049
County	Bristol	1.048	1.057	1.008	1.020	1.048	1.057
County	Cornwall	1.052	1.049	1.012	1.008	1.052	1.049
County	Devon	1.049	1.050	1.010	1.012	1.049	1.050
County	Dorset	1.029	1.029	0.990	0.991	1.029	1.029
Authority	Cheltenham	1.035	1.070	0.996	1.047	1.016	1.025
E02004600	Cheltenham 001	1.031	1.048	0.994	1.035	1.009	1.014
E02004601	Cheltenham 002	1.035	1.075	0.999	1.061	1.036	1.044
E02004602	Cheltenham 003	1.048	1.098	1.003	1.067	1.021	1.028
E02004603	Cheltenham 004	1.037	1.092	0.999	1.086	1.019	1.028
E02004604	Cheltenham 005	1.046	1.113	1.009	1.105	1.018	1.033
E02004605	Cheltenham 006	1.046	1.107	1.006	1.108	1.044	1.049
E02004606	Cheltenham 007	1.035	1.069	0.995	1.045	1.005	1.013
E02004607	Cheltenham 008	1.038	1.068	0.997	1.033	1.012	1.017
E02004608	Cheltenham 009	1.033	1.054	0.995	1.029	1.003	1.013
E02004609	Cheltenham 010	1.032	1.062	0.992	1.019	1.035	1.040
E02004610	Cheltenham 011	1.030	1.060	0.995	1.041	1.016	1.037
E02004611	Cheltenham 012	1.039	1.070	0.996	1.038	1.019	1.027
E02004612	Cheltenham 013	1.045	1.076	1.000	1.039	1.022	1.028
E02004613	Cheltenham 014	1.035	1.067	0.997	1.046	1.019	1.029
E02004614	Cheltenham 015	1.040	1.068	0.998	1.041	1.008	1.020
Authority	Cotswold	1.065	1.042	1.027	0.988	1.065	1.042
Authority	Forest of Dean	1.073	1.053	1.033	1.000	1.073	1.053
Authority	Gloucester	1.042	1.060	1.002	1.028	1.008	1.012
E02004636	Gloucester 001	1.037	1.039	0.994	0.997	1.008	1.008
E02004637	Gloucester 002	1.041	1.064	1.006	1.053	0.979	0.987
E02004638	Gloucester 003	1.041	1.054	0.997	1.016	0.999	1.004
E02004639	Gloucester 004	1.039	1.056	1.004	1.044	1.020	1.026
E02004640	Gloucester 005	1.050	1.097	1.012	1.091	1.024	1.027
E02004641	Gloucester 006	1.049	1.073	1.005	1.039	1.017	1.024
E02004642	Gloucester 007	1.040	1.045	1.000	1.014	1.006	1.005
E02004643	Gloucester 008	1.058	1.112	1.015	1.080	1.005	1.015

Area Description	Name	PM Peak Period (0700-1000) 2013 to 2021					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
E02004644	Gloucester 009	1.041	1.063	1.002	1.042	1.005	1.011
E02004645	Gloucester 010	1.037	1.034	0.988	0.990	0.997	0.997
E02004646	Gloucester 011	1.059	1.114	1.017	1.086	1.027	1.036
E02004647	Gloucester 012	1.049	1.087	1.008	1.060	1.022	1.031
E02004648	Gloucester 013	1.044	1.068	1.004	1.038	1.012	1.017
E02004649	Gloucester 014	1.036	1.028	0.992	0.981	0.990	0.991
E02004650	Gloucester 015	1.041	1.042	0.999	0.995	1.005	1.000
Authority	Stroud	1.073	1.057	1.032	1.008	1.073	1.057
Authority	Tewkesbury	1.063	1.061	1.021	1.018	1.031	1.030
E02004666	Tewkesbury 001	1.060	1.048	1.018	1.000	1.022	1.016
E02004667	Tewkesbury 002	1.067	1.079	1.024	1.038	1.045	1.045
E02004668	Tewkesbury 003	1.064	1.068	1.023	1.031	1.038	1.036
E02004669	Tewkesbury 004	1.062	1.049	1.022	1.005	1.032	1.024
E02004670	Tewkesbury 005	1.063	1.066	1.021	1.026	1.032	1.033
E02004671	Tewkesbury 006	1.068	1.060	1.021	1.007	1.023	1.019
E02004672	Tewkesbury 007	1.060	1.056	1.018	1.015	1.021	1.024
E02004673	Tewkesbury 008	1.066	1.073	1.023	1.030	1.042	1.042
E02004674	Tewkesbury 009	1.063	1.066	1.021	1.017	1.027	1.029
County	Somerset	1.053	1.051	1.013	1.010	1.053	1.051
Authority	Wiltshire	1.041	1.031	1.001	0.987	1.041	1.031
County	Mid Wales	1.003	1.000	0.967	0.962	1.003	1.000
County	North Wales	1.022	1.022	0.980	0.981	1.022	1.022
County	South East Wales	1.048	1.048	1.008	1.009	1.048	1.048
County	South West Wales	1.019	1.019	0.979	0.979	1.019	1.019
Authority	Herefordshire, County of	1.009	1.003	0.969	0.960	1.009	1.003
County	Shropshire	1.055	1.055	1.016	1.016	1.055	1.055
County	Staffordshire	1.035	1.028	0.997	0.986	1.035	1.028
County	Warwickshire	1.049	1.037	1.007	0.988	1.049	1.037
County	West Midlands	1.059	1.067	1.023	1.036	1.059	1.067
County	Worcestershire	1.024	1.022	0.986	0.981	1.024	1.022
Authority	Malvern Hills	1.012	1.023	0.973	0.990	1.012	1.023
Authority	Wychavon	1.010	1.018	0.970	0.982	1.010	1.018
Region	YH	1.063	1.063	1.025	1.025	1.063	1.063

Area Description	Name	AM Peak Period (0700-1000) 2013 to 2026					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
Region	EAST	1.087	1.095	1.038	1.048	1.148	1.151
County	Derbyshire	1.082	1.085	1.034	1.038	1.091	1.089
County	Leicestershire	1.083	1.096	1.038	1.052	1.085	1.089
County	Lincolnshire	1.035	1.034	0.988	0.988	1.074	1.076
County	Northamptonshire	1.108	1.094	1.066	1.050	1.119	1.111
County	Nottinghamshire	1.089	1.084	1.045	1.038	1.096	1.098
Region	LON	1.166	1.144	1.119	1.093	1.154	1.150
Region	NE	1.109	1.109	1.063	1.063	1.069	1.069
Region	NW	1.105	1.105	1.061	1.061	1.074	1.074
Region	SCOTLAND	1.077	1.077	1.039	1.039	1.074	1.074
County	Berkshire	1.112	1.116	1.059	1.068	1.129	1.127
County	Buckinghamshire	1.120	1.124	1.069	1.073	1.146	1.134
County	East Sussex	1.083	1.082	1.041	1.037	1.126	1.130
County	Hampshire	1.104	1.111	1.053	1.062	1.119	1.120
County	Kent	1.125	1.136	1.076	1.084	1.133	1.134
County	Oxfordshire	1.144	1.100	1.104	1.049	1.168	1.127
County	Surrey	1.070	1.109	1.015	1.060	1.096	1.121
County	West Sussex	1.088	1.087	1.040	1.040	1.140	1.136
County	Bristol	1.106	1.087	1.065	1.042	1.100	1.097
County	Cornwall	1.091	1.092	1.045	1.047	1.093	1.093
County	Devon	1.088	1.087	1.046	1.045	1.097	1.097
County	Dorset	1.064	1.062	1.022	1.020	1.078	1.079
Authority	Cheltenham	1.107	1.058	1.071	1.011	1.061	1.036
E02004600	Cheltenham 001	1.090	1.051	1.065	1.010	1.049	1.045
E02004601	Cheltenham 002	1.114	1.046	1.079	1.010	1.075	1.047
E02004602	Cheltenham 003	1.146	1.058	1.092	1.018	1.063	1.026
E02004603	Cheltenham 004	1.153	1.056	1.133	1.015	1.064	1.035
E02004604	Cheltenham 005	1.188	1.057	1.153	1.021	1.064	1.018
E02004605	Cheltenham 006	1.191	1.054	1.166	1.017	1.098	1.066
E02004606	Cheltenham 007	1.116	1.054	1.074	1.013	1.052	1.027
E02004607	Cheltenham 008	1.104	1.058	1.052	1.013	1.063	1.050
E02004608	Cheltenham 009	1.076	1.063	1.050	1.011	1.055	1.032
E02004609	Cheltenham 010	1.070	1.067	1.035	1.008	1.064	1.084
E02004610	Cheltenham 011	1.090	1.049	1.053	1.010	1.059	1.023
E02004611	Cheltenham 012	1.103	1.059	1.058	1.012	1.055	1.033
E02004612	Cheltenham 013	1.115	1.060	1.063	1.016	1.063	1.051
E02004613	Cheltenham 014	1.100	1.052	1.062	1.012	1.063	1.027
E02004614	Cheltenham 015	1.100	1.061	1.060	1.014	1.054	1.025
Authority	Cotswold	1.058	1.107	0.999	1.059	1.054	1.076
Authority	Forest of Dean	1.084	1.115	1.023	1.068	1.059	1.071
Authority	Gloucester	1.107	1.081	1.065	1.033	1.062	1.050
E02004636	Gloucester 001	1.079	1.071	1.025	1.029	1.051	1.051
E02004637	Gloucester 002	1.115	1.084	1.092	1.039	1.054	1.013
E02004638	Gloucester 003	1.095	1.074	1.041	1.032	1.051	1.028
E02004639	Gloucester 004	1.103	1.079	1.099	1.033	1.075	1.070
E02004640	Gloucester 005	1.178	1.084	1.161	1.039	1.090	1.075
E02004641	Gloucester 006	1.122	1.083	1.074	1.036	1.086	1.060
E02004642	Gloucester 007	1.083	1.078	1.044	1.031	1.047	1.053
E02004643	Gloucester 008	1.196	1.087	1.143	1.046	1.073	1.032

Area Description	Name	AM Peak Period (0700-1000) 2013 to 2026					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
E02004644	Gloucester 009	1.120	1.076	1.084	1.033	1.064	1.040
E02004645	Gloucester 010	1.066	1.071	1.008	1.026	1.042	1.049
E02004646	Gloucester 011	1.192	1.083	1.139	1.045	1.094	1.049
E02004647	Gloucester 012	1.159	1.077	1.114	1.039	1.081	1.048
E02004648	Gloucester 013	1.120	1.074	1.073	1.035	1.074	1.052
E02004649	Gloucester 014	1.054	1.076	0.996	1.027	1.024	1.026
E02004650	Gloucester 015	1.074	1.083	1.021	1.031	1.045	1.062
Authority	Stroud	1.091	1.113	1.035	1.066	1.073	1.082
Authority	Tewkesbury	1.075	1.096	1.023	1.046	1.051	1.066
E02004666	Tewkesbury 001	1.059	1.093	1.006	1.045	1.033	1.065
E02004667	Tewkesbury 002	1.104	1.098	1.047	1.049	1.086	1.088
E02004668	Tewkesbury 003	1.084	1.092	1.032	1.047	1.059	1.057
E02004669	Tewkesbury 004	1.063	1.092	1.005	1.047	1.029	1.054
E02004670	Tewkesbury 005	1.080	1.096	1.032	1.046	1.054	1.064
E02004671	Tewkesbury 006	1.061	1.110	1.000	1.047	1.028	1.048
E02004672	Tewkesbury 007	1.075	1.090	1.020	1.045	1.051	1.052
E02004673	Tewkesbury 008	1.087	1.104	1.037	1.048	1.069	1.079
E02004674	Tewkesbury 009	1.078	1.104	1.026	1.048	1.058	1.073
County	Somerset	1.086	1.091	1.040	1.046	1.104	1.107
Authority	Wiltshire	1.052	1.078	1.002	1.033	1.093	1.100
County	Mid Wales	1.020	1.034	0.973	0.993	1.044	1.032
County	North Wales	1.058	1.055	1.011	1.009	1.065	1.066
County	South East Wales	1.089	1.087	1.047	1.045	1.089	1.089
County	South West Wales	1.054	1.054	1.010	1.010	1.079	1.082
Authority	Herefordshire, County of	1.046	1.042	1.000	0.997	1.087	1.087
County	Shropshire	1.095	1.094	1.049	1.047	1.096	1.095
County	Staffordshire	1.061	1.074	1.014	1.031	1.079	1.086
County	Warwickshire	1.064	1.089	1.010	1.041	1.117	1.129
County	West Midlands	1.121	1.103	1.081	1.059	1.100	1.093
County	Worcestershire	1.047	1.061	0.999	1.016	1.075	1.080
Authority	Malvern Hills	1.066	1.044	1.026	0.999	1.111	1.084
Authority	Wychavon	1.032	1.042	0.985	0.996	1.077	1.079
Region	YH	1.110	1.110	1.065	1.065	1.085	1.085



