

M5 Junction 10 Improvements Scheme

Environmental Management Plan Annex B11 - Traffic Management Plan (tracked) TR010063 – APP 9.12

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Environmental Management Plan

Annex B.11 Traffic Management Plan

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B.11. Traffic Management Plan

B.11.1 Introduction

Purpose

- B.11.1.1. This document forms Annex B11 of the Environmental Management Plan (EMP) (Application document TR010063/APP/7.3). Annex B11 is a Traffic Management Plan (TMP) (1st iteration) for the M5 Junction 10 Improvements Scheme (the Scheme). This TMP (1st iteration) will be updated by the appointed Principal Contractor (PC) into a TMP (2nd iteration), as required by Requirement 3 of the DCO, prior to commencement of works. The purpose of this TMP (1st iteration) is to outline the core requirements for all aspects of the management of traffic during the construction of the Scheme, reinforcing the parameters that the Environmental Statement (ES) (Application documents TR010063/APP/6.1 – 6.15) is based on and that the PC will therefore need to adhere to.
- B.11.1.2. This TMP (1st iteration) sets the expectations for the PC to undertake the following, as the TMP is iterated:
- Develop and implement detailed proposals for general traffic management that accord to Gloucestershire County Council (GCC) and National Highways' (NH) requirements, preserving through traffic and access as far as is practicable and safe.
 - Develop and implement detailed proposals for the movement of emergency vehicles through areas under traffic management, in accordance with the Emergency Vehicle Movement Management Plan (EVM MP) (Annex B14, Application document TR010063/APP/9.14).
 - Impose controls on the movement of the construction workforce, supporting sustainable travel modes and delivering off-street arrangements for the management of parking for construction worker vehicles.
 - Implement measures to prioritise the use of preferred routes for construction related traffic (workforce and deliveries) and control traffic flow within defined parameters.
 - Reduce interference with public rights of way (PRoW), footpaths and cycleways, in accordance with the Public Rights of Way Management Plan (PROW MP) (Annex B13, Application document TR010063/APP/9.13).
 - Engage with the GCC streetworks management process to ensure co-ordination of Scheme activities with other projects on the highway network. In accordance with the Community Engagement Plan (CEP) (Annex B15, Application document TR010063/APP/9.10).
 - Support the Project Liaison Officer (PLO) in the provision of accurate and timely information on traffic management, to enable advance communication of works to relevant stakeholders, in accordance with the CEP (Annex B15, Application document TR010063/APP/9.10).
 - Support the PLO in engaging with developers of the strategic development sites (Elms Park (North West Cheltenham Development Area), West Cheltenham Development Area and safeguarded land to the north-west of Cheltenham) to coordinate the management of cumulative construction traffic impacts on sensitive receptors. This is to be conducted in accordance with the CEP (Annex B15, Application document TR010063/APP/9.10).

- B.11.1.3. The TMP will, in subsequent iterations, respond to the construction sequencing and will describe the approach to all aspects of the management of traffic during the construction of the Scheme.

Structure of the TMP

- B.11.1.4. This TMP (1st iteration) is structured as follows:
- Project team roles and responsibilities relevant to the development TMP and implementation of the 1st iteration) are set out.
 - The methodology for developing the more detailed proposals for the TMP (2nd iteration) is outlined. This section is sub-divided by topic. It will be subject to detailed development at later iterations.
 - Potential management measures to be delivered through the TMP (2nd iteration) or in conjunction with the TMP as established within the ES, are set out, highlighting the means of delivering the environmental actions and commitments that the ES requires (as set out in the Record of Environmental Actions and Commitments (REAC) (Application document TR010063/APP/7.4)).

Project team roles and responsibilities

- B.11.1.5. The PC will be responsible for the implementation and the delivery of the TMP and relevant actions contained within the Register of Environmental Actions and Commitments (REAC) (Application document TR010063/APP/7.4).
- B.11.1.6. The PC will need to work directly with the PLO to support the co-ordination and implementation of related parts of the EMP as set out in the CEP (Annex B15, Application document TR010063/APP/9.10).
- B.11.1.7. The following management plans within Annex B must be implemented during construction to aid the delivery of the TMP:
- Annex B1 – Materials management plan (MMP) (Application document TR010063/APP/9.1).
 - Annex B2 – Soil handling management plan (SHMP) (Application document TR010063/APP/9.2).
 - Annex B3 – Noise and vibration management plan (NVMP) (Application document TR010063/APP/9.3).
 - Annex B4 – Air quality management plan (AQMP) (Application document TR010063/APP/9.4).
 - Annex B13 – Public rights of way management plan (PROW MP) (Application document TR010063/APP/9.13).
 - Annex B14 – Emergency vehicle movement management plan (EVM MP) (Application document TR010063/APP/9.14).
 - Annex B15 – Community Engagement Plan (CEP) (Application document TR010063/APP/9.10).
- B.11.1.8. The development of the TMP will need to incorporate the mitigation requirements of ES Chapters 5 – Air Quality (Application document TR010063/APP/6.3) and 6 – Noise and Vibration (Application document TR010063/APP/6.4), specifically in respect of the management of traffic flows and traffic composition on the highway network to ensure that significant adverse environmental effects are avoided. This will include

