

# M20 Junction 10a

## TR010006

### Environmental Statement

### Chapter 12 Effects on All Travellers

APFP Regulation 5(2)(q)

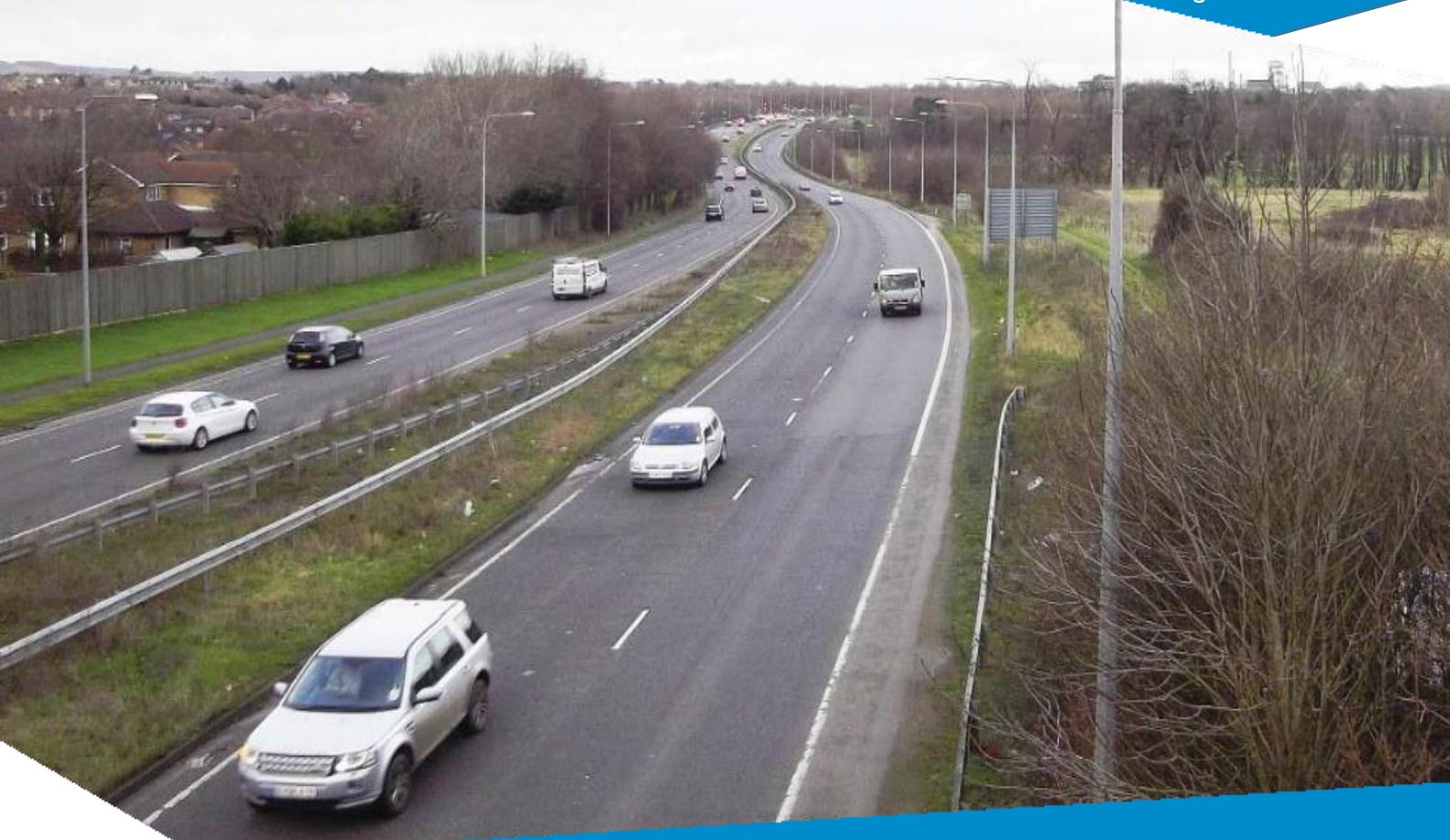
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**Volume 6.1**  
July 2016



M20 Junction 10a

TR010006

## **Environmental Statement**

### **Chapter 12 Effects on All Travellers**

Volume 6.1



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## 12 Effects on All Travellers

### 12.1 Introduction

- 12.1.1 The Environmental Scoping Report (MMSJV, 2015<sup>1</sup>) identified potentially significant effects (both Beneficial and Adverse) on all travellers during construction and operation for the Scheme, and therefore, in accordance with the Design Manual for Roads and Bridges (DMRB) Volume 11 Section 3 Parts 8 and 9<sup>2</sup> a Detailed Assessment has been undertaken for Effects on All Travellers (EoAT).
- 12.1.2 This EoAT Assessment considers effects of the proposed Main and Alternative Schemes on non-motorised users (NMUs) during construction and operation periods, including changes to NMU amenities, journey length and journey experience. This EoAT chapter also considers effects of the Main and Alternative Schemes on vehicle travellers during construction and operation periods and in particular considers levels of Driver Stress.
- 12.1.3 DMRB Volume 11 Section 3, Part 9 Chapter 2 also requires consultants to assess views from the road as part of the assessment of vehicle travellers. However in this particular instance an assessment of views from the road is provided in Chapter 7 Landscape and Visual Effects, Volume 6.1 of this Environmental Statement (ES) and also Appendix 7.2 LVIA Visual Baseline and Impact Schedules, Volume 6.3. Visual receptors no.6 Highfield Lane, no.19 Bockham Lane and no.23 have been appropriately assessed with respect to views from the road in Chapter 7 Landscape, Volume 6.1, and Appendix 7.2, Volume 6.3, and as such, further consideration of this topic is not required for this chapter.

### 12.2 Legislative and Policy Framework

- 12.2.1 'People and Communities' is identified as a DMRB topic within IAN 125/15. However, guidance has yet to be published on the new topic of 'People and Communities', although IAN 125/15 notes that it will draw on the former Land Use, Pedestrians, Cyclists, Equestrians and Community Effect and Vehicles topics. As this IAN was only published in October 2015 this ES instead addresses Community and Private Assets, and EoAT, both of which were identified as new DMRB topics in the now superseded IAN 125/09 'Environmental Assessment'.

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<sup>1</sup> Mott MacDonald Sweco Joint Venture (2015) M20 junction 10a Environmental Scoping Report

<sup>2</sup> DMRB Volume 11, Section 3, Part 8 and Part 9, available online at <http://www.standardsforhighways.co.uk/ha/standards/dmr/vol11/section3.htm>, accessed 23/03/16.

- 12.2.2 EoAT incorporates the former Vehicle Travellers and relevant parts of Pedestrians, Cyclists, Equestrians and Community Effects, to ensure that the interests of all road users are given equal weight. Guidance was never published on this topic, and the approach set out in this report therefore is based on professional judgement, drawing on guidance from the superseded topics suggested by the superseded IAN 125/09. These are:
- Volume 11 Section 3 Part 8, Pedestrians, Cyclists, Equestrians and Community Effects (note that the Community Effects / Community Severance element is included within Chapter 13 Community and Private Assets, Volume 6.1).
  - Volume 11 Section 3 Part 9, Vehicle Travellers.
- 12.2.3 Following the guidance contained within these 2 DMRB chapters, the overall approach for the assessment of EoAT will consider the following:
- The effect of the Main Scheme and the Alternative Scheme upon NMUs as a result of changes to the local road network, footpaths and cycleways. NMUs include pedestrians, equestrians and cyclists, as well as users with mobility issues.
  - The effect of the Main Scheme and the Alternative Scheme upon vehicle travellers. To accord with DMRB Volume 11, Section 3, Part 9, the effect considered in the assessment is change to Driver Stress. However, the view from the road for vehicle travellers (drivers and passengers) travelling on the existing M20 and intersecting roads is considered within Chapter 7 Landscape and Visual Effects, Volume 6.1, and is not discussed further in this chapter. In addition, DMRB Volume 11, Section 3, Part 9 notes that those benefits for all travellers that are counted within the cost-benefit economic analysis as quantifiable effects should not be included in the assessment. This assessment therefore does not address the potential monetised benefits and dis-benefits from any changes to physical activity or journey quality that may be brought about as a result of the Scheme.

## National Policy

- 12.2.4 In December 2014, the Government's policies to deliver Nationally Significant Infrastructure Projects (NSIPs) on the national road and rail networks in England were set out through the National Policy Statement for National Networks<sup>3</sup> (NPSNN). The policies set out in the NPSNN largely build on those within the National Planning Policy Framework (NPPF), but also readdress the government's commitment to providing people the opportunity to choose sustainable modes of transport. The NPSNN contains an expectation that schemes will:

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<sup>3</sup> <https://www.gov.uk/government/publications/national-policy-statement-for-national-networks>, accessed 23/03/16

- Identify opportunities to invest in infrastructure where communities (including pedestrians and cyclists) appear to be severed by the road network.
  - Addressing historic problems.
  - Take into account accessibility requirements for all, including disabled users, in the design and delivery.
- 12.2.5 The NPPF promotes sustainable transport (Paragraphs 29-41), healthy communities (Paragraphs 69-78) and plan making (Paragraphs 150-185). In promoting sustainable transport, it advises that developments generating significant amounts of movement should be supported by a Transport Statement or Transport Assessment, and that a Travel Plan would also be required. Importance is also placed on the exploitation and protection of sustainable transport modes, by encouraging the use of public transport, cycling and walking. Safety for cyclists and pedestrians should be considered in combination with traffic. The NPPF highlights the importance of Public Rights of Way (PRoW), stating that they should be protected and enhanced through planning policy.

### Local Policy

- 12.2.6 The following local policies have been identified in relation to EoAT:
- 12.2.7 Policy CS1 taken from Ashford Borough Council's (ABC) Core Strategy 2008:
- *CS1 Guiding Principles: Key planning objectives for the Council include I) a wider choice of sustainable transport to serve developments, K) the creation of an integrated and connected network of green spaces to provide a framework for growth and L) promotion of healthy sustainable communities. The creation of a new junction 10a is also earmarked within this overarching policy.*
  - *CS15 Transport: This policy highlights the council's priority to promote sustainable transport and implement highways Schemes that will improve serious impediments to growth and/or secure important environmental benefits. Development proposals must show how all highway, public transport, walking and cycling arising from the development will be satisfied and provide timely implementation of all necessary infrastructure, whilst, new accesses and intensified use of existing accesses on to the primary or secondary road network will not be permitted if a materially increased risk of road traffic accidents or significant traffic delays would be likely to result.*
- 12.2.8 The Ashford Highways and Transport Study<sup>4</sup> is 1 of numerous studies that have been carried out to support the development of Ashford in order to accommodate the planned increase of 30,000 additional houses and 28,000

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<sup>4</sup> Available <http://www.ashford.gov.uk/generic-policy-evidence-base>, accessed 23/03/16

new jobs by 2031. The M20 junction 10a Scheme is considered within the traffic forecasts for this study.