Area Description	Name	Inter Peak Period (0700-1000) 2013 to 2026					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
Region	EAST	1.082	1.080	1.038	1.036	1.163	1.162
County	Derbyshire	1.069	1.069	1.029	1.028	1.096	1.096
County	Leicestershire	1.077	1.078	1.035	1.033	1.097	1.098
County	Lincolnshire	1.021	1.021	0.981	0.981	1.087	1.085
County	Northamptonshire	1.082	1.082	1.046	1.049	1.124	1.125
County	Nottinghamshire	1.071	1.071	1.033	1.034	1.101	1.102
Region	LON	1.137	1.134	1.100	1.102	1.154	1.156
Region	NE	1.087	1.087	1.046	1.046	1.074	1.074
Region	NW	1.084	1.084	1.046	1.046	1.078	1.078
Region	SCOTLAND	1.059	1.059	1.019	1.019	1.087	1.087
County	Berkshire	1.101	1.100	1.059	1.058	1.135	1.134
County	Buckinghamshire	1.108	1.108	1.064	1.064	1.149	1.150
County	East Sussex	1.071	1.070	1.033	1.033	1.139	1.138
County	Hampshire	1.095	1.095	1.052	1.051	1.123	1.123
County	Kent	1.117	1.119	1.070	1.070	1.141	1.140
County	Oxfordshire	1.096	1.098	1.066	1.076	1.155	1.157
County	Surrey	1.087	1.085	1.038	1.028	1.114	1.112
County	West Sussex	1.074	1.075	1.035	1.036	1.150	1.150
County	Bristol	1.077	1.078	1.042	1.046	1.099	1.100
County	Cornwall	1.076	1.076	1.036	1.035	1.094	1.093
County	Devon	1.072	1.072	1.033	1.033	1.102	1.102
County	Dorset	1.051	1.050	1.014	1.014	1.082	1.082
Authority	Cheltenham	1.051	1.054	1.025	1.036	1.043	1.046
E02004600	Cheltenham 001	1.044	1.038	1.017	1.025	1.033	1.033
E02004601	Cheltenham 002	1.055	1.047	1.036	1.049	1.067	1.070
E02004602	Cheltenham 003	1.079	1.074	1.049	1.063	1.041	1.047
E02004603	Cheltenham 004	1.061	1.061	1.042	1.071	1.045	1.048
E02004604	Cheltenham 005	1.080	1.075	1.073	1.102	1.032	1.041
E02004605	Cheltenham 006	1.081	1.066	1.076	1.097	1.066	1.072
E02004606	Cheltenham 007	1.054	1.051	1.025	1.039	1.029	1.029
E02004607	Cheltenham 008	1.055	1.055	1.023	1.029	1.044	1.041
E02004608	Cheltenham 009	1.040	1.050	1.012	1.017	1.035	1.034
E02004609	Cheltenham 010	1.039	1.060	1.008	1.010	1.061	1.069
E02004610	Cheltenham 011	1.041	1.040	1.016	1.027	1.044	1.054
E02004611	Cheltenham 012	1.057	1.058	1.025	1.035	1.044	1.047
E02004612	Cheltenham 013	1.070	1.067	1.035	1.045	1.050	1.049
E02004613	Cheltenham 014	1.051	1.047	1.025	1.035	1.046	1.048
E02004614	Cheltenham 015	1.056	1.056	1.026	1.035	1.034	1.036
Authority	Cotswold	1.077	1.077	1.031	1.019	1.068	1.065
Authority	Forest of Dean	1.089	1.089	1.041	1.034	1.068	1.066
Authority	Gloucester	1.069	1.069	1.036	1.041	1.048	1.050
E02004636	Gloucester 001	1.061	1.056	1.015	1.016	1.049	1.050
E02004637	Gloucester 002	1.066	1.071	1.040	1.054	1.022	1.020
E02004638	Gloucester 003	1.067	1.063	1.023	1.029	1.041	1.042
E02004639	Gloucester 004	1.062	1.064	1.039	1.044	1.061	1.063
E02004640	Gloucester 005	1.089	1.087	1.077	1.096	1.065	1.065
E02004641	Gloucester 006	1.081	1.079	1.048	1.054	1.071	1.070
E02004642	Gloucester 007	1.062	1.059	1.025	1.026	1.039	1.040
E02004643	Gloucester 008	1.110	1.106	1.087	1.105	1.035	1.040

Area Description	Name	Inter Peak Period (0700-1000) 2013 to 2026					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
E02004644	Gloucester 009	1.070	1.066	1.040	1.049	1.042	1.044
E02004645	Gloucester 010	1.059	1.054	1.001	1.001	1.039	1.036
E02004646	Gloucester 011	1.110	1.103	1.089	1.107	1.067	1.073
E02004647	Gloucester 012	1.090	1.085	1.066	1.083	1.061	1.068
E02004648	Gloucester 013	1.075	1.070	1.044	1.052	1.059	1.057
E02004649	Gloucester 014	1.053	1.053	0.998	0.997	1.022	1.023
E02004650	Gloucester 015	1.062	1.065	1.018	1.013	1.044	1.045
Authority	Stroud	1.092	1.090	1.045	1.041	1.078	1.076
Authority	Tewkesbury	1.074	1.074	1.030	1.025	1.055	1.054
E02004666	Tewkesbury 001	1.071	1.068	1.021	1.016	1.042	1.040
E02004667	Tewkesbury 002	1.085	1.083	1.047	1.039	1.078	1.075
E02004668	Tewkesbury 003	1.075	1.073	1.038	1.033	1.059	1.058
E02004669	Tewkesbury 004	1.071	1.067	1.025	1.019	1.039	1.037
E02004670	Tewkesbury 005	1.076	1.076	1.031	1.027	1.057	1.057
E02004671	Tewkesbury 006	1.071	1.081	1.021	1.012	1.035	1.033
E02004672	Tewkesbury 007	1.071	1.067	1.023	1.020	1.048	1.048
E02004673	Tewkesbury 008	1.078	1.086	1.040	1.037	1.068	1.068
E02004674	Tewkesbury 009	1.074	1.083	1.030	1.028	1.059	1.059
County	Somerset	1.076	1.076	1.036	1.035	1.112	1.112
Authority	Wiltshire	1.057	1.058	1.016	1.009	1.102	1.101
County	Mid Wales	1.018	1.018	0.981	0.979	1.053	1.054
County	North Wales	1.043	1.043	1.006	1.006	1.071	1.071
County	South East Wales	1.073	1.073	1.035	1.035	1.094	1.094
County	South West Wales	1.043	1.043	1.008	1.008	1.088	1.087
Authority	Herefordshire, County of	1.032	1.030	0.995	0.994	1.096	1.096
County	Shropshire	1.079	1.079	1.041	1.042	1.102	1.102
County	Staffordshire	1.057	1.055	1.016	1.012	1.090	1.088
County	Warwickshire	1.069	1.069	1.024	1.018	1.132	1.130
County	West Midlands	1.086	1.087	1.055	1.059	1.101	1.102
County	Worcestershire	1.043	1.043	1.001	0.999	1.090	1.089
Authority	Malvern Hills	1.037	1.039	1.006	1.012	1.115	1.116
Authority	Wychavon	1.027	1.028	0.987	0.987	1.092	1.092
Region	YH	1.090	1.090	1.053	1.053	1.091	1.091

Area Description	Name	PM Peak Period (0700-1000) 2013 to 2026					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
Region	EAST	1.089	1.081	1.041	1.032	1.128	1.128
County	Derbyshire	1.076	1.074	1.031	1.027	1.079	1.079
County	Leicestershire	1.085	1.076	1.043	1.030	1.082	1.080
County	Lincolnshire	1.026	1.027	0.982	0.981	1.060	1.057
County	Northamptonshire	1.087	1.096	1.044	1.059	1.106	1.111
County	Nottinghamshire	1.076	1.080	1.032	1.037	1.085	1.085
Region	LON	1.137	1.150	1.091	1.116	1.143	1.142
Region	NE	1.096	1.096	1.053	1.053	1.070	1.070
Region	NW	1.092	1.092	1.052	1.052	1.072	1.072
Region	SCOTLAND	1.067	1.067	1.027	1.027	1.074	1.074
County	Berkshire	1.107	1.104	1.062	1.054	1.112	1.112
County	Buckinghamshire	1.116	1.112	1.067	1.064	1.125	1.134
County	East Sussex	1.076	1.076	1.031	1.034	1.111	1.109
County	Hampshire	1.102	1.097	1.055	1.047	1.104	1.104
County	Kent	1.125	1.118	1.076	1.069	1.123	1.125
County	Oxfordshire	1.096	1.130	1.047	1.101	1.129	1.147
County	Surrey	1.098	1.069	1.054	1.008	1.098	1.086
County	West Sussex	1.080	1.082	1.034	1.035	1.118	1.121
County	Bristol	1.078	1.095	1.035	1.057	1.083	1.083
County	Cornwall	1.083	1.082	1.038	1.037	1.083	1.082
County	Devon	1.079	1.079	1.036	1.036	1.086	1.087
County	Dorset	1.056	1.056	1.013	1.014	1.066	1.065
Authority	Cheltenham	1.052	1.091	1.009	1.066	1.039	1.049
E02004600	Cheltenham 001	1.048	1.068	1.007	1.056	1.031	1.033
E02004601	Cheltenham 002	1.051	1.094	1.012	1.077	1.060	1.070
E02004602	Cheltenham 003	1.066	1.122	1.016	1.086	1.044	1.054
E02004603	Cheltenham 004	1.056	1.126	1.014	1.124	1.046	1.056
E02004604	Cheltenham 005	1.067	1.157	1.026	1.153	1.045	1.062
E02004605	Cheltenham 006	1.067	1.148	1.023	1.155	1.074	1.081
E02004606	Cheltenham 007	1.053	1.092	1.008	1.066	1.027	1.036
E02004607	Cheltenham 008	1.055	1.086	1.008	1.045	1.036	1.040
E02004608	Cheltenham 009	1.049	1.071	1.008	1.042	1.029	1.037
E02004609	Cheltenham 010	1.046	1.074	1.004	1.025	1.054	1.060
E02004610	Cheltenham 011	1.045	1.075	1.006	1.051	1.035	1.061
E02004611	Cheltenham 012	1.055	1.089	1.007	1.053	1.039	1.048
E02004612	Cheltenham 013	1.062	1.098	1.011	1.059	1.044	1.049
E02004613	Cheltenham 014	1.050	1.083	1.009	1.058	1.042	1.053
E02004614	Cheltenham 015	1.056	1.085	1.010	1.055	1.031	1.042
Authority	Cotswold	1.093	1.057	1.051	0.992	1.063	1.055
Authority	Forest of Dean	1.102	1.079	1.058	1.018	1.062	1.055
Authority	Gloucester	1.073	1.093	1.029	1.058	1.046	1.050
E02004636	Gloucester 001	1.065	1.065	1.017	1.018	1.039	1.041
E02004637	Gloucester 002	1.074	1.100	1.034	1.091	1.020	1.027
E02004638	Gloucester 003	1.070	1.080	1.020	1.036	1.033	1.041
E02004639	Gloucester 004	1.070	1.095	1.031	1.089	1.059	1.064
E02004640	Gloucester 005	1.085	1.152	1.043	1.155	1.068	1.071
E02004641	Gloucester 006	1.079	1.107	1.031	1.070	1.059	1.069
E02004642	Gloucester 007	1.070	1.072	1.025	1.032	1.040	1.038
E02004643	Gloucester 008	1.096	1.168	1.046	1.136	1.048	1.059

