Highways England

HIGHWAYS ENGLAND DESIGNATED FUNDS-A27 NMU LINK IMPROVEMENTS PACKAGE

Chichester to Emsworth

CHEM
APRIL 2020

CONFIDENTIAL

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TYPE OF DOCUMENT (VERSION) CONFIDENTIAL

PROJECT NO. 700155187

OUR REF. NO. CHEM

DATE: APRIL 2020

Highways England

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Chichester to Emsworth

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QUALITY CONTROL

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	Draft for comment	Updated SAR & comments		
Date	January 2020	April 2020		
Prepared by	[redacted]	[redacted]		
Signature				
Checked by	[redacted]	[redacted]		
Signature				
Authorised by	[redacted]	[redacted]		
Signature				
Project number	70055187	70055187		
Report number	S1	Rev1		
File reference	\\uk.wspgroup.com\Central Data\Projects\700551xx\70055187 - CDF DF A27 NMU Links Feasibility Study\03 WIP\TP Transport Planning\03 Document\Scheme 1 Chichester-Emsworth\Rev. 1\A27 Designated Funds Links - Chichester to Emsworth Feasibility Report Rev1.docx			

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1 INTRODUCTION

1.1.1. WSP has been commissioned by Highways England (HE) to undertake a feasibility study assessing the continuity of existing Non-Motorised User (NMU) routes across the A27 corridor in West Sussex as part of the Cycling, Safety and Integration Designated Funds programme. The schemes identified for feasibility study have been selected following completion of a local policy review, stakeholder workshop and Multi Criteria Assessment Framework process completed in late 2019.

1.1.2. This feasibility study considers the route between Emsworth and Chichester with the objective of enabling a growth in journeys made by active modes along the A259 with the provision of high-quality cycling infrastructure. The existing route forms part of the National Cycle Network Route 2 (NCN2) and as such attracts leisure cyclists as well as higher than average flows of commuter cycling to and from the historic city of Chichester. Existing conditions along the A259 have been identified as unsatisfactory to meet the sustainable development goals of the area.

1.2 PURPOSE OF STUDY

1.2.1. The purpose of the Feasibility Study is to explore the options to create consistent, safe route for pedestrians and cyclists along NCN2 which runs along the A259 between Chichester and Emsworth. The route has a mix of on-road and off-road provision and connects to several stations on the Chichester to Havant railway line, including Fishbourne, Bosham and Nutbourne.

1.2.2. This A259 route is a high priority corridor for West Sussex County Council (WSCC). The area to the west of Chichester has been identified as an area for strategic development, and to support this development and meet the needs of existing residents a high-quality route is required into Chichester which promotes sustainable travel.

1.2.3. Despite being a signed designated cycle route, NCN2 lacks consistency and suffers from narrow shared use paths, poor cycle design with risk of 'dooring', and abrupt ends to the cycle lane in sections, with no onward provision. The feasibility study would explore the options to create a consistent, safe route for pedestrians and cyclists.

1.3 NATIONAL POLICY CONTEXT

HIGHWAYS ENGLAND – ROAD INVESTMENT STRATEGY 2015/16 TO 2019/20 (2015)

1.3.1. In 2015, Highways England released a document outlining their strategy towards investing in the Strategic Road Network (SRN). Several key aims of the SRN outlined in this document support the development of the Chichester to Emsworth Scheme, such as;

- Providing capacity and connectivity to support national and local economic activity;
- Supporting and improving journey quality, reliability and safety;
- Joining our communities and linking effectively to each other; and
- Supporting delivery of environmental goals and the move to a low carbon economy.

1.3.2. The Road Investment Strategy also acknowledges the following;

"*The government is committed to improving active travel options, such as cycling and walking. Too often the SRN often acts as a barrier to these activities, so we are committed to improving access through building new bridges, crossings and cycle paths. The Investment Plan has allocated £100 million to invest in 200 projects to improve cycling and walking across and alongside existing*

stretches of the SRN. The Company has also committed to cycle-proofing new schemes as standard, as well as working with Local Authorities to improve end-to-end cycling and walking journeys."

1.3.3. In order to realise their vision, Highways England have specified the following targeted outcomes;

- Making the network safer;
- Improving user satisfaction;
- Supporting the smooth flow of traffic;
- Encouraging economic growth;
- Delivering better environmental outcomes;
- Helping cyclists, walkers and other vulnerable users of the network;
- Achieving real efficiency; and
- Keeping the network in good condition.

1.3.4. Furthermore, the A27 is a road included in Highways England's feasibility studies.

"*The Department committed to undertaking six feasibility studies to help identify and fund solutions to tackle some of the most notorious and long-standing road hot spots in the country*".

"The A27 is the only east-west trunk road south of the M25. It links the key coastal urban areas between Portsmouth and Eastbourne with each other and the rest of the SRN. Over three quarters of a million people are concentrated in the urbanised coastal area. The route also runs along and through the South Downs National Park. Over 60% of the 67 miles length of road is dual carriageway, while four stretches of the road remain single carriageway at Arundel, Worthing and east of Lewes."
"The local economy has strengths in advanced engineering, tourism and other sectors and has accommodated substantial growth over the past decade. Over 60,000 new homes and substantial employment growth are expected to be developed over the next 15 years along the coast."

An investment package of around £350 million is being injected into the A27 and surrounding areas. This will include the development of sustainable transport measures within West Sussex.

THE CYCLING AND WALKING INVESTMENT STRATEGY (DFT, 2017)

1.3.5. The Cycling and Walking Investment Strategy (CWIS) was published by the government in 2017. This strategy outlines the government's ambition to make cycling and walking a natural choice for shorter journeys, with aims to:

- Double levels of cycling by 2025;
- Each year, reduce the rate of cyclists killed or injured on English road;
- Reverse the decline in walking activity; and
- Increase the percentage of children aged 5-10 who usually walk to school.

1.4 LOCAL POLICY CONTEXT

WEST SUSSEX WALKING AND CYCLING STRATEGY (2016)

1.4.1. The key stakeholder is WSCC with the NCN2 route linking towns and villages in the county, to the city of Chichester. WSCC published its Walking and Cycling Strategy for 2016 to 2026 with clear objectives:

- To ensure that cycling and walking are recognised as important travel modes and therefore part of the transport mix;
- To make cycling and walking the natural choice for shorter journeys (such as journeys to school), or as part of a longer journey;
- To reduce the number of cyclists and pedestrians that are killed or seriously injured on our roads;
- To support economic development by facilitating travel to work and services without a car;
- To reduce congestion and pollution by encouraging and enabling people to travel without a car;
- To increase levels of physical activity to help to improve physical health;
- To help to maintain good mental health and staying independent later in life;
- To increase the vitality of communities by improving access by bicycle and on foot; and
- To help people to access rural areas and enjoy walking and cycling.

WEST SUSSEX CYCLING DESIGN GUIDE (2019)

1.4.2. This document provides technical solutions appropriate to specific scenarios that support all cycle users when planning for new development or upgrading existing infrastructure. WSCCs aim is that these design standards become commonplace in all new schemes throughout the county and, as opportunities arise to renew and upgrade existing infrastructure through the normal maintenance routine, or as funding becomes available, they become the standard that is applied to the entire network if site-specific constraints allow. The guidance follows national design guidance referenced within this report, including;

- Design Manual for Roads and Bridges (DMRB);
- London Cycling Design Standards (2014); and
- Handbook for Cycle-friendly Design (Sustrans)

1.4.3. It is hoped that, by following the guidance, the best value is obtained from future investment in transport facilities through ensuring these are well designed for existing and potential new cycle users from the outset. Well-designed facilities, with cycle users in mind, are essential to make cycling the mode of choice for as many journeys as possible and meet the aims and aspirations of both the West Sussex Walking & Cycling Strategy 2016-2026, Local Cycling and Walking Infrastructure Plans (LCWIPs), and the government's Cycling and Walking Investment Strategy (CWIS).

1.5 METHODOLOGY

1.5.1. The main objective of the scheme is to develop proposals which improve the existing level of cycling infrastructure on the A259, thereby facilitating active mode trips between Chichester and Emsworth. This will be informed by a review of existing conditions to identify gaps in the existing cycling infrastructure which will incorporate data from a variety of sources this including site visits, desk-based assessments and stakeholder consultation. The existing conditions assessment will include a full Cycling Level of Service (CLoS) assessment, as detailed in Section 3.

1.5.2. Once the gaps in existing cycle infrastructure have been identified, several options for route enhancement will be assessed in terms of safety, comfort, directness, coherence and attractiveness.

A preferred option will then be set out for scheme development and preliminary design, taking into consideration input from stakeholder consultation and appraisal criteria.

1.5.3. Once the preferred option has been chosen, a desktop environmental study will be conducted to outline the existing environmental situation and set out any environmental constraints that may have to influence the design. The preferred option with then be costed and a Scheme Appraisal Report (SAR) completed to provide some high-level value for money (VfM) to be determined.

1.6 REPORT STRUCTURE

1.6.1. The structure of this feasibility study is as follows:

- Section 2: Outlines existing site information, including site visit observations;
- Section 3: Analyses existing and future cycling demand ;
- Section 4: summarises stakeholder consultation outcomes;
- Section 5: Route Improvement: Options Development and Appraisal;
- Section 6: Preliminary Route Design;
- Section 7: Desktop Environmental Study;
- Section 8: Scheme Costings;
- Section 9: Scheme appraisal report; and
- Section 10: provides a summary and conclusion.

2 EXISTING CONDITIONS

2.1.1. This section provides a summary of existing conditions to provide context to the requirement of the specific scheme in respect of local and strategic trip generators and attractors, to take into consideration existing and future desire lines.

2.2 LOCATION/LAYOUT

2.2.1. The study area includes a link that is approximately 10 miles long between Chichester and Emsworth on the route of the A259. The link and surrounding area is shown in Figure 2-1, overleaf.

2.2.2. The majority of the route is a single carriageway road with a speed limit that varies between 30 mph and national speed limit. From Chichester, the A259 Main Road passes through Fishbourne, Bosham, Nutbourne, Southbourne and Hermitage Bridge before arriving at Emsworth.

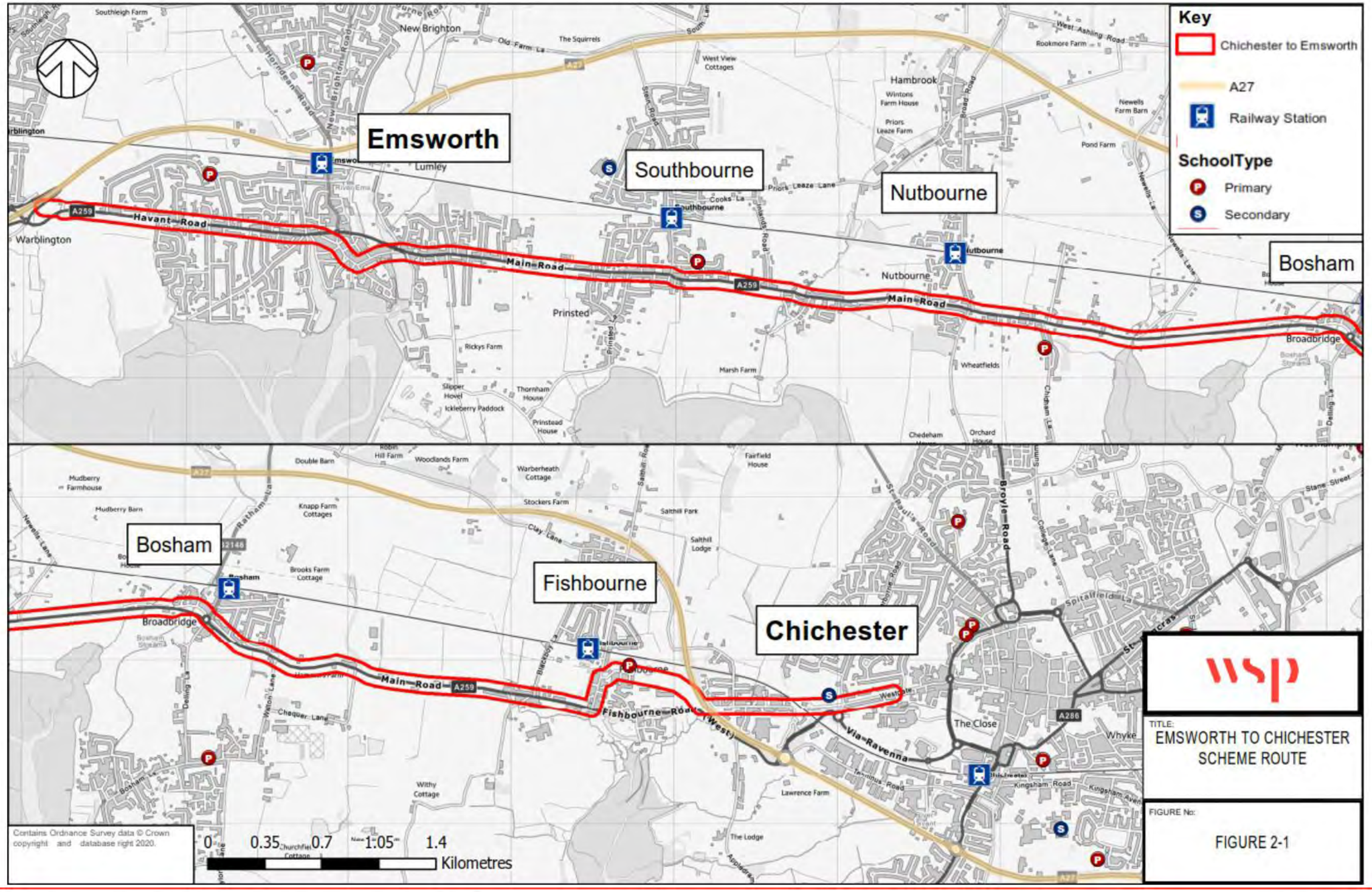
2.3 EXISTING PEDESTRIAN FACILITIES

2.3.1. Footways are intermittent with coverage on both sides of the carriageway in the villages and residential areas, often this goes down to one side of the carriageway in the more rural parts of the scheme study area. Table 2-1 below summarises the footway provision along the route.

Table 2-1: Footway and Crossing Provision along A259

Section	Provision
Emsworth to Southbourne	1.5m on both sides Signalised crossings at and away from junctions.
Southbourne to Nutbourne	1.5m north side only. Traffic islands at junctions and on roundabout arms.
Nutbourne to Bosham	2m shared-use path on south side. Traffic islands at junctions.
Bosham to Fishbourne	1.5 shared use path, narrows to 1m in places. No crossing facilities.
Fishbourne to Chichester	1.5m path on both sides of carriageway. Shared use path through Fishbourne Roman Palace. NMU crossing over railway line.

Figure 2-1: Study Area and Surrounding Facilities Plan

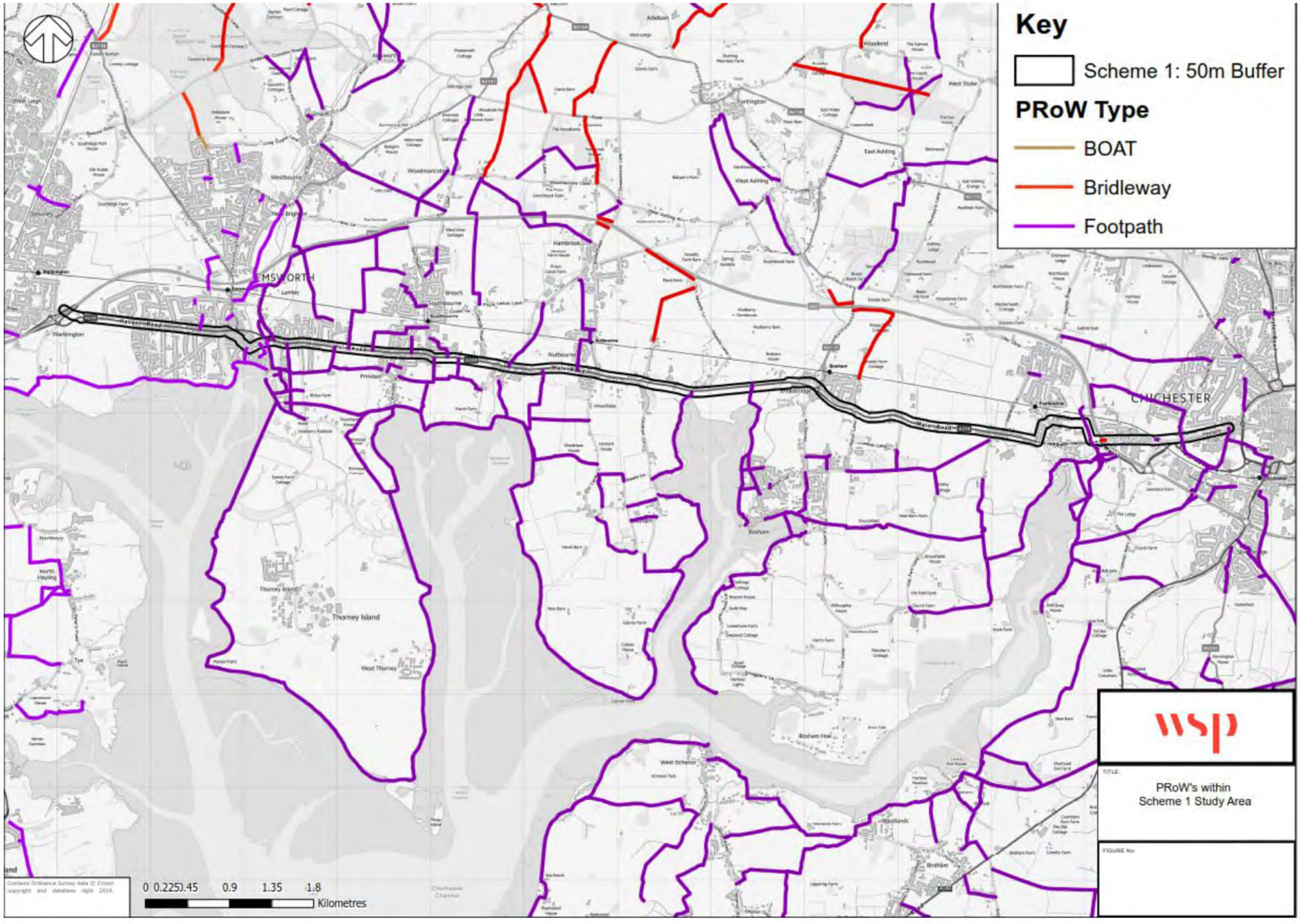


PUBLIC RIGHTS OF WAY (PROW)

2.3.2. There are approximately 18 PRoWs within the 50m study area of the A259 Main Road scheme extent. All the PRoWs within the study area are footpaths, although there are some bridleways to the north of the Emsworth to Chichester railway line. The locations of these PRoW's are shown in Figure 2-2, overleaf. The majority extend up to the A259 and only a few extend over the A259 Main Road.

2.3.3. To the south of the A259 at Emsworth, the PRoW network provides links to the villages of Thorney Island, Prinstead. To the north of Emsworth the PRoW network provides off-road links to the village of Westbourne. At the A259 Junctions with Tara Perry Road and Pottery Lane, a narrow PRoW footpath provides an off-road connection to Southbourne and Nutbourne Stations and village centres. A series of PRoW to the south of the A259 provide links to Bosham village centre around the scenic Cutmill Creek that overlooks the Chichester Harbour Area of Natural Outstanding Beauty.

Figure 2-2: Public Rights of Way Map



2.4 CYCLIST FACILITIES

2.4.1. This scheme is part of the NCN2, which mainly follows the alignment of the A259 Main Road. The facilities along the length of NCN2 vary in quality and standard with some of the length containing on-street and some containing off-street cycle facilities. Figure 2-3 below shows the route of NCN2 within the study. To the east of the study area, NCN2 continues through Bognor Regis and along the south coast into East Sussex and Kent. To the west of the study area, NCN2 provides a link towards Portsmouth, Southampton and along the south coast through to Dorset and Devon. Section 3 of this report provides a detailed assessment of the cycling conditions along this route.