measures to implement the use of the preferred construction traffic route (see Section B11.2 – Construction Traffic).

- B.11.1.9. The PC will be responsible for the co-ordination and implementation of the EMP (Application document TR010063/APP/7.3) as a whole, which includes Annex B. It will be the responsibility of the PC to ensure that all aspects of the EMP work effectively together. This will need to be kept under review at all iterative stages of the development of the EMP and its various annexes.

B.11.2 Methodology

- B.11.2.1. This is to be determined by the PC in detail at the EMP 2nd iteration.
- B.11.2.2. The PC will be required to develop the methodology such that it meets the requirements of National Highways, reflecting commitments to safety, good customer service¹ and the timely and efficient delivery of projects affecting the network for which it is responsible.
- B.11.2.3. To deliver all aspects of the intended purposes of the TMP, the following methodology is required to include proposals relating to the following matters (as introduced in B11.1):
- B.11.2.4. Maintenance of through movements and access to residential, community and business premises through areas under traffic management. This includes the need to introduce traffic light controls on the overbridge at the existing M5 Junction 10; and adherence to the National Highways endorsed diversion routes while the M5 Junction 10 slip road closures are in place (see Appendix A).
- Incorporation of proposals for the movement of emergency vehicles, including safeguarding access and operational effectiveness of the West Cheltenham Fire Station. This element will need to accord to the EVM MP (Annex B14, Application document TR010063/APP/9.14).
 - Management of construction traffic, to ensure that defined parameters relating to the avoidance of significant adverse effects on noise and air quality are adhered to. This will include controls regarding the amount, distribution and composition of construction traffic movements, encompassing the workforce, light duty vehicles (LDV) and heavy duty vehicles (HDV) requirements.
 - Management of public rights of way (PROW), footpaths and cycleways. This element will need to accord to the PROW MP (Annex B13, Application document TR010063/APP/9.13).
- B.11.2.5. The provision of information on traffic management to support the activities of the PLO, as set out in the CEP (Annex B15, Application document TR010063/APP/9.10). Specific requirements to engage with National Highways, Gloucestershire County Council (GCC) streetworks and West Cheltenham Fire Station will need to be addressed in the methodology.

Maintenance of through movements

- B.11.2.6. Traffic management must be implemented by the PC to maintain traffic flows during the construction of Junction 10, the Link Road and the widened A4019. This will include local service roads linked to the signalised junctions to enable local residents

¹ NH document 'Roadworks: a Customer View' sets out 20 principles connected to good customer service that must be reflected within the iteration of this TMP.

to retain an ease of access onto the A4019, particularly for turning right (onto the A4019).