- 12.2.9 Ashford Parking Strategy<sup>5</sup> promotes the use of public transport and aims to achieve traffic flows along the ring road such that conditions for pedestrians, cyclists and the environment are improved. The future Parking Strategy supports Ashford's future Masterplan for Growth (GADF) and the Transport Strategy.
- 12.2.10 Ashford Transport Strategy<sup>6</sup> sets out a vision that “...no one should think of coming into town by car as a first choice, unless they have a good reason”. Amongst the 10 key points covered within the strategy, comprehensive quality cycling and walking network and a limited programme of highway improvements, including motorway and junction improvements are included. ABC believes the Transport Strategy will support the preferred spatial strategy for Ashford, assisting in the delivery of development and facilitating economic growth.
- 12.2.11 The Ashford Green and Blue Grid Strategy<sup>7</sup> sets out the agenda for environmental action across Ashford Borough. It aims to make the most of Ashford's superb environment and benefit wildlife, local communities and Ashford's economy as a whole through promoting sustainable transport, the enhancement of recreation and amenity facilities, the creation of accessible greenspace and wildlife areas and health and wellbeing.

### **12.3 Method of Assessment**

- 12.3.1 This EoAT assessment considers both the Main Scheme and the Alternative Scheme, the latter of which comprises the Main Scheme plus access to the potential Stour Park development from the proposed A2070 link road roundabout.

#### **Study Area**

- 12.3.2 This EoAT assessment takes into account all vehicles and non-motorised traffic that uses, meets or crosses the Main or Alternative Scheme extents in the baseline situation, and how that traffic would be affected during and after the construction of the Main or Alternative Schemes. It considers all NMU amenities comprising PRowS, footpaths, bridleways, restricted byways, cycleways and NMU crossings as well as all roads (and subsequent impacts on Driver Stress) up to 250m from the Main and Alternative Scheme extents.

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<sup>5</sup> Available <http://www.ashford.gov.uk/generic-policy-evidence-base>, accessed 23/03/16

<sup>6</sup> Available <http://www.ashford.gov.uk/generic-policy-evidence-base>, accessed 23/03/16

<sup>7</sup> Available <http://www.ashford.gov.uk/generic-policy-evidence-base>, accessed 23/03/16

## Significance Criteria – NMUs

- 12.3.3 The assessment of effects of the Main and Alternative Schemes on NMUs has been undertaken using the guidance contained within DMRB Volume 11, Section 3, Part 8: Pedestrians, Cyclists, Equestrians only (effects on the community are considered within Chapter 13 Community and Private Assets, Volume 6.1), and by applying professional judgement. The assessment examines the likely detriment or improvement to NMU journeys from changes to journey length and changes to NMU amenity.
- 12.3.4 Amenity is defined within the DMRB as the '*relative pleasantness of a journey*'. It is concerned with changes in the degree and duration of people's exposure to traffic and the effect of the road itself, such as from noise, air quality and visual intrusion. The assessment identifies this as changes to journey experience and quality, through traffic flow changes for NMU routes that run immediately adjacent to or cross the Main or Alternative Schemes. Consideration has also been given to the presence of construction plant and noise / dust from construction activity. In addition, the assessment identifies where there would be an enhancement or reduction to NMU amenities, through the provision or reduction in footpaths, footbridges, cycle-ways and dedicated crossing points.
- 12.3.5 In the absence of specific DMRB guidance for assigning the magnitude of change for NMUs, significance criteria have been developed by applying professional judgment. The assessment draws upon the criteria included within DMRB Volume 11, Section 3, Part 8, including changes to journey length and amenity either through the provision or reduction in footpaths, cycle-ways and crossings, or changes to journey experience through traffic flow changes. For changes to traffic flows, forecasts for the Opening Year (2018) have been applied to determine the percentage change in traffic levels between the Do Minimum (without Scheme) and the Do Something (with Scheme) scenarios for affected routes, using the Annual Average Daily Traffic (AADT) value. The subsequent categories that have been developed for the magnitude of change are set out in
- 12.3.6 Table 12.1 below. All NMUs are considered to be of High sensitivity to change.

Table 12.1 Effects upon NMUs – Magnitude of Change and Corresponding Significance of Effect

Description	Magnitude	Significance of effect
Substantial improvement to NMU network through the provision of new amenities for pedestrians and cyclists where none existed previously. NMUs required to navigate a road which has a decrease in traffic flows of >60%. Length of journeys decreased by over 500m.	Major Beneficial	Large or Very Large Beneficial
Improve existing NMU network through the provision of new amenities for pedestrians and cyclists where few or none existed previously. NMUs required to navigate a road which has a decrease in traffic flows of 30-60%.	Moderate Beneficial	Moderate or Large Beneficial

Description	Magnitude	Significance of effect
Length of journeys decreased by 250-500m.		
Improve existing NMU network through the upgrading of existing amenities or provision of new amenities for pedestrians and cyclists where some already exist. NMUs required to navigate a road which has a decrease in traffic flows of 10-30%. Length of journeys decreased by up to 250m.	Minor Beneficial	Slight or Moderate Beneficial
NMU's required to navigate a road which has a change in traffic flows of <10%. Length of journeys not materially changed.	Negligible Beneficial	Slight Beneficial
No change to traffic flows, journey length or NMU amenity.	No change	Neutral
NMU's required to navigate a road which has a change in traffic flows of >10%. Length of journeys not materially changed.	Negligible Adverse	Slight Adverse
Improvements to existing pedestrian / cycle amenities are not provided. NMU's required to navigate a road which has an increase in traffic flows of 10-30%. Length of journeys increased by up to 250m.	Minor Adverse	Slight or Moderate Adverse
Existing pedestrian / cycle facilities are degraded. NMUs required to navigate a road which has an increase in traffic flows of 30-60%. Length of journeys increased by 250-500m.	Moderate Adverse	Moderate or Large Adverse
Closure/ removal of pedestrian / cycling amenities where they previously existed. NMUs required to navigate a road which has an increase in traffic flows of >60%. Length of journey journeys increased by over 500m.	Major Adverse	Large or Very Large Adverse

Source: Based on DMRB Volume 11 Part 8, and outlined within the Stage 2 Scoping Report (Mott MacDonald, 2015)

### Significance Criteria - Driver Stress

12.3.7 Driver Stress is defined for the purposes of this assessment as the adverse mental and physiological effects experienced by a driver traversing a road network. Factors influencing the level of stress include road layout and geometry, junction frequency, and speed and flow per lane. Taken together, these factors can induce in drivers the feelings of discomfort, annoyance, frustration or fear culminating in physical and emotional tension that detracts from the value and safety of a journey.

12.3.8 The study area for Driver Stress is outlined in Section 12.3.2, whilst affected routes are presented in Appendix 12.3 (the Main Scheme) and Appendix 12.4 (the Alternative Scheme), Volume 6.3. The study area includes all roads included within the traffic model that would be directly affected or intersected by the Main or Alternative Schemes, as well as routes within 250m of the Main and Alternative Schemes that would experience a change in traffic flow.

- 12.3.9 DMRB considers that Driver Stress has 3 components: frustration, fear of potential accidents and route uncertainty. Frustration is caused by a driver's inability to drive at a speed consistent with their own wishes in relation to the general standard of the road, or by difficulties in overtaking slower moving traffic. Congestion can lead to frustration by creating a situation in which the driver does not feel in control.
- 12.3.10 The main factors leading to fear of potential accidents are presence of other vehicles, inadequate sight distances and the likelihood of pedestrians, particularly children, stepping into the road. Other factors include inadequate lighting, narrow roads, roadworks and poorly maintained road surfaces. Fear of potential accidents is highest when speeds, flows and the proportion of HGVs, are all high.
- 12.3.11 Route uncertainty is primarily caused by inadequate signing. It will not normally be possible to assess the size of this factor unless a consensus has already appeared on the adequacy of existing signing practice at a specific site. Good design and layout of signs can go a long way towards eliminating this cause of stress from new road schemes. Route uncertainty is not considered within this assessment as explained in the Assumptions and Limitations Section 12.5.4.
- 12.3.12 In accordance with DMRB Volume 11, Section 3, Part 9, a 3 point descriptive scale (Low, Moderate or High) has been used to describe Driver Stress during both construction and operation, alongside a qualitative description of the predicted effects of the Main and Alternative Schemes. This is supported by considering traffic flows and journey speeds on motorways, dual carriageways and single carriageways, in line with DMRB Volume 11, Section 3, Part 9 Chapter 4 Tables 1 to 3 (refer to Appendix 12.1, Volume 6.3 for further details).
- 12.3.13 For Driver Stress, the magnitude of change is derived from changes to traffic flows and journey speeds for the first 15 years after the Opening Year. Conclusions have been drawn as to whether or not Driver Stress would increase from the baseline, decrease from the baseline or remain as per the baseline once the scheme is in place. Furthermore, a qualitative discussion regarding potential changes to driver frustration and fear of potential accidents is presented for the operational stage.
- 12.3.14 The construction stage assessment has been undertaken by applying professional judgment based on available information regarding the likely presence of Traffic Management (TM) and construction plant, which would be considered to influence driver frustration and fear of potential accidents. Professional judgement has been applied to establish whether Driver Stress would increase or decrease, which will inform the overall significance of effects.