Area Description	Name	PM Peak Period (0700-1000) 2013 to 2026					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
E02004644	Gloucester 009	1.073	1.099	1.029	1.076	1.041	1.049
E02004645	Gloucester 010	1.063	1.053	1.006	1.003	1.027	1.027
E02004646	Gloucester 011	1.095	1.166	1.048	1.136	1.070	1.083
E02004647	Gloucester 012	1.083	1.136	1.036	1.110	1.062	1.075
E02004648	Gloucester 013	1.074	1.102	1.029	1.069	1.050	1.059
E02004649	Gloucester 014	1.063	1.045	1.014	0.989	1.016	1.017
E02004650	Gloucester 015	1.071	1.066	1.023	1.010	1.039	1.032
Authority	Stroud	1.103	1.084	1.058	1.030	1.070	1.068
Authority	Tewkesbury	1.085	1.070	1.039	1.015	1.052	1.046
E02004666	Tewkesbury 001	1.083	1.058	1.037	0.995	1.039	1.026
E02004667	Tewkesbury 002	1.091	1.093	1.043	1.041	1.073	1.070
E02004668	Tewkesbury 003	1.085	1.076	1.041	1.029	1.057	1.052
E02004669	Tewkesbury 004	1.084	1.057	1.040	1.001	1.046	1.030
E02004670	Tewkesbury 005	1.084	1.074	1.038	1.025	1.052	1.050
E02004671	Tewkesbury 006	1.087	1.059	1.038	0.996	1.035	1.024
E02004672	Tewkesbury 007	1.082	1.066	1.035	1.010	1.039	1.039
E02004673	Tewkesbury 008	1.090	1.086	1.043	1.030	1.065	1.060
E02004674	Tewkesbury 009	1.086	1.078	1.040	1.015	1.053	1.050
County	Somerset	1.083	1.079	1.039	1.034	1.095	1.092
Authority	Wiltshire	1.068	1.049	1.025	0.997	1.081	1.079
County	Mid Wales	1.028	1.017	0.988	0.970	1.036	1.035
County	North Wales	1.049	1.051	1.004	1.006	1.057	1.057
County	South East Wales	1.080	1.081	1.036	1.038	1.082	1.082
County	South West Wales	1.049	1.049	1.005	1.004	1.070	1.069
Authority	Herefordshire, County of	1.037	1.038	0.992	0.994	1.071	1.072
County	Shropshire	1.086	1.087	1.042	1.043	1.087	1.088
County	Staffordshire	1.065	1.054	1.023	1.006	1.071	1.069
County	Warwickshire	1.079	1.060	1.033	1.004	1.104	1.101
County	West Midlands	1.091	1.104	1.052	1.073	1.092	1.094
County	Worcestershire	1.051	1.041	1.009	0.993	1.068	1.065
Authority	Malvern Hills	1.040	1.058	0.996	1.025	1.085	1.097
Authority	Wychavon	1.034	1.028	0.991	0.981	1.066	1.067
Region	YH	1.098	1.098	1.057	1.057	1.084	1.084

Area Description	Name	AM Peak Period (0700-1000) 2013 to 2031					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
Region	EAST	1.110	1.122	1.057	1.072	1.210	1.215
County	Derbyshire	1.112	1.115	1.060	1.066	1.136	1.134
County	Leicestershire	1.107	1.123	1.061	1.077	1.129	1.135
County	Lincolnshire	1.059	1.059	1.010	1.011	1.120	1.123
County	Northamptonshire	1.139	1.121	1.095	1.075	1.173	1.161
County	Nottinghamshire	1.120	1.114	1.074	1.066	1.142	1.144
Region	LON	1.203	1.171	1.155	1.119	1.223	1.216
Region	NE	1.142	1.142	1.093	1.093	1.107	1.107
Region	NW	1.134	1.134	1.088	1.088	1.111	1.111
Region	SCOTLAND	1.110	1.110	1.071	1.071	1.114	1.114
County	Berkshire	1.141	1.143	1.086	1.094	1.188	1.185
County	Buckinghamshire	1.150	1.151	1.098	1.097	1.213	1.195
County	East Sussex	1.116	1.111	1.073	1.064	1.181	1.183
County	Hampshire	1.127	1.138	1.074	1.087	1.167	1.168
County	Kent	1.143	1.162	1.090	1.106	1.193	1.195
County	Oxfordshire	1.179	1.127	1.138	1.074	1.236	1.186
County	Surrey	1.087	1.135	1.029	1.084	1.146	1.178
County	West Sussex	1.114	1.116	1.062	1.067	1.189	1.187
County	Bristol	1.148	1.113	1.107	1.066	1.157	1.152
County	Cornwall	1.122	1.120	1.074	1.072	1.135	1.135
County	Devon	1.114	1.115	1.069	1.070	1.141	1.142
County	Dorset	1.089	1.087	1.046	1.044	1.120	1.122
Authority	Cheltenham	1.111	1.076	1.067	1.027	1.080	1.070
E02004600	Cheltenham 001	1.093	1.070	1.059	1.026	1.073	1.084
E02004601	Cheltenham 002	1.120	1.063	1.078	1.025	1.094	1.078
E02004602	Cheltenham 003	1.152	1.075	1.088	1.031	1.078	1.051
E02004603	Cheltenham 004	1.167	1.075	1.139	1.031	1.083	1.069
E02004604	Cheltenham 005	1.211	1.077	1.169	1.037	1.083	1.048
E02004605	Cheltenham 006	1.219	1.073	1.186	1.034	1.113	1.096
E02004606	Cheltenham 007	1.118	1.072	1.067	1.028	1.075	1.062
E02004607	Cheltenham 008	1.109	1.076	1.047	1.027	1.087	1.088
E02004608	Cheltenham 009	1.087	1.082	1.051	1.028	1.086	1.073
E02004609	Cheltenham 010	1.070	1.085	1.025	1.024	1.078	1.114
E02004610	Cheltenham 011	1.092	1.067	1.048	1.025	1.078	1.051
E02004611	Cheltenham 012	1.095	1.076	1.045	1.026	1.068	1.061
E02004612	Cheltenham 013	1.107	1.076	1.051	1.028	1.079	1.082
E02004613	Cheltenham 014	1.100	1.070	1.054	1.028	1.076	1.056
E02004614	Cheltenham 015	1.093	1.079	1.046	1.029	1.067	1.055
Authority	Cotswold	1.063	1.128	0.999	1.077	1.088	1.116
Authority	Forest of Dean	1.097	1.137	1.031	1.087	1.094	1.110
Authority	Gloucester	1.117	1.102	1.067	1.052	1.088	1.089
E02004636	Gloucester 001	1.075	1.090	1.017	1.044	1.073	1.082
E02004637	Gloucester 002	1.131	1.106	1.099	1.059	1.092	1.056
E02004638	Gloucester 003	1.098	1.095	1.037	1.049	1.071	1.058
E02004639	Gloucester 004	1.126	1.101	1.119	1.052	1.111	1.115
E02004640	Gloucester 005	1.215	1.106	1.197	1.059	1.125	1.119
E02004641	Gloucester 006	1.131	1.104	1.077	1.054	1.118	1.097
E02004642	Gloucester 007	1.092	1.099	1.041	1.049	1.065	1.091
E02004643	Gloucester 008	1.220	1.108	1.160	1.064	1.101	1.068

Area Description	Name	AM Peak Period (0700-1000) 2013 to 2031					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
E02004644	Gloucester 009	1.133	1.098	1.088	1.052	1.090	1.077
E02004645	Gloucester 010	1.061	1.089	0.998	1.039	1.055	1.078
E02004646	Gloucester 011	1.210	1.105	1.151	1.064	1.124	1.084
E02004647	Gloucester 012	1.165	1.097	1.117	1.056	1.109	1.080
E02004648	Gloucester 013	1.131	1.095	1.080	1.053	1.104	1.088
E02004649	Gloucester 014	1.049	1.096	0.983	1.043	1.030	1.050
E02004650	Gloucester 015	1.078	1.104	1.015	1.049	1.064	1.101
Authority	Stroud	1.106	1.135	1.048	1.085	1.112	1.124
Authority	Tewkesbury	1.100	1.118	1.046	1.066	1.094	1.108
E02004666	Tewkesbury 001	1.079	1.115	1.024	1.064	1.073	1.107
E02004667	Tewkesbury 002	1.139	1.122	1.078	1.070	1.139	1.137
E02004668	Tewkesbury 003	1.112	1.114	1.058	1.067	1.101	1.096
E02004669	Tewkesbury 004	1.079	1.114	1.018	1.066	1.065	1.092
E02004670	Tewkesbury 005	1.109	1.119	1.059	1.066	1.099	1.105
E02004671	Tewkesbury 006	1.084	1.133	1.018	1.067	1.060	1.086
E02004672	Tewkesbury 007	1.100	1.112	1.042	1.064	1.095	1.093
E02004673	Tewkesbury 008	1.113	1.127	1.061	1.068	1.116	1.124
E02004674	Tewkesbury 009	1.106	1.126	1.052	1.067	1.103	1.119
County	Somerset	1.111	1.117	1.062	1.070	1.155	1.160
Authority	Wiltshire	1.064	1.102	1.009	1.055	1.138	1.149
County	Mid Wales	1.032	1.058	0.980	1.015	1.064	1.057
County	North Wales	1.084	1.080	1.036	1.031	1.094	1.095
County	South East Wales	1.118	1.115	1.075	1.072	1.128	1.128
County	South West Wales	1.080	1.080	1.036	1.035	1.113	1.116
Authority	Herefordshire, County of	1.078	1.067	1.031	1.020	1.130	1.123
County	Shropshire	1.123	1.120	1.074	1.071	1.138	1.137
County	Staffordshire	1.084	1.102	1.034	1.057	1.116	1.125
County	Warwickshire	1.086	1.116	1.029	1.067	1.167	1.182
County	West Midlands	1.156	1.133	1.116	1.088	1.149	1.139
County	Worcestershire	1.064	1.086	1.012	1.039	1.103	1.114
Authority	Malvern Hills	1.096	1.069	1.054	1.021	1.149	1.118
Authority	Wychavon	1.041	1.066	0.990	1.017	1.095	1.108
Region	YH	1.140	1.140	1.094	1.094	1.129	1.129