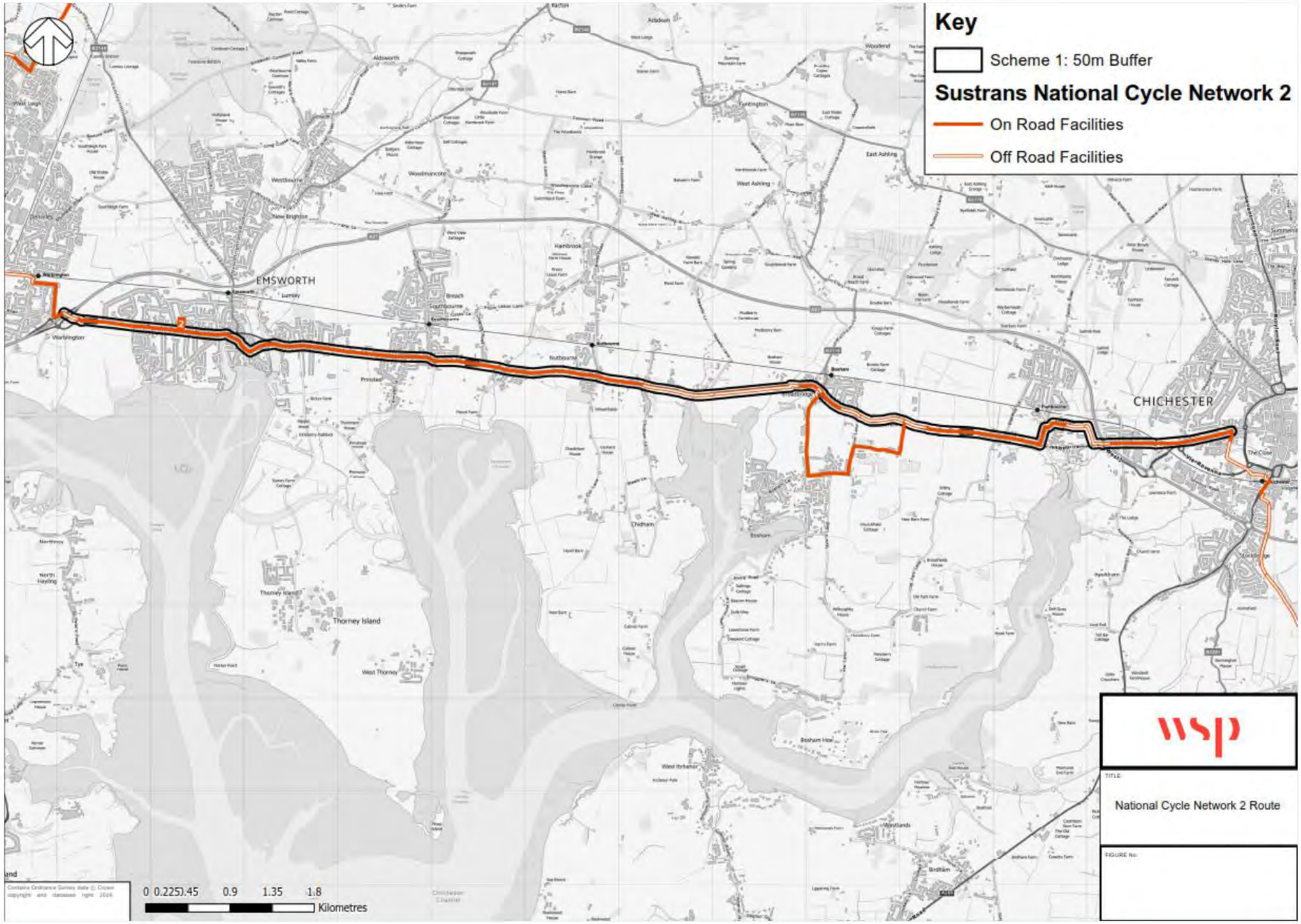
2.5 BUS SERVICES

2.5.1. The bus facilities in the study area include the bus routes shown below in Table 2-2.

Table 2-2: Local Bus Services along A259

Route Number	Direction	Weekday	Saturday
700 Coastliner	Littlehampton-Chichester-Emsworth-Portsmouth	Every 10 minutes	Every 10 minutes
56	Chichester-Old Bosham	Every 90 minutes	Every 90 minutes
27	Rowlands Castle-Havant-Emsworth	Every 2 hours	Every 2 hours

Figure 2-3: Cycle facilities in the vicinity of the study area



2.6 RAIL SERVICES

2.6.1. Emsworth railway station is located at the western end of the study area, on the West Coastway line, operated by Southern. This line also serves the stations of Southbourne, Nutbourne, Bosham, Fishbourne and Chichester, at the eastern end of the study area. Table 2-3 below summarises the services that run from the station within the study area.

Table 2-3: Rail Services within the Study Area

Station and Cycle Parking Facilities	Services	Frequency
Emsworth (Sheltered Cycle Parking - 15 Spaces)	Southampton	2 trains per hour
	London Victoria via Gatwick	1 train per hour
	Portsmouth	2 trains per hour
	Littlehampton	1 train per hour
	Brighton	1 train per hour
Southbourne (No Cycle Parking) Nutbourne (No Cycle Parking), Bosham (Platform Cycle Parking – 20 Spaces), Fishbourne (No Cycle Parking)	Southampton	1 train per hour
	London Victoria via Gatwick	1 train per hour
	Portsmouth	1 train per hour
	Brighton	1 train per hour
Chichester (Un-Sheltered Cycle Parking - 180 Spaces)	Southampton	2 trains per hour
	London Victoria via Gatwick	1 train per hour
	Portsmouth	2 trains per hour
	Bristol / Cardiff	1 train every 2 hours

2.6.2. With the aim of improving NMU conditions in the study area to facilitate greater uptake in journeys made by bike, consultation should be sought with the train operating companies and WSCC to provide bike parking facilities at the stations listed above.

2.7 LOCAL FACILITIES

2.7.1. Within the study area there are a number of local facilities (schools, hospitals, shops). These are outlined below and shown in Figure 2-1, above.

Schools

Table 2-4: Schools within 1km of the Study Area

School	Location
Emsworth Primary School	Victoria Road – 440 metres North of A259
Southbourne Junior School	New Road – 220 metres North of A259
Bourne Community College	Manor Road – 850 metres North of A259
Chidham Paochial Primary School	Chidham Lane – 300 metres South of A259
Bosham Primary School	Walton Lane – 1km South of A259
Fishbourne CofE Primary School	Roman Lane - 300m North of A259 (on NCN2)
Bishop Luffa School	Centurion Way – 200m North of Westgate, Chichester
Parklands Primary School	Sherbourne Road – 500m North of Westgate, Chichester

Hospitals

2.7.2. The only Hospital in close proximity to the study area is St Richards Hospital in Chichester. It is located approximately 1.5km to the East of the study area, just outside the centre of Chichester.

Employment Centres

2.7.3. There are a number of key employment centres within the study area that act as trip generators. These include the following locations:

- Emsworth town centre;
- Chichester town centre;

Other Amenities

2.7.4. The NCN2 route passes through the village centres of Emsworth, Southbourne, Nutbourne, Bosham and Fishbourne. All the village centres contain convenience stores, cafes, public houses, places of worship and some specialist shops. The City of Chichester, at the eastern end of the study area is a larger urban conurbation providing an extensive range of amenities. It is also a Cathedral city with a long history dating back to Roman times and therefore attracts large numbers of tourists.

3 CYCLING CONDITIONS

3.1 INTRODUCTION

3.1.1. This section outlines the findings from the site visit including a link assessment of the cycling conditions. The purpose of the site visit was to gain a physical perspective of NCN2 from the viewpoint of an NMU and to identify any particular issues that were not evident when assessing the route via a desktop study alone.

3.1.2. On the day of the site visit, weather conditions were mild with clear skies. These conditions were considered to be conducive for NMU journeys to take place.

3.2 METHODOLOGY

3.2.1. The site visit allowed for a thorough examination of the existing cycle conditions. The assessment considered the core design principles such as Safety, Accessibility and Attractiveness as identified within 'DfT Local Transport Note 1/12: Shared Use Routes for Pedestrians and Cyclists (September 2012)' and 'Sustrans Design Manual: Handbook for cycle-friendly design (April 2014)'.

3.2.2. The Cycling Level of Service (CLoS) assessment toolkit was used to assess each link along the route. This allows for an objective assessment of the cycle conditions based on six key themes:

- Safety;
- Directness;
- Coherence;
- Comfort;
- Attractiveness; and
- Adaptability.

3.2.3. All links are scored out of 100. However, due to certain scoring factors not being applicable to this route and on certain links, a percentage score is used which indicates the level of service provided.

- Routes with an overall total of less than 40% are considered to have a 'low' level of service;
- Those between 40 and 70% an 'improved' level of service; and
- Scores above 70% represents 'good' provision for cycling.

3.2.4. Within the main themes, the CLoS assessment is broken down into 42 individual factors, 8 of these factors (listed below) are identified as 'critical' and therefore have greater weighting in the CLoS assessment. The London Cycle Design Standards (LCDS)[1] guidance recommends that factors causing routes to fail against 'critical' criteria should be addressed as a priority regardless of the overall score for a link. These include:

- Risk of collision with turning vehicles at junctions;
- Risk of collision from the side or behind;

[1] Tfl, 2016, http://content.tfl.gov.uk/lcds-chapter1-designrequirements.pdf

- Level of kerbside activity;
- Traffic speed;
- Traffic volume;
- Interaction with Heavy Goods Vehicles (HGVs);
- Quality of surface; and
- Width of allocated cycling area.

3.2.5. Quiet residential streets are unlikely to score highly on factors related to segregation and separation from traffic; however, it is unlikely that this level of infrastructure is desirable in a quiet residential environment and therefore the CLoS scoring should be considered in this context.

3.2.6. In order to undertake the assessment for all streets within the study area using data available, additional assumptions have been made when scoring against certain criteria such as traffic speed, traffic volume, levels of HGVs, noise and air quality.

3.2.7. The CLoS assessment is carried out for the length of the NCN2 between Emsworth and Chichester and broken down into the following links, based on the different street typologies that exist along the route;

- Link 1: Havant Road (Emsworth)
- Link 2: Emsworth High Street
- Link 3: Emsworth to Southbourne
- Link 4: Southbourne to Farm Lane
- Link 5: Farm Lane to Broad Road
- Link 6: Broad Road to Cutmill Creek
- Link 7: Cutmill Creek to Old Bridge Road
- Link 8: Old Bridge Road to Brooks Lane
- Link 9: Brooks Lane to Hillier Garden Centre
- Link 10: Hillier Garden Centre to Salthill Road
- Link 11: Roman Way (Fishbourne)
- Link 12: Fishbourne Road East to Westgate (Chichester).

3.2.8. Full details of the LCDS CLoS scoring criteria and modifications for this study are provided in Appendix A.

3.3 LINK 1: HAVANT ROAD (EMSWORTH)

3.3.1. Link 1 runs along the NCN2 route (as shown in Figure 3-3), which has a mix of on-road-advisory and mandatory cycle lanes. At the western end of the link the cycle lanes are 1.5m wide (see Figure 3-1). However, these narrow in points on the southern side of the carriageway when they become advisory (see Figure 3-2). During the site visit the advisory lanes were observed with parked vehicles occupying them outside residential properties, creating pinch points and a safety hazard for passing cyclists.

3.3.2. The CLoS Assessment for this section is shown in Table 3-1 below.

Table 3-1: Havant Road CLoS

Factor	Description	CLoS Score
Safety	Side road junctions are frequent with conflicting movements not separated. Cycle lanes less than 2m wide in general traffic lanes. 30 mph speed limit with high volumes of traffic results in low scores for feeling of safety.	19%
Directness	Cyclists have enough room to pass queuing vehicles and other cyclists. No deviation factor from straight line main road route.	63%
Coherence	Cyclists have dedicated connection to Emsworth High Street with cycle specific signage present. Signage could be clearer.	75%
Comfort	Some minor defects to road surface. Pinch points caused by slight narrowing of advisory cycle lane between Lane End Drive and Warblington Road.	40%
Attractiveness	Route has some greening elements with grass embankments. Medium to high PM10 NOX, and noise pollution values assumed on basis of high traffic flows.	40%
Adaptability	Link could be adjusted to meet demand, but junction improvements may be constrained by vehicle capacity limitations.	50%
	Total CLoS Score:	33%

3.3.3. The link score of 33% represents a low level of service for cyclists. Although large parts of the link provide good cycle provision, in the form 1.5m on-road-mandatory cycle lanes, these end at certain locations to become narrower, advisory-only lanes. There are numerous side road junctions with a lack of treatment to slow down vehicle turning movements that reduce collision risk.

Figure 3-1: Mandatory Cycle Lane, Link 1

Figure 3-2: Narrow pinch point, Link 1

Figure 3-3: Link 1 Extent

3.4 LINK 2: EMSWORTH HIGH STREET

The Havant Road advisory cycle lanes end at the junction with West Street, where a Toucan crossing is provided for cyclists heading east towards Emsworth High Street. The route is shown in Figure 3-6. A short-shared-use path is provided with filtered access to West Street and the High Street (see Figure 3-4). No cycle is provided along West Street or the High Street, but due to shop-front activity and the narrow street typology, traffic speeds are low and the environment can be considered conducive to cycling (see Figure 3-5).

3.4.1. Table 3-2 below, outlines the full CLoS scores for this link.

Table 3-2: Emsworth High Street CLoS

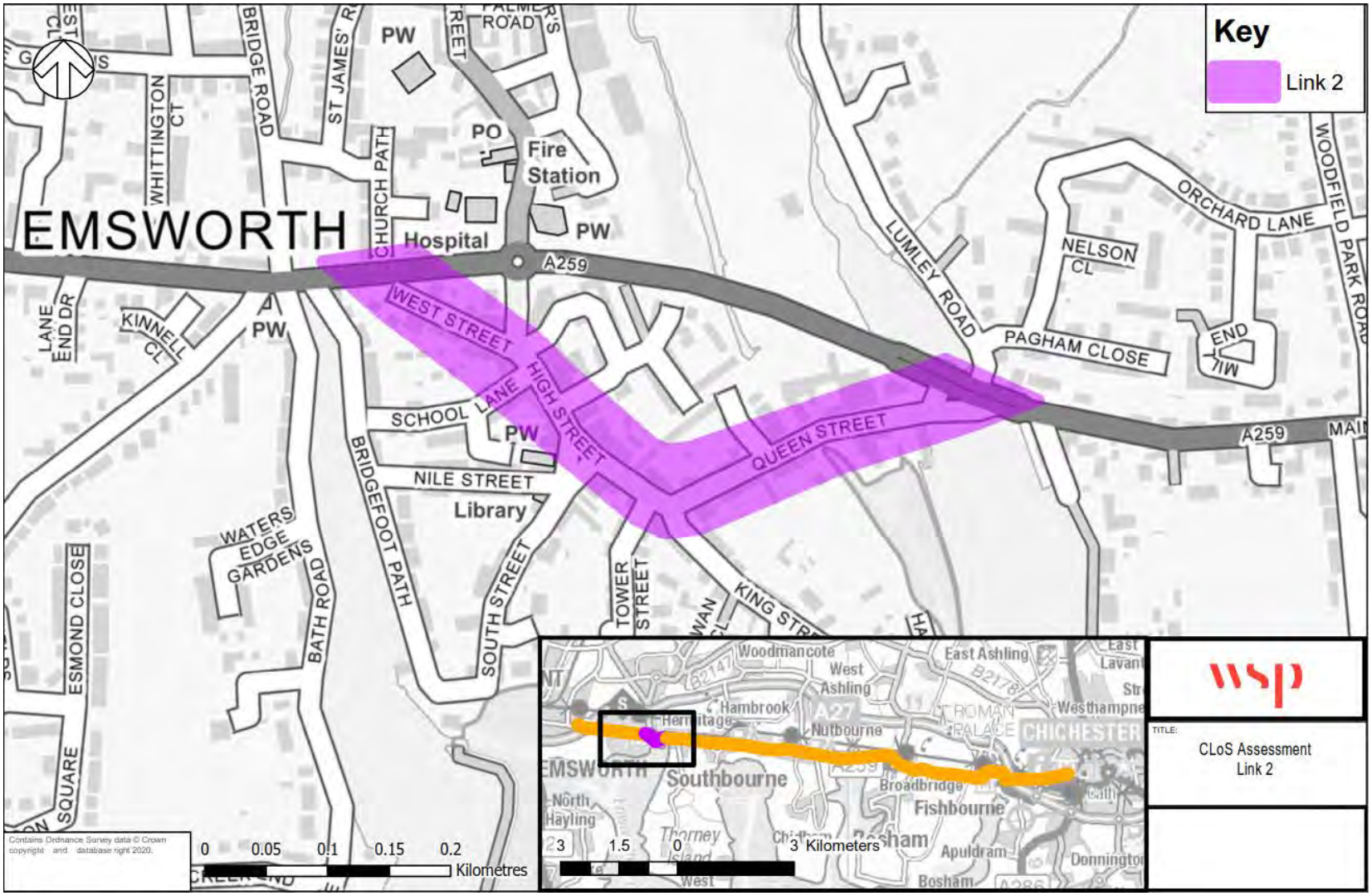
Factor	Description	CLoS Score
Safety	Toucan crossing at Havant Road / West Street provides a segregated crossing movement at this location. No segregation provided along the high street, but traffic speeds and volumes are low which provides a good score for feeling of safety. Route is overlooked for most of the day and well-lit for most parts.	42%
Directness	Cyclists have enough room to pass other cyclists and pedestrians. Journey time delayed at Havant Road / West Street where cyclists have to mount pavement to use toucan crossing. This is difficult to navigate travelling westbound. Slight deviation of route from A259.	38%
Coherence	Cyclists share connections with motor traffic but on road cycle-specific direction signing is worn and not easily seen. Clearer signposted directional signing is required at Havant Road / West Street.	25%
Comfort	Few minor defects in surface quality with accumulation of mud and debris at West Street / Havant Road. Low motor vehicle flow on High Street. However, parked cars along Queen Street create pinch points.	55%
Attractiveness	No impact on pedestrian provision Green infrastructure incorporated with tree lined streets and pleasant scenery. Air quality and noise pollution assumed to be low/medium due to low trafficked route through High Street.	60%
Adaptability	Facility can be adapted within area constraints by reducing traffic in the high street / queen street by restricting through traffic.	50%
	Total CLoS Score:	46%

3.4.2. The link score of 49% represents an improved level of service. Low scores are recorded for collision risk due to the lack of segregation. However, scores for feeling of safety are good due to low traffic speeds and volumes. Restricting vehicular through traffic and prioritising cycle and pedestrian movements would further improve safety scores. Clearer direction signing would improve scores for coherence with more on-road markings also helping to prioritise cycle movements over vehicles.

Figure 3-4: Filtered access from A259 to West Street / High Street, Link 2

Figure 3-5: Emsworth High Street

Figure 3-6: Link 2 Extent



3.5 LINK 3: EMSWORTH TO SOUTHBOURNE

3.5.1. The NCN2 route re-joins the A259 carriageway at the junction with Queen Street. The full extent of Link 3 is shown below in Figure 3-9. Immediately at the junction an advisory cycle lane is provided on both sides of the carriageway, but this provision ends 50m to the east of the junction (see Figure 3-7). For the remainder of the link, no cycle provision is provided along the carriageway with some token cycle symbols painted in the road (see Figure 3-8).

3.5.2. **Table 3-3** below, shows the full CLoS assessment for this link.