- B.11.2.7. In order to adhere to NH requirements, three lanes running in both directions along the M5 will be required at peak times throughout the construction phase. The M5 Junction 10 overbridge will require temporary signalisation during the works.
- B.11.2.8. Temporary traffic management will also be implemented at M5 J9 and/or J11 in order to avoid queuing on to the mainline carriageway, beyond the slip roads. The necessary intervention will be determined as a result of modelling, at detailed design stage, via a microsimulation model.
- B.11.2.9. Bus stop provision along the A4019 must be retained in line with Scheme proposals, ensuring public transport access along this corridor during construction. Public transport provision and rescheduling of services to reflect temporary stops should be discussed and agreed with local authorities, public bus companies and providers well in advance. Temporary stop relocation must be incorporated within the subsequent iterations of the TMP and should be based on targeted engagement to understand and respond to needs, to be led by the PLO, in accordance with the CEP (Annex B15, Application document TR010063/APP/9.10).
- B.11.2.10. A minimum of one eastbound (E/B) and one westbound (W/B) traffic lane will typically be maintained on the A4019 throughout the construction period. Exceptions may be required for essential overnight lane closures where single lane working under traffic control may need to be deployed; and in instances where stakeholder engagement through the PLO proposes alternative traffic management arrangements that are assessed as having Scheme benefits during construction. The TMP methodology will need to include details of how such proposals will be developed and approval sought in writing from the county planning authority following consultation with the relevant local planning authority and the strategic highway authority (GCC) as an acceptable alteration to the TMP.
- B.11.2.11. The 2nd iteration TMP must include temporary diversion routes for all vehicles when sections of the existing highway network must be closed. These diversions will prioritise routing via A-roads (see construction traffic sub-section). Signage will need to be developed and implemented to discourage the use of the local road network by HDVs and other construction related traffic, except where access is required.
- B.11.2.12. Emergency Vehicle Movements
- B.11.2.13. The TMP will be iterated to include the proposals that will emerge from the EVM MP (Annex B14, Application document TR010063/APP/79.14). This information is not available at this 1st iteration as it requires detailed discussion with the West Cheltenham Fire Station to agree the most effective means of delivering the service when the A4019 is under traffic management. It is not yet known whether this will involve off-site placement of emergency vehicles and whether that might be accommodated within the works areas. Also, there is a need to explore the safe passage of all emergency vehicles through the areas under traffic management, including when the M5 slip roads are unavailable. The methodology of the TMP and EVM MP will need to be developed to reflect these discussions.
- B.11.2.14. The scope of the controls needed in relation to the movement of emergency vehicles is set out in the EVM MP (Annex B14, Application document TR010063/APP/9.14).

Construction traffic

- B.11.2.15. A methodology will need to be developed to promote the use of the preferred construction traffic route for all construction traffic movements associated with the Scheme. The preferred construction traffic route comprises the following roads:
- M5 – between Junction 9 and 11.
 - A4019 Tewkesbury Road and Cheltenham Road - A4013 to A38 at Coombe Hill.
 - A38 Gloucester Road and Jubilee Way – either side of Coombe Hill from A40 north to Tewkesbury.
 - A4013 – from the A4019 to A40.
 - A40 - from the A4019 to M5.
 - B4634 Old Gloucester Road – B4063 to A4019.
 - B4063 Cheltenham Road East – B4634 to A40.
- B.11.2.16. In addition to these roads, construction traffic may also be redirected to sections of the official Gloucestershire diversion routes during slip road closures at M5 Junction 10 required as part of the construction works (see Appendix A), as follows:
- A438 Ashchurch Road – A38 to M5 junction 9.
 - A40 Gloucester Road – A38 to M5 junction 11.
- B.11.2.17. The methodology for the TMP (2nd iteration) will need to ensure that overall construction traffic movements remain within acceptable headroom thresholds (as defined in the ES Chapter 6 (Application document TR010063/APP/6.4) to ensure that significant adverse effects do not arise. The headroom is the maximum number of additional vehicles (comprising cars, LDV and HDV) that could use each part of the preferred construction traffic route before exceeding the threshold for a moderate magnitude of impact – this information is provided in Appendix B. A significant effect is only determined from these changes in traffic flows if the amount of additional vehicles exceeds the threshold for ten or more days in any fifteen consecutive days or 40 days in six consecutive months. In order to ensure adherence to these defined parameters, the methodology will set out suitable measures to control all construction related traffic attributable to the Scheme (i.e. construction worker vehicle movements, LDV and HDV movements).

Construction worker vehicle movements

- B.11.2.18. Chapter 2 of the ES (Application document TR010062/APP/6.2) sets out the assumptions that have been assessed in terms of likely demand on the existing highway network that will be generated by construction worker vehicle movements, at peak. These assumptions have underpinned the work reported in ES Chapters 5 Air Quality (Application document TR010063/APP/6.3) and Chapter 6 Noise and Vibration (Application document TR010063/APP/6.4), specifically in respect of the management of traffic flows and traffic composition on the highway network to ensure that significant adverse environmental effects are avoided, based on available headroom and duration of impacts (see Appendix B). The TMP methodology must incorporate the means of developing detailed proposals that the construction workforce must follow to stay within the defined parameters. This is required to include (but not be limited to) the promotion of sustainable transport modes; car sharing; suitable provision for car parking (within work sites and any off-site park and share/park and ride proposals); travel planning; and the use of preferred construction traffic route to access work sites.