Area Description	Name	Inter Peak Period (0700-1000) 2013 to 2031					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
Region	EAST	1.107	1.106	1.059	1.056	1.231	1.230
County	Derbyshire	1.098	1.098	1.053	1.052	1.143	1.142
County	Leicestershire	1.103	1.103	1.057	1.055	1.145	1.145
County	Lincolnshire	1.045	1.045	1.002	1.001	1.135	1.134
County	Northamptonshire	1.110	1.109	1.071	1.075	1.179	1.180
County	Nottinghamshire	1.100	1.100	1.058	1.059	1.149	1.149
Region	LON	1.167	1.163	1.130	1.134	1.224	1.227
Region	NE	1.117	1.117	1.072	1.072	1.112	1.112
Region	NW	1.111	1.111	1.070	1.070	1.115	1.115
Region	SCOTLAND	1.090	1.090	1.044	1.044	1.129	1.129
County	Berkshire	1.129	1.128	1.083	1.083	1.198	1.197
County	Buckinghamshire	1.135	1.136	1.089	1.089	1.218	1.219
County	East Sussex	1.101	1.099	1.061	1.061	1.195	1.195
County	Hampshire	1.121	1.121	1.073	1.071	1.175	1.174
County	Kent	1.141	1.143	1.088	1.086	1.208	1.207
County	Oxfordshire	1.125	1.127	1.093	1.104	1.223	1.226
County	Surrey	1.111	1.109	1.058	1.045	1.171	1.169
County	West Sussex	1.102	1.103	1.058	1.059	1.204	1.204
County	Bristol	1.107	1.108	1.071	1.079	1.155	1.158
County	Cornwall	1.103	1.103	1.060	1.060	1.135	1.135
County	Devon	1.098	1.098	1.054	1.054	1.148	1.148
County	Dorset	1.076	1.075	1.035	1.036	1.126	1.126
Authority	Cheltenham	1.065	1.068	1.031	1.039	1.072	1.073
E02004600	Cheltenham 001	1.059	1.053	1.024	1.029	1.066	1.065
E02004601	Cheltenham 002	1.070	1.060	1.044	1.052	1.094	1.097
E02004602	Cheltenham 003	1.091	1.085	1.052	1.062	1.061	1.065
E02004603	Cheltenham 004	1.077	1.077	1.051	1.078	1.073	1.076
E02004604	Cheltenham 005	1.100	1.094	1.088	1.115	1.056	1.065
E02004605	Cheltenham 006	1.102	1.086	1.093	1.114	1.085	1.093
E02004606	Cheltenham 007	1.067	1.064	1.028	1.037	1.059	1.058
E02004607	Cheltenham 008	1.070	1.068	1.028	1.028	1.075	1.071
E02004608	Cheltenham 009	1.057	1.067	1.024	1.027	1.072	1.071
E02004609	Cheltenham 010	1.051	1.072	1.013	1.015	1.082	1.090
E02004610	Cheltenham 011	1.055	1.054	1.023	1.029	1.069	1.078
E02004611	Cheltenham 012	1.065	1.066	1.022	1.029	1.067	1.068
E02004612	Cheltenham 013	1.076	1.073	1.031	1.036	1.075	1.073
E02004613	Cheltenham 014	1.064	1.059	1.030	1.036	1.069	1.070
E02004614	Cheltenham 015	1.066	1.067	1.026	1.031	1.058	1.058
Authority	Cotswold	1.094	1.093	1.042	1.027	1.107	1.104
Authority	Forest of Dean	1.108	1.108	1.055	1.046	1.107	1.105
Authority	Gloucester	1.087	1.087	1.047	1.050	1.083	1.083
E02004636	Gloucester 001	1.072	1.066	1.017	1.011	1.078	1.077
E02004637	Gloucester 002	1.087	1.091	1.056	1.068	1.065	1.062
E02004638	Gloucester 003	1.082	1.077	1.029	1.029	1.068	1.068
E02004639	Gloucester 004	1.083	1.086	1.057	1.064	1.101	1.103
E02004640	Gloucester 005	1.115	1.111	1.102	1.122	1.103	1.103
E02004641	Gloucester 006	1.098	1.096	1.060	1.061	1.109	1.105
E02004642	Gloucester 007	1.080	1.078	1.035	1.035	1.069	1.070
E02004643	Gloucester 008	1.133	1.128	1.104	1.118	1.067	1.071

Area Description	Name	Inter Peak Period (0700-1000) 2013 to 2031					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
E02004644	Gloucester 009	1.088	1.085	1.052	1.059	1.074	1.076
E02004645	Gloucester 010	1.065	1.059	0.997	0.993	1.062	1.058
E02004646	Gloucester 011	1.130	1.123	1.103	1.117	1.102	1.106
E02004647	Gloucester 012	1.106	1.100	1.074	1.087	1.095	1.101
E02004648	Gloucester 013	1.093	1.087	1.056	1.061	1.095	1.092
E02004649	Gloucester 014	1.063	1.063	0.997	0.993	1.037	1.037
E02004650	Gloucester 015	1.078	1.080	1.026	1.016	1.075	1.075
Authority	Stroud	1.111	1.109	1.061	1.055	1.120	1.119
Authority	Tewkesbury	1.096	1.096	1.050	1.046	1.098	1.098
E02004666	Tewkesbury 001	1.091	1.089	1.037	1.033	1.082	1.082
E02004667	Tewkesbury 002	1.113	1.109	1.074	1.066	1.127	1.124
E02004668	Tewkesbury 003	1.099	1.096	1.061	1.056	1.100	1.099
E02004669	Tewkesbury 004	1.089	1.087	1.041	1.035	1.077	1.075
E02004670	Tewkesbury 005	1.100	1.100	1.053	1.051	1.101	1.101
E02004671	Tewkesbury 006	1.093	1.103	1.042	1.031	1.069	1.068
E02004672	Tewkesbury 007	1.093	1.089	1.042	1.040	1.092	1.093
E02004673	Tewkesbury 008	1.099	1.108	1.060	1.059	1.113	1.115
E02004674	Tewkesbury 009	1.097	1.106	1.051	1.050	1.105	1.105
County	Somerset	1.101	1.101	1.057	1.057	1.167	1.166
Authority	Wiltshire	1.078	1.079	1.031	1.021	1.154	1.152
County	Mid Wales	1.038	1.037	0.995	0.991	1.077	1.077
County	North Wales	1.066	1.066	1.028	1.028	1.101	1.101
County	South East Wales	1.100	1.101	1.060	1.060	1.135	1.135
County	South West Wales	1.069	1.068	1.031	1.031	1.124	1.124
Authority	Herefordshire, County of	1.057	1.055	1.019	1.018	1.136	1.135
County	Shropshire	1.104	1.104	1.063	1.063	1.145	1.145
County	Staffordshire	1.082	1.081	1.037	1.032	1.129	1.128
County	Warwickshire	1.094	1.095	1.045	1.038	1.186	1.184
County	West Midlands	1.116	1.117	1.083	1.088	1.152	1.153
County	Worcestershire	1.065	1.065	1.017	1.014	1.123	1.122
Authority	Malvern Hills	1.062	1.063	1.028	1.035	1.152	1.153
Authority	Wychavon	1.045	1.046	0.999	0.996	1.116	1.116
Region	YH	1.119	1.119	1.078	1.078	1.137	1.137



Area Description	Name	PM Peak Period (0700-1000) 2013 to 2031					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
Region	EAST	1.115	1.104	1.063	1.049	1.184	1.184
County	Derbyshire	1.106	1.103	1.055	1.051	1.120	1.120
County	Leicestershire	1.111	1.101	1.066	1.050	1.123	1.120
County	Lincolnshire	1.051	1.051	1.003	1.001	1.102	1.098
County	Northamptonshire	1.114	1.126	1.068	1.087	1.152	1.159
County	Nottinghamshire	1.105	1.110	1.056	1.064	1.126	1.126
Region	LON	1.166	1.184	1.115	1.151	1.204	1.203
Region	NE	1.127	1.127	1.080	1.080	1.105	1.105
Region	NW	1.120	1.120	1.077	1.077	1.106	1.106
Region	SCOTLAND	1.099	1.099	1.054	1.054	1.112	1.112
County	Berkshire	1.134	1.132	1.086	1.079	1.163	1.165
County	Buckinghamshire	1.143	1.142	1.090	1.091	1.180	1.194
County	East Sussex	1.105	1.108	1.056	1.064	1.160	1.158
County	Hampshire	1.128	1.120	1.078	1.066	1.147	1.147
County	Kent	1.150	1.137	1.097	1.081	1.176	1.179
County	Oxfordshire	1.124	1.163	1.071	1.133	1.185	1.207
County	Surrey	1.124	1.087	1.076	1.019	1.147	1.131
County	West Sussex	1.108	1.107	1.059	1.055	1.164	1.166
County	Bristol	1.106	1.134	1.058	1.097	1.132	1.132
County	Cornwall	1.110	1.112	1.061	1.064	1.121	1.121
County	Devon	1.105	1.105	1.058	1.056	1.127	1.127
County	Dorset	1.080	1.081	1.035	1.037	1.104	1.103
Authority	Cheltenham	1.068	1.097	1.021	1.059	1.061	1.066
E02004600	Cheltenham 001	1.065	1.075	1.020	1.045	1.055	1.050
E02004601	Cheltenham 002	1.068	1.100	1.024	1.074	1.085	1.092
E02004602	Cheltenham 003	1.081	1.127	1.024	1.081	1.058	1.065
E02004603	Cheltenham 004	1.073	1.138	1.027	1.126	1.070	1.074
E02004604	Cheltenham 005	1.087	1.177	1.040	1.166	1.066	1.078
E02004605	Cheltenham 006	1.086	1.172	1.038	1.174	1.095	1.098
E02004606	Cheltenham 007	1.069	1.095	1.018	1.055	1.049	1.052
E02004607	Cheltenham 008	1.071	1.090	1.020	1.038	1.059	1.057
E02004608	Cheltenham 009	1.068	1.083	1.023	1.037	1.059	1.062
E02004609	Cheltenham 010	1.061	1.074	1.016	1.014	1.070	1.071
E02004610	Cheltenham 011	1.061	1.079	1.018	1.041	1.054	1.076
E02004611	Cheltenham 012	1.067	1.083	1.015	1.038	1.054	1.058
E02004612	Cheltenham 013	1.073	1.092	1.017	1.045	1.060	1.061
E02004613	Cheltenham 014	1.066	1.085	1.021	1.048	1.061	1.067
E02004614	Cheltenham 015	1.071	1.082	1.020	1.039	1.048	1.053
Authority	Cotswold	1.113	1.064	1.068	0.990	1.095	1.084
Authority	Forest of Dean	1.123	1.093	1.075	1.025	1.095	1.086
Authority	Gloucester	1.093	1.104	1.045	1.058	1.074	1.073
E02004636	Gloucester 001	1.081	1.063	1.027	1.007	1.058	1.057
E02004637	Gloucester 002	1.096	1.117	1.052	1.094	1.057	1.059
E02004638	Gloucester 003	1.087	1.084	1.033	1.030	1.053	1.058
E02004639	Gloucester 004	1.091	1.117	1.050	1.104	1.095	1.096
E02004640	Gloucester 005	1.109	1.185	1.062	1.187	1.102	1.100
E02004641	Gloucester 006	1.099	1.117	1.046	1.072	1.086	1.096
E02004642	Gloucester 007	1.089	1.083	1.041	1.028	1.064	1.056
E02004643	Gloucester 008	1.118	1.190	1.062	1.150	1.075	1.082