## **12.4 Consultation**

- 12.4.1 A telephone meeting was held between Kent County Council's (KCC) Rights of Way Officer and Mott MacDonald Sweco Joint Venture (MMSJV) in March 2015. Potential changes to existing NMU routes as a result of the Main Scheme, as well as opportunities for mitigation, enhancements and improvements for pedestrians, equestrians and cyclists were discussed in the context of the Main Scheme design. KCC noted that the PRoW AE339 is a defunct footpath due to the construction of Barrey Road and Ashford Business Park and the PRoW will subsequently be extinguished. The existing PRoW AU101 connecting into junction 10 consists of a set of steps. KCC requested that this be converted into a ramp if possible.
- 12.4.2 The provision of NMU access through junction 10a was also discussed, with the safety of NMUs of top priority. The provision of a new pedestrian footbridge was agreed at Kingsford Street, as NMU access across junction 10a would not be desirable due to high safety risk. The ownership and future maintenance of any new NMU facilities included within the Main Scheme design was also raised as a point for future discussion.
- 12.4.3 Due to the similarities between the Main and Alternative Schemes, no further consultation has been deemed necessary for the Alternative Scheme.

## **12.5 Assumptions and Limitations**

- 12.5.1 Whilst identified as a DMRB topic within the superseded IAN 125/09 Supplementary guidance for users of DMRB Volume 11 'Environmental Assessment', published guidance relating to the assessment of the Effects on All Travellers is not available. As a result, the EoAT assessment for the Main and Alternative Schemes incorporates 2 of the "old" DMRB topics, and also draws upon best practice and an element of professional judgement. It should be noted that the Community Effects (Community Severance) element of DMRB Volume 11 Section 3 Part 8, Pedestrians, Cyclists, Equestrians and Community Effects is included within Chapter 13 Community and Private Assets, Volume 6.1.
- 12.5.2 The traffic models for the Main and Alternative Schemes include a number of confirmed or near certain developments within the Ashford locality, which would generate additional traffic on the existing network. The inclusion of these developments means that some traffic increases or decreases may not be a direct result of the implementation of the Main and Alternative Schemes. Consequently, for some locations where Driver Stress and NMU effects have been identified as a result of changes to traffic flows, the effects (Beneficial or Adverse) may not be fully attributable to the Main and Alternative Schemes.
- 12.5.3 Furthermore, traffic data for the Main and Alternative Schemes has only been predicted for the Opening Year (2018) and Design Year (2033) (15 years after opening) and does not cover the construction period. Therefore professional judgement has been used to assess levels of Driver Stress during construction of the Main and Alternative Schemes.

- 12.5.4 The proposed junction 10a, A2070 link road and A2070 / A2070 link road junctions have been designed in accordance with Highways England's and the Department for Transport's (DfT) standards for road signing and it is therefore unlikely that route uncertainty would be a contributing factor to Driver Stress once the Main or Alternative Schemes are operational. This EoAT assessment therefore focusses on potential changes to driver frustration and fear of potential accidents caused by changes to traffic flows and vehicle speeds, and route uncertainty has not been considered further within this EoAT assessment.
- 12.5.5 There is still some uncertainty with regard to the phasing of the Church Road Footbridge, given the location of the new A2070 roundabout and existing bridge piers. Currently it is assumed that the demolition of the existing Church Road Footbridge would be undertaken early in the programme, before the new bridge is in operation. This would result in Church Road Footbridge being unavailable for a duration of 25 weeks. However, an 'on demand signal controlled pedestrian facility' would be made available on the A2070 during construction to the south of the existing Church Road Footbridge. During the works the Contractor would install the temporary signals, considering the recommendations of Traffic Advisory Leaflet 3/11 – Signal – controlled pedestrian facilities at Portable Traffic Signals (DfT, 2011)<sup>8</sup> when choosing the most suitable location for the signals with temporary footpath links onto existing routes. Temporary lighting may also be required to highlight the temporary signalling installation.

## **12.6 Baseline Information**

### **NMU Amenities**

- 12.6.1 A network of NMU amenities exist in the study area as shown in Table 12.2 and Figure 12.1, Volume 6.2. No public bridleways, restricted byways, Byways Open to All Traffic (BOATs) or closed / restricted paths have been identified within the study area. Table 12.2 identifies all existing PRoWs, footpaths, cycle routes or any other relevant NMU amenities that intersect, are immediately adjacent to or are located within 250m of the Main and Alternative Schemes.
- 12.6.2 Previous NMU surveys completed by Parsons Brinckerhoff in 2006 indicated low usage of PRoWs by equestrians within the study area. Further NMU surveys were carried out in June 2015 and are reported in Appendix 12.2, Volume 6.3 (see the NMU Context Report (MMSJV, 2016) in Appendix 12.5, Volume 6.3, for details regarding the location of NMU surveys).

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<sup>8</sup> Department for Transport, 2011, Available at:  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/482503/3-11.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/482503/3-11.pdf) accessed 13/03/2016

Table 12.2 Existing NMU Amenities within the Main and Alternative Scheme Study Areas

Target Note number , NMU amenity and KCC Path Number (Figure 12.1, Volume 6.1)	Relationship to Main/ Alternative Schemes	NMU amenity location and pathway
TN1: PRoW: Public Footpath AE175	Intersects	Situated to the north of Hythe Road (A20) with initial access to this PRoW opposite the Willesborough Garden Centre, this PRoW continues through fields towards the northeast.
TN2: PRoW: Public Footpath AE337A	Intersects	A public footpath connecting PRoW AE639 and AU63C to the north, running through arable fields.
TN3: PRoW: Public Footpath AE338	Intersects	Forks off PRoW ref. AE337A to the northeast before ending at Aylesford Stream.
TN5: PRoW: Public Footpath AE339	20m west	Path adjacent to Barrey Road continuing west towards Church Road.
TN6: PRoW: Public Footpath AE340	80m east	Connecting St Marys Church with Church Road to the south.
TN7: PRoW: Public Footpath AE342	180m southwest	Route to the south of Ashford Business Park, running to the northern extents of the Channel Tunnel Rail Link (CTRL), before connecting to the southern extents of Barrey Road.
TN8: PRoW: Public Footpath AE342A and AE342B	15m south	Two short stretches of PRoWs running either side of the A2070 between Church Road and the CTRL to the south.
TN9: PRoW: Public Footpath AE357	65m northeast	Part of route between Mersham and AONB, via Mersham Lane Overbridge and FP AE172. FP is between A20 and Bockham Lane. North south movement.
TN12: PRoW: Public Footpath AE636	Intersects	Running alongside Willesborough Garden Centre, south of M20, between Aylesford Stream and Highfield Lane.
TN13: PRoW: Public Footpath AE639	Adjacent	Just to the south of St Marys Church running between the A2070 to the west, continuing east through arable fields to Highfield Lane.
TN15: PRoW: Public Footpath AU53	Intersects	Runs from M20 junction 10, parallel to the south of the M20 until reaching Aylesford Stream.
TN16: PRoW: Public Footpath AU53A	Adjacent	North of the M20 running between the junction 10 and A20 opposite the Hospice.
TN20: PRoW Public Footpath AU63	125m north	In the vicinity of the William Harvey Hospital, connecting The Street and hospital car park.
TN21: PRoW: Public Footpath AU63B	10m north	Route between William Harvey Hospital and Tesco superstore roundabout alongside the M20 junction 10. West east movement starting at The Street and ending to the north of the A20.
TN22: PRoW: Public Footpath AU63C	Intersects	Public footpath connecting the AE337A to the south with the AU53, just to the south of M20 junction 10.
TN23: PRoW: Public Footpath AU64	240m northeast	Just to the south of the William Harvey Hospital.
TN24: PRoW: Public Footpath AU65	Intersects	Connects PRoWs AE338 and AU53, just to the south of the M20.
TN25: PRoW: Public Footpath AU65A	Adjacent	Running between PRoW ref AU53A and the A20, just to the east of the Tesco superstore.
TN26: PRoW: Public Footpath AU94	60m north	Footbridge crossing M20 and Hythe Road A292 between Lacton Way and The Street.
TN27: PRoW: Public Footpath AU103	Adjacent	Just south of the existing M20 junction 10, running continuing towards Collard Road to the west.
TN28: Church Road Footbridge	Intersects	Church Road Footbridge running between Church Road and St Marys Church.
TN29: Footpath Church Road to St Marys Church	145m south east	Undesignated footpath running between Church Road and approximately 70m to the south east of St Marys Church.
TN30: Footpath M20 junction 10 to Tesco Superstore via A20	Adjacent	To the north of the A20 running between M20 junction 10 east, just before the Tesco superstore roundabout.
TN32: Footway Church Road (Ashford Business Park) to Kingfisher Close	Adjacent	Along Church Road just south of Kingfisher Close.
TN33: Footway PRoW AU53A to M20 junction 10	Intersects	Connects to PRoW ref. AU53A just to the east of M20 junction 10.
TN34: Footway Alongside A20 between Tesco and Bockhanger Wood	120m north	To the edge of the A20 eastbound starting at the Tesco superstore roundabout and continuing east past Bockhanger Wood.
TN35: Shared footway and cycleway M20 junction 10 to Tesco via A20	Intersects	To the north eastern extents of M20 junction 10, running between the A2070 Willesborough Lees southbound flank, to the north of the A20 before finishing at the Tesco superstore roundabout.
TN36: Shared footway and cycleway junction 10	Intersects	Within the inner section of M20 junction 10, running between the A20 and A2070 Sevington.
TN37: Shared footway and cycleway A292, down A2070 past CTRL	Intersects	To the west of the A2070 running Hythe Road A292 to the north and past the CTRL.
TN38 Shared Footway and cycleway Church Bridge to Church Road	Intersects	Along the lane just to the west of St Marys Church running between Church Road Footbridge and Church Road.
TN39: Desire Line Mersham to Tesco	Intersects	From Mersham to Tesco superstore and The William Harvey Hospital via Kingsford Street, Highfield Lane and A20 Hythe Road is likely to be a desire line.

Target Note number , NMU amenity and KCC Path Number (Figure 12.1, Volume 6.1)	Relationship to Main/ Alternative Schemes	NMU amenity location and pathway
and William Harvey Hospital		
TN42 Signalised Crossing M20 junction 10 / A20 Hythe Road	Intersects	M20 junction 10 pedestrian crossing of the A20 Hythe Road.
TN43 Uncontrolled Crossing Barrey Road	Intersects	Uncontrolled Pedestrian Cycle crossing at Barrey Road (into Ashford Business Park).
TN44 Signalised Crossing M20 junction 10 eastbound slip	Intersects	Signalised pedestrian cycle crossing of the M20 junction 10 eastbound on slip.
TN45 Signalised Crossing A2070/ junction 10 south	Intersects	Signalised pedestrian crossing of A2070 and junction 10, to the south of the M20 junction 10.
TN46 Uncontrolled Crossing A20/ Tesco Superstore	120m north	Uncontrolled crossing of the A20 from the north of the A20 to Tesco.
TN47 Uncontrolled Crossing West of Swatfield bridge residents	60m northeast	Uncontrolled crossing for residents to the west of Swatfield bridge.
TN48 Uncontrolled Crossing A20/ Garden Centre	Intersects	Uncontrolled crossing along the A20 opposite the Willesborough Garden Centre.
TN49 Uncontrolled Crossing A20/ east of Highfield Lane Bridge	Intersects	Uncontrolled crossing along the A20 to the east of Highfield Lane bridge.
TN50 PRoW Footpath AU57	Adjacent	PRoW connecting Highfield Road to Lees Road.
TN51 PRoW Footpath AU58	Adjacent	PRoW heading north of Lees Road alongside the M20.