- B.11.2.19. The TMP methodology must be developed to reflect the assumptions relating to the following timing of construction works, which have underpinned the ES:
- B.11.2.20. Construction works will take place during normal work hours 07:00 - 19:00 weekdays and Saturdays.
- B.11.2.21. Construction works outside of the above hours shall be minimised as far as possible.
- B.11.2.22. To maximise productivity within the core hours, contractors would require a period of up to one hour before and up to one hour after core working hours for start-up and closedown of activities. This would include but not be limited to deliveries, movement to and from a place of work, unloading, maintenance and general preparation works. This would not include operation of plant or machinery likely to cause a disturbance. These periods would not be considered an extension of core working hours.
- B.11.2.23. The TMP method needs to accommodate the requirement to, where possible, provide advance notice of construction works outside of these hours through the community engagement process (in accordance with the CEP (Annex B15, Application document TR010063/APP/9.10)).

Construction traffic movements (HDV)

- B.11.2.24. Chapter 2 of the ES (Application document TR010062/APP/6.2) sets out the assumptions that have been used in the assessment in terms of demand on the existing highway network that will be generated by HDV movements (assumed as 200 HDV movements per day). These assumptions have underpinned the work reported in ES Chapter 5 Air Quality (Application document TR010063/APP/6.3) and Chapter 6 Noise and Vibration (Application document TR010063/APP/6.4), specifically in respect of the management of traffic flows and traffic composition on the highway network to ensure that significant adverse environmental effects are avoided, based on available headroom and duration of impacts (see Appendix B).
- B.11.2.25. The TMP methodology must incorporate the means of developing detailed proposals relating to HDV movements in order to stay within the defined parameters (see Appendix B). This is required to include (but not be limited to) the use of the preferred construction traffic route, with adaptations during temporary road closures and diversions; and controls on the timing of certain construction traffic movements.

Public rights of way, footpaths and cycleways

- B.11.2.26. The TMP will be iterated to include the proposals that will emerge from the PROW MP (Annex B13, Application document TR010063/APP/9.13). This information is not available at this 1st iteration as it requires detailed planning of the construction sequencing and development of plans for the layout and use of all work sites. It is not yet known how these arrangements will affect the availability of existing PROW, footpaths and cycleways, beyond the need to close a section of bridleway AUC1 in the interests of safety. The methodology of the TMP and PROW MP will need to be developed at the EMP (2nd iteration) and include flexibility to respond to changing construction requirements.
- B.11.2.27. The scope of the controls needed in relation to PROW, footpaths and cycleways is set out within the PROW MP (Annex B13, Application document TR010063/APP/9.13).

Coordination with PLO activities

- B.11.2.28. The TMP methodology will need to include processes for supporting the activities of the PLO, as set out in the CEP (Annex B15, Application document TR010063/APP/9.10). These include, but are not limited to, advance notice of traffic management proposals to enable communication with community members to support their adaptation to impacts on the transport network, across modes; feedback mechanisms to respond to traffic management issues that may be escalated through the PLO; forward planning of works to enable coordination with the developers of the strategic development sites, in the interest of managing cumulative effects; and adherence to the NH or GCC streetworks notification processes, to secure approval for traffic management works affecting flow across the Gloucestershire highway network.
- B.11.2.29. The TMP methodology should also address use of the Variable Message Signs (VMS) system on the M5, as appropriate. Proposals will need to reflect the notification process and lead in times for provision of information to be displayed.

B.11.3 Management measures

- B.11.3.1. The preparation, delivery and implementation of the TMP is essential to ensuring the mitigation measures committed to within the ES (Application documents TR010063/APP/6.1 – 6.15) and the REAC (Application document TR010063/APP/7.4), are effectively delivered.

Register of Environmental Actions and Commitments

- B.11.3.2. The following are the REAC as they relate to the TMP. Table B11-1 indicates where additional detail on their implementation is set out. Bold text is used to identify the commitments that will principally be delivered through this TMP.