Area Description	Name	PM Peak Period (0700-1000) 2013 to 2031					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
E02004644	Gloucester 009	1.093	1.114	1.045	1.078	1.066	1.070
E02004645	Gloucester 010	1.074	1.049	1.012	0.991	1.041	1.037
E02004646	Gloucester 011	1.116	1.183	1.063	1.146	1.098	1.109
E02004647	Gloucester 012	1.101	1.144	1.048	1.111	1.088	1.100
E02004648	Gloucester 013	1.093	1.113	1.044	1.073	1.078	1.085
E02004649	Gloucester 014	1.078	1.042	1.025	0.974	1.025	1.022
E02004650	Gloucester 015	1.090	1.071	1.038	1.000	1.063	1.048
Authority	Stroud	1.124	1.101	1.075	1.040	1.106	1.103
Authority	Tewkesbury	1.107	1.095	1.057	1.037	1.089	1.084
E02004666	Tewkesbury 001	1.104	1.079	1.054	1.010	1.072	1.060
E02004667	Tewkesbury 002	1.116	1.126	1.063	1.071	1.116	1.114
E02004668	Tewkesbury 003	1.108	1.103	1.060	1.055	1.093	1.089
E02004669	Tewkesbury 004	1.105	1.075	1.058	1.014	1.078	1.063
E02004670	Tewkesbury 005	1.108	1.103	1.056	1.050	1.091	1.090
E02004671	Tewkesbury 006	1.109	1.082	1.056	1.014	1.067	1.054
E02004672	Tewkesbury 007	1.104	1.090	1.052	1.031	1.075	1.077
E02004673	Tewkesbury 008	1.111	1.111	1.061	1.054	1.103	1.101
E02004674	Tewkesbury 009	1.109	1.105	1.059	1.038	1.091	1.089
County	Somerset	1.109	1.104	1.061	1.054	1.141	1.138
Authority	Wiltshire	1.091	1.062	1.045	1.001	1.122	1.119
County	Mid Wales	1.051	1.030	1.007	0.975	1.059	1.056
County	North Wales	1.073	1.076	1.025	1.029	1.086	1.086
County	South East Wales	1.108	1.110	1.061	1.064	1.119	1.120
County	South West Wales	1.075	1.075	1.028	1.028	1.104	1.103
Authority	Herefordshire, County of	1.062	1.068	1.013	1.024	1.106	1.109
County	Shropshire	1.112	1.113	1.063	1.066	1.125	1.126
County	Staffordshire	1.091	1.077	1.046	1.024	1.106	1.104
County	Warwickshire	1.106	1.083	1.057	1.021	1.149	1.146
County	West Midlands	1.120	1.138	1.079	1.105	1.136	1.139
County	Worcestershire	1.075	1.059	1.029	1.003	1.097	1.092
Authority	Malvern Hills	1.064	1.086	1.016	1.051	1.119	1.132
Authority	Wychavon	1.056	1.040	1.009	0.983	1.088	1.085
Region	YH	1.128	1.128	1.083	1.083	1.124	1.124

Area Description	Name	AM Peak Period (0700-1000) 2013 to 2036					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
Region	EAST	1.139	1.155	1.082	1.101	1.271	1.278
County	Derbyshire	1.144	1.149	1.089	1.097	1.177	1.175
County	Leicestershire	1.136	1.153	1.087	1.105	1.171	1.178
County	Lincolnshire	1.087	1.088	1.035	1.037	1.161	1.165
County	Northamptonshire	1.171	1.151	1.125	1.103	1.222	1.207
County	Nottinghamshire	1.158	1.149	1.110	1.097	1.186	1.187
Region	LON	1.246	1.204	1.197	1.149	1.290	1.281
Region	NE	1.183	1.183	1.131	1.131	1.140	1.140
Region	NW	1.168	1.168	1.120	1.120	1.145	1.145
Region	SCOTLAND	1.149	1.149	1.107	1.107	1.152	1.152
County	Berkshire	1.172	1.173	1.115	1.123	1.244	1.238
County	Buckinghamshire	1.183	1.183	1.129	1.126	1.275	1.253
County	East Sussex	1.150	1.142	1.104	1.092	1.234	1.235
County	Hampshire	1.150	1.162	1.094	1.109	1.212	1.214
County	Kent	1.167	1.194	1.109	1.134	1.251	1.255
County	Oxfordshire	1.217	1.157	1.174	1.102	1.300	1.242
County	Surrey	1.106	1.165	1.045	1.112	1.191	1.232
County	West Sussex	1.142	1.146	1.086	1.095	1.238	1.239
County	Bristol	1.196	1.146	1.157	1.098	1.213	1.203
County	Cornwall	1.156	1.152	1.107	1.101	1.176	1.173
County	Devon	1.144	1.146	1.096	1.099	1.180	1.181
County	Dorset	1.116	1.112	1.070	1.066	1.154	1.156
Authority	Cheltenham	1.110	1.091	1.060	1.039	1.099	1.102
E02004600	Cheltenham 001	1.096	1.084	1.054	1.039	1.094	1.123
E02004601	Cheltenham 002	1.120	1.077	1.074	1.037	1.109	1.108
E02004602	Cheltenham 003	1.150	1.089	1.083	1.042	1.093	1.075
E02004603	Cheltenham 004	1.166	1.089	1.132	1.043	1.105	1.103
E02004604	Cheltenham 005	1.217	1.091	1.170	1.049	1.107	1.076
E02004605	Cheltenham 006	1.223	1.088	1.186	1.047	1.135	1.127
E02004606	Cheltenham 007	1.117	1.086	1.059	1.040	1.097	1.096
E02004607	Cheltenham 008	1.107	1.090	1.040	1.039	1.112	1.126
E02004608	Cheltenham 009	1.093	1.097	1.050	1.042	1.117	1.114
E02004609	Cheltenham 010	1.067	1.099	1.015	1.037	1.086	1.142
E02004610	Cheltenham 011	1.089	1.081	1.039	1.037	1.092	1.075
E02004611	Cheltenham 012	1.086	1.089	1.031	1.037	1.078	1.087
E02004612	Cheltenham 013	1.098	1.089	1.039	1.038	1.090	1.111
E02004613	Cheltenham 014	1.097	1.084	1.046	1.040	1.086	1.084
E02004614	Cheltenham 015	1.086	1.094	1.032	1.042	1.075	1.085
Authority	Cotswold	1.067	1.142	0.999	1.091	1.116	1.152
Authority	Forest of Dean	1.100	1.151	1.030	1.100	1.124	1.145
Authority	Gloucester	1.140	1.118	1.090	1.067	1.135	1.130
E02004636	Gloucester 001	1.094	1.105	1.034	1.058	1.114	1.114
E02004637	Gloucester 002	1.155	1.123	1.128	1.074	1.145	1.100
E02004638	Gloucester 003	1.120	1.111	1.057	1.064	1.115	1.094
E02004639	Gloucester 004	1.148	1.117	1.149	1.067	1.160	1.160
E02004640	Gloucester 005	1.253	1.123	1.240	1.075	1.182	1.167
E02004641	Gloucester 006	1.161	1.121	1.107	1.070	1.173	1.143
E02004642	Gloucester 007	1.109	1.114	1.058	1.063	1.104	1.133
E02004643	Gloucester 008	1.257	1.126	1.195	1.081	1.156	1.112

Area Description	Name	AM Peak Period (0700-1000) 2013 to 2036					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
E02004644	Gloucester 009	1.159	1.113	1.115	1.066	1.139	1.118
E02004645	Gloucester 010	1.076	1.104	1.009	1.052	1.093	1.119
E02004646	Gloucester 011	1.246	1.121	1.186	1.080	1.183	1.125
E02004647	Gloucester 012	1.195	1.113	1.147	1.071	1.161	1.115
E02004648	Gloucester 013	1.161	1.111	1.110	1.068	1.155	1.127
E02004649	Gloucester 014	1.059	1.111	0.989	1.057	1.062	1.081
E02004650	Gloucester 015	1.093	1.120	1.028	1.063	1.103	1.142
Authority	Stroud	1.118	1.150	1.057	1.099	1.149	1.162
Authority	Tewkesbury	1.126	1.134	1.073	1.081	1.142	1.150
E02004666	Tewkesbury 001	1.098	1.130	1.045	1.078	1.116	1.147
E02004667	Tewkesbury 002	1.175	1.138	1.113	1.085	1.200	1.186
E02004668	Tewkesbury 003	1.140	1.130	1.086	1.081	1.148	1.133
E02004669	Tewkesbury 004	1.100	1.130	1.040	1.081	1.105	1.131
E02004670	Tewkesbury 005	1.138	1.135	1.090	1.081	1.149	1.144
E02004671	Tewkesbury 006	1.106	1.149	1.039	1.081	1.100	1.126
E02004672	Tewkesbury 007	1.126	1.127	1.069	1.079	1.144	1.132
E02004673	Tewkesbury 008	1.138	1.142	1.090	1.082	1.167	1.170
E02004674	Tewkesbury 009	1.132	1.142	1.082	1.082	1.154	1.166
County	Somerset	1.139	1.147	1.089	1.098	1.200	1.206
Authority	Wiltshire	1.079	1.131	1.019	1.083	1.176	1.191
County	Mid Wales	1.047	1.086	0.990	1.041	1.080	1.078
County	North Wales	1.114	1.109	1.064	1.058	1.119	1.119
County	South East Wales	1.152	1.148	1.108	1.103	1.164	1.163
County	South West Wales	1.111	1.111	1.065	1.064	1.144	1.147
Authority	Herefordshire, County of	1.110	1.092	1.062	1.042	1.169	1.158
County	Shropshire	1.144	1.141	1.094	1.090	1.176	1.174
County	Staffordshire	1.111	1.135	1.057	1.088	1.151	1.162
County	Warwickshire	1.112	1.149	1.051	1.098	1.212	1.231
County	West Midlands	1.198	1.169	1.156	1.121	1.198	1.185
County	Worcestershire	1.085	1.114	1.028	1.065	1.132	1.149
Authority	Malvern Hills	1.124	1.095	1.081	1.044	1.187	1.152
Authority	Wychavon	1.055	1.090	0.998	1.039	1.116	1.137
Region	YH	1.174	1.174	1.124	1.124	1.170	1.170

Area Description	Name	Inter Peak Period (0700-1000) 2013 to 2036					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
Region	EAST	1.138	1.137	1.084	1.080	1.297	1.295
County	Derbyshire	1.129	1.129	1.080	1.078	1.184	1.183
County	Leicestershire	1.132	1.132	1.082	1.079	1.188	1.189
County	Lincolnshire	1.073	1.072	1.025	1.024	1.177	1.176
County	Northamptonshire	1.139	1.139	1.097	1.101	1.228	1.229
County	Nottinghamshire	1.133	1.133	1.088	1.089	1.191	1.191
Region	LON	1.202	1.198	1.164	1.170	1.292	1.296
Region	NE	1.154	1.154	1.104	1.104	1.144	1.144
Region	NW	1.142	1.142	1.097	1.097	1.149	1.149
Region	SCOTLAND	1.126	1.126	1.074	1.074	1.166	1.166
County	Berkshire	1.159	1.158	1.109	1.109	1.255	1.254
County	Buckinghamshire	1.166	1.168	1.116	1.117	1.281	1.282
County	East Sussex	1.132	1.130	1.088	1.089	1.250	1.249
County	Hampshire	1.144	1.144	1.092	1.089	1.223	1.222
County	Kent	1.170	1.173	1.111	1.107	1.272	1.269
County	Oxfordshire	1.156	1.159	1.121	1.134	1.284	1.288
County	Surrey	1.138	1.135	1.080	1.065	1.223	1.221
County	West Sussex	1.130	1.131	1.082	1.082	1.257	1.257
County	Bristol	1.143	1.143	1.107	1.116	1.208	1.211
County	Cornwall	1.133	1.133	1.087	1.087	1.174	1.173
County	Devon	1.127	1.127	1.079	1.079	1.186	1.187
County	Dorset	1.100	1.099	1.056	1.057	1.161	1.161
Authority	Cheltenham	1.075	1.077	1.033	1.037	1.099	1.101
E02004600	Cheltenham 001	1.070	1.065	1.029	1.031	1.097	1.096
E02004601	Cheltenham 002	1.080	1.069	1.046	1.050	1.119	1.122
E02004602	Cheltenham 003	1.097	1.092	1.047	1.055	1.083	1.085
E02004603	Cheltenham 004	1.087	1.087	1.052	1.075	1.103	1.105
E02004604	Cheltenham 005	1.111	1.104	1.090	1.115	1.085	1.093
E02004605	Cheltenham 006	1.112	1.098	1.095	1.115	1.113	1.119
E02004606	Cheltenham 007	1.076	1.073	1.027	1.033	1.088	1.087
E02004607	Cheltenham 008	1.078	1.076	1.027	1.022	1.108	1.102
E02004608	Cheltenham 009	1.070	1.079	1.032	1.031	1.109	1.108
E02004609	Cheltenham 010	1.059	1.080	1.015	1.016	1.100	1.107
E02004610	Cheltenham 011	1.063	1.062	1.025	1.026	1.090	1.098
E02004611	Cheltenham 012	1.070	1.071	1.017	1.020	1.086	1.087
E02004612	Cheltenham 013	1.080	1.076	1.024	1.025	1.097	1.093
E02004613	Cheltenham 014	1.073	1.068	1.030	1.033	1.089	1.089
E02004614	Cheltenham 015	1.074	1.074	1.023	1.025	1.080	1.078
Authority	Cotswold	1.105	1.104	1.049	1.031	1.141	1.137
Authority	Forest of Dean	1.118	1.118	1.060	1.049	1.142	1.139
Authority	Gloucester	1.103	1.103	1.062	1.066	1.129	1.129
E02004636	Gloucester 001	1.088	1.082	1.030	1.025	1.119	1.118
E02004637	Gloucester 002	1.105	1.108	1.073	1.086	1.113	1.109
E02004638	Gloucester 003	1.099	1.094	1.043	1.045	1.114	1.113
E02004639	Gloucester 004	1.098	1.101	1.072	1.080	1.145	1.147
E02004640	Gloucester 005	1.135	1.131	1.125	1.148	1.154	1.152
E02004641	Gloucester 006	1.119	1.117	1.081	1.085	1.164	1.159
E02004642	Gloucester 007	1.094	1.092	1.047	1.048	1.109	1.111
E02004643	Gloucester 008	1.157	1.151	1.126	1.143	1.120	1.123