## Baseline NMU Surveys

- 12.6.3 Two NMU counts were undertaken by MMSJV in May and June 2015, over 10 hour periods, 1 on a weekday and 1 on a weekend, to assess the NMU usage around the Main and Alternative Scheme area. The date of the weekend survey was chosen to coincide with a service being held at St Marys Church.
- 12.6.4 Seven sites were chosen for the surveys including Church Road Footbridge and Highfield Lane Bridge. Additional NMU movements were assessed for Barrey Road, A20 Hythe Road and Kingsford Street (refer to Appendix 12.2, Volume 6.3, for a summary of NMU survey results). The 7 site locations are as follows (see the NMU Context Report Appendix 12.5, Volume 6.3, for further details):
- Site 1 - Junction of PRowS AE337A / AE639.
  - Site 2 - Junction of Barrey Road and A2070.
  - Site 3 – St Marys Church.
  - Site 4 – A20 opposite Pilgrim’s Hospice.
  - Site 5 – Junction of Highfield Lane and Kingsford Street.
  - Site 6 - Junction of Hythe Road and Highfield Lane.
  - Site 7 - Junction of Hythe Road and Bockham Lane.
- 12.6.5 The 7 site locations were chosen due to a high potential for NMU activity (with nearby community facilities, a business park and a residential area) and NMU facilities being affected by the Main and Alternative Scheme in each of these locations.

## Vehicle Travellers

- 12.6.6 At present, congestion commonly occurs around junction 10, leading to delays and High levels of Driver Stress. Route uncertainty is considered to be Low along the M20 and junction 10 due to existing signage, whilst fear of potential accidents is also considered to be Low, with no NMU amenities alongside the M20 and signalised crossings for NMUs already in place at junction 10.
- 12.6.7 The existing A2070 Southern Orbital Road (SOR) is a rural ‘Dual All-purpose Road’ and provides access for high volumes of traffic travelling to and from Hastings and Rye via the M20 at junction 10. It is an unrestricted road in which the national speed limit applies. The Barrey Road junction on the western approach link to junction 10 has restricted movements (no right-turn out) and currently provides access to the Ashford Business Park and parts of Sevington. Minor accidents occur frequently on this stretch of road and it is perceived as an accident ‘black spot’, in which the fear of potential accidents amongst vehicle travellers is High.
- 12.6.8 Highfield Lane and Kingsford Street are narrow single carriageway rural roads running south of the A2070 and M20. This route is used as a cut-through by

local traffic to cross the M20 at the existing Highfield Lane Bridge to access the A20 Hythe Road west, avoiding the congestion around junction 10. Driver frustration along the A20 Hythe Road, Highfield Lane and Kingsford Street is considered to be Low. Route uncertainty is also considered to be Low, with these roads likely to be used by locals. There is likely to be a fear of potential accidents along the A20, Highfield Lane and Kingsford Street with the presence of NMUs within the vicinity of these roads (as shown in Appendix 12.2, Volume 6.3) and lack of NMU amenities, for example along the A20 there are numerous uncontrolled crossings which NMUs use. Therefore the fear of potential accidents is considered to be High along this stretch of road.

- 12.6.9 Vehicle travellers utilising other roads within the study area, including A2070 Kennett Road and A292 Hythe Road are likely to experience driver frustration, as a result of existing congestion at the M20 junction 10. Although the fear of potential accidents is likely to be Low along this road, with adequate signage in place and a number of existing NMU crossings. Therefore Driver Stress on these 2 roads is currently anticipated to be Moderate. Other roads within the vicinity of the Main and Alternative Schemes are generally in a residential setting and therefore Driver Stress experienced by vehicle travellers is anticipated to be Low, with no existing congestion issues, adequate signage and NMU facilities already in place.
- 12.6.10 There are currently bus routes (numbers 125 and 111) between Mersham and Ashford Town Centre running along Kingsford Street, across Highfield Lane Bridge and then on to the A20 and Tesco superstore. There is an alternative route from Mersham which buses could use, across the M20 via The Street, but this is less direct.

## **12.7 Mitigation and Compensation Measures**

### **Construction**

- 12.7.1 A Construction Environmental Management Plan (CEMP) (see the Outline CEMP in Appendix 17.21, Volume 6.3) would be implemented during construction. The CEMP would ensure that the construction of the Main and Alternative Schemes would be undertaken in as sensitive a manner as possible with regards to all travellers. The CEMP would also include a Community Relations Strategy, ensuring that communication with the general public would be managed and maintained prior to and during all construction works. The Main and Alternative Schemes would also be delivered in accordance with the Considerate Constructors Scheme (CCS).
- 12.7.2 TM would be the main measure for minimising effects upon vehicle travellers during the construction period. All diversion routes and road closures would be sign posted clearly. The following TM measures are likely to be required during construction:
- The M20 would be reduced to 2 lanes during the works.
  - A temporary diversion would be put in place for the north roundabout / A20 Hythe Road during construction.

- Traffic lights and single lane running would be implemented in the A20 Swatfield Culvert location.
  - King Street Footbridge would be in operation prior to the permanent closure of Highfield Lane Bridge.
  - A contraflow arrangement will be available along the A2070 during construction.
  - Access to Barrey Road would be maintained at all times.
- 12.7.3 Works on the A20, M20 junction 10a and A2070 would be phased to minimise effects on all travellers during construction. All temporary diversions for NMUs around the work site would be clearly signed, with alternative access arrangements maintained throughout the construction period, as required. The majority of existing crossings would only be closed once diversions are in place or the new arrangement has been established.
- 12.7.4 An 'on demand signal controlled pedestrian facility' would be made available on the A2070 to the south of the existing Church Road Footbridge. During the works the Contractor would install the temporary signals whilst considering the recommendations of Traffic Advisory Leaflet 3/11 – Signal- controlled pedestrian facilities at Portable Traffic Signals and the most suitable location for the signals with temporary footpath links onto existing routes.

## Operation

- 12.7.5 All new NMU routes would meet required standards and would be lit at night. Further mitigation will be developed as the detailed design of the Main and Alternative Schemes progresses, but at present, opportunities include the following:
- The existing Church Road Footbridge would be replaced with a new cycle friendly footbridge that is compliant with the Equality Act (2010). A new connection for cyclists would also be made at the end of the access road for St Marys Church. The existing substandard footway situated to the west side of the A2070 Bad Munstereifel Road would be upgraded to form a 3m wide shared footway and cycleway.
  - Special Category Land: The design of the Main and Alternative Schemes would require the permanent acquisition of 1,738.4m<sup>2</sup> of designated Open Space land to construct the new Church Road Footbridge. To mitigate for this, 5,887.4m<sup>2</sup> of replacement open space would be provided adjacent to the north of the existing Open Space land. This land would be made accessible for NMUs through the addition of stairs from the new footbridge and from the footpaths running alongside the A2070 Bad Munstereifel Road to the west.
    - A pedestrian and cycle bridge (which has also been designed to accommodate equestrians) would be provided over the M20 at Kingsford Street (hereafter Kingsford Street Footbridge), which would ensure that a new NMU crossing at junction 10a would not be required, despite the permanent closure of Highfield Lane

Bridge (see Target Note 39 in Table 12.2). A new footway along Kingsford Street would also be provided, so as to provide improved and safer NMU access along this existing narrow road, with drop kerbs where the Kingsford Street Footbridge meets the A20.

- A20 Hythe Road: A new footway would be installed alongside the A20 eastbound, between The Pilgrims Hospice and the new Kingsford Street Footbridge, to allow NMUs to continue making journeys eastward away from Ashford.
- A2070 link road: A new shared footway and cycleway would be provided to the south of the A2070 link road.

## **12.8 Predicted Effects on All Travellers**

### **Main Scheme – Construction**

#### **NMUs**

- 12.8.1 Mitigation measures identified within Section 12.7 above have been considered prior to the determination of the significance of effects on each receptor (e.g. PRoW, road etc.) and overarching group (either NMU or vehicle traveller).
- 12.8.2 During construction, the Main Scheme would require the temporary loss of 1,588.1m<sup>2</sup> of designated Open Space land to the west of the A2070 and north of Barrey Road. This would result in temporary adverse effects relating to the relative pleasantness of this open space and accessibility for NMUs, although the erection of signs informing NMUs of these temporary works would minimise effects. Permanent effects on NMUs using this Open Space are considered further in Section 12.8.12.
- 12.8.3 During construction, some adverse effects have been predicted for NMUs, with temporary closures and diversions put in place. This would result in journey length increases and times for users of a number of NMU amenities, particularly with the closures of the Church Road Footbridge and Highfield Lane Bridge (although permanent mitigation would be put in place). A temporary 'on demand signal controlled pedestrian facility' would be made available to the south of the existing Church Road Footbridge, which would minimise effects on NMUs during construction. However, all diversion routes would be clearly signposted. PRoWs AU63C, AU53, AE636, AU65, AE337A, AE338 and AE339 would all be closed during the construction phase, but effects on these PRoWs would be permanent and are therefore considered in further detail within Table 12.5. Effects on many NMU amenities (and subsequently on the users of these routes) during construction are anticipated to be Neutral with no changes to journey length or quality.
- 12.8.4 The measures described above would minimise disturbance and disruption to NMU journeys. However, the presence of construction plant, and construction noise and dust during works would detract from the quality of journey for NMU routes and crossings within the vicinity of works, having an adverse effect on

the amenity value of such routes (particularly with consideration given to the nature of the area, i.e. urban / rural fringe). In addition, the temporary closure of Church Road Footbridge for a period of 25 weeks would result in a significant impact for users of this footbridge during that period, although impacts on NMUs would be minimised through the provision of a temporary crossing. Therefore, on balance, with mitigation measures in place and consideration for the full study area, the overall effect is likely to be Slight Adverse for a temporary period.