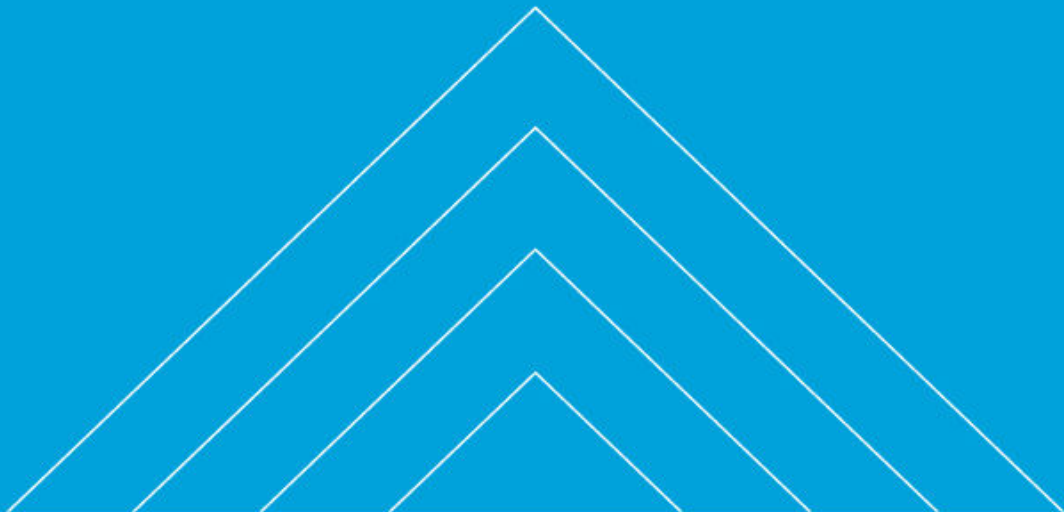
Table B 11-1 - Traffic Management Plan REAC

REAC	Commitment Text	Implementation mechanism
G4	Management plans.	EMP (1 st iteration) Annex B (All)
G10	Effective traffic management.	EMP (2nd iteration) Annex B11 – Traffic management plan – this document
G11	Working hours.	EMP (2nd iteration) Annex B11 – Traffic management plan – this document
G13	To minimise impacts from lighting at the construction stage.	EMP (2 nd iteration) Annex B5 – Landscape and ecology management plan
NV1	Manage noise and vibration at construction stage.	EMP (2 nd iteration) Annex B3 – Noise and vibration management plan
B6	Minimise loss of vegetation and avoid damage to existing vegetation (see also	EMP (2 nd iteration)

REAC	Commitment Text	Implementation mechanism
	LV1 and LV2 below) to retain existing biodiversity resource as far as possible	Annex B5 – Landscape and ecology management plan
LV1	Avoid damage to existing vegetation	Retained vegetation to be protected in accordance with AIA (Appendix 9.4, Application document TR010063/APP/6.15)
LV2	Minimise loss of vegetation	Retained vegetation to be protected in accordance with AIA (Appendix 9.4, Application document TR010063/APP/6.15)
PHH1	Effects on emergency vehicle movements through areas under construction traffic management, including from Cheltenham West Community Fire and Rescue Station.	EMP (2nd iteration) Annex B14 – Emergency vehicle movement management plan
PHH2	Temporary disruption to access for community facilities during construction	EMP (2nd iteration) Annex B11 – Traffic management plan – this document
PHH3, PHH4	Effectively informing people of construction works and traffic arrangements to enable forward planning and manage expectations around nuisance and disruption, in the interests of human health.	EMP (2 nd iteration) Annex B15 – Community Engagement Plan
PHH5	Maintaining WCH access, connections to and availability of public transport during construction to avoid severance and loss of access to key services and facilities, in the interests of human health.	EMP (2 nd iteration) Annex B13 – Public rights of way management plan
PHH7	Prevent adverse effects on human health determinants, derived from light pollution nuisance, disturbed sleep/night-time working.	EMP (1st and 2nd iterations) Annex B11 – Traffic management plan Annex B3 – Noise and vibration management plan (1 st iteration (Application document TR010063/APP/9.3) Annex B5 – Landscape and ecology management plan (1 st iteration (Application document TR010063/APP/9.5)
PHH8	Minimising disruption to access for residents of the informal Traveller site adjacent to the M5.	EMP (2nd iteration) Annex B11 – Traffic management plan – this document
PHH9	Prevent adverse effects on human health determinants relating to anxiety and stress and support those who experience difficulty adapting to change.	EMP (2 nd iteration) Annex B15 – Community Engagement Plan
PHH10	Minimising impacts on people from temporary land take (see also GS1 in the Soil Handling Management Plan).	EMP (2 nd iteration) Annex B2 – Soil handling management plan