Area Description	Name	Inter Peak Period (0700-1000) 2013 to 2036					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
E02004644	Gloucester 009	1.105	1.101	1.068	1.077	1.121	1.123
E02004645	Gloucester 010	1.080	1.074	1.007	1.002	1.104	1.097
E02004646	Gloucester 011	1.154	1.146	1.127	1.144	1.159	1.163
E02004647	Gloucester 012	1.126	1.120	1.095	1.111	1.146	1.152
E02004648	Gloucester 013	1.114	1.107	1.077	1.084	1.145	1.141
E02004649	Gloucester 014	1.074	1.076	1.003	0.999	1.073	1.072
E02004650	Gloucester 015	1.093	1.094	1.036	1.027	1.116	1.116
Authority	Stroud	1.125	1.123	1.070	1.065	1.160	1.158
Authority	Tewkesbury	1.113	1.114	1.066	1.065	1.143	1.145
E02004666	Tewkesbury 001	1.106	1.104	1.050	1.047	1.122	1.125
E02004667	Tewkesbury 002	1.135	1.131	1.096	1.090	1.181	1.176
E02004668	Tewkesbury 003	1.117	1.114	1.080	1.077	1.144	1.143
E02004669	Tewkesbury 004	1.105	1.103	1.056	1.053	1.116	1.117
E02004670	Tewkesbury 005	1.120	1.120	1.073	1.072	1.148	1.150
E02004671	Tewkesbury 006	1.110	1.120	1.058	1.048	1.109	1.110
E02004672	Tewkesbury 007	1.110	1.106	1.058	1.059	1.139	1.142
E02004673	Tewkesbury 008	1.115	1.125	1.075	1.077	1.160	1.165
E02004674	Tewkesbury 009	1.113	1.123	1.067	1.068	1.153	1.154
County	Somerset	1.129	1.130	1.082	1.081	1.213	1.212
Authority	Wiltshire	1.102	1.104	1.048	1.036	1.196	1.193
County	Mid Wales	1.060	1.059	1.012	1.006	1.095	1.095
County	North Wales	1.093	1.093	1.052	1.053	1.125	1.125
County	South East Wales	1.132	1.132	1.088	1.089	1.171	1.171
County	South West Wales	1.098	1.097	1.058	1.058	1.155	1.155
Authority	Herefordshire, County of	1.083	1.081	1.042	1.043	1.171	1.171
County	Shropshire	1.123	1.123	1.079	1.079	1.183	1.183
County	Staffordshire	1.111	1.110	1.061	1.055	1.165	1.163
County	Warwickshire	1.124	1.125	1.069	1.061	1.235	1.233
County	West Midlands	1.150	1.151	1.115	1.121	1.200	1.202
County	Worcestershire	1.089	1.089	1.036	1.031	1.155	1.154
Authority	Malvern Hills	1.086	1.087	1.050	1.058	1.187	1.189
Authority	Wychavon	1.065	1.066	1.013	1.009	1.140	1.140
Region	YH	1.150	1.150	1.105	1.105	1.178	1.178

Area Description	Name	PM Peak Period (0700-1000) 2013 to 2036					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
Region	EAST	1.147	1.133	1.090	1.071	1.238	1.238
County	Derbyshire	1.139	1.134	1.084	1.077	1.158	1.158
County	Leicestershire	1.141	1.129	1.092	1.074	1.161	1.158
County	Lincolnshire	1.079	1.078	1.026	1.024	1.140	1.136
County	Northamptonshire	1.144	1.157	1.094	1.115	1.194	1.202
County	Nottinghamshire	1.139	1.146	1.085	1.096	1.165	1.166
Region	LON	1.199	1.224	1.145	1.192	1.265	1.263
Region	NE	1.166	1.166	1.114	1.114	1.138	1.138
Region	NW	1.151	1.151	1.106	1.106	1.139	1.139
Region	SCOTLAND	1.136	1.136	1.086	1.086	1.148	1.148
County	Berkshire	1.164	1.163	1.112	1.106	1.211	1.214
County	Buckinghamshire	1.174	1.174	1.117	1.120	1.233	1.249
County	East Sussex	1.136	1.141	1.082	1.093	1.207	1.205
County	Hampshire	1.152	1.142	1.097	1.082	1.187	1.187
County	Kent	1.181	1.161	1.122	1.098	1.228	1.232
County	Oxfordshire	1.154	1.199	1.096	1.167	1.237	1.263
County	Surrey	1.153	1.108	1.102	1.033	1.192	1.173
County	West Sussex	1.137	1.135	1.083	1.076	1.209	1.211
County	Bristol	1.139	1.179	1.088	1.144	1.180	1.182
County	Cornwall	1.142	1.145	1.087	1.093	1.158	1.158
County	Devon	1.136	1.134	1.083	1.081	1.163	1.162
County	Dorset	1.105	1.107	1.055	1.059	1.136	1.135
Authority	Cheltenham	1.080	1.097	1.029	1.047	1.082	1.081
E02004600	Cheltenham 001	1.078	1.079	1.030	1.034	1.079	1.066
E02004601	Cheltenham 002	1.080	1.100	1.033	1.066	1.108	1.111
E02004602	Cheltenham 003	1.090	1.126	1.027	1.072	1.070	1.077
E02004603	Cheltenham 004	1.085	1.139	1.035	1.114	1.093	1.092
E02004604	Cheltenham 005	1.099	1.182	1.047	1.162	1.086	1.095
E02004605	Cheltenham 006	1.099	1.178	1.045	1.170	1.114	1.116
E02004606	Cheltenham 007	1.080	1.095	1.025	1.043	1.070	1.067
E02004607	Cheltenham 008	1.083	1.089	1.026	1.026	1.082	1.073
E02004608	Cheltenham 009	1.082	1.090	1.034	1.028	1.089	1.086
E02004609	Cheltenham 010	1.072	1.071	1.025	1.001	1.083	1.079
E02004610	Cheltenham 011	1.072	1.077	1.026	1.027	1.070	1.087
E02004611	Cheltenham 012	1.076	1.075	1.020	1.021	1.067	1.065
E02004612	Cheltenham 013	1.081	1.084	1.020	1.030	1.073	1.069
E02004613	Cheltenham 014	1.078	1.083	1.029	1.038	1.078	1.078
E02004614	Cheltenham 015	1.082	1.077	1.028	1.023	1.064	1.060
Authority	Cotswold	1.127	1.070	1.079	0.988	1.123	1.109
Authority	Forest of Dean	1.137	1.097	1.085	1.021	1.122	1.112
Authority	Gloucester	1.109	1.125	1.057	1.077	1.110	1.111
E02004636	Gloucester 001	1.096	1.081	1.038	1.023	1.089	1.092
E02004637	Gloucester 002	1.114	1.138	1.067	1.118	1.098	1.099
E02004638	Gloucester 003	1.104	1.105	1.044	1.049	1.088	1.097
E02004639	Gloucester 004	1.107	1.138	1.063	1.127	1.131	1.131
E02004640	Gloucester 005	1.128	1.218	1.077	1.225	1.143	1.143
E02004641	Gloucester 006	1.117	1.146	1.061	1.101	1.130	1.144
E02004642	Gloucester 007	1.104	1.099	1.053	1.041	1.096	1.089
E02004643	Gloucester 008	1.139	1.224	1.077	1.182	1.117	1.129

Area Description	Name	PM Peak Period (0700-1000) 2013 to 2036					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
E02004644	Gloucester 009	1.108	1.137	1.057	1.102	1.102	1.111
E02004645	Gloucester 010	1.089	1.063	1.022	1.001	1.072	1.068
E02004646	Gloucester 011	1.136	1.217	1.078	1.179	1.141	1.160
E02004647	Gloucester 012	1.119	1.172	1.062	1.139	1.127	1.146
E02004648	Gloucester 013	1.112	1.141	1.058	1.102	1.117	1.128
E02004649	Gloucester 014	1.091	1.052	1.035	0.979	1.049	1.049
E02004650	Gloucester 015	1.104	1.085	1.049	1.010	1.094	1.079
Authority	Stroud	1.139	1.113	1.086	1.048	1.138	1.134
Authority	Tewkesbury	1.123	1.119	1.070	1.061	1.127	1.126
E02004666	Tewkesbury 001	1.119	1.097	1.065	1.027	1.105	1.098
E02004667	Tewkesbury 002	1.136	1.159	1.077	1.104	1.161	1.161
E02004668	Tewkesbury 003	1.124	1.129	1.073	1.081	1.130	1.128
E02004669	Tewkesbury 004	1.120	1.095	1.070	1.035	1.112	1.100
E02004670	Tewkesbury 005	1.125	1.131	1.069	1.079	1.132	1.135
E02004671	Tewkesbury 006	1.126	1.103	1.068	1.034	1.102	1.090
E02004672	Tewkesbury 007	1.119	1.113	1.065	1.055	1.112	1.120
E02004673	Tewkesbury 008	1.127	1.136	1.073	1.080	1.142	1.145
E02004674	Tewkesbury 009	1.124	1.129	1.072	1.064	1.131	1.132
County	Somerset	1.138	1.132	1.086	1.077	1.182	1.179
Authority	Wiltshire	1.118	1.079	1.068	1.009	1.158	1.154
County	Mid Wales	1.076	1.046	1.030	0.983	1.078	1.073
County	North Wales	1.101	1.105	1.049	1.055	1.112	1.112
County	South East Wales	1.140	1.143	1.090	1.094	1.154	1.155
County	South West Wales	1.106	1.105	1.055	1.055	1.135	1.135
Authority	Herefordshire, County of	1.087	1.099	1.034	1.052	1.139	1.144
County	Shropshire	1.132	1.134	1.079	1.083	1.157	1.158
County	Staffordshire	1.122	1.104	1.073	1.045	1.139	1.136
County	Warwickshire	1.137	1.109	1.084	1.041	1.192	1.187
County	West Midlands	1.155	1.176	1.110	1.143	1.181	1.185
County	Worcestershire	1.101	1.080	1.051	1.017	1.126	1.120
Authority	Malvern Hills	1.090	1.114	1.037	1.076	1.151	1.166
Authority	Wychavon	1.079	1.054	1.028	0.990	1.112	1.106
Region	YH	1.160	1.160	1.111	1.111	1.163	1.163