- 12.8.5 The assessment of construction stage effects on NMUs as a result of the Main Scheme is presented within Table 12.3 below.

Table 12.3 Construction Stage effects for the main NMU journeys as a result of the Main Scheme

Target Note number (Figure 12.1, Volume 6.2)	Qualitative Commentary	Significance of Effect
TN1, TN6, TN9, TN13, TN16 TN34	No change to journey times along these NMU amenities, although views could result in adverse effects on journey amenity for NMUs. On balance, a Slight Adverse effect is anticipated during construction.	Slight Adverse
TN2, TN3, TN12, TN15, TN22, TN24	Effects on NMUs would be permanent through the closure of these PRowS (see Table 12.5 for further details). In addition, there would be temporary effects as journey times would be likely to increase during construction, whilst journey experience and amenity would also be affected for NMUs, through the presence of construction plant, machinery and earthworks and NMUs forced to travel along diversions. Consideration should be given to the relatively low usage of these PRowS (see Section 13.6.2). Overall effects are considered to be Slight Adverse on NMUs during construction, through the degradation of NMU amenities and potential increases in journey length.	Slight Adverse
TN5	Temporary diversions and closures would be required, which may increase journey times. Journey experience and amenity would also be adversely affected through the presence of construction machinery and vehicles.	Slight Adverse
TN7, TN8, TN20, TN21, TN23, TN26, TN27, TN29, TN30, TN33, TN35, TN36, TN42, TN44, TN45, TN46, TN47, TN50, TN51	No change to journey times, journey experience or amenity for these NMU amenities is predicted during construction.	Neutral
TN25	This path would not be temporarily stopped up, despite the closure of AU53A which this PRow intersects. This could result in confusion for NMUs using this path and NMUs making unnecessary journeys, which may result in frustration. However, the provision of clear signage during the construction period would ensure that effects on NMUs are not significant.	Slight Adverse
TN28	Church Road Footbridge would be demolished during construction, with a new footbridge installed in its place. There is potential for changes to journey times for NMUs with the footbridge potentially unavailable for a period of 25 weeks. Although a temporary 'on demand signal controlled pedestrian facility' would be made available on the A2070 to the south of the existing Church Road Footbridge which would minimise impacts to, journey length, times and amenity for NMUs. However, given the temporary degradation to NMU facilities a Moderate Adverse at worst effect is anticipated during construction.	Moderate Adverse at worst
TN32	Journey times, experience and amenity would not be affected along this footpath for the full duration of construction. However, NMUs may be deterred from making journeys along this footpath due to the temporary closure of Church Road Footbridge, although a diversion would be put in place for this temporary closure.	Slight Adverse
TN37	This shared footway and cycleway is likely to be temporarily affected between Church Road and Barrey Road during construction with the temporary closure of Church Road and works just to the south of Barrey Road. Access is anticipated to be maintained during construction, although journey experience may be adversely affected. On balance, a Slight Adverse effect is anticipated.	Slight Adverse
TN38	Journey times, experience and amenity would not be affected along this footpath for the full duration of construction. However NMUs may be deterred from making journeys along this footpath due to alterations which would be made to Church Road Footbridge. However, appropriate mitigation would be provided to ensure NMU journeys can still be made (see section 13.7.1).	Slight Adverse
TN39	This desire line has been identified in the NMU Context Report (Appendix 13.5). NMUs journeys between Mersham, Tesco and / or William Harvey Hospital would be adversely affected during construction with the permanent closure of Highfield Bridge. Appropriate phasing of works will be implemented to ensure that the Kingsford Street Footbridge structure (which Equestrians would be able to use) is in operation before the demolition of Highfield Lane Bridge, resulting in a Slight Adverse effect on NMUs.	Slight Adverse
TN43	Closure of surrounding footpaths during construction alongside the A2070 to facilitate construction works. However, a diversion would be put in place and subsequent effects on NMUs would be Slight Adverse.	Slight Adverse
TN48	This crossing would be closed during construction, with an appropriate diversion put in place. With the provision of a diversion for NMUs, journey lengths and times are unlikely to be affected and a Slight Adverse effect is anticipated.	Slight Adverse
TN49	This crossing would be permanently closed to construct junction 10a. Given that this is a fairly unsafe crossing point for NMUs, the temporary closure is not considered to be a significant adverse effect, although journey lengths and times may temporarily increase.	Slight Adverse

### ***Driver Stress***

- 12.8.6 During construction, TM within the Main Scheme area could result in delays to journey time, leading to increased driver frustration. The presence of construction plant and temporary diversions (which would be required due to the demolition of Highfield Lane Bridge) would also contribute to temporary changes in levels of Driver Stress. There is potential for vehicle travellers to divert from the local road network rather than pass through road works, although given the national importance of the M20 motorway as a transport link east to west, it is anticipated that the majority of travellers would be likely to pass through the temporary road works on the M20.
- 12.8.7 Narrow lanes, as well as the presence of construction site personnel within close proximity of operational lanes are also likely to contribute to an increased fear of potential accidents for the duration of the construction period. However mitigation measures would be put in place, including the phasing of works and strict implementation of a CEMP and the production of a Traffic Management Plan (TMP), and with additional consideration given for existing levels of Driver Stress on these roads, Driver Stress is not anticipated to change for vehicle travellers as a result of construction activities.
- 12.8.8 The proposed construction compound location would be to the south of the M20 between junction 10 and the new junction 10a. The presence of construction plant, stock piles and construction infrastructure within this compound would result in a reduction in visual amenity for vehicle travellers on adjacent roads which could increase Driver Stress for vehicle travellers. Construction plant would access the compound from the A2070, which could cause additional driver frustration for vehicle travellers due to the presence of slow moving HGVs. The presence of personnel walking to and from the compounds for these locations, which are within close proximity of the works site, may also contribute to an increased fear of potential accidents.
- 12.8.9 The assessment of construction stage effects on Driver Stress as a result of the Main Scheme is presented within Table 12.4 below.

Table 12.4 Construction Stage effects on motorised Users (Driver Stress) as a result of the Main Scheme

Road (s)	Driver Frustration	Fear of Potential Accidents	Driver Stress
M20	Construction works would be phased to minimise disruption to travellers, although the closure of the hard shoulder and implementation of narrow lanes would be required, along with full overnight closures of the M20 and a diversion via junction 11. The presence of construction plant, slow moving vehicles and delay in journey times would lead to an increase in Driver Stress during construction.	Narrow lanes, lane closure (Lane 3) and construction vehicles would increase the fear of potential accidents for vehicle travellers during construction.	High throughout construction.
M20 junction 10	Junction 10 would remain open, although TM and lane closures would be put in place to allow for permanent traffic signalling to be installed and for slipway works. This would result in a moderate level of driver frustration.	TM and construction vehicles would increase the fear of potential accidents.	Moderate throughout the duration of construction.
A20 Hythe Road	Temporary closures and diversions would be required, with the A20 used as a diversion route during closure of the M20. The presence of slow moving vehicles and construction plant and machinery during construction would increase in driver frustration. Works on the A20 would be phased in order to minimise driver frustration.	Temporary traffic signals and single lanes during Phases 1 and 2 of works to A20 Hythe Road would increase the fear of potential accidents for vehicle travellers during construction.	High throughout the duration of construction.
A2070 SOR	Temporary lane closures and speed limits would be required. The presence of slow moving vehicles and construction plant and machinery during construction would increase in driver frustration. Works would be phased to minimise driver frustration.	Temporary lane closures would be required, which would increase fear of potential accidents for vehicle travellers. A temporary crossing would be provided for NMUs whilst Church Road Footbridge is made unavailable, which would reduce the fear of potential accidents for vehicle travellers, with NMUs less likely to step into the road.	High throughout construction.
Highfield Lane	Temporary road closure could increase journey times and lengths, and also driver frustration, particularly Kingsford Street residents.	The temporary closure of this road would increase the fear of potential accidents for vehicle travellers during construction.	Moderate throughout construction.
Kingsford Street	Temporary road closure would increase journey lengths substantially (from approx. 200m from Kingsford Street and the A20, to 3.5km to the same point, distance to the A2070 would increase from approximately 1.7km to 7.9km), which would result in increased driver frustration.	The temporary closure of this road would increase the fear of potential accidents for vehicle travellers during construction.	High throughout construction.
Barrey Road	Access would be maintained at all times, although during Phases 2 and 3 of the A2070 Bad Munstereifel Road works, access would be restricted to left in left out, with no right turn into or out which would result in increases to driver frustration.	Temporary lane closures would be required, which would increase fear of potential accidents for vehicle travellers.	High during Phases 2 and 3 of works to A2070 Bad Munstereifel Road. Moderate for the remaining period.
Other Roads in Study Area*	No construction activities would be undertaken.	No Change from the baseline is anticipated.	No Change.

\* A2070 N, A292, Bockham Lane, Charlton Close, Church Road (Ashford Business Park), Church Road (Sevington), Cornwallis Close, Drake Road, Duckworth Close, Evans Road, Foley Close, Foster Road, Hardy Close, Kingfisher Close, Lacton Oast, Lacton Way, Nelson Close, Nightingale Close, Raleigh Close, Ripley Road, The Street, Wickenden Crescent, Yeoman Gardens.