Table 3-3: Emsworth to Southbourne CLoS

Factor	Description	CLoS Score
Safety	High risk of left/right hook collisions at junctions with heavy streams of traffic turning across main cycling stream Cyclists in general traffic lanes with vehicle speeds above 25mph and volumes between 500-1000.	8% (Critical fail for collision risk)
Directness	Cyclist have carriageway width to pass other cycles with journey times consistent with that of flowing traffic. Queuing traffic may prevent cyclists passing due to minimal nearside width for filtering. No deviation from straight line main road alternative.	63%
Coherence	Cyclists share connections with motor traffic with few cycle-specific directions signing.	50%
Comfort	Many on-road surface defects including sunken drain covers. Effective nearside space less than 1.5m creates conflict with high motor vehicle flow.	20% (Critical fail for safe passing distance)
Attractiveness	Route has some greening elements with grass embankments and tree lined streets. Medium to high PM10 NOX and noise pollution values assumed on basis of high traffic flows.	40%
Adaptability	Lack of cycle provision does not match current levels of demand. Link could be adjusted to meet demand but junction improvements may be constrained by vehicle capacity limitations.	50%
	Total CLoS Score:	22%

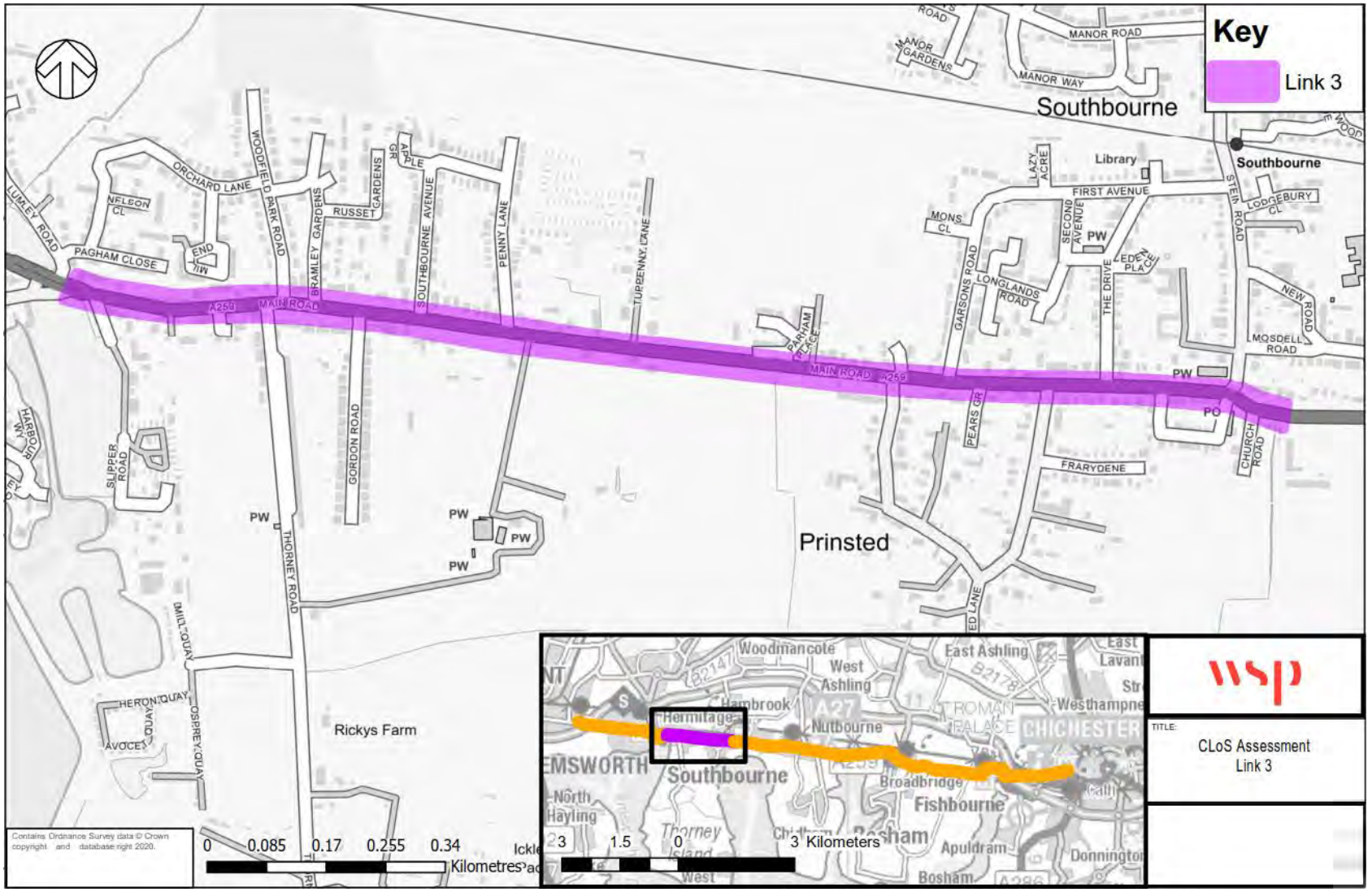
3.5.3. The link score of 22% represents a low level of service with critical failings for safety and comfort. Collision risk is high at junctions with heavy flows of traffic turning across the main cycling stream with no visual priority or segregation. Traffic volumes are high with speeds above 30mph

aggravating scores for feeling of safety and comfort levels. Surface quality is poor with many defects including sunken gullies adding to the low scores for comfort.

Figure 3-7: Advisory cycle lane ends 50m east of junction with Queen Street, Link 3

Figure 3-8: Broken road surface with sunken drain covers

Figure 3-9: Link 3 Extent



3.6 LINK 4: SOUTHBOURNE – STEIN ROAD TO FARM LANE

3.6.1. The NCN2 route passes through the village of Soutbourne at the A259 junction with Stein Road. Figure 3-14 demonstrates the extent of Link 4. A mini roundabout at the junction with Stein Road provides no cycling provision (see Figure 3-10), with on road advisory cycle lanes on both sides of the carriageway, provided 100m east of this junction. However, parking spaces provided outside residential properties mean the cycle lanes were often obstructed during the site visit (see Figure 3-11). The cycle lanes switch from providing advisory to mandatory provision up to the junction with Farm Lane. The width of the lane varies from 1.5m to 1m in places.

3.6.2. **Table 3-4** below outlines the full CLoS assessment for this link.

Table 3-4: Stein Road to Farm Lane CLoS

Factor	Description	CLoS Score
Safety	High risk of left/right hook collisions at junctions with heavy streams of traffic turning across main cycling stream Cyclists in general traffic lanes with vehicle speeds above 30mph and volumes between 500-1000.	8% (Critical fail for collision risk)
Directness	Cyclists have carriageway width to pass other cycles with journey times consistent with that of flowing traffic. Queuing traffic may prevent cyclists passing due to minimal nearside width for filtering. No deviation from straight line main road alternative.	63%
Coherence	Cyclists share connections with motor traffic with few cycle-specific directions signing.	50%
Comfort	Many on-road surface defects including sunken drain covers. Effective nearside space less than 1.5m creates conflict with high motor vehicle flow passing at speeds above 30mph (speed limit 40mph).	25% (Critical fail for safe passing distance and vehicle speeds)
Attractiveness	Route has some greening elements with grass embankments and tree lined streets. Medium to high PM10 NOX and noise pollution values assumed on basis of high traffic flows.	40%
Adaptability	Link could be adjusted to meet demand but junction improvements may be constrained by vehicle capacity limitations.	50%
	Total CLoS Score:	24%

3.6.3. The link score of 24% represents a low level of service with critical failings for collision risk and comfort. Collision risk is high at junctions with heavy flows of traffic turning across the main cycling stream with no visual priority or segregation. Traffic volumes are high with speeds above 30mph aggravating scores for feeling of safety and comfort levels. Surface quality is poor with many defects including sunken gullies adding to the low scores for comfort.

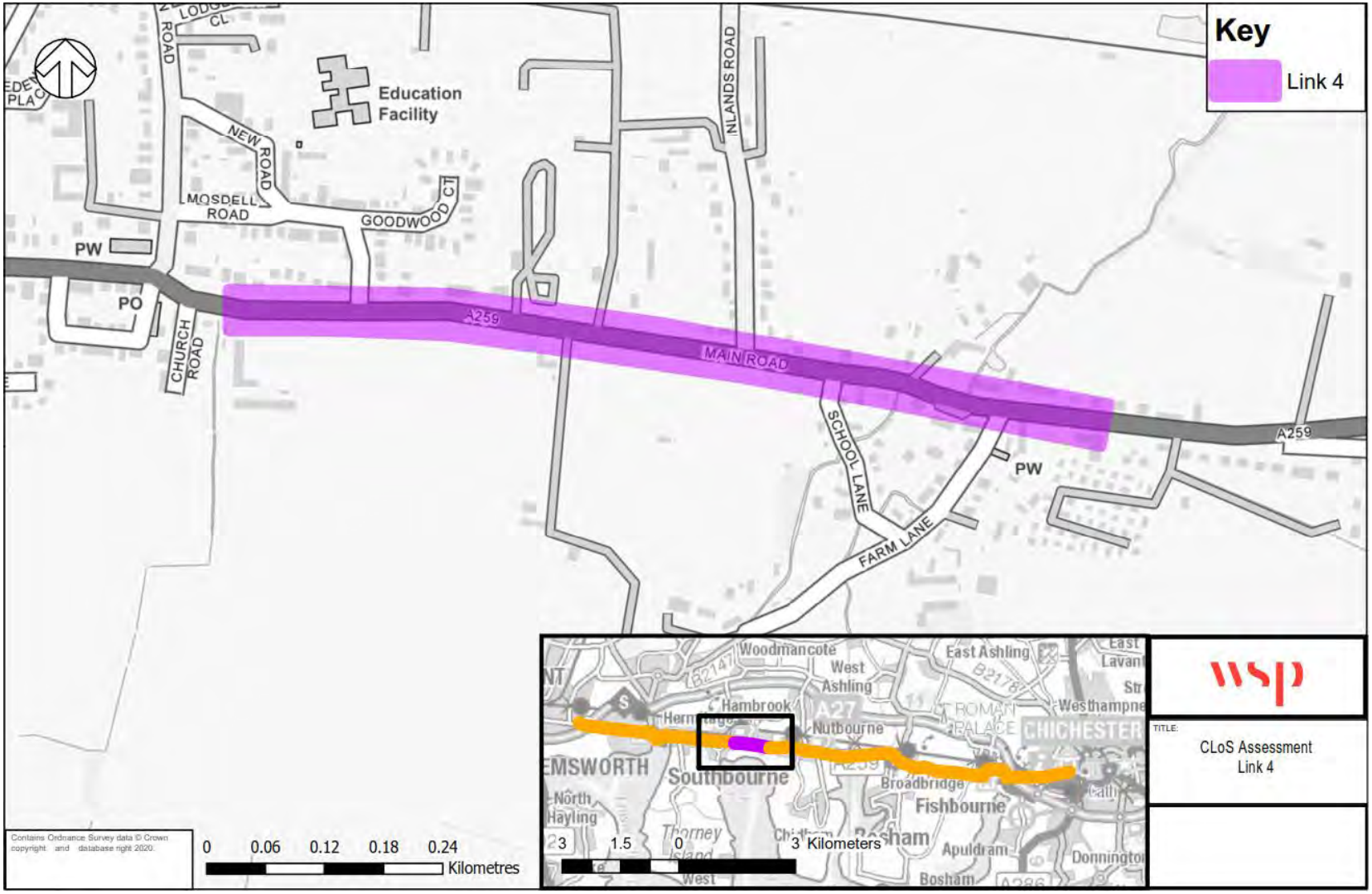
Figure 3-10: Roundabout at Stein Road with no cycle provision, Link 4

Figure 3-11: Cars park over advisory cycle lane, Link 4

Figure 3-12: Speed Limit increases to 40mph reducing CLoS scores for safety, Link 4

Figure 3-13: Faded advisory cycle lane, providing poor provision alongside 40mph traffic, Link 4

Figure 3-14: Link 4 Extent



3.7 LINK 5: FARM LANE TO BROAD ROAD

3.7.1. Link 5 (full extent shown in Figure 3-17) passes through the village of Nutbourne. Approximately 100m east of Farm Lane, advisory cycle lanes are provided but during the site visit, the cycle lane on the north side of the carriageway was occupied by parked cars outside residential properties making them redundant. A further 100m east and the advisory cycle lane provision ends with a few cycle symbols painted on the carriageway (see Figures 3-15 and 3-16).

3.7.2. **Table 3-5** below shows the full CLoS assessment scores for this link.

Table 3-5: Farm Lane to Broad Road CLoS

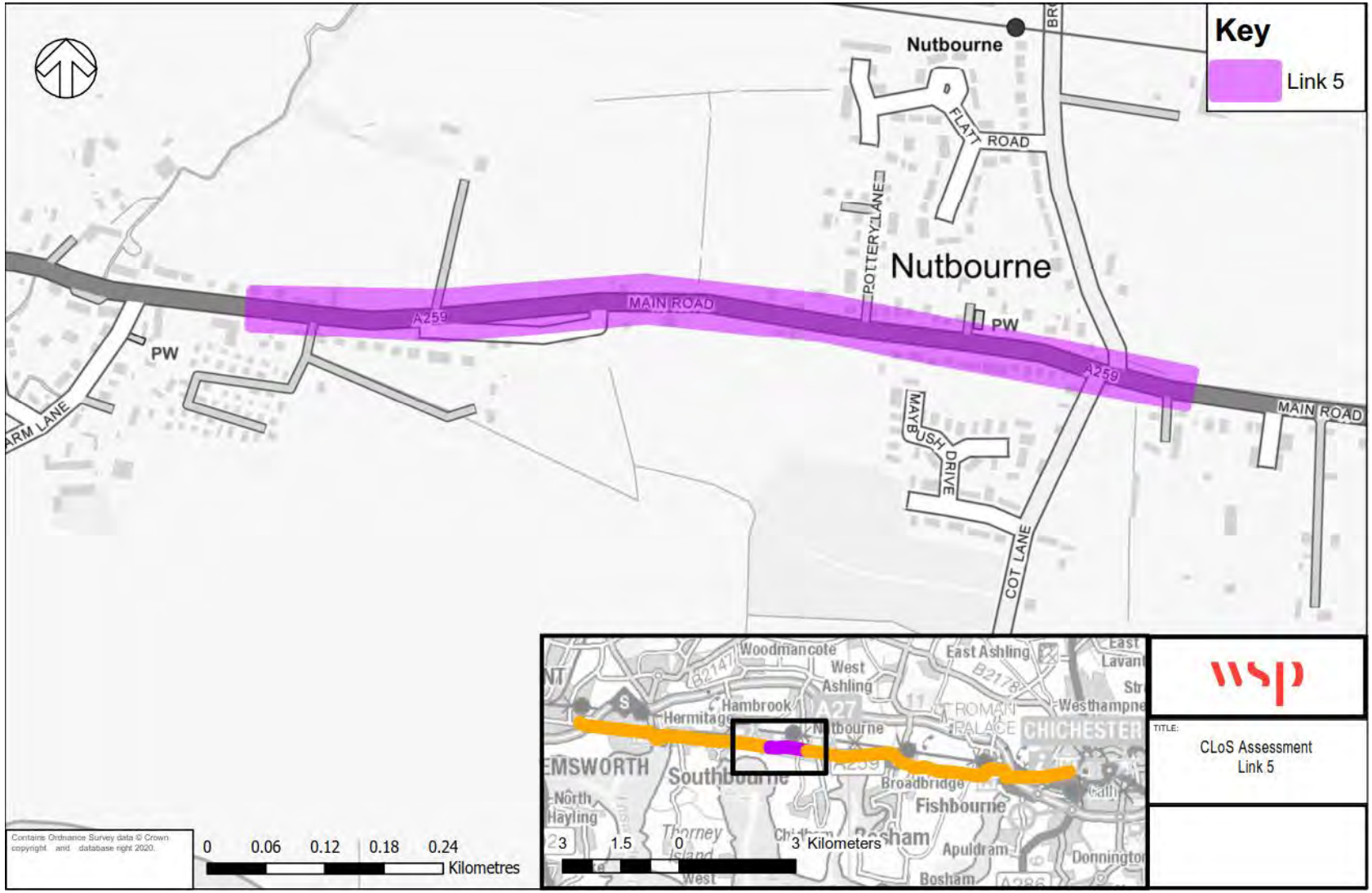
Factor	Description	CLoS Score
Safety	High risk of left/right hook collisions at junctions with heavy streams of traffic turning across main cycling stream Cyclists in general traffic lanes with vehicle speeds above 25mph and volumes between 500-1000.	8% (Critical fail for collision risk)
Directness	Cyclist have carriageway width to pass other cycles with journey times consistent with that of flowing traffic. Queuing traffic may prevent cyclists passing due to minimal nearside width for filtering. No deviation from straight line main road alternative.	63%
Coherence	Cyclists share connections with motor traffic with few cycle-specific directions signing.	50%
Comfort	Many on-road surface defects including sunken drain covers. Effective nearside space less than 1.5m creates conflict with high motor vehicle flow.	25% (Critical fail for safe passing distance and vehicle speeds)
Attractiveness	Route has some greening elements with grass embankments and tree lined streets. Medium to high PM10 NOX and noise pollution values assumed on basis of high traffic flows.	40%
Adaptability	Lack of cycle provision does not match current levels of demand. Link could be adjusted to meet demand but junction improvements may be constrained by vehicle capacity limitations.	50%
	Total CLoS Score:	23%

3.7.3. The link score of 23% represents a low level of service with critical failings for collision risk and comfort. Collision risk is high at junctions with heavy flows of traffic turning across the main cycling stream with no visual priority or segregation. Traffic volumes are high with speeds above 30mph aggravating scores for feeling of safety and comfort levels. Surface quality is poor with many defects including sunken gullies adding to the low scores for comfort.

Figure 3-15: Broken surface with no cycle provision, Link 5

Figure 3-16: No cycle provision, Link 5

Figure 3-17: Link 5 Extent



3.8 LINK 6: BROAD ROAD TO CUTMILL CREEK

3.8.1. For the length of Link 6 (shown in Figure 3-20), there are 1m wide advisory cycle lanes provided on each side of the carriageway (see Figure 3-18). On the southern side of the carriageway parked cars occupy the cycle lanes (see Figure 3-19) making them redundant for cyclists traveling west. There are no parking restrictions in place to prevent this.

3.8.2. **Table 3-6** below outlines the full CLoS assessment results for this link.

Table 3-6: Broad Road to Cutmill Creek

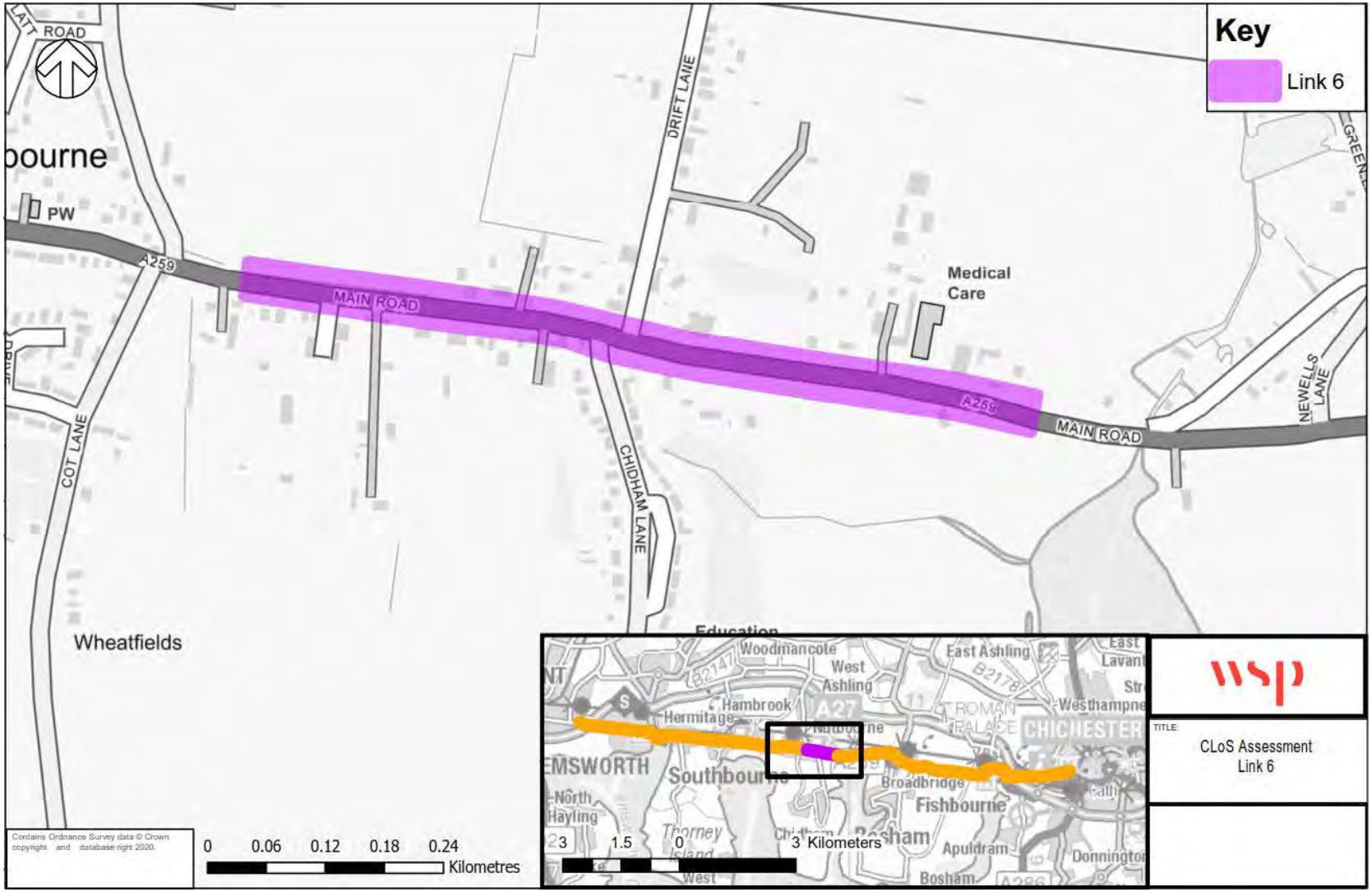
Factor	Description	CLoS Score
Safety	High risk of left/right hook collisions at junctions with heavy streams of traffic turning across main cycling stream Cyclists in general traffic lanes with vehicle speeds above 30mph and volumes between 500-1000.	8% (Critical fail for collision risk)
Directness	Cyclist have carriageway width to pass other cycles with journey times consistent with that of flowing traffic. Queuing traffic may prevent cyclists passing due to minimal nearside width for filtering. No deviation from straight line main road alternative.	63%
Coherence	Cyclists share connections with motor traffic with few cycle-specific directions signing.	50%
Comfort	Many on-road surface defects including sunken drain covers. Effective nearside space less than 1.5m creates conflict with high motor vehicle flow passing at speeds above 30mph (speed limit 40mph).	25% (Critical fail for safe passing distance and vehicle speeds)
Attractiveness	Route has some greening elements with grass embankments and tree lined streets. Medium to high PM10 NOX and noise pollution values assumed on basis of high traffic flows.	40%
Adaptability	Link could be adjusted to meet demand but junction improvements may be constrained by vehicle capacity limitations.	50%
	Total CLoS Score:	23%

3.8.3. The link score of 23% represents a low level of service with critical failings for collision risk and comfort. Collision risk is high at junctions with heavy flows of traffic turning across the main cycling stream with no visual priority or segregation. Traffic volumes are high with speeds above 30mph aggravating scores for feeling of safety and comfort levels. Surface quality is poor with many defects including sunken gullies adding to the low scores for comfort.