Area Description	Name	AM Peak Period (0700-1000) 2013 to 2041					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
Region	EAST	1.171	1.190	1.110	1.131	1.323	1.331
County	Derbyshire	1.178	1.185	1.119	1.129	1.220	1.220
County	Leicestershire	1.168	1.187	1.116	1.136	1.214	1.223
County	Lincolnshire	1.118	1.120	1.062	1.065	1.204	1.209
County	Northamptonshire	1.208	1.185	1.159	1.134	1.271	1.255
County	Nottinghamshire	1.195	1.184	1.144	1.129	1.233	1.233
Region	LON	1.286	1.240	1.235	1.182	1.347	1.333
Region	NE	1.225	1.225	1.169	1.169	1.191	1.191
Region	NW	1.206	1.206	1.155	1.155	1.192	1.192
Region	SCOTLAND	1.188	1.188	1.143	1.143	1.189	1.189
County	Berkshire	1.206	1.207	1.146	1.153	1.289	1.283
County	Buckinghamshire	1.221	1.217	1.163	1.157	1.324	1.300
County	East Sussex	1.189	1.179	1.143	1.125	1.278	1.277
County	Hampshire	1.182	1.197	1.123	1.141	1.252	1.255
County	Kent	1.202	1.231	1.139	1.166	1.298	1.304
County	Oxfordshire	1.261	1.190	1.217	1.132	1.355	1.288
County	Surrey	1.131	1.199	1.064	1.142	1.226	1.274
County	West Sussex	1.176	1.183	1.116	1.128	1.279	1.281
County	Bristol	1.235	1.179	1.195	1.129	1.269	1.252
County	Cornwall	1.190	1.185	1.138	1.130	1.218	1.214
County	Devon	1.176	1.179	1.124	1.128	1.220	1.221
County	Dorset	1.149	1.145	1.102	1.096	1.192	1.195
Authority	Cheltenham	1.124	1.122	1.066	1.068	1.112	1.130
E02004600	Cheltenham 001	1.112	1.116	1.060	1.068	1.111	1.153
E02004601	Cheltenham 002	1.132	1.107	1.081	1.063	1.116	1.136
E02004602	Cheltenham 003	1.164	1.119	1.089	1.067	1.104	1.098
E02004603	Cheltenham 004	1.185	1.121	1.143	1.072	1.124	1.133
E02004604	Cheltenham 005	1.238	1.122	1.185	1.077	1.128	1.105
E02004605	Cheltenham 006	1.243	1.119	1.198	1.075	1.151	1.152
E02004606	Cheltenham 007	1.131	1.118	1.066	1.068	1.113	1.124
E02004607	Cheltenham 008	1.120	1.122	1.046	1.067	1.130	1.156
E02004608	Cheltenham 009	1.114	1.130	1.061	1.071	1.142	1.146
E02004609	Cheltenham 010	1.079	1.131	1.017	1.065	1.091	1.164
E02004610	Cheltenham 011	1.102	1.112	1.044	1.065	1.105	1.103
E02004611	Cheltenham 012	1.093	1.119	1.032	1.064	1.083	1.110
E02004612	Cheltenham 013	1.105	1.118	1.040	1.063	1.096	1.133
E02004613	Cheltenham 014	1.107	1.116	1.049	1.068	1.090	1.107
E02004614	Cheltenham 015	1.093	1.126	1.032	1.070	1.078	1.106
Authority	Cotswold	1.092	1.176	1.019	1.121	1.142	1.185
Authority	Forest of Dean	1.126	1.185	1.050	1.130	1.151	1.177
Authority	Gloucester	1.180	1.151	1.128	1.097	1.176	1.166
E02004636	Gloucester 001	1.129	1.138	1.065	1.088	1.149	1.148
E02004637	Gloucester 002	1.199	1.161	1.172	1.110	1.190	1.139
E02004638	Gloucester 003	1.158	1.144	1.091	1.094	1.153	1.127
E02004639	Gloucester 004	1.187	1.150	1.192	1.097	1.203	1.196
E02004640	Gloucester 005	1.309	1.157	1.298	1.106	1.234	1.205
E02004641	Gloucester 006	1.207	1.155	1.150	1.101	1.214	1.180
E02004642	Gloucester 007	1.143	1.148	1.090	1.094	1.141	1.168
E02004643	Gloucester 008	1.313	1.161	1.245	1.113	1.207	1.150

Area Description	Name	AM Peak Period (0700-1000) 2013 to 2041					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
E02004644	Gloucester 009	1.202	1.147	1.157	1.097	1.184	1.154
E02004645	Gloucester 010	1.109	1.137	1.038	1.082	1.129	1.154
E02004646	Gloucester 011	1.301	1.156	1.237	1.112	1.235	1.164
E02004647	Gloucester 012	1.241	1.147	1.190	1.102	1.204	1.151
E02004648	Gloucester 013	1.208	1.145	1.155	1.099	1.196	1.163
E02004649	Gloucester 014	1.090	1.144	1.015	1.086	1.097	1.115
E02004650	Gloucester 015	1.128	1.153	1.059	1.093	1.140	1.177
Authority	Stroud	1.148	1.184	1.084	1.130	1.181	1.196
Authority	Tewkesbury	1.166	1.168	1.111	1.111	1.183	1.187
E02004666	Tewkesbury 001	1.135	1.164	1.081	1.109	1.156	1.184
E02004667	Tewkesbury 002	1.226	1.173	1.160	1.116	1.250	1.226
E02004668	Tewkesbury 003	1.178	1.163	1.121	1.112	1.183	1.165
E02004669	Tewkesbury 004	1.133	1.163	1.070	1.111	1.136	1.163
E02004670	Tewkesbury 005	1.182	1.169	1.134	1.112	1.191	1.181
E02004671	Tewkesbury 006	1.139	1.182	1.067	1.111	1.132	1.158
E02004672	Tewkesbury 007	1.167	1.161	1.109	1.109	1.188	1.170
E02004673	Tewkesbury 008	1.178	1.176	1.126	1.113	1.205	1.205
E02004674	Tewkesbury 009	1.172	1.176	1.123	1.113	1.199	1.203
County	Somerset	1.170	1.179	1.116	1.127	1.243	1.250
Authority	Wiltshire	1.105	1.164	1.041	1.112	1.215	1.234
County	Mid Wales	1.069	1.114	1.008	1.066	1.094	1.097
County	North Wales	1.144	1.138	1.091	1.084	1.141	1.141
County	South East Wales	1.188	1.183	1.141	1.135	1.197	1.195
County	South West Wales	1.142	1.142	1.093	1.093	1.171	1.174
Authority	Herefordshire, County of	1.147	1.123	1.097	1.070	1.213	1.197
County	Shropshire	1.180	1.176	1.126	1.122	1.223	1.220
County	Staffordshire	1.144	1.169	1.086	1.119	1.193	1.205
County	Warwickshire	1.145	1.183	1.080	1.129	1.264	1.285
County	West Midlands	1.237	1.205	1.193	1.155	1.247	1.233
County	Worcestershire	1.111	1.146	1.051	1.094	1.167	1.187
Authority	Malvern Hills	1.163	1.126	1.120	1.072	1.232	1.192
Authority	Wychavon	1.075	1.121	1.014	1.066	1.145	1.172
Region	YH	1.213	1.213	1.160	1.160	1.217	1.217

IP	Name	Inter Peak Period (0700-1000) 2013 to 2041					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
Region	EAST	1.171	1.169	1.110	1.106	1.349	1.347
County	Derbyshire	1.162	1.162	1.107	1.105	1.227	1.226
County	Leicestershire	1.163	1.164	1.108	1.105	1.232	1.232
County	Lincolnshire	1.102	1.101	1.050	1.049	1.220	1.219
County	Northamptonshire	1.171	1.171	1.125	1.130	1.275	1.276
County	Nottinghamshire	1.167	1.166	1.116	1.118	1.236	1.236
Region	LON	1.238	1.233	1.197	1.203	1.342	1.346
Region	NE	1.193	1.193	1.136	1.136	1.193	1.193
Region	NW	1.176	1.176	1.127	1.127	1.195	1.195
Region	SCOTLAND	1.161	1.161	1.104	1.104	1.201	1.201
County	Berkshire	1.190	1.190	1.136	1.135	1.298	1.297
County	Buckinghamshire	1.200	1.201	1.143	1.145	1.328	1.328
County	East Sussex	1.167	1.165	1.118	1.119	1.290	1.290
County	Hampshire	1.176	1.176	1.118	1.114	1.261	1.259
County	Kent	1.204	1.207	1.137	1.134	1.318	1.315
County	Oxfordshire	1.191	1.193	1.152	1.167	1.333	1.337
County	Surrey	1.168	1.165	1.103	1.086	1.260	1.258
County	West Sussex	1.163	1.164	1.109	1.108	1.296	1.296
County	Bristol	1.176	1.176	1.136	1.147	1.259	1.262
County	Cornwall	1.164	1.164	1.113	1.113	1.214	1.214
County	Devon	1.156	1.156	1.103	1.103	1.225	1.226
County	Dorset	1.131	1.130	1.083	1.084	1.197	1.198
Authority	Cheltenham	1.099	1.101	1.047	1.047	1.119	1.120
E02004600	Cheltenham 001	1.096	1.091	1.046	1.044	1.121	1.120
E02004601	Cheltenham 002	1.102	1.090	1.057	1.058	1.134	1.138
E02004602	Cheltenham 003	1.118	1.113	1.054	1.062	1.097	1.098
E02004603	Cheltenham 004	1.112	1.112	1.067	1.087	1.127	1.129
E02004604	Cheltenham 005	1.136	1.130	1.104	1.128	1.108	1.115
E02004605	Cheltenham 006	1.137	1.123	1.108	1.128	1.131	1.137
E02004606	Cheltenham 007	1.100	1.097	1.039	1.041	1.110	1.108
E02004607	Cheltenham 008	1.101	1.099	1.038	1.029	1.131	1.125
E02004608	Cheltenham 009	1.097	1.107	1.053	1.048	1.137	1.136
E02004609	Cheltenham 010	1.082	1.103	1.030	1.028	1.112	1.117
E02004610	Cheltenham 011	1.088	1.086	1.040	1.035	1.108	1.115
E02004611	Cheltenham 012	1.089	1.091	1.024	1.024	1.098	1.098
E02004612	Cheltenham 013	1.097	1.093	1.028	1.028	1.109	1.105
E02004613	Cheltenham 014	1.095	1.090	1.041	1.041	1.101	1.100
E02004614	Cheltenham 015	1.096	1.097	1.032	1.032	1.091	1.088
Authority	Cotswold	1.133	1.132	1.072	1.052	1.170	1.166
Authority	Forest of Dean	1.147	1.147	1.083	1.070	1.171	1.168
Authority	Gloucester	1.136	1.136	1.091	1.096	1.166	1.166
E02004636	Gloucester 001	1.120	1.113	1.056	1.052	1.153	1.152
E02004637	Gloucester 002	1.142	1.144	1.106	1.119	1.152	1.148
E02004638	Gloucester 003	1.131	1.126	1.070	1.074	1.149	1.149
E02004639	Gloucester 004	1.129	1.132	1.101	1.108	1.182	1.183
E02004640	Gloucester 005	1.172	1.168	1.161	1.188	1.196	1.193
E02004641	Gloucester 006	1.154	1.152	1.112	1.120	1.201	1.196
E02004642	Gloucester 007	1.124	1.123	1.073	1.074	1.143	1.146
E02004643	Gloucester 008	1.195	1.189	1.161	1.183	1.163	1.167