## Main Scheme – Operation

### NMUs

- 12.8.10 The operational effects of the Main Scheme on NMUs are shown in Table 12.5 below. Traffic flow increases and decreases are based upon forecasts for the Opening Year (2018) and percentage change in traffic levels between the Do Minimum (without Main Scheme) and Do Something (with Main Scheme) for affected routes within the study area, using the AADT value. Table 12.5 considers mitigation measures which would be implemented. Figure 12.2, Volume 6.2, illustrates the NMUs facilities which would be installed or permanently lost as a result of the Main Scheme.
- 12.8.11 Provisions for NMUs as part of the Scheme include new shared footway and cycleways adjacent to the south of the new A2070 link road between St Marys Church and Highfield Lane, within the vicinity of Barrey Road opposite Church Road northbound side to Church Road Footbridge and north of Kingsford Street between Lagonda Lodge and Ransley House. A new footway would also be constructed to the north of the A20 between Swatfield culvert bridge and Bockham Lane. In addition, a new footbridge suitable for pedestrians and cyclists would be installed between Church Road and St Marys Church, which would replace the old facility. A new footbridge suitable for all NMUs would be installed just to the east of Ransley House. The Scheme would result in the closure of 7 PRoWs (AE636, AE339, AE337A, AU65, AU63C, AE338 and AU53), resulting in adverse effects for NMUs, with increases in journey lengths and time travelled and permanent changes in journey experience and amenity for NMUs.
- 12.8.12 The Main Scheme would require the permanent acquisition of 1,738m<sup>2</sup> of designated Open Space land. However, 5,887m<sup>2</sup> of replacement Open Space would be provided by the Main Scheme, which would increase connectivity and accessibility through the addition of stairs from the new Church Road Footbridge (which are not present currently and require NMUs to follow the footpath to the end of the footbridge). This could shorten the distance required to access the open space by approximately 115m. The improved access and increased area will result in a Large Beneficial Effect upon NMUs in the location of the Open Space.
- 12.8.13 However, on balance, whilst some adverse effects would be experienced by NMUs, largely as a result of an increase to journey lengths and time, changes in journey experience and amenity for NMUs would improve with a decrease in traffic flows along a number of roads, whilst the installation of new facilities would also be of benefit for NMUs, and could result in decreases to journey lengths and times. It is worth considering the low usage (as determined in Section 12.6.2) of PRoWs AE338 and AE339 (which would also suggest low usage by NMUs of PRoWs AU63C and AU65, given their location). Permanent changes to a number of NMU routes and facilities are anticipated to result in long term benefits for NMUs. The majority of NMU routes within the study area would experience no changes in terms of journey length and

changes in journey experience and amenity as a result of the Main Scheme. Therefore, taking a balanced view of the implications of the Main Scheme on NMUs, with consideration for the mitigation which would be implemented and enhancements which would be provided in the vicinity of Church Road Footbridge, effects would be considered Neutral during the Operational phase. These effects would be considered Not Significant.

Table 12.5 Operational effects on NMU amenities for the Main Scheme

Target Note (Figure 12.1, Volume 6.2)	Change in journey length	Change in facilities	Traffic Flow Increase	Commentary	Significance of Effect
TN1	No Change	No Change	N/A – PRow separated from traffic.	PRow would not be permanently affected by the Main Scheme. Journey experience and amenity are not anticipated to be affected for NMUs in the long term.	Neutral
TN2	72m increase between St Marys Church and the junction 10.	Permanent closure of footpath. New Equality Act (2010) compliant replacement of Church Road Footbridge.	N/A – PRow separated from traffic.	This PRow would be permanently closed which would mean NMUs travelling between Sevington and junction 10 would have to use the new Church Road Footbridge, resulting in journey length increases, although this would be mitigated by a new foot / cycleway alongside the A2070. However, NMUs would have to journey along a busy road rather than through fields and journey experience and amenity would be affected, giving a Slight Adverse effect.	Slight Adverse
TN3	460m decrease between St Marys Church and Merham. 370m increase between St Marys Church and A20.	Permanent Closure of footpath. New foot / cycleway south of A2070 link road and new NMU Kingsford Street Footbridge.	N/A – PRow separated from traffic.	This PRow would be permanently closed, although provision of the new foot / cycleway alongside the A2070 link road and the new Kingsford Street Footbridge (which would also be suitable for cyclists and equestrians) would minimise effects on NMUs and result in a decrease in journey length of approximately 460m between St Marys Church and Merham which is a significant benefit. There would be an increase in journey of approximately 370m between St Marys Church and the A20. Main Scheme provisions would not mitigate losses in terms of journey experience and amenity and with consideration given to the varied effects on NMU journey length and time journey experience and amenity and consideration for the permanent closure of this footpath on balance, an overall Slight Adverse effect is anticipated.	Slight Adverse
TN5	No Change – existing distances for NMUs maintained.	New foot / cycleway either side of Barrey Road.	N/A – PRow separated from traffic.	This PRow would be permanently closed, although a new foot / cycleway would be provided either side of Barrey Road in between would ensure journey lengths would not alter. The provision of the new footway and cycleway would result in a benefit in terms of NMU journey experience and therefore a Slight Beneficial effect is anticipated.	Slight Beneficial
TN6, TN7, TN9, TN13, TN16, TN20, TN21, TN23, TN25, TN26, TN27, TN29, TN50, TN51	No Change.	No Change.	N/A – PRow separated from traffic.	No change to journey times or effect upon journey experience or amenity for this footpath once the Main Scheme is in operation.	Neutral
TN8	No Change – existing distances for NMUs maintained.	Provision of a new shared foot / cycleway.	Increase in traffic in 2033, NMUs would be alongside.	A new foot / cycleway would be provided in place of a 100m section of PRow AE342A, which would therefore not alter journey lengths and times for NMUs and would be an improved surface and therefore provide benefits in terms of journey experience. Journey amenity may be adversely affected by an increase in the number of vehicles using the A2070.	Slight Beneficial
TN12	Increase of 478m travellers between Merham and the M20 junction 10.	Permanent closure of footpath. New footway adjacent to Kingsford Street and new Kingsford Street Footbridge.	Decrease from the baseline (no crossing the A20 or Highfield Lane bridge). Increase along Kingsford Street.	This PRow would be permanently closed, meaning NMUs wishing to travel between Merham and junction 10 would have to use the new Kingsford Street Footbridge (which would also be suitable for cyclists and equestrians), and whilst this would be safer than the existing conditions, this would increase journey length. Effects on journey experience and amenity for NMUs would be varied, with NMUs forced to travel alongside the busy A20 Hythe Road for their journey, rather than travelling through rural fields, although a new footbridge would be installed within the vicinity of this PRow. With consideration given for the adverse effects on journey lengths and times, varied effects on journey experience and amenity (Moderate Adverse and Moderate Beneficial), the permanent closure of this footpath (although this would be mitigated for through new NMU provisions) and low usage of path by NMUs, on balance, an overall Slight Adverse effect is anticipated.	Slight Adverse
TN15	478m increase between Merham and junction 10, 370m increase between St Marys and A20, 72m increase between Sevington and junction 10, 460m decrease between St Marys and Merham.	Permanent closure of footpath. New shared foot / cycleway and footbridge at Kingsford Street. New Church Road Footbridge.	N/A – PRow separated from traffic.	This PRow would be permanently closed, which would increase journey lengths and force NMUs to travel alongside busy roads (A20 and A2070) rather than rural field boundaries just to the south of the M20. On balance, effects on NMUs using this PRow would be Slight Adverse, when the shared foot / cycleway facilities and footbridges at Church Road and Kingsford Street are considered.	Slight Adverse

Target Note (Figure 12.1, Volume 6.2)	Change in journey length	Change in facilities	Traffic Flow Increase	Commentary	Significance of Effect
TN22	72m increase between St Marys Church and junction 10.	Permanent closure of footpath. New foot / cycleway south of new A2070 link road.	N/A – PRoW separated from traffic.	This PRoW would be permanently closed, resulting in journey length increases for NMUs. Given that the majority of the new journeys would be alongside the A2070 rather than in the rural fields to the south of the existing M20, journey experience and amenity would be adversely affected. The new foot / cycleway alongside the A2070 would maintain access to Mersham for NMUs and on balance a Slight Adverse effect is anticipated.	Slight Adverse
TN24	460m decrease between St Marys and Mersham, 370m increase between St Marys and A20.	Permanent Closure in footpath. New shared foot / cycleway 120m south of ProW.	N/A – PRoW separated from traffic.	This PRoW would be permanently closed, although the provision of the new foot / cycleway alongside the new A2070 link road would minimise effects leading to a decrease in journey of approx. 460m between St Marys and Mersham, but an increase in journey of approx. 370m between St Marys Church and the A20. The new Kingsford Street Footbridge (which would be suitable for equestrians) would improve safety for NMUs, and on balance, a Neutral effect on NMUs is anticipated.	Neutral
TN28	640m decrease between Church Road footbridge and junction 10.	New footbridge compliant with the Equality Act (2010).	N/A – the new footbridge would be separated from traffic.	The new Church Road Footbridge would significantly decrease journeys for pedestrians wishing to travel northwards towards junction 10. This structure would also connect with new shared footways and cycleways to either side, improving connectivity and there would be an increase in the area of Open Space available for NMUs alongside the A2070. Journey experience and amenity would be unlikely to significantly alter as a result of the Main Scheme. A Large Beneficial effect is anticipated for NMUs using Church Road Footbridge.	Large Beneficial
TN30	No Change.	No Change.	Decrease from Baseline.	No change in journey times experience or amenity would be anticipated for NMUs.	Neutral
TN32	No Change.	No Change.	No traffic data available, assumed to be No Change.	No change in journey times experience or amenity would be anticipated for NMUs.	Neutral
TN33	No Change.	No Change.	N/A Footpath separated from the road.	No change in journey times experience or amenity would be anticipated for NMUs.	Neutral
TN34	No Change.	Refurbishment of footway between Swatfield culvert bridge and 250m west of Bockham Lane.	Decrease between junction 10 and junction 10a, increase east of junction 10a.	The Main Scheme would result in approximately 520m of new footway alongside the A20 between Swatfield Bridge and 250m to the west of Bockham Lane. There would be no permanent change in journey length or experience for NMUs utilising this facility. There would be no change in amenity for NMUs with a decrease in traffic flows to the west of the new M20 junction 10a and increase eastward. A Slight Beneficial effect is anticipated on NMUs through the provision of a new footway in this location.	Slight Beneficial
TN35	No Change.	No Change.	Decrease in traffic flows.	No change in journey times experience or amenity would be anticipated for NMUs.	Neutral
TN36	No Change.	No Change.	Decrease in traffic flows.	No change in journey times experience or amenity would be anticipated for NMUs.	Neutral
TN37	No Change.	Existing substandard footway will be upgraded to a 3m wide footway / cycleway to the west of the A2070.	Decrease in traffic flows between junction 10 and new A2070 roundabout. Increase in traffic flows to the south of the new A2070 roundabout.	The 250m length of A2070 which would be upgraded to a 3m wide footway / cycleway. A slight reduction in amenity for NMUs would be felt with an overall increase in the number of vehicles alongside this NMU facility. However, the increase in area of open land available for NMUs to the west of the A2070 and cycleway are considered to result in an overall Slight Beneficial effect for NMUs.	Slight Beneficial
TN38	No Change	New footway / cycleway connection to the south of the new A2070 link road and new connection to Church Road Footbridge.	No traffic data. Assumed to be no change given the nature of the road.	This shared footway and cycleway would be connected to the new shared footway and cycleway which would be constructed to the south of the A2070 link road. These new connections to the wider network would be considered a slight benefit to NMUs. The new Equality Act (2010) compliant footbridge would open up access to St Marys Church via this footpath and the wider area eastwards.	Slight Beneficial
TN39	770m increase between Kingsford Street and junction 10, 110m increase between Mersham and A20 (opposite existing Highfield Lane bridge).	Closure of Highfield Lane Bridge and installation of Kingsford Street Footbridge.	Substantial increase in traffic flows along Kingsford Street.	Slight increase in journey length between Mersham and Tesco / William Harvey Hospital, although the new Kingsford Street Footbridge (which would be suitable for equestrians) would mean NMUs would no longer have to cross the A20, which would improve safety and potentially also improve journey times. The increased traffic flows along Kingsford Street as a result of the Highfield Bridge closure would alter journey experience and amenity, and NMU safety could be affected for those still using this desire line in 2033. With consideration given for the varied effects on journey length and times for NMUs (Slight to Large Adverse), closure of a bridge used by NMUs which would be mitigated through the provision of a new footbridge, and Large Adverse effects in relation to journey amenity along	Large Adverse