Figure 3-18: Junction with Broad Road, Link 6

Figure 3-19: Parked vehicle in advisory cycle lane, Link 6

Figure 3-20: Link 6 Extent



3.9 LINK 7: CUTMILL CREEK TO OLD BRIDGE ROAD

3.9.1. Along Link 7 (extent shown in Figure 3-23), a 2.5m wide shared use path is provided on the southern side of the carriageway (see Figure 3-21). Due to overgrown vegetation and debris, the effective width is 2m. Accessing the shared use path from the west, requires cyclists to mount the pavement and use the traffic island crossing facility to cross to the south side of the carriageway (see Figure 3-22).

3.9.2. The full CLoS assessment results for this link are shown below in Table 3-7.

Table 3-7: Cutmill Creek to Old Bridge Road

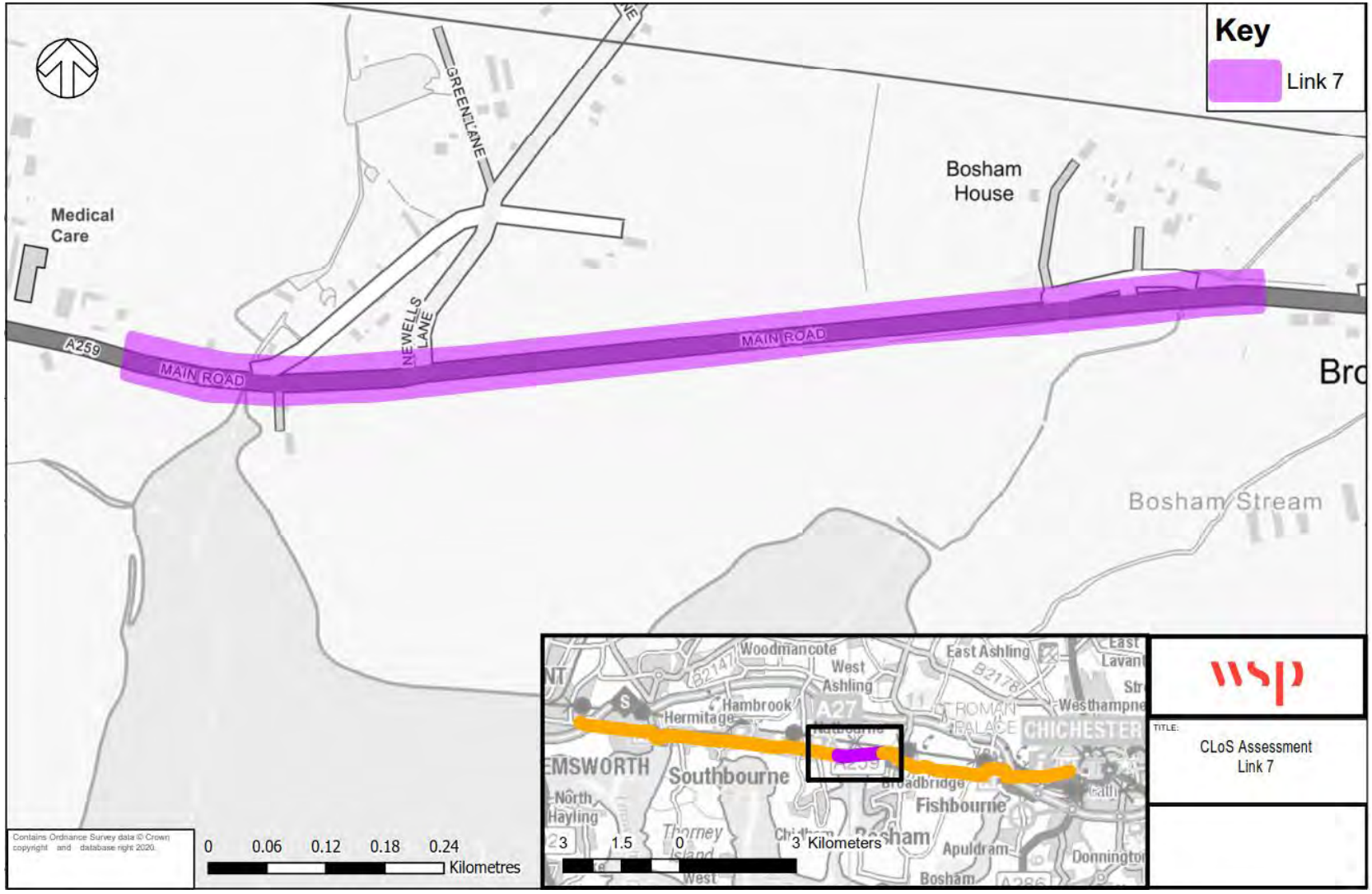
Factor	Description	CLoS Score
Safety	Separation from traffic along the route and at junctions/side roads. Route is well lit and overlooked for most of the day. Narrow traffic island for crossing at western end (difficult to score in CLoS)	89%
Directness	Cyclists have enough room to pass other cyclists/pedestrians. Delay at joining the shared use path where cyclists must mount pavement and wait to cross to other side of carriageway. No deviation of route against straight line or main road alternative.	50%
Coherence	Some cycle-specific signing is in place but could be more consistent.	50%
Comfort	Good surface quality with a few minor defects caused by mud and debris accumulation. Effective width from overtaking motor vehicles greater than 2.0m but reduced by presence of overgrown shrubbery.	65%
Attractiveness	Minor impact on pedestrian provision with reduced footway widths. Full integration of green infrastructure minimal street clutter. Air Quality and Noise Pollution assumed to be medium due to proximity of carriageway.	50%
Adaptability	The link meets existing user demand and can be adjusted to meet demand but junction improvements are constrained by vehicle capacity limitations.	50%
	Total CLoS Score:	71%

3.9.3. The total CLoS score of 71% represents a good level of service along this link of the route. Further improvements to directness, by reducing delays crossing the carriageway to access the shared use path, could further increase the overall level of service score. However, the adaptability of the route at this location will be constrained by vehicle capacity limitations.

Figure 3-21: Cycle provision switches to southern side of carriageway, Link 7

Figure 3-22: Shared use path, Link 7

Figure 3-23: Link 7 Extent



3.10 LINK 8: OLD BRIDGE ROAD TO BROOKS LANE

3.10.1. Along Link 8 (extent shown in Figure 3-27), the NCN2 shared use path switches to the northern side of the carriageway (see Figure 3-24) 100m before deviating slightly to take a quiet route through the residential streets of Old Bridge Road (see Figure 3-25) and Penwarden Way, which run parallel to the A259 carriageway.

3.10.2. The full CLoS assessment results are shown below in **Table 3-8.**

Table 3-8: Old Bridge Road to Brooks Lane CLoS

Factor	Description	CLoS Score
Safety	No segregation but low collision risk on shared use path and quiet residential streets. Traffic volumes and speeds are low. Route is overlooked for most of the day and well-lit for most parts.	71%
Directness	Cyclists have enough room to pass other cyclists and pedestrians. Journey time delayed switching from south to north side of carriageway to continue on shared use path. Slight deviation of route from A259.	63%
Coherence	Cyclists have dedicated connections through quiet residential streets but on road cycle-specific direction signing is worn and not easily seen. Directional signing not clear across roundabout with Station Road (see Figure 3-26)	50%
Comfort	Few minor defects in surface quality with accumulation of mud and debris at end of shared use path and start of Old Bridge Road. Low motor vehicle flow with no pinch points or horizontal/vertical deflections.	65%
Attractiveness	Slight impact on pedestrian provision on narrow shared use paths at either end of Middle Street. Green infrastructure with tree lined shared use paths and pleasant scenery. Air quality and noise pollution assumed to be low/medium due to distance from carriageway and low trafficked route through Middle Street.	70%
Adaptability	Facility can be expanded or layout adapted within area constraints.	50%
	Total CLoS Score:	67%

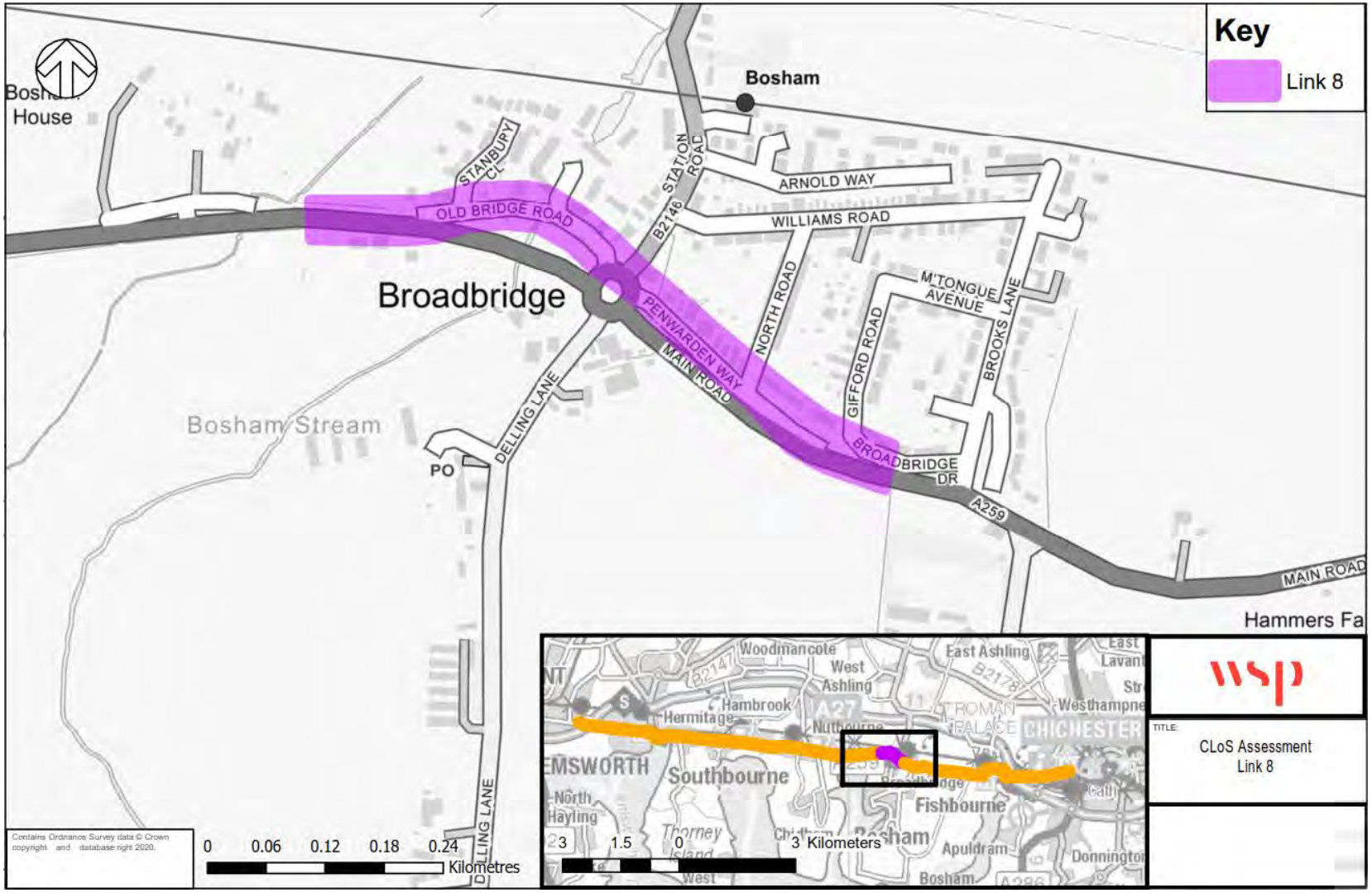
3.10.3. The overall CLoS score of 67% represents a level of service just below 'good'. Improvements to the crossing and signage of the station road roundabout would increase CLoS scores for safety, directness and coherence.

Figure 3-24: Cycle provision switches to North side of carriageway, Link 8

Figure 3-25: Route diverts away from carriageway through Old Bridge Road

Figure 3-26: No cycle specific signage or provision across Station Road roundabout, Link 8

Figure 3-27: Link 8 Extent



3.11 LINK 9: BROOKS LANE TO HILLIER GARDEN CENTRE

3.11.1. Approximately 100m west of Brooks Lane (link extent shown in Figure 3-32), the NCN2 route re-joins the A259 with a shared use path provided on the northern side of the carriageway (see Figure 3-28) which continues for approximately 1km where it passes the Hillier Garden Centre. The shared use path is approximately 1.5m wide, although this narrows in places to 1m (see Figure 3-30).

3.11.2. The CLoS assessment for Link 9 is shown in Table 3-9 below.

Table 3-9: Brooks Lane to Hillier Garden Centre CLoS

Factor	Description	CLoS Score
Safety	Cyclists are separated from motorised traffic. However, side road junctions are untreated with conflicting movements and risk of left hook collisions from fast moving traffic turning across cycle path (see **Figure 3-29**). Poor visibility crossing the junction with Brooks Lane.	53%
Directness	Cyclists have to slow/stop at side roads, to look behind for fast moving traffic indicating left (see **Figure 3-29**)	50%
Coherence	Cyclists share connections with motor traffic with some cycle specific signage in place.	50%
Comfort	Good surface quality along most of the link, with a few minor defects and accumulation of mud/debris. Some small pinch points where path narrows.	65%
Attractiveness	Narrow path in places will cause slight reduction in pedestrian comfort levels and increase user conflict. High levels of noise pollution due to proximity to carriageway.	40%
Adaptability	Provision is matched to current levels of demand but with little spare capacity.	50%
	Total CLoS Score:	54%

3.11.3. The treatment of side roads to slow turning traffic would reduce left hook collision risks and give cyclists clear priority allowing them to maintain speed. This would increase CLoS scores for safety and directness. A realignment of the path to move it further from the carriageway with a continuous grass verge buffer would increase CLoS scores for comfort and attractiveness.

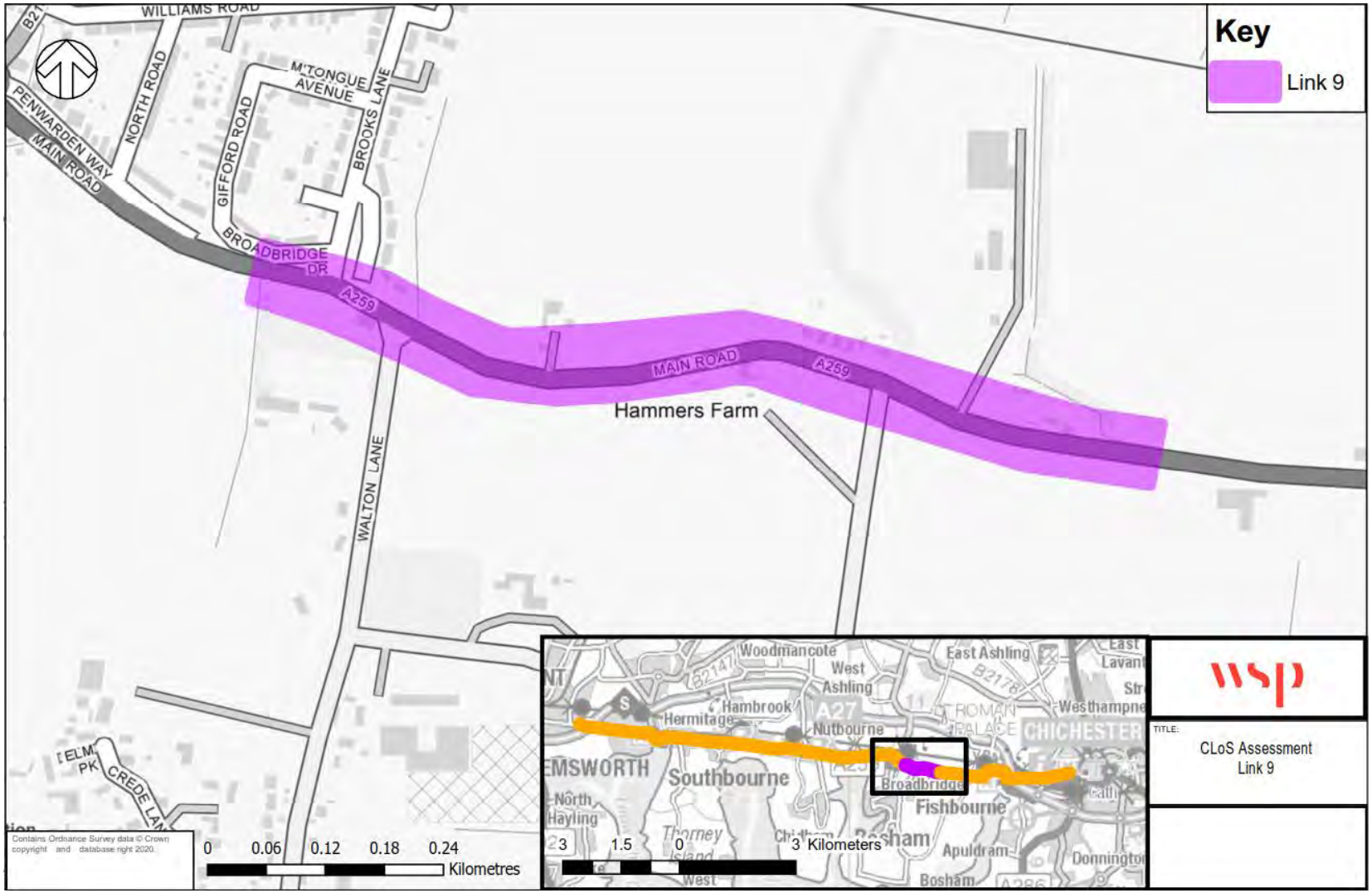
Figure 3-28: Shared use path, Link 9

Figure 3-29: Conflicting turning movements and no priority over side road, Link 9

Figure 3-30: Shared use path narrows, Link 9

Figure 3-31: Narrow shared use path with poor surface quality, Link 9

Figure 3-32: Link 9 Extent



3.12 LINK 10: HILLIER GARDEN CENTRE TO SALTHILL ROAD

3.12.1. The shared use path ends approximately 200m east of the junction with Chequers Lane (link extent shown in Figure 3-35). Cyclists traveling west must abruptly leave the carriageway, dismount and use a narrow traffic island to cross to join the shared use path in Link 9. Cyclists traveling east must re-join the carriageway and are provided with a mixture of mandatory and advisory cycle lanes that are inconsistent in width, varying between 1.5m and 1m wide (see Figure 3-33 and Figure 3-34). They continue for 1km until ending at the junction with Salthill Road.

3.12.2. **Table 3-10** below outlines the complete CLoS scores for this link.