REAC	Commitment Text	Implementation mechanism
PHH11	Managing impacts on residential receptors (access).	EMP (2nd iteration) Annex B11 – Traffic management plan – this document
PHH12	Managing impacts on business receptors (access).	EMP (2nd iteration) Annex B11 – Traffic management plan – this document
PHH13	Managing impacts on community receptors (access).	EMP (2nd iteration) Annex B11 – Traffic management plan – this document
PHH15	Providing accurate information to minimise temporary disruptions to access to development land and businesses.	EMP (2 nd iteration) Annex B15 – Community Engagement Plan
PHH16	Minimising construction stage impacts to local residents in a targeted and responsive manner.	EMP (2 nd iteration) Annex B15 – Community Engagement Plan
PHH17	Informing the local community of the multimodal transport improvements of the Scheme, for example accessibility and connectivity.	EMP (2 nd iteration) Annex B15 – Community Engagement Plan
PHH18	Safe access for pedestrians and cyclists through areas under traffic management.	EMP (2nd iteration) Annex B11 – Traffic management plan – this document
CEA1	Reducing adverse interproject cumulative construction impacts of the Scheme and other GCC and NH highways projects disrupting movement across the strategic and local transport network.	EMP (2nd iteration) Annex B11 – Traffic management plan
CEA3	Managing the interproject cumulative construction impacts of the Scheme, with the addition of activities from strategic development sites, on residential communities at Uckington, along the A4019, B4634 and at Withybridge Lane.	EMP (2nd iteration) Annex B11 – Traffic management plan

Appendices



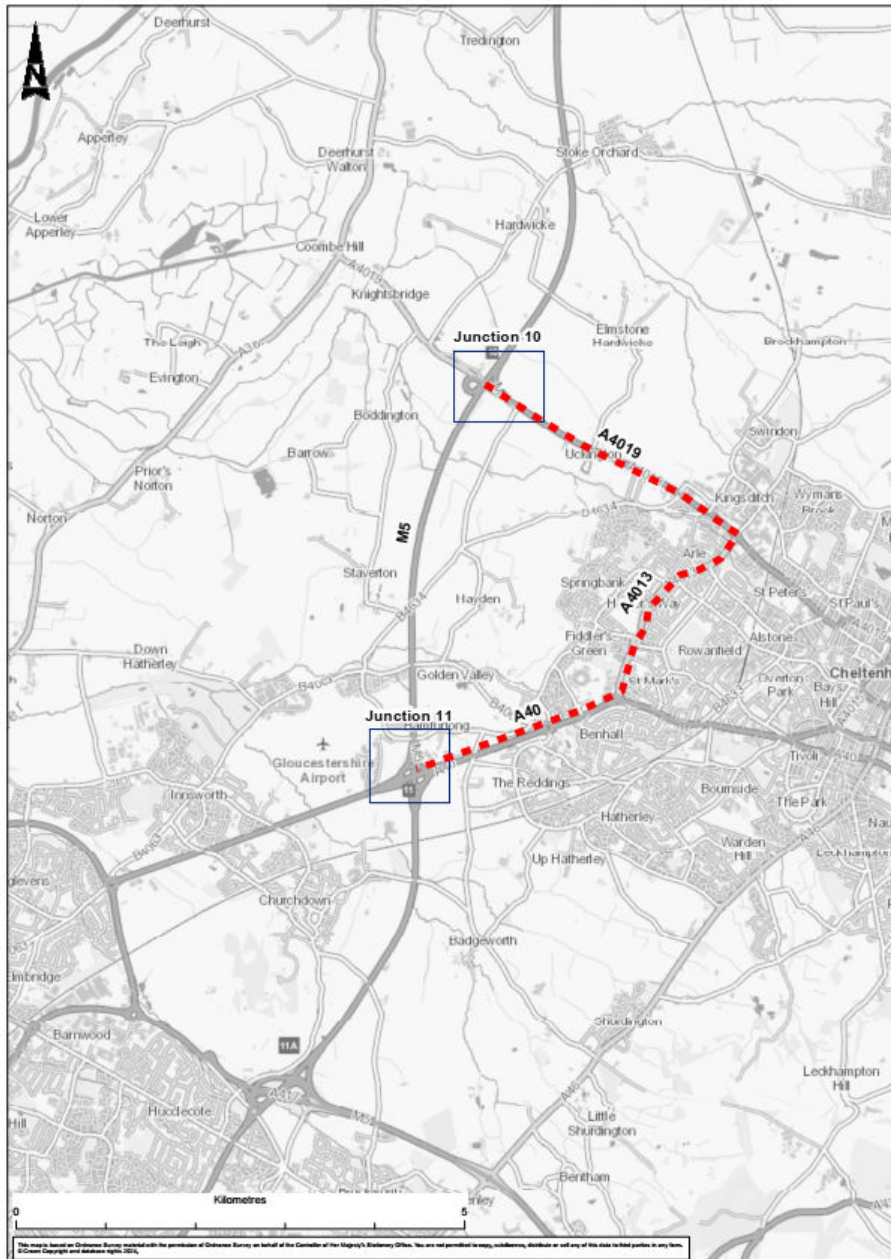
Appendix A. Gloucestershire Diversion Routes