Target Note (Figure 12.1, Volume 6.2)	Change in journey length	Change in facilities	Traffic Flow Increase	Commentary	Significance of Effect
				Kingsford Street, effects are considered to be Large Adverse at worst.	
TN42	No Change.	No Change.	Decrease in traffic flows.	No change to journey times or effect upon journey experience or amenity for this footpath.	Neutral
TN43	No Change.	Refurbishment of foot / cycleways both sides of road.	No Change along Barrey Road.	There would be no change to journey length, although the provision of a new shared foot / cycleway is considered to be of slight benefit.	Slight Beneficial
TN44, TN45, TN46, TN47	No Change.	No Change.	Decrease in traffic flows.	No change to journey times or effect upon journey experience or amenity for this footpath.	Neutral
TN48	No Change.	Permanent closure of uncontrolled crossing and refurbishment of footway between Swatfield culvert bridge and 250m west of Bockham Lane.	Decrease in traffic flows.	Creation of 520m of new footway alongside the A20 between Swatfield culvert bridge and 250m to the west of Bockham Lane. The change in amenity along this footway would be minimal, with no permanent change in journey length or experience. The permanent closure of this crossing would result in a Slight Adverse effect for NMUs.	Slight Adverse
TN49	110m increase between Highfield Lane and Kingsford Street.	Permanently Closed. Installation of Kingsford Street Footbridge opposite Bockham Lane.	Increase in traffic flows.	This crossing would be permanently closed, increasing journey lengths and times between Mersham and junction 10. Kingsford Street Footbridge (which would be suitable for equestrians) would be installed approximately 285m to the east. Given the Slight Adverse effect from journey length increase, Moderate Beneficial effect through provision of new facilities and Slight Adverse effect in terms of journey amenity; an overall Neutral effect is anticipated.	Neutral

### ***Driver Stress***

- 12.8.14 Table 1.1 of Appendix 12.3, Volume 6.3, identifies the key routes within the study area which would be affected by changes to traffic flows as a result of the Main Scheme. This table also predicts the level of Driver Stress for vehicle travellers for the Do Minimum (without Main Scheme) and Do Something (with Main Scheme) scenarios in the Design Year (2033), based on the DMRB criteria presented within Appendix 12.1, Volume 6.3.
- 12.8.15 A summary of the assessment presented within Appendix 12.3, Volume 6.3, is provided below, applying the 3 point scale (Low, Moderate and High) as described in Section 12.3.12. This is because available research evidence does not permit the use of finely graded assessments of Driver Stress.
- 12.8.16 On balance, in the Design Year (2033), Driver Stress experienced by vehicle travellers is not predicted to change with the Main Scheme in place rather than the without Scheme scenario for the majority of roads within the study area. Decreases (i.e. improvements) in Driver Stress are predicted to change from Moderate to Low along A20 Hythe Road between the Tesco superstore and The Pilgrims Hospice, and from High to Moderate along M20 eastbound at Willesborough Lees. Increases in Driver Stress have also been predicted along the A20 between The Pilgrims Hospice and to the east of M20 junction 10a, although it is worth noting that traffic flows would be affected by the addition of new developments in the area for either scenario and therefore changes in Driver Stress would not be entirely attributable to the Main Scheme. Elsewhere, Driver Stress experienced by vehicle travellers in 2033 would be the same with or without the Main Scheme.
- 12.8.17 The fear of potential accidents amongst vehicle travellers is not predicted to substantially alter as a result of the Main Scheme, but on balance, would slightly improve with the upgrading of existing NMU facilities alongside the A20 Hythe Road and A2070 Bad Munstereifel Road. This would reduce the fear amongst drivers of NMUs straying into affected roads.

### ***Driver Stress for the existing M20***

- 12.8.18 Traffic data in the first 15 years after opening indicates a Low level of Driver Stress along the majority of the existing M20 motorway in the Design Year (2033) with or without the Main Scheme in place. Driver Stress is predicted to improve along the M20 eastbound at Willesborough Lees with the Main Scheme in place in 2033, with a change from High to Moderate. No increases (i.e. deteriorations) in Driver Stress are predicted along the M20 with the Main Scheme in place in the Design Year. No change in the fear of potential accidents is predicted during operation, since there are no NMU amenities alongside this road.

***Driver Stress for M20 junction 10 and the new junction 10a (including M20 slip roads)***

- 12.8.19 At M20 junction 10, Driver Stress experienced by vehicle travellers would be High with or without the Main Scheme in place in the first 15 years after opening. Nonetheless, slight improvements are predicted at the junction with the Main Scheme in place due to traffic flow decreases in the first 15 years after opening. Furthermore, Main Scheme improvements at junction 10 include modifications to the traffic signalling sequence, which has the potential to reduce driver frustration. In addition, the Main Scheme would reduce the number of NMU movements within close proximity of the junction, since PRow AU53 would be permanently closed off as part of the Main Scheme. No new NMU crossings would be installed within the vicinity of junction 10, and therefore, the fear of potential accidents amongst vehicle travellers is predicted to slightly improve at M20 junction 10.
- 12.8.20 The new M20 junction 10a is only considered as part of the 'with Scheme' scenario. In the first 15 years after opening, Driver Stress experienced by vehicle travellers would vary between Moderate and High at the new junction, and Low on the slip roads adjoining the M20. Driver Stress is predicted to increase from Moderate to High to the north of the roundabout with the Main Scheme in place (no junction would be present in the without Scheme scenario which would allow vehicles to move at consistent speeds and minimise Driver Stress), due to travellers being forced to slow down along A20 Hythe Road resulting in increased frustration. Conversely, the complete removal of NMU amenities at the new junction 10a would also minimise vehicle travellers' perceived fear of potential accidents, which would be of benefit to drivers.

***Driver Stress along the A2070 Bad Munstereifel Road and A2070 link road***

- 12.8.21 Moderate to High levels of Driver Stress are predicted for vehicle travellers in the first 15 years after opening along A2070 Bad Munstereifel Road. However, this level of Driver Stress is not anticipated to change with or without the Main Scheme in place. The High levels of Driver Stress along this road in 2033 would be attributed to vehicles slowing down at the M20 junction 10 and new roundabout as well as high traffic flows per lane. New NMU facilities provided as part of the Main Scheme alongside or over A2070, such as Church Road Footbridge, are unlikely to alter the fear of potential accidents amongst vehicle travellers given the presence of the existing footbridge and since NMUs would be separated from traffic.
- 12.8.22 Along the new A2070 link road, Driver Stress experienced by vehicle travellers in the year 2033 would be between Moderate and High with the Main Scheme in place, due to the new M20 junction 10a and roundabout either end of the A2070 link road causing vehicles to travel at slower speeds. A new shared footway and cycleway would be installed to the south of A2070 which would minimise the fear of potential accidents amongst vehicle travellers, with NMUs segregated from vehicles.

***Driver Stress for additional roads within the study area***

12.8.23 For other roads located within the vicinity of the Main Scheme, Driver Stress experienced by vehicle travellers in the first 15 years after opening would vary. This has been summarised in Table 12.6 below.

Table 12.6 Driver Stress for additional roads within the study area for the Main Scheme

Location	Driver frustration	Fear of potential accidents	Driver Stress (2033 without Main Scheme)	Driver Stress (2033 with Main Scheme)
Highfield Lane / Kingsford Street	Increased traffic flows have the potential to result in inconsistent vehicle speeds which could cause frustration amongst drivers.	Slight decrease in the fear of potential accidents for drivers due to new NMU provisions to the north of Kingsford Street, with a new NMU bridge over the M20 and a shared footway and cycleway alongside the A2070 link road. However, the realigned Kingsford Street is still likely to be a desire line used by NMUs, and as such there is likely to be a fear amongst drivers of pedestrians stepping into the road.	High	High
Church Road	No change; traffic flows and speeds not predicted to substantially alter with the Main Scheme in place.	No new NMU facilities. No change.	High	High
A20 Hythe Road (east of junction 10a) / Bockham Road	Slight increase in traffic flows (up to 18%) which have the potential to result in inconsistent speeds and may cause frustration amongst drivers.	Slight decrease in the fear of potential accidents for drivers due to new NMU provisions to the north of Kingsford Street, with a new NMU bridge over the M20.	Driver Stress would generally be Moderate along this section of road, except to the east of Bockham Lane where it would be Low.	Driver Stress would generally be Moderate along this section of road, except to the east of Bockham Lane where it would be Low and to the east of Highfield Lane and the west of Hatch Lodge where it would be High.
A20 Hythe Road – between junction 10a and Pilgrims Hospice.	Slight increase in traffic flows and slower moving traffic (63km/hr to 24km/ hr) which would cause frustration amongst drivers.	Slight decrease in the fear of potential accidents for drivers due to the provision of an upgraded footway alongside the A20 eastbound.	Moderate	Driver Stress would generally be Moderate along this section of Road, except opposite The Pilgrims Hospice where it would be High.