Table 3-10: Hillier Garden Centre to Salthill Road CLoS

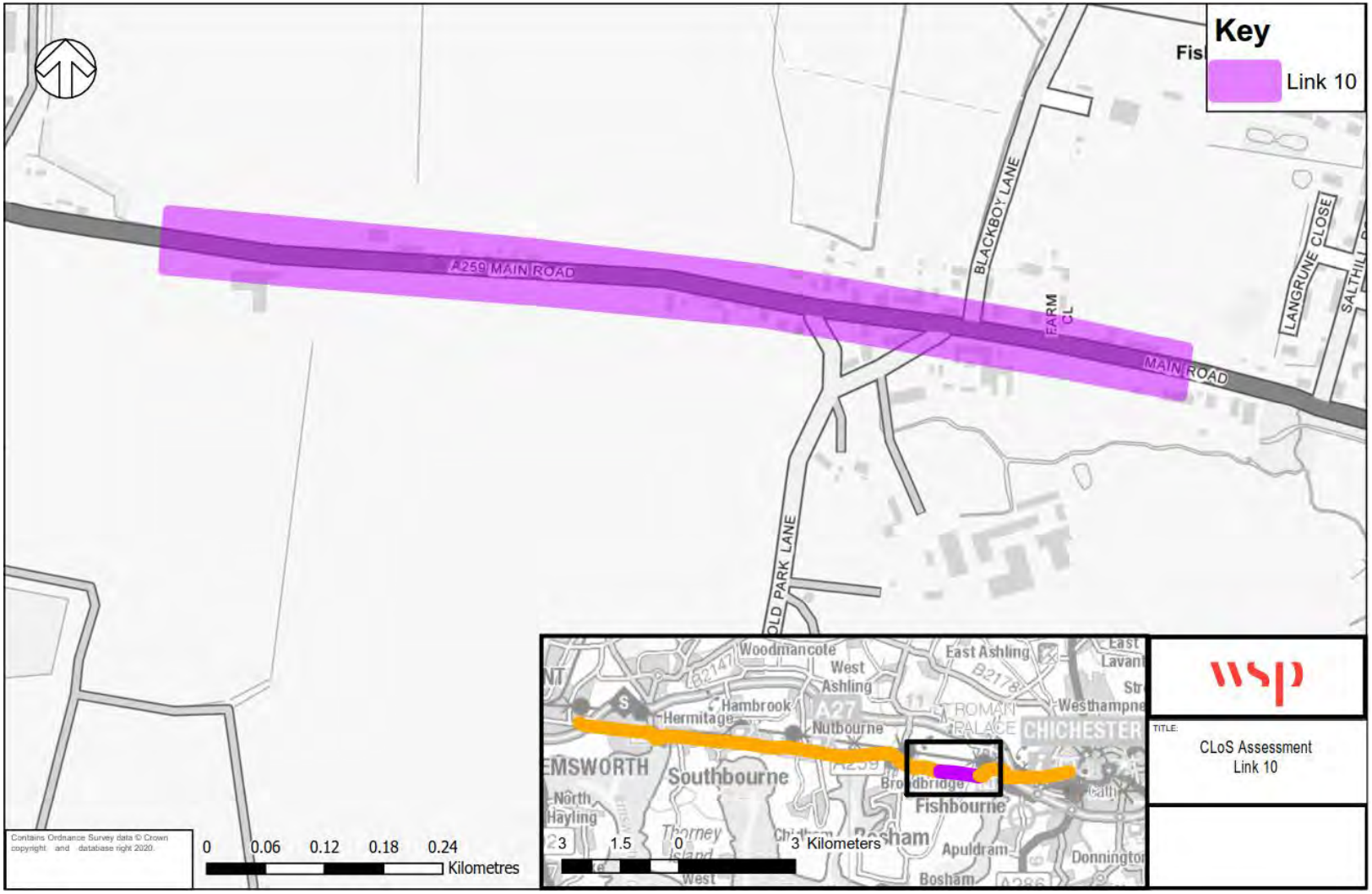
Factor	Description	CLoS Score
Safety	High risk of left/right hook collisions at junctions with heavy streams of traffic turning across main cycling stream Cyclists in general traffic lanes with vehicle speeds above 30mph and volumes between 500-1000.	8% (Critical fail for collision risk)
Directness	Cyclist have carriageway width to pass other cycles with journey times consistent with that of flowing traffic. Queuing traffic may prevent cyclists passing due to minimal nearside width for filtering. No deviation from straight line main road alternative.	63%
Coherence	Cyclists share connections with motor traffic with few cycle-specific directions signing.	50%
Comfort	Many on-road surface defects including sunken drain covers. Effective nearside space less than 1.5m creates conflict with high motor vehicle flow passing at speeds above 30mph (speed limit 40mph).	25% (Critical fail for safe passing distance and vehicle speeds)
Attractiveness	Route has some greening elements with grass embankments and tree lined streets. Medium to high PM10 NOX and noise pollution values assumed on basis of high traffic flows.	40%
Adaptability	Link could be adjusted to meet demand but junction improvements may be constrained by vehicle capacity limitations.	25%
	Total CLoS:	22%

3.12.3. The link score of 23% represents a low level of service with critical failings for collision risk and comfort. Collision risk is high at junctions with heavy flows of traffic turning across the main cycling stream with no visual priority or segregation. Traffic volumes are high with speeds above 30mph aggravating scores for feeling of safety and comfort levels. Surface quality is poor with many defects including sunken gullies adding to the low scores for comfort.

Figure 3-33: Narrow cycle lane providing no protection from fast moving traffic, Link 10

Figure 3-34: Narrow advisory cycle lane, Link 10

Figure 3-35: Link 10 Extent



3.13 LINK 11: ROMAN WAY

3.13.1. Along Link 11 (extent shown in Figure 3-40) the NCN2 route diverts away from the A259 to follow a quiet route through Salthill Road, a shared use path through Roman Way (see Figure 3-36 and Figure 3-37) and continuing through an underpass of the A27 to join Fishbourne Road East (see Figure 3-39) towards Chichester.

Table 3-11: Roman Way CLoS

Factor	Description	CLoS Score
Safety	Low collision risk on shared use path through Roman Way Traffic volumes and speeds are low along Salthill Road. Short stretches where the link is unlit.	79%
Directness	Cyclists have to stop/slow to pass other cyclists and pedestrians. Deviation factor is high due to diversion away from A259.	25%
Coherence	Cyclists have dedicated connection through filtered access of A27 underpass. Some cycle specific signage, but on-road markings could be clearer.	75%
Comfort	Few minor defects in surface quality with accumulation of mud and debris at end of Roman Way. Some damage to surface caused by root heave. Low motor vehicle flow on Salthill Road, with no pinch points or horizontal/vertical deflections.	80%
Attractiveness	Slight impact on pedestrian provision on narrow shared use path through Roman Way. Green infrastructure with tree lined shared use paths and pleasant scenery. Air quality and noise pollution assumed to be low/medium due to distance from carriageway and low trafficked route.	60%
Adaptability	Facility can be expanded or layout adapted within area constraints. Removal of speed barriers on shared use paths would increase capacity.	75%
	Total CLoS Score:	72%

3.13.2. The link score of 72% represents a good level of service with good scores for safety and comfort due to the low trafficked route and shared use path. However, the route scores low for directness due to a long deviation from the main road route along the A259 to Chichester. Scores for social safety would be improved by providing street lighting along the link.

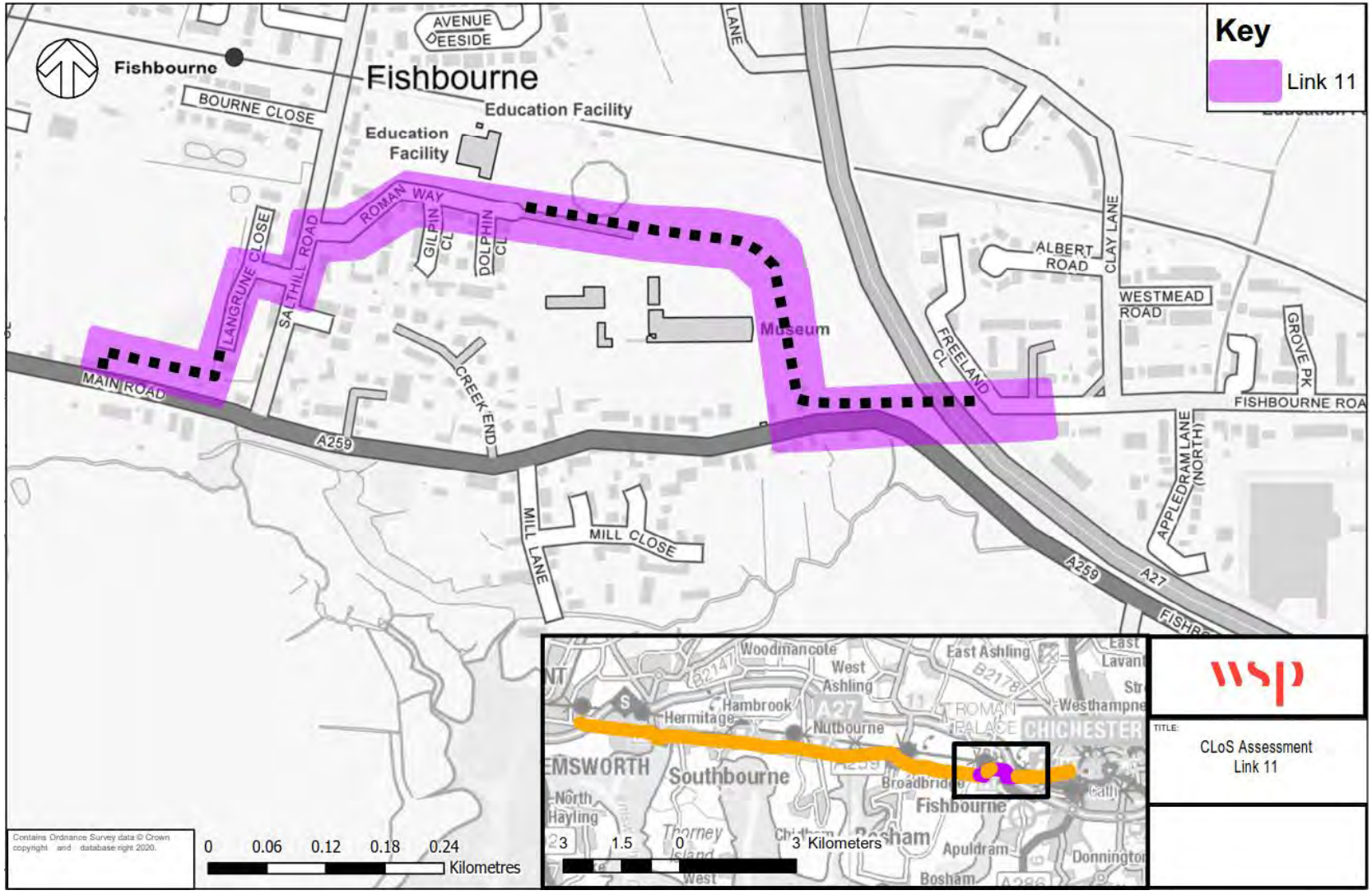
Figure 3-36: Route diverts from carriageway before junction with Salthill Road, Link 11

Figure 3-37: Roman Way shared use path, Link 11

Figure 3-38: Cyclists have to stop/slow to pass pedestrians, Roman Way shared use path, Link 11

Figure 3-39: Pedestrians and cycles segregated through A27 underpass, Link 11

Figure 3-40: Link 11 Extent



3.14 LINK 12: FISHBOURNE ROAD EAST TO WESTGATE

Along the final link, Link 12 (extent shown in Figure 3-45), the NCN2 route continues towards Chichester through Fishbourne Road East and Westgate. From the A27 underpass to the end of the study no cycle provision is provided, however traffic volumes are medium to low and the speed limit is 20mph.

3.14.1. The CLoS assessment scores are shown below in **Table 3-12**.

Table 3-12: Fishbourne Road East to Westgate CLoS

Factor	Description	CLoS Score
Safety	No segregation provided along Fishbourne Road East / Westgate, but traffic speeds and volumes are low which provides a good score for feeling of safety. Route is overlooked for most of the day and well-lit for most parts.	42%
Directness	Cyclists have enough room to pass other cyclists and pedestrians.	63%
Coherence	Cyclists share connections with motor traffic but on road cycle-specific direction signing is worn and not easily seen. Clearer signposted directional signing is required at Havant Road / West Street.	25%
Comfort	Few minor defects in surface quality with accumulation of mud and debris at A27 underpass – Fishbourne Road East. Low motor vehicle flow on, However, parked cars along Westgate create pinch points with traffic calming bollards forcing cyclists into dooring risk (see Figure 3-43)	45%
Attractiveness	No impact on pedestrian provision Green infrastructure incorporated with tree lined streets and pleasant scenery, however, traffic calming measures provide clutter and force cyclists through pinch points with parked cars Air quality and noise pollution assumed to be low/medium due to low trafficked route.	40%
Adaptability	Facility can be adapted within area constraints by reducing traffic by restricting through traffic and removing poorly placed traffic calming bollards.	75%
	Total CLoS Score:	46%

3.14.2. The total CLoS score of 44% represents a level of service just above 'low'. The low trafficked route with 20mph speed limit does create a good score for feeling of safety. However, parked cars and poorly designed traffic calming bollards along Westgate create unnecessary pinch points alongside parked cars. The full extent of Link 12 is shown in Figure 3-22 below.

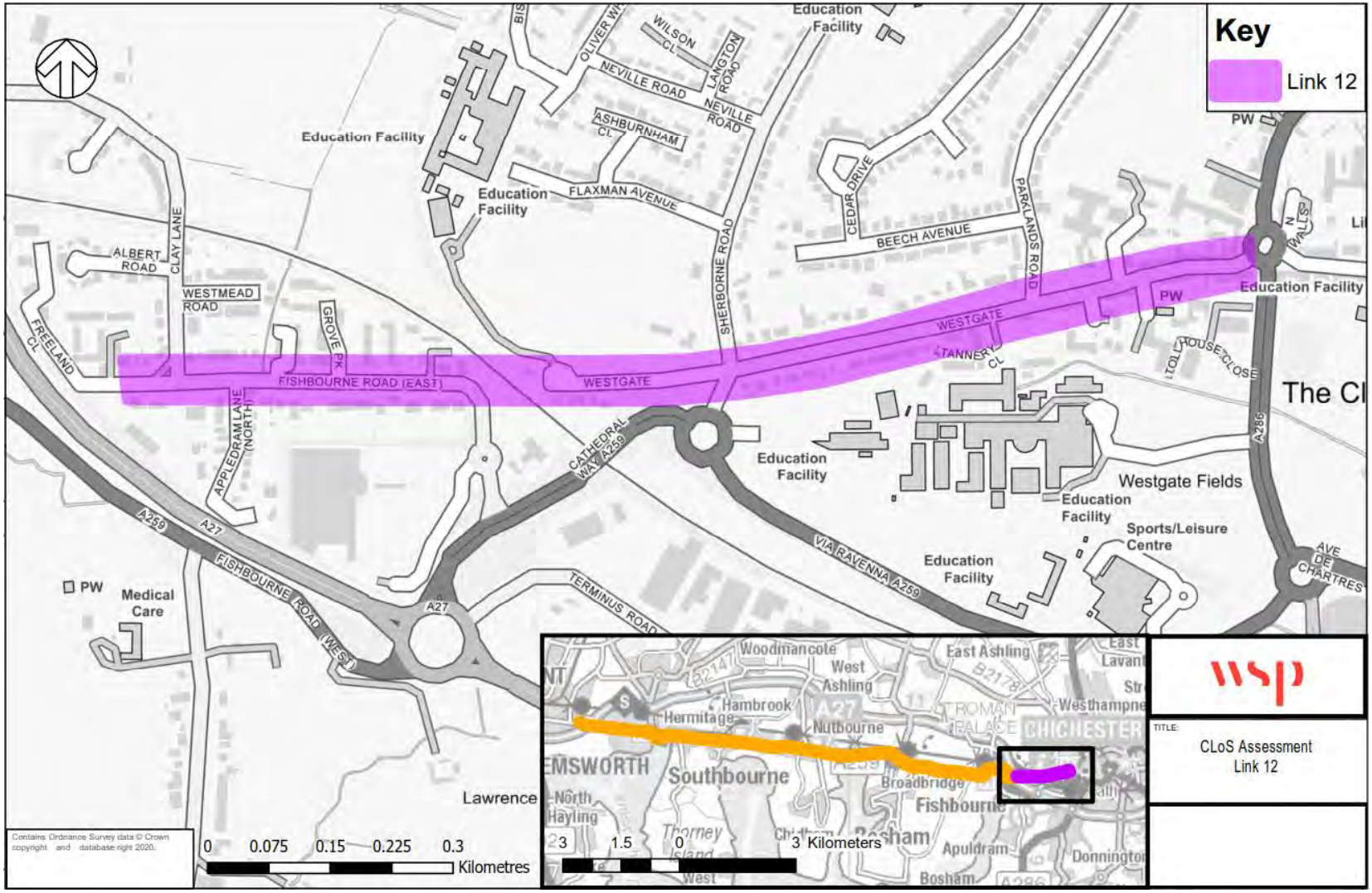
Figure 3-41 - Quiet route through Fishbourne Road East, Link 12

Figure 3-42: NMU railway crossing, Link 12

Figure 3-43: Traffic calming bollards on Westgate create pinch points for cycles and dooring risk from parked cars, Link 12

Figure 3-44: Cyclist choosing to go round traffic calming pinch point, Link 12

Figure 3-45: Link 12 Extent



3.15 SUMMARY

3.15.1. The CLoS assessment has identified which links along the route are most in need of improvements. Table 3-13 below summarises the scores for each link;

Table 3-13: CLoS Summary

Link	CLoS
1. Havant Road (Emsworth)	33%
2. Emsworth High Street	49%
3. Emsworth to Southbourne	22%
4. Southbourne to Farm Lane	24%
5. Farm Lane to Broad Road	23%
6. Broad Road to Cutmill Creek	23%
7. Cutmill Creek to Old Bridge Road	71%
8. Old Bridge Road to Brooks Lane	67%
9. Brooks Lane to Hillier Garden Centre	54%
10. Hillier Garden Centre to Salthill Road	22%
11. Roman Way (Fishbourne)	72%
12. Fishbourne Road East to Westgate (Chichester).	46%
Average CLoS	42%

3.15.2. The link assessment provides a useful guide to where the NCN2 route is currently failing in terms of safety and comfort levels for cyclists. Safety failings occur where cyclists have to mix with high volumes of fast-moving traffic with collision risks present at junctions and side roads. The following section assesses the collision data for the scheme extent which further highlights the hazards faced by cyclists along the route.

4 SURVEY DATA

4.1.1. This section looks at the available data to assess current numbers of people cycling along the A259 study area, along with the most recent collision data to understand the risks associated with cycling through the existing layout.

4.2 TRAFFIC SURVEY DATA

4.2.1. Traffic Survey Data was obtained from the West Sussex County Council Traffic Monitoring Database. Data was collected from the following monitoring site:

- A259 Southbourne W. of Thorney Road. O/S NO. 44. (No. 00004335)

4.2.2. Average traffic flow data was obtained for both hourly and daily movements for the month of January 2020. A summary of this data is provided in the table below.

Table 4-1: Traffic Data Summary, A259 Emsworth Monitoring Point.

			Eastbound	Westbound	Two-way
Weekday	AM Peak	Time	08:00	08:00	08:00
		Flow (Veh/hr)	731	708	1439
	PM Peak	Time	16:00	16:00	16:00
		Flow (Veh/hr)	672	719	1391
Weekend	AM Peak	Time	11:00	11:00	11:00
		Flow (Veh/hr)	585	611	1196
	PM Peak	Time	12:00	12:00	12:00
		Flow (Veh/hr)	604	683	1287
AADT (24 hour)			15697		
AAWT (24 hour)			-		

4.2.3. Speed data was also obtained from the data collection point in Emsworth. A summary of this is provided in the table below.

Table 4-2: Traffic Speed Data

Speed limit at data collection point (mph)	85th Percentile Speed (mph)	
	Eastbound Carriageway	Westbound Carriageway
30	34	33

4.2.4. The surveys outlined above confirm the on-site observations that the A259 study area is a relatively high-speed and highly trafficked link, with signposted speed limits exceeding 30mph in and an AADT flow of 15,697 vehicles. This will be taken into account during the option appraisal outlined in Section 5 of this report.

4.3 NMU SURVEYS

4.3.1. Cycle counter surveys were also obtained from the WSCC Traffic Monitoring Database. Data was collected from the following monitoring site located at the A27 underpass in Fishbourne (Link 11)

- Chichester A529, Fishbourne Road East (Subway) (No. 00005044) (W/C 2nd December).