A.1. Introduction

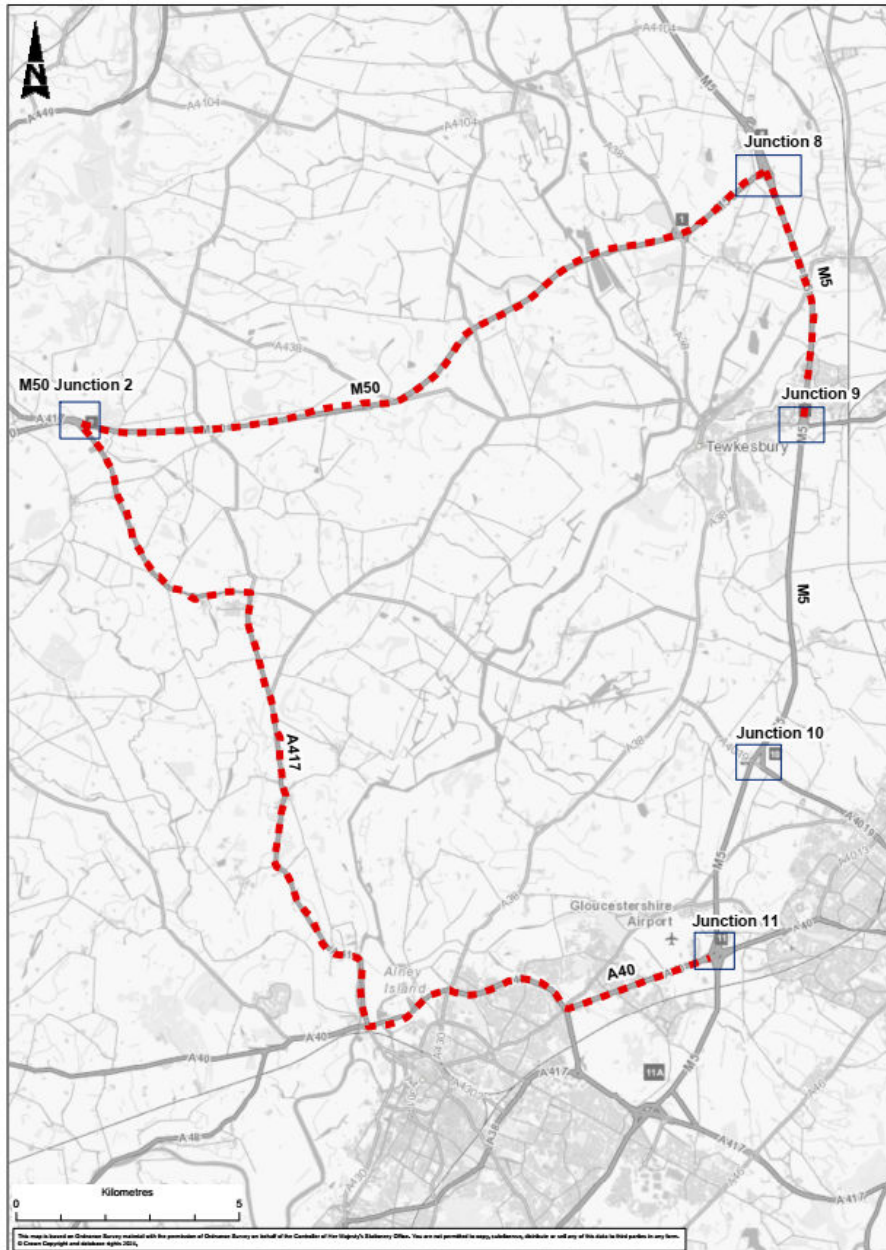
A.1.1. This appendix provides details of the official diversion routes approved by National Highways in the event of there being a requirement to close parts of the M5 that affect Junction 10. The TMP must be developed to reflect the use of these official diversion routes adapting as necessary to reflect the specific requirements of the Scheme, in particular, during the periods of M5 Junction 10 slip road closures.

Route 1 – closure of the northbound onslip at Junction 10, with traffic diverted via the A4019, A38 and A46 to join the northbound M5 at Junction 9.