Location	Driver frustration	Fear of potential accidents	Driver Stress (2033 without Main Scheme)	Driver Stress (2033 with Main Scheme)
A20 Hythe Road between Pilgrims Hospice and Tesco's.	Slight decrease in traffic flows to the east of Tesco's superstore (up to 90%) which would result in drivers travelling at more consistent speeds improving driver frustration.	No new NMU facilities. No change.	Driver Stress would generally be High along this stretch of road, except just to the east of the Tesco's superstore where it would be Moderate.	Driver Stress would generally be High along this stretch of road, except just to the east of the Tesco's superstore where it would be Low.
A20 Hythe Road between Tesco's and junction 10.	No change; traffic flows and speeds not predicted to substantially alter with the Main Scheme in place.	No new NMU facilities. No change.	High	High
A292 Hythe Road	No change; traffic flows and speeds not predicted to substantially alter with the Main Scheme in place.	No new NMU facilities. No change.	High	High
North of M20 junction 10.	No change; traffic flows and speeds not predicted to substantially alter with the Main Scheme in place.	No new NMU facilities. No change.	High	High

## Alternative Scheme - Construction

### ***NMUs***

- 12.8.24 No additional effects to those predicted for the Main Scheme on NMUs (Section 12.8.1) are predicted as a result of the Alternative Scheme during construction. On balance, with mitigation measures in place and consideration for the full study area, the overall effect is likely to be Slight Adverse for a temporary period as a result of the Alternative Scheme.

### ***Driver Stress***

- 12.8.25 No additional effects to those predicted for the Main Scheme on Driver Stress (Section 12.8.1) are predicted as a result of the Alternative Scheme during construction. With suitable mitigation measures in place, including the phasing of works and strict implementation of a CEMP and the production of a Traffic Management Plan (TMP), and with additional consideration given for existing levels of Driver Stress on these roads, Driver Stress is not anticipated to change for vehicle travellers as a result of construction activities associated with the Alternative Scheme.

## Alternative Scheme - Operation

### ***NMUs***

- 12.8.26 Additional effects have been predicted for the Alternative Scheme with respect for NMUs, further to those assessed for the Main Scheme as shown in Table 12.7.

Table 12.7 Operational effects on NMU amenities for the Alternative Scheme

Target Note (Figure 12.1, Volume 6.2)	Change in journey length	Change in facilities	Traffic Flow Increase	Commentary	Significance of Effect
TN2	As with Table 12.5.	As with Table 12.5, although NMUs would be required to cross the Stour Park access.	Increase from baseline with a new road introduced in place of this PRoW.	This PRoW would be permanently closed, but would be mitigated through the provision of a shared foot / cycleway south of the A2070 link road. The access road for the Stour Park would require NMUs to cross, resulting in increased journey times potentially and additional adverse effects relating to journey amenity.	Slight Adverse
TN3,	As with Table 12.5.	As with Table 12.5, although NMUs would be required to cross the Stour Park access.	Increase from baseline with a new road introduced in place of this PRoW.	This PRoW would be permanently closed, although this would be mitigated through the provision of a shared foot / cycleway south of the A2070 link road. The access road for the Stour Park would require NMUs to cross, resulting in increased journey times potentially (although decreases have been reported between St Marys Church and Mersham) and additional adverse effects relating to journey amenity.	Slight Adverse
TN15	As with Table 12.5.	As with Table 12.5, although NMUs would be required to cross the Stour Park access.	Increase from baseline with a new road introduced in place of this PRoW.	This PRoW would be permanently closed, but would be mitigated through the provision of a shared foot / cycleway south of the A2070 link road. The access road for the Stour Park would require NMUs to cross, resulting in increased journey times potentially and additional adverse effects relating to journey amenity.	Slight Adverse
TN22	As with Table 12.5.	As with Table 12.5, although NMUs would be required to cross the Stour Park access.	Increase from baseline with a new road introduced in place of this PRoW.	This PRoW would be permanently closed, but would be mitigated through the provision of a shared foot / cycleway south of the A2070 link road. The access road for the Stour Park would require NMUs to cross, resulting in increased journey times potentially and additional adverse effects relating to journey amenity.	Slight Adverse
TN39	As with Table 12.5.	As with Table 12.5, although NMUs would be required to cross the Stour Park	Increase from baseline.	Highfield Lane bridge would be permanently closed, although this would be mitigated through the provision of a shared foot / cycleway south of the A2070 link road and the new Kingsford footbridge. The access road for the Stour Park would require NMUs to	Large Adverse at worst

Target Note (Figure 12.1, Volume 6.2)	Change in journey length	Change in facilities	Traffic Flow Increase	Commentary	Significance of Effect
		access.		cross, resulting in increased journey times potentially and additional adverse effects (further to the Large Adverse effects reported for the Main Scheme) relating to journey amenity.	

**Driver Stress**

12.8.27 Table A12.4.1 of Appendix 12.4, Volume 3, identifies the key routes within the study area which would be affected by changes to traffic flows as a result of the Alternative Scheme. This Table also predicts the level of Driver Stress for vehicle travellers for the Do Minimum (without Alternative Scheme) and Do Something (with Alternative Scheme) scenarios, based on the DMRB criteria presented within Appendix 12.1, Volume 6.3.

12.8.28 A summary of the assessment presented within Appendix 12.4, Volume 6.3, is provided in Table 12.8 below, discussing potential changes to driver frustration and fear of potential accidents. This is only described where driver frustration and / or the fear of potential accidents would be different to that presented in Table 12.6 for the Main Scheme. Driver Stress experienced by vehicle travellers without the Alternative Scheme in place (Do Minimum) would be the same as the Main Scheme in the first 15 years after scheme opening. But changes in Driver Stress experienced by vehicle travellers with the Alternative Scheme in place would on the whole be similar to those predicted with the Main Scheme in place. However, several changes to Driver Stress for the Alternative Scheme have been identified along A2070 link road and A20 Hythe Road with different traffic flows and vehicle speeds predicted (as presented in Appendix 12.4, Volume 6.3).

Table 12.8 Operational Driver Stress along roads within the vicinity of the Alternative Scheme

Location	Driver frustration	Fear of potential accidents	Driver Stress (2033 without Alternative Scheme)	Driver Stress (2033 with Alternative Scheme)
A2070 link road	As with Section 12.8.21, but worth noting that Driver Stress would be Moderate to the south of the A2070 roundabout, and High to the south of junction 10a with the Alternative Scheme in place.	Further to Section 12.8.21, NMUs would be required to cross the access road to the Stour Park development. Therefore, it is likely that there would be a fear amongst drivers of pedestrians stepping into the road.	Not Applicable	Driver Stress would generally be Moderate between the Stour Park access roundabout and A2070 Bad Munstereifel Road, but would be High between the Stour Park access roundabout and

Location	Driver frustration	Fear of potential accidents	Driver Stress (2033 without Alternative Scheme)	Driver Stress (2033 with Alternative Scheme)
				junction 10a.
Highfield Lane/ Kingsford Street	Traffic flows were not predicted for Highfield Lane and Kingsford Street with the Alternative Scheme in place.	Traffic flows were not predicted for Highfield Lane and Kingsford Street with the Alternative Scheme in place.	High	Not applicable
A20 Hythe Road (east Bockham Road)	Traffic flows and speeds are not predicted to substantially alter with the Alternative Scheme in place.	As with the Main Scheme (See Table 12.6).	Driver Stress would generally be Moderate along this section of road, but would be Low just to the east of Bockham Lane	Driver Stress would generally be Moderate along this section of road, except to the east of Bockham Lane where it would be Low

## 12.9 Conclusions

12.9.1 A summary of the effects of the Main and Alternative Schemes on NMUs and vehicle travellers is been provided in Table 12.9 and Table 12.10 below.

Table 12.9 Summary of residual effects for the Main Scheme

Phase	Commentary	Significance of Effects Main Scheme
Construction - NMUs	During construction, adverse effects as a result of the Main Scheme have been predicted for NMUs, with temporary closures and diversions put in place. The temporary closure of Church Road Footbridge for a period of 25 weeks would result in a Moderate Adverse at worst impact for users of this footbridge during that period, although mitigation measures as described in Section 12.8.3 would minimise impacts. However, on balance, for the full study area and with mitigation measures in place, the overall effect is likely to be Slight Adverse for a temporary period.	Slight Adverse
Construction – Driver Stress	During construction, the temporary presence of TM for the Main Scheme is likely to result in High levels of Driver Stress amongst vehicle travellers along a number of roads within the study area. The strict implementation of mitigation measures described in Section 12.7.1 would ensure that overall effects on vehicle travellers are Slight Adverse and Not Significant.	Slight Adverse
Operation - NMUs	During operation, the Main Scheme would result in the closure of 7 PRowS, with Church Road Footbridge removed and replaced, Highfield Lane Bridge (identified as an NMU desire line) removed with Kingsford Lane Footbridge to be installed to the east of the new junction 10a. The provision of mitigation measures described in Section 12.7.2 as well as enhancements within the vicinity of Church Road Footbridge would ensure that on balance overall effects on NMUs would be Neutral and Not Significant.	Neutral

Phase	Commentary	Significance of Effects Main Scheme
Operation – Driver Stress	During operation, the Main Scheme is not predicted to substantially alter Driver Stress levels amongst vehicle travellers. For the majority of roads within the vicinity of the Scheme, Driver Stress would not alter with the Main Scheme in place, although Driver Stress is predicted to increase along sections of the M20 and A20, with decreases along a separate section of the A20. On balance, effects as a result of the Main Scheme on Driver Stress are considered to be Neutral and Not Significant.	Neutral

Table 12.10 Summary of residual effects for the Alternative Scheme

Phase	Commentary	Significance of Effects Alternative Scheme
Construction - NMUs	No additional effects to those predicted for the Main Scheme on NMUs are predicted as a result of the Alternative Scheme during construction.	Slight Adverse
Construction – Driver Stress	No additional effects to those predicted for the Main Scheme on Driver Stress are predicted as a result of the Alternative Scheme during construction.	Slight Adverse
Operation - NMUs	The Alternative Scheme would result in an additional effect on NMUs, with NMUs having to traverse an access road at the new A2070 link road roundabout whilst travelling along the proposed new shared footway and cycleway to the south of the A2070 link road. However, on balance, with consideration of mitigation which would be implemented and enhancements within the vicinity of Church Road Footbridge effects on NMUs are considered to be Neutral and Not Significant.	Neutral
Operation – Driver Stress	Differences to Driver Stress as a result of the Alternative Scheme have been identified on the A2070 link road, A20 Hythe Road, Highfield Lane and Kingsford Street. On balance, effects as a result of the Alternative Scheme on Driver Stress are considered to be Neutral and Not Significant.	Neutral