Table 4-3 : Automatic Cycle Counter Data (Fishbourne, A27 Subway)

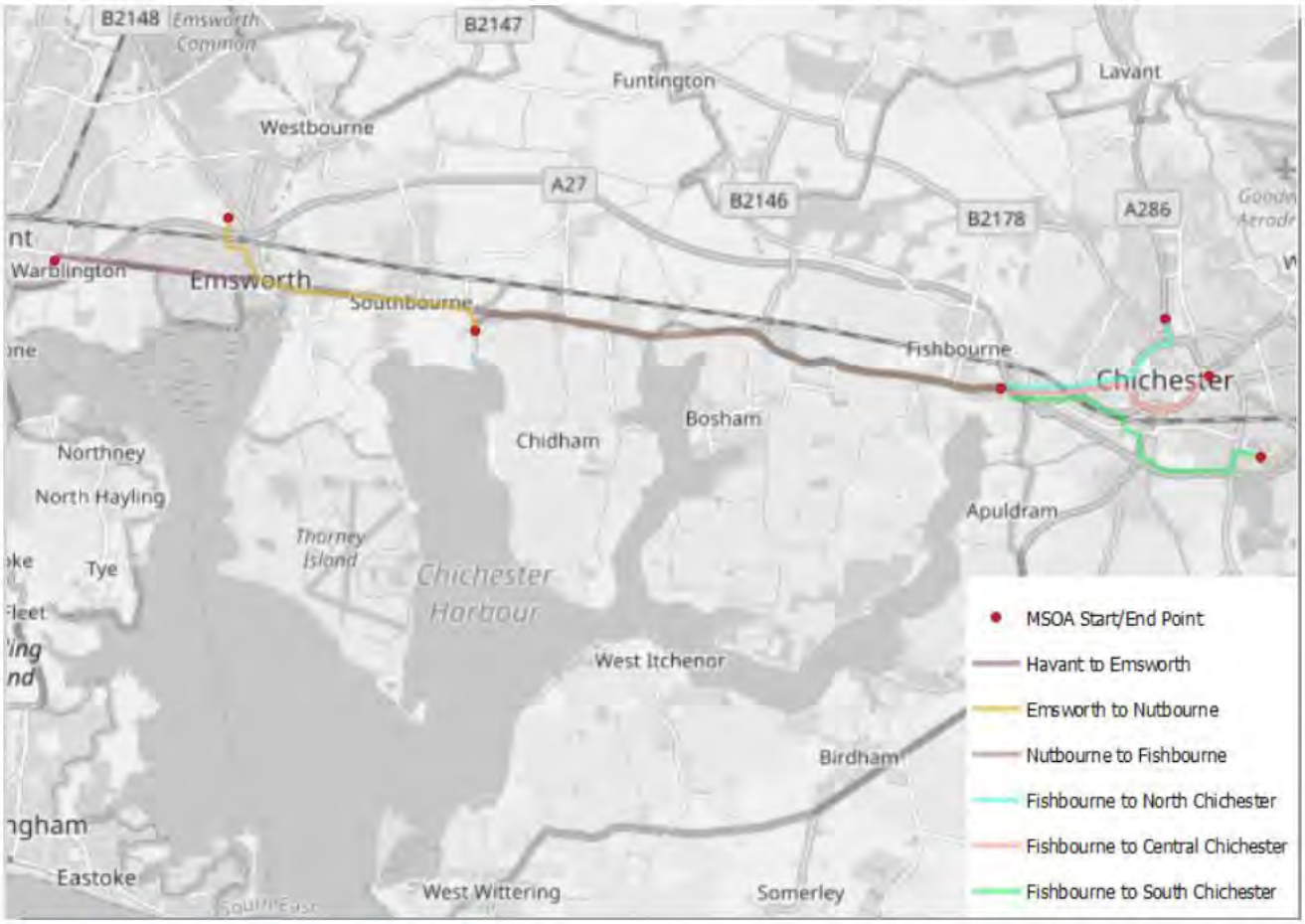
Time	AM Peak Two-Way Flows	PM Peak Two-Way Flows	24 Hour Two-Way Flows
Weekday (Tuesday to Thursday Average)	34	31	316
Weekend (Two Day Average)	25	24	202

The surveys

4.4 CYCLE DEMAND

4.4.1. Cycle demand data is obtained from the DfT Propensity to Cycle Tool (PCT) which is an open access website tool that shows existing levels of cycling in every local authority in England, using 2011 Census travel to work data. By utilising the start and end points of journey to work data, the tool allows users to visualise the number of people commuting to work by bike between Census Middle Super Output Areas (MSOA). The A259 study area was identified as consisting of six separate journey to work start and end points. The tool can use this data to map the fastest routes between the given MSOAs (shown in Figure 4-1 below).

Figure 4-1: Cycling Demand Between Journey to work start and end points (PCT, Census 2011 MSOAs)



4.4.2. The journey to work cycle flows have been identified for each of the start to end points shown in the map above. These add up to give an overall picture of the commuting cycle flows through the A259 study area and shown in Table 4-4 below.

Table 4-4: PCT Flows (Census 2011)

Journey to Work Start/End Point	Total Commuter Flows	Cyclists
Havant - Emsworth	156	7 (4%)
Emsworth - Nutbourne	206	19 (9%)
Nutbourne - Fishbourne	179	16 (9%)
Fishbourne - North Chichester	538	83 (15%)
Fishbourne - Central Chichester	791	124 (16%)
Fishbourne - South Chichester	289	32 (11%)
Totals	**2159**	**281 (13%)**

4.4.3. The A259 corridor experiences high levels of cycling to work at 13%, higher than the national average of 2% and the West Sussex average of 3%. The flows above show 281 people cycling to work along the corridor. It is important to note the figures only show commuter cycling from journey to work data, and as such, journeys for other purposes, i.e. leisure, shopping, school traffic etc, are not captured. However, the 13% cycling to work figure indicates there is relatively high demand for journeys to be made by bike. This is also confirmed by the WSCC automatic cycle counters positioned at the eastern end of the A259 study area (see Table 4-3).

4.4.4. The PCT allows for the testing of different scenarios to determine what levels of cycling could be achieved for different scenarios. For the purposes of this study area the following scenarios have been tested;

- Government Target – based on the UK government target of doubling journeys by bike by 2025; and
- Go Dutch – if commuters had the same propensity to cycle as in the Netherlands with an allowance for hilliness;

4.4.5. The flows for each scenario are shown below in Table 4-2.

Table 4-5: PCT Scenario Flows

Journey to Work Start/End Point	Total Commuter Flows	Cyclists (Census 2011)	Cyclists (Government Target)	Cyclists (Go-Dutch)
A259 Corridor	2159	281 (13%)	444 (21%)	970 (45%)

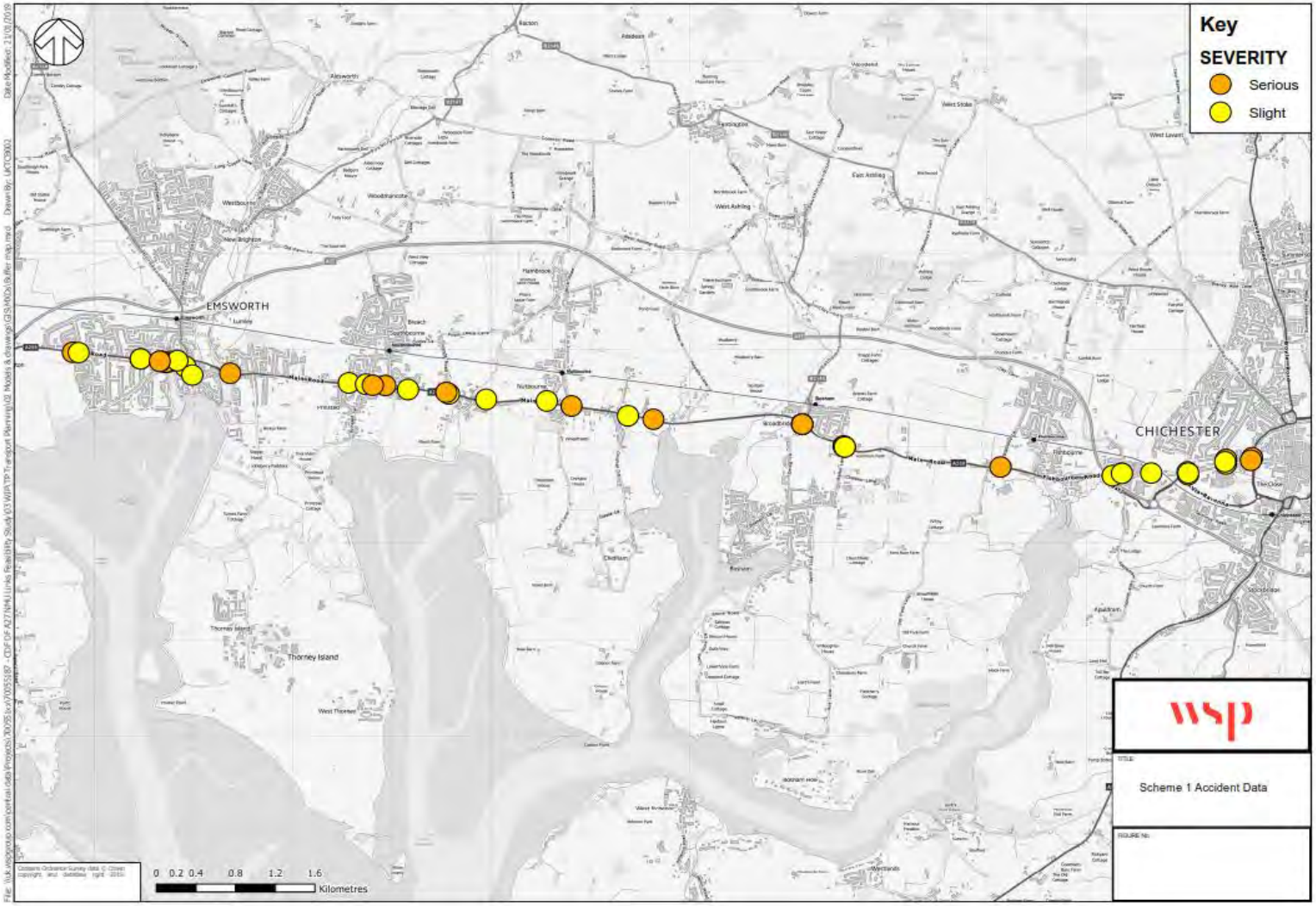
4.4.6. By showing what the rate of cycling could feasibly look like in different parts of cities and regions and illustrating the associated increase in cycle use on the road network, the PCT should inform policies that seek a wider shift towards sustainable transport. In this instance, it can be assumed that infrastructure improvements along the Emsworth – Chichester study area, that facilitate safer and more comfortable journeys, has the potential to see increases in cycling uptake. For all scenarios, a list of quantitative benefits from reductions in CO2 and increased physical activity can be used to inform the Scheme Appraisal Report (SAR) outlined in Section 10.

4.5 COLLISION DATA

4.5.1. A review of Personal Injury Collisions (PIC) has been undertaken within the immediate area of the scheme boundary. The PIC data is for a six-year period from September 2013 to October 2019. The complete dataset including full descriptions of the individual collisions is included in **Appendix B.** A total of 85 collisions were recorded within the scheme extent, 44 of which involved injury to an NMU.

4.5.2. The collision data involving NMUs, has been split into the 12-links assessed in the previous cycling conditions section. The NMU collision has been plotted on a map shown below in **Figure 4-2**. This illustrates the clusters of accidents within the study area.

Figure 4-2: Collision data map



LINK 1: A259 HAVANT ROAD (EMSWORTH)

4.5.3. There has been a total of eight reported collisions involving NMUs along Link 1. Six of these collisions involved cyclists, four resulting in serious injury to the cyclist. All six of the collisions involving cyclists were caused by drivers overtaking cyclists at an unsafe passing distance or failing to look properly when turning out/into a side road.

Table 4-6: Link 1 NMU Collision Data

Link	Police Reference	User	Severity	Factors
1	140091552	Cycle	Slight	Car Passing too close to cyclist.
1	140204692	Cycle	Serious	Car driver failed to look properly turning right into side road, collided with cyclist.
1	150013884	Cycle	Serious	Car driver failed to look properly turning right from side road onto A259, collided with cyclist.
1	160140195	Cycle	Slight	Motorcyclist turning right into side road fails to see pedal cyclist.
1	160261723	Cycle	Serious	Car driver turning left into side road across path of cyclist, passing too close and failing to look properly.
1	160386916	Cycle	Serious	Cyclist had to overtake van parked in cycle lane. Car overtook too close and collided with cyclist.
1	150061622	Ped	Slight	Ped impaired by alcohol punches moving bus.
1	180248891	Ped	Serious	Car driver exiting petrol station turning onto main road fails to see, and collides with, pedestrian.

LINK 2: EMSWORTH HIGHT STREET

4.5.4. There has been a total of three reported collisions involving NMUs along Link 2. Two of the collisions involved cyclists, both resulting in slight injuries to the cyclist. One collision involved the cyclist losing control and falling from the bike, the other resulted from a car overtaking too closely and knocking the cyclist off the bike.

Table 4-7: Link 2 NMU Collision Data

Link	Police Reference	User	Severity	Factors
2	150071962	Cycle	Slight	Cyclist loss of control
2	160140195	Cycle	Slight	Car Passing too close to cyclist
2	160261723	Ped	Slight	Car reversing fails to see pedestrian

LINK 3: A259 EMSWORTH TO SOUTHBOURNE

4.5.5. There has been a total of five reported collisions involving NMUs along Link 3. Two of the collisions involved cyclists, one resulting in a serious injury when the cyclist mounted the pavement to pass a parked HGV and fell from their bike. The other resulted in a slight injury when a car pulled out from a side road and collided with a cyclist on the A259.

Table 4-8: Link 3 NMU Collision Data

Link	Police Reference	User	Severity	Factors
3	1500466	Ped	Serious	Pedestrian stepped out into road and collided with cyclist
3	1507436	Ped	Serious	Pedestrian struck by car when crossing road
3	1604296	Ped	Slight	Pedestrian ran out into road struck by car
3	1702846	Cycle	Slight	Car pulled out from side road and collided with cyclist
3	1704765	Cycle	Serious	Cyclist mounts pavement to pass parked HGV falls from bike

LINK 4: A259 SOUTHBOURNE TO FARM LANE

4.5.6. There has been a total of three collisions involving NMUs along Link 4. Two collisions involved a car driver passing too close to cyclist or cutting across their path, one resulting in a serious injury. The other collision occurred when a motorcyclist turned across the path of a cyclist and failed to see them before colliding.

Table 4-9: Link 4 NMU Collision Data

Link	Police Reference	User	Severity	Factors
4	1400972	Cycle	Slight	Motorcyclist turns across path of cyclist fails to look properly collides with pedal cyclist
4	1601367	Cycle	Serious	Car passing too close to cyclist swerves and collides with cyclist
4	1800684	Cycle	Slight	Car overtook cyclist and turned across path into side road colliding with cyclist

LINK 5: A259 FARM LANE TO BROAD ROAD

4.5.7. There has been a total of three reported collisions involving NMUs along Link 5. All three collisions involved a cyclist all resulting from car driver error; either passing too close to the cyclist or failing to stop at a side road. One serious injury occurred when a car collided at speed with a cycle from behind.

Table 4-10: Link 5 NMU Collision Data

Link	Police Reference	User	Severity	Factors
5	1402359	Cycle	Slight	Car Passing too close to cyclist - clips cyclist with nearside wing mirror
5	1601296	Cycle	Serious	Car collides with cyclist from behind - travelling too fast
5	1605280	Cycle	Slight	Car failed to stop at side road give way line and collided with cyclist

LINK 6: A259 BROAD ROAD TO CUTMILL CREEK

4.5.8. The two reported collisions involving NMUs along Link 6, were caused by car driver error. One resulted in a serious injury to a cyclist when a car driver pulled out from a driveway across the path of the cyclist, resulting in a serious injury. The other occurred when a car driver overtook a cycle and turned across their path causing a slight injury.

Table 4-11: Link 6 NMU Collision Data

Link	Police Reference	User	Severity	Factors
6	1405445	Cycle	Serious	Cyclist travelling eastbound on designated cycle path - car pulls out of driveway and collides with cyclist
6	1602862	Cycle	Slight	Car overtook cyclist and turned across path into pub entrance colliding with cyclist

LINK 7: A259 CUTMILL CREEK TO OLD BRIDGE ROAD

4.5.9. There were no reported collisions involving NMUs along this link where a segregated shared use path is provided for pedestrians and cyclists.

LINK 8: A259 OLD BRIDGE ROAD TO BROOKS LANE

4.5.10. Three collisions involving NMUs were reported along Link 8, all involving injuries to a cyclist. Two collisions occurred when a car driver entered a roundabout and collided with a cyclist already on the

roundabout, one resulting in a serious injury. The other collision occurred when a car driver pulled out from a side road colliding with a cyclist travelling on the A259.

Table 4-12: Link 8 NMU Collision Data

Link	Police Reference	User	Severity	Factors
8	1407021	Cycle	Slight	Car enters roundabout and collides with cyclist already on roundabout
8	1407465	Cycle	Slight	Car pulls out from side road and collides with cyclist
8	1504985	Cycle	Serious	Car enters roundabout and collides with cyclist already on roundabout

LINK 9: A259 BROOKS LANE TO HILLIER GARDEN CENTRE

4.5.11. There has been a total of four reported collisions involving NMUs along Link 9. All four collisions were recorded as a car driver pulling out from a side road into the path of a cyclist, one resulting in a serious injury.

Table 4-13: Link 9 NMU Collision Data

Link	Police Reference	User	Severity	Factors
9	1604038	Cycle	Slight	Car pulling out of side road collides with cyclist
9	1706265	Cycle	Slight	Car pulls out from side road and collides with cyclist
9	1804964	Cycle	Serious	Car pulled out from side road and collided with cyclist
9	1806747	Cycle	Slight	Car pulled out from side road and collided with cyclist

LINK 10: A259 HILLIER GARDEN CENTRE TO SALTHILL ROAD

4.5.12. One collision involving an NMU has been recorded along Link 10. This occurred when a car driver turned right from the A259 into a side road and collided with a cyclist, resulting in a serious injury.

Table 4-14: Link 10 NMU Collision Data

Link	Police Reference	User	Severity	Factors
10	1801985	Cycle	Serious	Car turning right from main road into side road collides with cyclist

LINK 11: ROMAN WAY (FISHBOURNE)

4.5.13. One collision involving an NMU has been recorded along Link 11. This occurred when a car driver turned right from the main road into a side road and collided with a cyclist, resulting in a slight injury.

Table 4-15: Link 11 NMU Collision Data

Link	Police Reference	User	Severity	Factors
11	1501782	Cycle	Slight	Car turning right from main road into side road collides with cyclist

LINK 12: FISHBOURNE ROAD EAST TO WESTGATE

4.5.14. Link 12 had a total of 11 reported collisions involving NMU's. This includes nine cyclists and two pedestrian collisions. Of the 11 collisions involving NMUs three resulted in serious injury, all involving cyclists. The remaining nine NMU related collisions resulted in slight collisions. The collisions for section 3 are summarised in **Table 4-12** below.

Table 4-16: Link 12 NMU Collision Data

Link	Police Reference	User	Severity	Factors
12	1401270	Cycle	Slight	Goods vehicle pulls out from side road and collides with cyclist
12	1401431	Cycle	Serious	Car Passing too close to cyclist - clips cyclist with nearside wing mirror
12	1503550	Cycle	Slight	Car pulls out from side road and collides with cyclist
12	1602276	Cycle	Serious	Car passing too close to cyclist collides with cyclist when exiting roundabout
12	1605690	Cycle	Slight	Car enters roundabout and collides with rear of cyclist already on roundabout
12	1701688	Cycle	Slight	Car enters roundabout and collides with cyclist already on roundabout

12	1703613	Cycle	Slight	Car enters roundabout and collides with cyclist already on roundabout
12	1800310	Ped	Slight	Car turning right from main road into side road collides with pedestrian crossing side road
12	1800453	Cycle	Slight	Car Passing too close to cyclist - clips cyclist with nearside wing mirror
12	1803740	Ped	Serious	Ped crossing roundabout arm struck by car exiting roundabout
12	1805313	Cycle	Slight	Car pulls out from side road and collides with cyclist

SUMMARY

4.5.15. A summary of the above data analysis is shown below in Table 4-12 using the two most common causation factors reported in the PIC analysis.