- Route 2 – closure of the southbound offslip at Junction 10, with traffic diverted to leave the M5 at Junction 11, and then rerouted back to Junction 10 via the A40, A4013 and the A4019.
- Route 3 – closure of the M5 main carriageway at Junction 10.
 - Northbound traffic on the M5 diverted from Junction 11 via the A40, A417 and M50 to rejoin the M5 at Junction 8.
 - Southbound traffic on the M5 diverted from Junction 8 via the M50, A417 and the A40 to rejoin the M5 at Junction 11. Traffic joining the motorway at Junction 9 and wanting to travel southbound would be diverted onto the M5 northbound to Junction 8.



Route 2 - closure of the southbound offslip at Junction 10



Route 3 - closure of the M5 main carriageway at Junction 10

Appendix B. Headroom for construction traffic

- B.1.1. The methodology for the TMP will need to ensure that overall construction traffic movements remain within acceptable headroom thresholds to ensure that significant adverse effects do not arise. The headroom is the maximum number of additional vehicles (comprising cars, LDV and HDV) that could use each part of the preferred construction traffic route before exceeding the threshold for a moderate magnitude of impact. The ES Chapter 6 Noise and Vibration (Application document TR010063/APP/6.4) includes an assessment of headroom – this appendix replicates the summary table derived from that assessment process.
- B.1.2. The summary table sets out the 'tipping point' values in terms of available capacity for additional traffic movements along specific sections of the preferred construction traffic route before a moderate magnitude of impact is reached. These tipping points are based on an additional traffic composition scenarios where there are 200 HDV amongst the overall demand for increased traffic. The tipping point values also vary during the construction phase, as follows:
- 'No Slip Road Diversions' Traffic Scenario – this will be the scenario for the majority of the construction phase, when access to the M5 Junction 10 will be possible for general traffic.
 - 'Worst Case Slip Road Diversion' Traffic Scenario – this will be the scenario for the portion of the construction phase when there will be slip road closures affecting M5 Junction 10. This is referred to as worst case since the slip road closures will result in a higher baseline of general traffic using the official diversion route (as set out Appendix A), reducing the available headroom for construction traffic attributable to the Scheme.
- B.1.3. The tipping point values reflect the number of vehicles above which a moderate magnitude of impact is reached under each combination of traffic composition across the two scenarios. It is important to note that a moderate magnitude of impact will only become a significant adverse effect if the duration of the exceedance of the headroom threshold meets certain criteria. A significant effect is only determined from these changes in traffic flows if the amount of additional vehicles exceeds the threshold for ten or more days in any fifteen consecutive days or 40 days in six consecutive months.
- B.1.4. Together the relevant traffic scenario and timeframe of any exceedance of thresholds form the 'defined parameters' referenced within this TMP. In order to ensure adherence to these defined parameters, the methodology will set out suitable measures to control all construction related traffic attributable to the Scheme (i.e. construction worker vehicle movements, LDV and HDV movements).

Table B1-1- Construction traffic headroom scenarios

Road	'No Slip Road Diversions' Traffic Scenario	'Worst Case Slip Road Diversion' Traffic Scenario
	Car and LDV headroom for Moderate Impact with 200 additional HDV	Car and LDV headroom for Moderate Impact with 200 additional HDV
A46 Ashchurch Road east of M25	57989	62421
A438 Ashchurch Road west of M25	12366	12416
A38 Jubilee Way	3759	2429
A38 Gloucester Road	8889	8120
A4019 Cheltenham Road west of M5	5559	5286
A4019 Tewkesbury Road east of M5	17688	69029
B4634 Old Gloucester Road southwest of B4019	4837	2436
B4634 Old Gloucester Road southwest of Hayden Lane	10879	13709
B4063 Cheltenham Road East west of B4634	12079	13836
B4063 Cheltenham Road East from Pirton Lane to Innsworth Lane	2866	3036
The M5 Junction 10-11 northbound	62928	108913
The M5 Junction 10-11 southbound	59560	57128
The M5 Junction 9-10 northbound	82827	32643

Road	'No Slip Road Diversions' Traffic Scenario	'Worst Case Slip Road Diversion' Traffic Scenario
	Car and LDV headroom for Moderate Impact with 200 additional HDV	Car and LDV headroom for Moderate Impact with 200 additional HDV
The M5 Junction 9-10 southbound	73204	54733
A40 eastbound Gloucester Road and Golden Valley Bypass	26146	25305
A40 westbound Gloucester Road and Golden Valley Bypass	26286	27513
A4013 Princess Elizabeth Way	21117	21562

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