IP	Name	Inter Peak Period (0700-1000) 2013 to 2041					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
E02004644	Gloucester 009	1.137	1.134	1.097	1.108	1.160	1.162
E02004645	Gloucester 010	1.110	1.105	1.029	1.028	1.138	1.132
E02004646	Gloucester 011	1.193	1.185	1.162	1.186	1.204	1.208
E02004647	Gloucester 012	1.161	1.155	1.125	1.146	1.185	1.191
E02004648	Gloucester 013	1.149	1.141	1.109	1.119	1.181	1.178
E02004649	Gloucester 014	1.104	1.105	1.025	1.022	1.107	1.106
E02004650	Gloucester 015	1.124	1.125	1.062	1.052	1.151	1.151
Authority	Stroud	1.155	1.153	1.095	1.089	1.192	1.190
Authority	Tewkesbury	1.146	1.146	1.096	1.095	1.181	1.183
E02004666	Tewkesbury 001	1.137	1.136	1.078	1.075	1.159	1.163
E02004667	Tewkesbury 002	1.172	1.167	1.130	1.126	1.223	1.219
E02004668	Tewkesbury 003	1.149	1.146	1.108	1.107	1.177	1.177
E02004669	Tewkesbury 004	1.136	1.133	1.082	1.079	1.147	1.148
E02004670	Tewkesbury 005	1.155	1.154	1.105	1.107	1.187	1.190
E02004671	Tewkesbury 006	1.140	1.151	1.083	1.073	1.141	1.141
E02004672	Tewkesbury 007	1.143	1.138	1.087	1.089	1.178	1.182
E02004673	Tewkesbury 008	1.148	1.157	1.104	1.106	1.195	1.201
E02004674	Tewkesbury 009	1.145	1.156	1.096	1.098	1.191	1.193
County	Somerset	1.159	1.159	1.107	1.105	1.256	1.256
Authority	Wiltshire	1.131	1.133	1.072	1.058	1.237	1.234
County	Mid Wales	1.084	1.084	1.032	1.023	1.110	1.109
County	North Wales	1.120	1.120	1.075	1.076	1.144	1.144
County	South East Wales	1.164	1.164	1.116	1.117	1.201	1.202
County	South West Wales	1.127	1.127	1.083	1.083	1.180	1.180
Authority	Herefordshire, County of	1.113	1.111	1.069	1.071	1.212	1.212
County	Shropshire	1.156	1.156	1.107	1.108	1.228	1.227
County	Staffordshire	1.143	1.142	1.087	1.081	1.206	1.205
County	Warwickshire	1.156	1.157	1.097	1.089	1.288	1.287
County	West Midlands	1.184	1.185	1.146	1.152	1.249	1.251
County	Worcestershire	1.117	1.117	1.058	1.052	1.191	1.190
Authority	Malvern Hills	1.117	1.119	1.078	1.088	1.229	1.232
Authority	Wychavon	1.091	1.092	1.032	1.026	1.172	1.172
Region	YH	1.186	1.186	1.135	1.135	1.225	1.225

Area Description	Name	PM Peak Period (0700-1000) 2013 to 2041					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
Region	EAST	1.180	1.164	1.117	1.096	1.284	1.284
County	Derbyshire	1.173	1.167	1.112	1.103	1.197	1.197
County	Leicestershire	1.173	1.160	1.120	1.100	1.201	1.197
County	Lincolnshire	1.110	1.108	1.052	1.048	1.180	1.175
County	Northamptonshire	1.177	1.192	1.122	1.146	1.237	1.246
County	Nottinghamshire	1.173	1.182	1.114	1.127	1.207	1.208
Region	LON	1.235	1.262	1.175	1.227	1.312	1.311
Region	NE	1.206	1.206	1.148	1.148	1.184	1.184
Region	NW	1.187	1.187	1.136	1.136	1.182	1.182
Region	SCOTLAND	1.173	1.173	1.118	1.118	1.184	1.184
County	Berkshire	1.196	1.196	1.138	1.134	1.249	1.254
County	Buckinghamshire	1.208	1.210	1.145	1.151	1.275	1.292
County	East Sussex	1.171	1.178	1.112	1.127	1.246	1.244
County	Hampshire	1.185	1.174	1.125	1.108	1.222	1.222
County	Kent	1.216	1.195	1.151	1.124	1.270	1.274
County	Oxfordshire	1.188	1.241	1.124	1.206	1.282	1.310
County	Surrey	1.185	1.133	1.129	1.049	1.228	1.205
County	West Sussex	1.172	1.167	1.113	1.102	1.246	1.247
County	Bristol	1.171	1.216	1.115	1.178	1.224	1.228
County	Cornwall	1.173	1.177	1.114	1.121	1.196	1.197
County	Devon	1.166	1.164	1.109	1.105	1.199	1.199
County	Dorset	1.136	1.139	1.082	1.087	1.171	1.170
Authority	Cheltenham	1.108	1.111	1.052	1.048	1.102	1.095
E02004600	Cheltenham 001	1.107	1.097	1.055	1.035	1.101	1.084
E02004601	Cheltenham 002	1.106	1.112	1.053	1.068	1.128	1.127
E02004602	Cheltenham 003	1.114	1.138	1.043	1.075	1.084	1.086
E02004603	Cheltenham 004	1.113	1.156	1.057	1.120	1.116	1.112
E02004604	Cheltenham 005	1.127	1.202	1.068	1.172	1.107	1.112
E02004605	Cheltenham 006	1.127	1.197	1.067	1.179	1.132	1.132
E02004606	Cheltenham 007	1.108	1.109	1.046	1.045	1.090	1.082
E02004607	Cheltenham 008	1.109	1.102	1.047	1.027	1.103	1.090
E02004608	Cheltenham 009	1.112	1.111	1.061	1.032	1.117	1.110
E02004609	Cheltenham 010	1.099	1.082	1.050	0.999	1.098	1.086
E02004610	Cheltenham 011	1.099	1.090	1.050	1.027	1.089	1.098
E02004611	Cheltenham 012	1.100	1.082	1.040	1.018	1.080	1.071
E02004612	Cheltenham 013	1.103	1.090	1.035	1.028	1.085	1.075
E02004613	Cheltenham 014	1.105	1.094	1.052	1.037	1.093	1.087
E02004614	Cheltenham 015	1.108	1.086	1.050	1.020	1.078	1.065
Authority	Cotswold	1.158	1.094	1.106	1.004	1.152	1.136
Authority	Forest of Dean	1.168	1.123	1.112	1.040	1.151	1.139
Authority	Gloucester	1.142	1.162	1.085	1.112	1.145	1.148
E02004636	Gloucester 001	1.127	1.114	1.063	1.051	1.122	1.125
E02004637	Gloucester 002	1.151	1.178	1.100	1.157	1.136	1.139
E02004638	Gloucester 003	1.135	1.140	1.070	1.081	1.122	1.132
E02004639	Gloucester 004	1.139	1.174	1.091	1.165	1.166	1.167
E02004640	Gloucester 005	1.162	1.269	1.107	1.281	1.182	1.187
E02004641	Gloucester 006	1.151	1.188	1.089	1.141	1.167	1.182
E02004642	Gloucester 007	1.136	1.131	1.081	1.069	1.129	1.123
E02004643	Gloucester 008	1.174	1.273	1.105	1.229	1.158	1.174

Area Description	Name	PM Peak Period (0700-1000) 2013 to 2041					
		Employers Business		Commute		Other	
		Origin	Destination	Origin	Destination	Origin	Destination
E02004644	Gloucester 009	1.141	1.175	1.085	1.140	1.138	1.151
E02004645	Gloucester 010	1.119	1.094	1.045	1.028	1.104	1.100
E02004646	Gloucester 011	1.172	1.267	1.106	1.228	1.183	1.207
E02004647	Gloucester 012	1.152	1.214	1.089	1.180	1.165	1.186
E02004648	Gloucester 013	1.145	1.184	1.086	1.143	1.153	1.166
E02004649	Gloucester 014	1.121	1.081	1.061	1.002	1.080	1.081
E02004650	Gloucester 015	1.136	1.118	1.076	1.037	1.127	1.112
Authority	Stroud	1.170	1.143	1.114	1.072	1.169	1.165
Authority	Tewkesbury	1.156	1.156	1.098	1.097	1.163	1.164
E02004666	Tewkesbury 001	1.151	1.132	1.093	1.059	1.141	1.136
E02004667	Tewkesbury 002	1.171	1.205	1.105	1.148	1.201	1.205
E02004668	Tewkesbury 003	1.157	1.165	1.100	1.115	1.163	1.161
E02004669	Tewkesbury 004	1.152	1.127	1.098	1.062	1.144	1.131
E02004670	Tewkesbury 005	1.158	1.173	1.098	1.120	1.171	1.176
E02004671	Tewkesbury 006	1.157	1.135	1.096	1.061	1.134	1.121
E02004672	Tewkesbury 007	1.152	1.151	1.093	1.092	1.149	1.161
E02004673	Tewkesbury 008	1.160	1.173	1.102	1.113	1.177	1.181
E02004674	Tewkesbury 009	1.157	1.167	1.100	1.101	1.167	1.172
County	Somerset	1.169	1.162	1.112	1.102	1.222	1.218
Authority	Wiltshire	1.149	1.105	1.095	1.028	1.196	1.189
County	Mid Wales	1.103	1.068	1.053	0.998	1.096	1.090
County	North Wales	1.129	1.134	1.073	1.079	1.133	1.133
County	South East Wales	1.173	1.177	1.118	1.123	1.185	1.187
County	South West Wales	1.136	1.136	1.081	1.081	1.161	1.161
Authority	Herefordshire, County of	1.118	1.133	1.059	1.084	1.177	1.183
County	Shropshire	1.166	1.169	1.108	1.112	1.199	1.200
County	Staffordshire	1.155	1.135	1.101	1.071	1.178	1.174
County	Warwickshire	1.170	1.141	1.113	1.067	1.239	1.234
County	West Midlands	1.189	1.213	1.140	1.176	1.226	1.230
County	Worcestershire	1.131	1.106	1.077	1.036	1.160	1.152
Authority	Malvern Hills	1.120	1.151	1.063	1.112	1.190	1.208
Authority	Wychavon	1.107	1.075	1.051	1.003	1.142	1.133
Region	YH	1.197	1.197	1.143	1.143	1.206	1.206

## Appendix F: Ceiling Growth Constraint Scaling Factors



































## Appendix G: Scenario Q and Baseline Convergence Statistics

Convergence statistics				
SATURN				
	Time Period	Number of loops	Assignment Model Gap (Target = 0.1%)	Assignment Model <% Flows (Target = 98%)
Scenario Q	AM	29	0.015	97.82
	IP	25	0.0095	98.04
	PM	45	0.0046	97.52
Baseline	AM	27	0.0092	98.08
	IP	16	0.0059	98.58
	PM	26	0.0032	97.74



## Appendix H: Scenario P, S and R Convergence Statistics

**Convergence statistics**

**SATURN**

	Time Period	Number of loops	Assignment Model Gap (Target = 0.1%)	Assignment Model <% Flows (Target = 98%)	Number of loops	Assignment Model Gap (Target = 0.1%)	Assignment Model <% Flows (Target = 98%)	Number of loops	Assignment Model Gap (Target = 0.1%)	Assignment Model <% Flows (Target = 98%)	Number of loops	Assignment Model Gap (Target = 0.1%)	Assignment Model <% Flows (Target = 98%)	Number of loops	Assignment Model Gap (Target = 0.1%)	Assignment Model <% Flows (Target = 98%)															
																	2021			2026			2031			2036			2041		
																	Scenario P	AM	22	0.0058	98.31	21	0.0092	98	25	0.0072	97.83	24	0.01	98.27	27
IP	16	0.0053	99.27	16	0.01	97.91	16	0.0072	98.59	16	0.0068	98.46	19	0.0066	98.27																
PM	21	0.0041	98.37	21	0.0092	98	24	0.0031	98.08	24	0.0056	98.46	27	0.0038	98.5																
Scenario S	AM	20	0.0062	97.61	21	0.0066	98.4	23	0.007	97.95	28	0.0071	98.42	28	0.0078	98.06															
	IP	16	0.0084	98.71	15	0.0055	98.61	19	0.0079	98.77	18	0.0069	98.52	20	0.0053	99.04															
	PM	22	0.0042	97.87	20	0.0036	98.5	25	0.0038	99.06	20	0.0048	97.58	26	0.008	97.81															
Scenario R	AM	18	0.0065	98.17	21	0.0083	98.52	24	0.0076	98.25	28	0.0088	98.78	29	0.01	98.13															
	IP	17	0.0073	98.61	16	0.0081	98.69	21	0.0059	98.73	19	0.01	98.45	22	0.0077	98.61															
	PM	23	0.0024	99.08	20	0.0057	97.67	26	0.0045	98.74	49	0.0088	99.25	39	0.0054	98.79															