Table 4-17: NMU Collision Summary

Link	NMU Collisions			Causation Factors	
	Cycle	Pedestrian	Total	Driver error / failed to look properly	At a junction / side road
1	6	2	8	7	5
2	2	1	3	2	0
3	2	3	5	2	1
4	3	0	3	3	2
5	3	0	3	3	1
6	2	0	2	2	2
7	0	0	0	0	0
8	3	0	3	3	3
9	4	0	4	4	4
10	1	0	1	1	1
11	1	0	1	1	1
12	9	2	11	11	9
Total	**36**	**8**	**44**	**39 (89%)**	**29 (66%)**

4.5.16. Of all the 85 PICs recorded within the scheme extent, 44 involved an NMU, representing 52% of the total. 36 recorded PICs involved injury to a cyclist, representing 42% of the total reported collisions. 89% of the collisions involving NMUs were recorded as vehicle driver error; either failing to look properly, driving carelessly or passing too close to a cyclist when overtaking. 66% of the collisions involving NMUs occurred at a junction, roundabout or side road. This demonstrates the hazardous nature of junctions and side roads for NMUs, particularly cyclists where visibility is restricted. Improvements to the NCN2 route should look to provide segregated provision where possible as this will reduce conflicting movements at junctions and reduce the risk of vehicles passing too close to cyclists. It should be noted that non-fatal casualties to pedal cyclists are amongst the most likely to be under-reported in road casualty data since cyclists have no obligation to inform the police of collisions.[2] Therefore there are likely to be more collisions that take place along the route than shown in the collision records. This should be borne in mind when analysing and interpreting the data.

[2] Pedal Cycling Road Safety Factsheet, DfT 2018

5 OPTIONS DEVELOPMENT AND APPRAISAL

5.1 OVERVIEW

5.1.1. Following on from the initial stakeholder consultation and review of baseline conditions, two improvement options have been considered for the A259 Corridor, each taking account of the scheme objectives of facilitating trips by active modes through the provision of improved pedestrian and cycle facilities. As a minimum standard, both options will address the critical junctions outlined in the existing conditions and CLoS assessment by providing some form of traffic calming measures, as well as providing improved surfacing and directional signage. The options considered can be summarised as follows:

- **Option A**: Provision of off-carriageway 3.5m – 2.5m two-way cycle track (shared use path for some sections) along A259, with traffic calming measures along quiet route sections;
- **Option B**: Provision of on-carriageway 1.5m cycle lanes with improved light segregation from traffic (in the form of bollards and/or lane orcas) where possible within existing carriageway widths of A259, with traffic calming measures along quiet route sections;

5.1.2. Design guidance for the cycle traffic is set out in CD 195 of the Design Manual for Roads and Bridges (DMRB). This appraisal will consider the guidance set out in this document when assessing the two options. Each option has considered key design factors, outlined within Table E/1.1.1 of the Highways England guidance, to achieve the best balance between the criteria within the optioneering process. Table E/1.1.1. has been re-produced below in Figure 5-1.

Figure 5-1: CD195 Table E/1.1.1

Table E/1.1.1 Cycling design criteria

Coherence	Cycle networks link trip origins and destinations, including public transport access points and are continuous and easy to navigate.
Directness	Cycle networks serve all the main destinations and seek to offer an advantage in terms of distance and journey time.
Comfort	Infrastructure meets design standards for alignment and surface quality, and caters for all types of user, including children and disabled people.
Attractiveness	Aesthetics, noise reduction and integration with surrounding areas are important.
Safety	Cycle networks not only improve cyclists' and other road users' safety, but also their feeling of how safe the environment is (their personal security).

5.1.3. Additionally, within the optioneering process, reference has been made to Table E/1.1 Minimum provision for cycle routes to assess the cycle infrastructure provision required in relation to AADT flows. Table E/1.1 is re-produced below in Figure 5-2.

Figure 5-2: CD195 Table E/1.1

Table E/1.1 Minimum provision for cycle routes

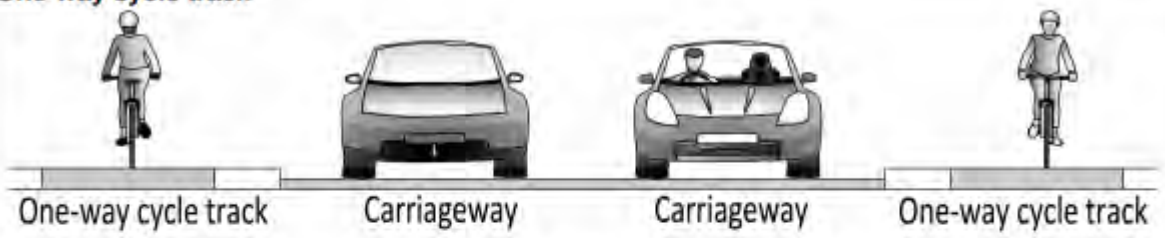
Speed limit (mph)	Motor traffic flow (AADT-Average annual daily traffic)	Minimum provision for cycle routes
40 and over	All flows	Cycle tracks (excluding stepped cycle tracks)
30	>5,000	Cycle tracks
	0-5,000	Cycle lanes
20	>5000	Cycle tracks
	2,500-5,000	Cycle lanes
	<2500	Quiet streets

5.1.4. To determine the required widths of proposed cycle infrastructure, based upon peak hour cycle flow, reference has been made to Table E/3.1 of the Highways England guidance. Table E/3.1 has been re-produced below in Figure 5-3.

Figure 5-3: CD195 Table E/3.1

Table E/3.1 Minimum widths of cycle routes (continued)

One-way cycle track



Cycle route type	Peak hour cycle flow (either one-way or two-way depending on cycle route type)	Desirable minimum width	Absolute minimum width (for sections up to 100m)
Two-way cycle track	<150	3.0 metres	2.5 metres
	150 or greater	4.0 metres	3.5 metres

Two-way cycle track

5.2 OPTION APPRAISAL

OPTION A

5.2.1. Option A considers the provision of off-carriageway pedestrian and cycle infrastructure improvements along the A259 corridor. The implementation of this option would mean the provision of a continuous off-carriageway connection for cyclists between Emsworth and Chichester. Preliminary designs for this option consist of a mix of off-road provision with 3.5 to 2.5m bi-directional shared-use path adjacent to the carriageway. Due to spatial constraints within the available highway land, the shared use path proposed within this option can only be accommodated on one side of the carriageway, at any given point. The side of the carriageway which is able to accommodate the shared-use path alternates at several points along the route. At points where cyclists are required to cross from one side of the carriageway to the other, improvements to the informal crossing points are proposed with improved traffic calming measures in the form of raised tables.

Compliance with Design Guidance

5.2.2. Within the relevant design guidance, vehicular traffic speeds are set out as a key consideration when determining minimum provisions for cyclists on a link. As is set out in the existing conditions section of this report, the A259 is a relatively high-speed and highly trafficked link, with signposted speed limits exceeding 30mph in the entirety of all three sections, and an AADT flow of 15697 vehicles. Table E/1.1 of CD 195 states that off-carriageway 'cycle tracks' are the minimum desirable provision for roads with a speed limit of 30mph and over, and an AADT of >5,000 vehicles. This guidance indicates that off-road provisions for cyclists are the most appropriate for this link.

5.2.3. In line with the guidance set out in CD 195, the preliminary design for the shared-use path in Option A is able to meet desirable minimum requirements set out in Table E/3.1 and retain 3.5m width for the majority of the route, with some small sections the width being down to 2.5m (the absolute minimum set out in the CD 195 guidance).

5.2.4. The provision of a consistent, segregated route also meets the standards set out in WSCC design guidance, which states that on primary distributor roads, where speeds are greater than 30mph, off carriageway provision must be provided.

Stakeholder Considerations

5.2.5. Option A was broadly supported by key stakeholders as the preferred option for cycle improvements on this link. WSCC set out at the importance of this key corridor in meeting the sustainable growth ambitions for the Chichester area. Providing a high-quality segregated cycle route will enable the greatest potential for cycling uptake and a reduction in car trips.

Summary

5.2.6. The proposals for Option A take into account the majority of the 'critical' criteria set out in the LCDS as described in paragraph 3.23 of this report. The design considers the traffic speed and volume on the road and minimises the need for cyclists to interact with vehicular traffic by removing them from the carriageway. The removal of cyclists from the carriageway will also considerably lessen the risk of collision of cyclists with all types of motorised traffic, as well as minimising the interaction between cyclists and HGV's on the road. The implementation of a shared-use path on this link will also help to considerably improve the quality of surface for cyclists and the available width.

OPTION B

5.2.7. The initial design process for Option B related to the improvement of the existing on-carriageway cycle facilities along the A259. However, after further design considerations, this Option was discounted from the scheme due to identified constraints relating to the speed of vehicles between the A259 and A27 as well as a high number of PICs involving cyclists being identified along this route.

5.2.8. Following a detailed review of PIC data within the baseline conditions of this report, covering a six-year period between 01/01/2013 - 31/10/2019 there were a total of 36 collisions identified involving cyclists across all sections of the route. The most common causation factor listed related to drivers failing to observe cyclists at different junctions along the A259. The analysis of the PIC data has concluded that there is an existing issue relating to the safety of cyclists on-carriageway within the study area, and simply improving the provision of on-carriageway cycling infrastructure would potentially exacerbate this issue relating to further safety constraints.

5.2.9. A review of the baseline conditions for the study area has also identified that the 85th percentile speeds at the ATC positioned on the A259 are above 30mph (see Table 4-2) . Guidance taken from Highways England, contained within Table E/1.1 of CD 195 Designing for Cycle Traffic, states that for roads with a speed limit of 30mph and over, regardless of traffic flow, should have a minimum provision of off-carriageway cycle-tracks for cycling design criteria. Table E/1.1 from Highways England is provided in Figure 5.2. If Option B were to be progressed further, traffic calming measures would need to be introduced to reduce the 85th percentile speed of the study area to below 30mph to enable on-carriageway cycle improvements to be considered. Whilst the implementation of traffic calming features, in the potential form of raised tables and narrowing of lanes, would reduce speeds this would increase the financial cost of this Option reducing its feasibility and would not be feasible for major road with such high flows of traffic.

5.2.10. The option also fails to meet the standards set out in WSCC Cycling Design Guidance which states that where speeds exceed 30mph, on carriageway provision is not satisfactory.

5.3 SUMMARY OF OPTIONS APPRAISAL

5.3.1. Following a review of the two options for NMU improvements on the A259 corridor, the preferred option to be taken forward to preliminary design is Option A. Option A was deemed to be the most appropriate route for further considerations as it offers a direct, safe route for all users between Emsworth and Chichester. A summary of the proposed options and appraisal, including the proposed CLoS scores is provided in Table 5-1 overleaf.

Table 5-1: Option Appraisal Summary

Link	CLoS	Existing Infrastructure	Option 1	Proposed CLoS	Option 2	Proposed CLoS
1. Havant Road (Emsworth)	33%	**1.5m Cycle Lanes** mandatory / advisory narrower in places	**3.5m Two-way Shared Use Path** Off road path on north side of carriageway (reduces in width to 2.5m in places)	77%	**1.5m On-Road Cycle Lanes** consistent width with improved light protection where possible	70%
2. Emsworth High Street	46%	**None - quiet route**	**2.5m Shared Use Path** Off road path on north side of carriageway as direct route with added crossing to Emsworth roundabout **Quiet route through Emsworth High Street** Improve West St/High St junction and improve crossing at eastern end with traffic calming.	65%	**None - quiet route** improve West St/High St junction improve crossing at eastern end	49%
3. Emsworth to Southbourne	22%	**None - A259**	**2.5m – 3.5m Shared Use Path** Off road path on north side of carriageway with added crossing to Southbourne roundabout (north arm)	77%	**None - A259** traffic calming add crossings to Southbourne roundabout (all arms)	28%
4. Southbourne to Farm Lane	24%	**1.5m Cycle Lanes** mandatory / advisory narrower in places	**3.5m Shared Use Path** Off road path on north side of carriageway.	85%	**1.5m Cycle Lanes** consistent width with improved protection where possible	33%
5. Farm Lane to Broad Road	23%	**None - A259**	**2.5m - 3.5m Shared Use Path** Off road path on north side of carriageway.	84%	**2.5m Cycleway / None - quiet route** unsegregated on south new crossing on western end modify controlled crossing at eastern end	51%

Link	CLoS	Existing Infrastructure	Option 1	Proposed CLoS	Option 2	Proposed CLoS
6. Broad Road to Cutmill Creek	23%	**1.5m Cycle Lanes** advisory narrower in places	**3.5m Shared Use Path** Path on south side of carriageway with modified controlled crossing at western end.	**85%**	**1.5m Cycle Lanes** consistent width with improved protection where possible	**36%**
7. Cutmill Creek to Old Bridge Road	71%	**2.5m Share Use Path** on south side	**2.5m Shared Use Path** on south keep existing crossing at eastern end			**73%**
8. Old Bridge Road to Brooks Lane	67%	**None - quiet route**	**None - quiet route** add crossing to Bosham roundabout (north arm) and improve others			**68%**
9. Brooks Lane to Hillier Garden Ctr	54%	**2.0m Shared Use path** on north side	**2.5m Shared Use Path** Increase width of path on north side of carriageway.			**76%**
10. Hillier Garden Centre to Salthill Road	22%	**1.5m Cycle Lanes** mandatory / advisory narrower in places	**3.5m Shared Use Path** Path on north side of carriageway with improved crossing at western and eastern ends.	**73%**	**1.5m Cycle Lanes** consistent width with improved protection where possible, with improved crossing at western and eastern ends.	**41%**
11. Roman Way	72%	**2.5m Shared Use Path** Through park	**2.5m Shared Use Path** Through Park – away from road. Improved lighting.	**79%**	**2.5m Cycle Path / None - quiet route** unsegregated away from road on north improve Salthill Rd link	**74%**
12. Fishbourne Road East to Westgate (Chichester).	46%	**None - quiet route**	**None - quiet route / 3.5m Cycleway** Two-way segregated track on north side with improve Salthill Rd link; add crossings to Sherborne Rd roundabout (all arms); add crossings to Westgate St roundabout (all arms).			**78%**

6 PRELIMINARY DESIGN

6.1 OVERVIEW

6.1.1. The preferred option, Option A, has been taken forward for preliminary design. This section provides a section by section summary of the preliminary design. The detailed design drawings are shown in Appendix C.

6.2 LINK 1: HAVANT ROAD, EMSWORTH (DRAWING 5187/GA101)

6.2.1. This section falls within the boundary of Hampshire County Council (HCC). HCC recently completed improvement works to the existing cycle provision on the A259. The works included resurfacing of the carriageway and improved visible road markings to emphasise the position of cyclists to other road users. Priority over side roads is clearly marked where it was previously faded. However, it was deemed the provision of a two-way shared use path unfeasible due to the amount of private driveway access points on both sides of the carriageway and the potential collision hazards associated with them. Whilst the provision is still on-carriageway, CLoS scores for comfort should be improved with the resurfacing works.

6.2.2. The existing footway parking just to the east of the junction with Slipper Road will have to be displaced onto the carriageway, with clearer enforcement to protect the shared use path from being blocked or narrowed. The provision of on-carriageway parking will also act as an informal traffic calming measure where vehicles have to slow to pass on-coming traffic.

6.3 LINK 2: EMSWORTH HIGH STREET (DRAWING 5187/GA102)

6.3.1. This section (shown below in Figure 6-2) also falls within the HCC boundary extent and suggested improvements were not considered feasible at this stage.

6.3.2. The CLoS assessment did not identify any safety critical issues on this link due to the 20mph speed limit through the high street. Improvements to the crossing at the junction of Queen Street A259 (within WSCC boundary) will improve the scores for safety, comfort and coherence.

6.4 LINK 3: EMSWORTH TO SOUTHBOURNE (DRAWING 5187/GA103 & 104)

6.4.1. This section falls within the boundary of WSCC and provides the main link from Emsworth to Chichester.

6.4.2. An off-road shared use path varying in width from 2.5 to 3.5m is provided on the north side of the A259 carriageway. The shared use path is given priority over the majority of side road crossings. Where priority is not possible, due to visibility and speed restraints, clear road markings alert drivers to the shared use path and cyclists travelling in both directions across the junction.

6.5 LINK 4: SOUTHBOURNE – STEIN ROAD TO FARM LANE (DRAWING 5187/GA104)

6.5.1. The provision of a shared use path continues with an improved crossing facility over the A259/Stein Road arm of the roundabout.

6.5.2. The provision continues the north side of the carriageway and is 3.5m in width for the duration. Clear road markings are provided over side road junctions to alert drivers to cyclists travelling in both directions.

6.5.3. The existing footway parking outside the entrance to 'Chichester Caravans' would be displaced onto the carriageway by the proposals, to prevent the facility being blocked and narrowed. The provision of on-carriageway parking will act as an informal traffic calming measure where vehicles have to slow to pass on-coming traffic.

6.6 LINK 5: FARM LANE TO BROAD ROAD (DRAWING 5187/GA104 & 105)

6.6.1. The 3.5m shared use path continues on the north side of the A259 carriageway. At the junction with Broad Road a new refuge island is provided to aid safe crossing of the junction for cyclists and pedestrians.

6.7 LINK 6: BROAD ROAD TO CUTMILL CREEK (DRAWING 5187/GA105)

6.7.1. From the Broad Road junction, the 3.5m shared use path continues on the north side of the carriageway. Pedestrians and cyclists are given clearly marked priority over the side road junction of Drift Lane and private access roads.

6.8 LINK 7: CUTMILL CREEK TO OLD BRIDGE ROAD (DRAWING 5187/GA106 & 107)

6.8.1. The 3.5m shared use path provision continues the north side of the carriageway. Approximately 100m west of the Cutmill Creek overpass, the provision switches to the south side of the carriageway. The existing refuge island, that facilitates crossing between the on-road provision and the existing shared use path on the south, will be increased in width to 2.5m.

6.8.2. The existing shared use path will remain on the south side of the carriageway. The usable width will be maximised with clearance of overhanging vegetation and surface debris.

6.9 LINK 8: OLD BRIDGE ROAD TO BROOKS LANE (DRAWING 5187/GA107 & 108)

6.9.1. Approximately 100m to the west of Old Bridge Road the shared use path provision switches back to the north side of the carriageway. The existing refuge island will be increased in width and depth to 2.5m to facilitate safer crossing movements for pedestrians and cyclists.

6.9.2. The route then deviates slightly to take a quiet route through the residential streets of Old Bridge Road and Penwarden Way, which run parallel to the A259 carriageway. The existing layout provides no provision over the roundabout. This is addressed in the proposed design with clear provision provided over the northern arm with highlighted surfacing and the existing refuge island widened. To reduce vehicle speeds on the approach to the roundabout, the northern arm will be narrowed.

6.10 LINK 9: BROOKS LANE TO HILLIER GARDEN CENTRE (DRAWING 5187/GA108)

6.10.1. The existing shared use path on the north side of the carriageway will be retained. The usable width will be maximised by vegetation clearance.

6.11 LINK 10: HILLIER GARDEN CENTRE TO SALTHILL ROAD (DRAWING 5187/GA108 & 109)

6.11.1. The on-road provision through this section will be removed and replaced with a 3.5m wide shared use path on the north side of the carriageway. The path narrows to 2.5m for a short section, 50m west of the junction with Blackboy Lane.

6.11.2. The shared use path provides a continuous off-road route linking to the quiet section through Salthill Road and Roman Way.

6.12 LINK 11: ROMAN WAY (DRAWING 5187/GA109)

6.12.1. The existing off-road shared use path is to be resurfaced to improve drainage, with solar lighting installed to increase perception of safety. A dropped kerb and shared use path will be provided at the Salthill Road / Roman Way junction, to link the existing provision across the junction.

6.13

6.14 LINK 12: FISHBOURNE ROAD EAST TO WESTGATE (DRAWING 5187/GA109 & 110)

6.14.1. Due to the low traffic flows and speeds along Fishbourne Road east, no formal provision is necessary. The existing Foot/Cycle bridge over the railway line will remain.

6.14.2. From Westgate to Sherbourne Road, a new 3.5m wide shared use path will be provided on the north side of the carriageway. This will continue across the northern arm of the Sherbourne Road mini roundabout. To the east of the roundabout, the shared use path ends and cyclists are provided with 2.5m Two-Way cycle track. On-road parking will be removed to facilitate this.

6.14.3. The existing on-street parking on the north side of the carriageway between the junctions of Sherbourne Road and Parklands Road will be removed. The residential properties along this section are provided with off road driveway parking.

6.15 SUMMARY

6.15.1. The proposed option will provide a more consistent level of off-road provision from Emsworth to Chichester. The shared use path of 2.5m to 3.5m in width, will facilitate safer and more comfortable journeys by removing cyclists from the hazards and risks associated with the existing conditions on the A259. Journey times for cyclists will also be improved with clear priority over side road junctions reducing the need to slow down and stop at regular intervals. Where priority has not been provided due to visibility restrictions, the provision is clearly marked on the carriageway to alert turning drivers of the presence of cyclists travelling in both directions.

7 STAKEHOLDER ENGAGEMENT AND CONSULTATION

7.1 OVERVIEW

7.1.1. A stakeholder consultation meeting was held on 8th January 2020 with WSCC and Chichester District Council to discuss initial proposals for the scheme. This section provides a summary of the key points discussed at the meeting.

7.2 EMSWORTH SECTION (WITHIN HAMPSHIRE)

7.2.1. Provision West of Emsworth (within Hampshire) was considered to be generally of a good standard with 1.5m mandatory lanes. Therefore, it was agreed that proposals for this route should start east of Emsworth town centre with a proposed off-road path starting near the Hampshire boundary. Due to the site visit showing cars speeding across the bridge, an improved crossing point has also been incorporated at the A259 junction with Queen Street.

7.3 VISIBILITY FROM SIDE ROADS

7.3.1. Visibility from side roads was explored to assess the possibility of a continuous shared-use path where possible. It was agreed that where visibility was restricted, the shared use path would not be continuous, but instead provide clear markings across the junction to alert drivers of the presence of two-way cycle flows.

7.4 CARRIAGEWAY WIDTHS AND PARKING

7.4.1. All proposals should aim to maintain a minimum 6.5m road width, within Southbourne village centre this reduces to 6m for a short length.

7.4.2. Some parts of the route are very tight, sometimes caused by footway parking, which would need to be removed to accommodate the proposals. This issue will need to be resolved to ensure the success of the route. It was agreed that where parking will need to be relocated, consideration is needed to how many cars will be affected and where alternative parking will be provided.

7.4.3. Stein Road (Southbourne) is very narrow and marked as a critical junction. Usable width can be maximised by clearing vegetation although maintenance will not be funded by Highways England. Likewise, at Bosham where more vegetation clearance is required to maximise width of existing shared-use path.

7.4.4. Southbourne mini roundabout is very tight. Parking issues are also a constraint. The need for an alternative for displaced vehicles should be provided.

7.4.5. The roundabout at Bosham is also a challenging junction. However, WSCC felt that approach speeds from the north are low.

7.5 QUIET ROUTES

7.5.1. The Fishbourne proposals were presented and involve surface improvements and lighting of existing route via Fishbourne Roman Palace. Other issues regarding quiet routes were discussed, including;

- Appledram Lane is very unsatisfactory, would it be out of scope to include it improvements?
- Is there scope for traffic calming in Fishbourne?

7.5.2. It was agreed that there is no space for cycle path in this area and that traffic calming be the strategy used for improvement.

7.5.3. In Bosham, an issue was raised with regards to using the old truncated road that runs parallel to the route to avoid the proposals switching sides of the carriageway. However, it was deemed unsatisfactory due to lack of passive surveillance in this area and associated safety concerns. However, this can be explored as an alternative.

7.6 SUMMARY

7.6.1. The proposed design was well received for the most part. Due to the existing provision being recently upgraded and deemed satisfactory along Havant Road and Emsworth High Street, the proposals for links 1&2 were removed from the final design.

7.6.2. Two links along the route were identified as facilitating footway parking. This was noted in the final design proposals with the need to displace to on-carriageway. The on-carriageway parking can be formalised in the form of on-road markings. On-carriageway parking is to be removed along one link of the route, on Westgate.

7.6.3. Further consultation, particularly on issues regarding the parking at the three locations mentioned above, will be sort at the proceeding detailed design stage of the project.

8 ENVIRONMENTAL CONSTRAINTS

8.1 OVERVIEW

8.1.1. An Environmental Desktop Study has been carried out to collate existing information from desktop sources in order to identify key potential environmental constraints and impacts associated with the Scheme. A summary of the findings is provided below, with the full report found in Appendix D.

8.1.2. The following environmental topics were covered:

- Air Quality;
- Biodiversity (in the form of a standalone report);
- Cultural Heritage;
- Geology and Soils;
- Landscape and Visual;
- Noise and Vibration;
- Population and Health; and
- Road Drainage and the Water Environment.

8.1.3. The report provides an overview of the potential environmental constraints based on current, publicly available information.

8.1.4. Baseline information has been collected through readily available desk-based sources, baseline information sources include, but are not limited to, the following:

- MagicMap Geographic Information website[3];
- EA Catchment Data Explorer[4];
- Natural England website[5];
- Chichester District Council website[6]; and
- Havant Borough Council website[7].

8.2 AIR QUALITY

8.2.1. Due to the nature and scale of the proposed works, air quality impacts are unlikely to be significant beyond 200m from the Scheme boundary. The construction phase may result in impacts from emissions of dust and particulates from construction vehicles and activities such as earthworks. The urban location and proximity of residential receptors to elements of the Site means that, while the

[3] Defra (2019) MagicMap GIS [Available at: https://magic.defra.gov.uk/MagicMap.aspx ; Accessed on 10-15/01/2020]
[4] Environment Agency (2019) Catchment Data Explorer [Available at: https://environment.data.gov.uk/catchment-planning/ ; Accessed on 10-15/01/2020]
[5] Natural England (2019) main website [Available at: https://www.gov.uk/government/organisations/natural-england ; Accessed on 10-15/01/2020]
[6] Chichester District Council (2020) CDC website [Available at: https://www.chichester.gov.uk/ ; Accessed on 10-15/01/2020]
[7] Havant Borough Council (2020) HBC website [Available at: https://www.havant.gov.uk/ ; Accessed on 10-15/01/2020]

works in each area are small in scale, surrounding properties, people and other receptors may be affected by emissions during construction.

8.2.2. No operational phase impacts or constraints are anticipated due to the nature of the Scheme which will provide NMU infrastructure, and therefore not resulting in an increase in motorised vehicles.

8.2.3. It is likely that potential construction impacts can be managed by standard best practice implemented through a Construction Environmental Management Plan (CEMP), including dust management measures. Due to the proximity of sensitive receptors this consideration is a priority in any CEMP.

8.2.4. Consultation with Natural England would be required regarding the Chichester Harbour Site of Special Scientific Interest , as the Site falls within this zone boundary.

8.3 CULTURAL HERITAGE

8.3.1. There is the potential for adverse construction impacts on nearby listed buildings, particularly those adjacent to the Site. However, it is likely that these impacts can be managed and mitigated through standard Best Practice Measures (BPMs) implemented through a CEMP. There is also the potential for the presence of undiscovered archaeology due to the historic context of much of the Study Area, particularly Fishbourne and Chichester. However, due to the Scheme taking place on previously disturbed ground, the potential for such discoveries and disturbances is low.

8.3.2. The nature of the Scheme will not result in major land-use change or changes in traffic conditions on the associated road network. As a result, no operational phase impacts are anticipated.

8.4 GEOLOGY AND SOILS

8.4.1. During the construction phase there is the potential for the accidental release of pollutants to the environment from sources such as spilled fuel or material. The soil quality is unlikely to be affected by this in the urban portions of the Study Area but there is increased potential for adverse impacts in the rural portions of the Study Area due to the land use being primarily agricultural. These impacts would be managed and mitigated through BPMs outlined and implemented in a CEMP and in particular should consider implications on SPZs. In addition, there is the potential for discovery and disturbance of pre-existing contamination during construction works. This would be addressed through Ground Investigation (GI) works prior to construction, alongside associated geotechnical investigations if required.

8.4.2. Operational impacts of the Scheme are unlikely to occur due to the lack of changes to the soil environment, the proposed works are to take place on previously disturbed ground and will not introduce increased traffic levels and the associated pollution risks.

8.5 LANDSCAPE AND VISUAL

8.5.1. The Study Area intersects Chichester Harbour AONB (see Figure 3.1), with the Site entering the AONB for a 700m segment. However, this is not anticipated to result in adverse effects due to the nature and scale of the works not significantly altering the landscape characterises of the area. The works may require alteration or removal of some roadside trees, some of these being subject to TPOs. The detailed design stage should ensure that tree removal is avoided. Where this is not possible this would cause impacts to the visual amenity of the immediate surroundings of the streets and may result in adverse impacts to retained trees due to the proximity of the construction works.

Construction impacts would then need to be managed and mitigated through BPMs implemented through a CEMP.

8.5.2. No operational phase constraints are anticipated. Impacts of the Scheme in the operation phase are likely to be positive, improving the visual aesthetic of the road network and accessibility to the surrounding landscape.

8.6 NOISE AND VIBRATION

8.6.1. During the construction phase there is the potential for adverse impacts on adjacent and nearby receptors for increased noise and vibration levels. These increases would be associated with construction activities and temporary disruptions to traffic flow to facilitate the completion of the works. It is likely that potential impacts from construction noise and vibration can be managed be standard BPMs implemented through a CEMP. Due to the proximity of sensitive receptors, particularly residential receptors, this would be a priority issue in any CEMP.

8.6.2. The Scheme would improve accessibility to NMU transports methods. There is the potential for positive effects on noise and vibration levels due to any associated reduction in motorised vehicle usage due to this improved accessibility, however these effects are not anticipated to be significant.

8.7 POPULATION AND HEALTH

8.7.1. There is the potential for existing NMU routes, PRoW routes and the existing road network to be adversely affected during the construction phase. These impacts would be temporary but would affect multiple factors such as journey time, NMU and public transport accessibility, journey stress and community connectivity. Due to the small-scale nature of the works, these are not anticipated to be significant and adverse effects would be managed and mitigated through implementation in a CEMP.

8.7.2. The aim of the Scheme is to increase the connectivity of cycle infrastructure and improve pedestrian accessibility as well. Due to this, the Scheme is considered to have a positive long-term impact on population and health.

8.8 ROAD DRAINAGE

8.8.1. The intersection of the Scheme with surface water bodies and proximity to the coast means there is the potential for adverse impacts as a result of construction activities in the construction phase. There is the potential for impacts on the rivers and coastline from the release of pollutants during the construction phase due to the proximity of these receptors. These risks would be managed through the implementation of a CEMP, and consultation with the EA should be undertaken.

8.8.2. The Scheme is located within Flood Zone 2 and Flood Zone 3 areas, this means the Scheme would be vulnerable, or increase the vulnerability of other receptors, to flood risk. Measures to mitigate flood risk would be required for both the construction phase (through implementation through a CEMP) and the operation phase (through adequate drainage provision).

8.8.3. Due to the nature of the works none of these constraints and effects are anticipated to be significant.

8.9 SUMMARY OF KEY CONSTRAINTS

8.9.1. The findings of the desktop environmental constraints study are summarised in the table below:

Table 8-1: Summary of Environmental Constraints

Environmental Topic	Key Constraints	Mitigation
Air Quality	Residential Receptors; Education Facilities; and Chichester Harbour SSSI.	Consultation with the EA about SSSI IRZ; and BPM inputs into a CEMP.
Biodiversity	A standalone biodiversity report has been prepared.	A standalone biodiversity report has been prepared.
Cultural Heritage	Chichester and Fishbourne Listed Buildings; and Chichester and Fishbourne Scheduled Monuments.	BPM inputs into a CEMP.
Geology and Soils	Groundwater SPZs; and Local soilscape.	GI and associated testing; and BPM inputs into a CEMP.
Landscape and Visual	Chichester AONB; TPOs; and Designated Agricultural Land.	BPM inputs into a CEMP; and Avoidance of tree removal in the detailed design stage.
Noise and Vibration	Residential Receptors; and Education Facilities.	BPM inputs into a CEMP.
Population and Health	Road and NMU network users; Residential Receptors; Education Facilities; Community and commercial facilities; and PRoW network and users.	BPM inputs into a CEMP.
Road Drainage and the Water Environment	Surface Water bodies (River Elms, Bosham Streams, River Lavant, the Sea); Flood vulnerable receptors; and The Scheme.	BPM inputs into a CEMP.

9 ECOLOGY REPORT

9.1.1. This section provides a summary of the ecology desktop study completed for the Chichester to Emsworth A259 corridor. The desk study was undertaken in January 2020 to review existing ecological baseline information available in the public domain and to obtain information held by relevant third parties. For the purpose of the desk study exercise, records were collated within various radii around the Indicative Site boundary. The full Ecology Report is provided in Appendix E.

9.2 DESIGNATED SITES

STATUTORY DESIGNATED SITES OF INTERNATIONAL IMPORTANCE

9.2.1. The desk study identified no internationally designated nature conservation site within 5km of the Indicative Site boundary.

STATUTORY DESIGNATED SITES OF NATIONAL IMPORTANCE

9.2.2. Three nationally designated sites are located within 2km Study Area. These sites are described in Table 9-1 below.

Table 9-1: National Statutory Designated Sites

Site Name	Designation	Size (ha)	Distance and orientation from Study Area	Description
Solent Maritime	SAC	11,243	0km, South	The Solent and its inlets are unique in Britain and Europe, experiencing four tides a day and supporting an array of marine and estuarine habitats.
Chichester and Langstone Harbours	Ramsar/SPA	5,811	0km, South	The harbours cover two large estuarine basins and contains extensive intertidal mudflats and sandflats. These habitats, amongst others, support numerous overwintering and breeding bird species.
Solent and Isle of Wight Lagoons	SAC	38	2.8km, South	A matrix of coastal habitats including tidal rivers, estuaries, sand flats, lagoons salt marshes, salt pastures and salt steppes.
Kingley Vale	SAC	201	4.7km, North	This site is the largest area of yew Taxus baccata woodland in Britain. It also supports semi-natural dry grasslands and scrubland facies on calcareous substrates.

Pagham Harbour	SPA	637	5km, South-east	An estuarine basin with extensive saltmarsh and intertidal mud-flats as well as several other wetland habitats.

NON-STATUTORY DESIGNATED SITES

9.2.3. Three non-statutory nature conservation sites (Local Wildlife Sites (LWS)) are present within the 1km Study Area and detailed in below Table 9-2.

Table 9-2: Non-Statutory Designated Sites

Site Name	Designation	Size (ha)	Distance and orientation from Study Area	Description
Brook Meadow (Emsworth)	Local Nature Reserve (LNR)	4.0	0km, North	A small grassland site within the village of Emsworth surrounded by woodland.
Chichester Harbour	Site of Special Scientific Interest (SSSI)	9130.0	0km, South	A large estuarine basin with extensive mudflats and sandflats at low tide.
Nutbourne Marshes	LNR	387.0	0.5km, South	This site comprises mainly of saltmarsh and mudflats, the latter supporting an abundance of invertebrates.
Eames Farm	LNR	132.0	0.7km, South	Consisting of coastal grazing marsh, wetland and reedbed, this site supports a rare invertebrate and floral community.
Warblington Meadow	SSSI	4.0	0.8km, South-west	This unimproved grazing marsh has a rich floral composition associated with the grading from freshwater, base rich marsh to saltmarsh.
Brandy Hole Copse	LNR	7.0	1.9km, North-east	The site is a matrix of broadleaved woodland, coniferous woodland, lowland heathland, tall herb and fen as well as various aquatic habitats.
Langstone Harbour	SSSI	2085.0	1.9km, South-west.	This large tidal basin has one of the largest areas of mixed saltmarsh on the south coast and at low tide reveals large mudflats. The harbour supports high densities of intertidal invertebrates, large wader and wildfowl populations and extensive beds of eelgrass.

9.3 HABITATS

OTHER HABITATS OF CONSERVATION IMPORTANCE

9.3.1. Within the 500m Study Area the closest patch of ancient woodland mapped is 170m north of the Indicative Site. HPIs located within the Indicative Site Boundary are deciduous woodland, good quality semi-improved grassland, saline lagoons and traditional orchard.

PROTECTED/NOTABLE SPECIES

9.3.2. A summary of the desk study results returned for protected and notable species is provided below. Focus has been given to species which may utilise the Indicative Site and its surrounding area.

- Bats: 10 species were returned from the desk study;
- Badgers: No records of badger were returned from the desk study, as such information is confidential and must be requested;
- Hazel Dormouse: one record was returned from the desk study;
- Water Vole and Otter: No record of otter, while 31 records of water vole were returned;
- Other Mammals: Records of four mammals were returned by the desk study ;
- Birds: Records of 87 bird species were returned by the desk study;
- Reptiles: The desk study returned three species of reptile;
- Amphibians: Records of common frog, common toad and smooth newt were returned as part of the desk study search;
- Fish: European eel, bullhead, Atlantic salmon and brown/sea trout have been recorded within 1km of the site;
- Invertebrates: 62 records of invertebrate species were returned from the desk study;
- Plants: A total of 33 plant species were returned in the desk study;
- Invasive Non-Native Species: A total of 21 invasive non-native species were recorded within 1km of the site including mammals, birds, invertebrates and plants.

9.4 RECOMMENDATIONS

9.4.1. Further survey, avoidance and mitigation recommendations have been outlined to ensure the potential effects of the Proposed Development on biodiversity is avoided and minimised and to enable compliance with legislation and planning policy where appropriate. Recommendations for ecological enhancement have also been made.

10 ROAD SAFETY REVIEW

10.1.1. This section provides a summary of the road safety review of the proposed scheme infrastructure improvements that have been undertaken for the identified preferred route as outlined in Section 6. The review has been based on HE Road Safety Audit guidelines to ascertain if there is any inherent design risks that need to be addressed at this feasibility stage of the design.

10.2 SUMMARY OF ROAD SAFETY REVIEW

10.2.1. The following general issues have been identified as part of the road safety review:

- Side road crossings: Further consideration is required of all vehicle and farm and how these interact with the proposals to ensure that there is a consistent approach across the scheme.
- Bus Stops: Further information is required as to how conflicts are mitigated between cyclists and people waiting at bus stops or boarding /alighting from buses.
- Displaced parking: Further consideration needed of how the proposals mitigate displaced parking and the potential for vehicles to park on the proposed shared-use path.
- Existing pedestrian crossings: Interaction between controlled and uncontrolled crossings and placement of street furniture will needs to be considered in detail to avoid pinch-points.
- Carriageway widths: Reduced carriageway widths may lead to side swipes by larger vehicles and buffer zones may be needed where speed limits are 40mph or greater.
- Level differences between carriageway and footway: Increased height and gradience difference between carriageway and footway may unnerve cyclists.
- Vegetation and trees: Existing vegetation will need to be trimmed or removed in various locations along the route to ensure minimum headroom is maintained and to remove restrictions to visibility between users.

10.2.2. In addition to the general issues, the following location specific concerns have been identified:

- Langrune Close (Roman Way): The existing vehicle crossover at West View may lead to vehicle / cycle conflicts and should be fully considered.
- Shared route on Westgate between college access and Sherbourne Road roundabout: Use of the shared footway as a school bus stop area would result in conflict between waiting pupils and shared footway users.
- Eastern extent of proposed route: It is unclear how the scheme terminates with the existing network close to the junction with Parklands Road, while the proposals are also dependent of the Chichester Parking Strategy parking removal scheme. Alternative provision should be proposed should this scheme not come forward as proposed.

10.2.3. Each of these issues have been reviewed and are considered to require only minor design alternation or submission of further information rather than fundamental changes to the proposed scheme. As such each of these items will be added to the design risk register and will be considered individually during the detailed design stage of the project. The full Road Safety Review is provided in Appendix F.

11 SCHEME APPRAISAL REPORT

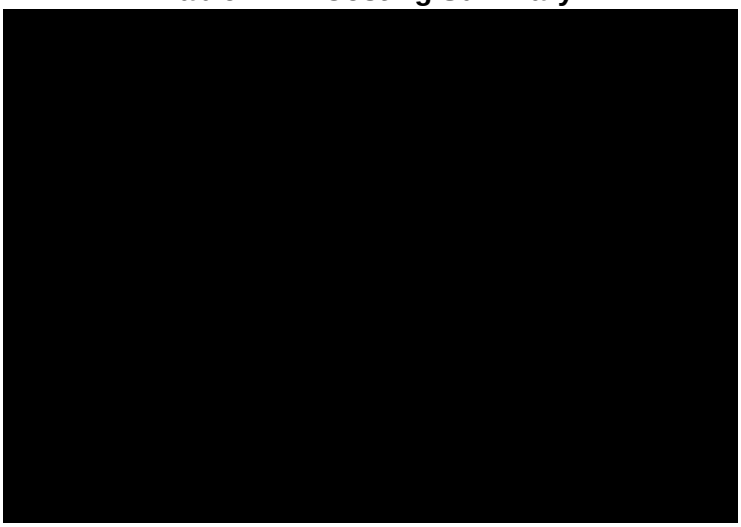
11.1 OVERVIEW

11.1.1. A Scheme Appraisal Report (SAR) has been carried out to determine the economic benefits of the proposed option. SAR is a Highways England, Excel based tool, which records the results of a Department for Transport (DfT) WebTAG based appraisal of a small highway improvement scheme. It allows the study to take quantified impacts, e.g. journey time savings, collision savings and then monetise them in accordance with WebTAG methodology.

11.2 COSTS

11.2.1. The preferred option has been costed including construction costs and professional fees with a risk/contingency rate of 45%. VAT, legal fees, land take/compensation and future inflation have been excluded from the costings. The cost summaries have been provided below in Table 11-1 and have been rounded off to the nearest £1,000. The cost estimate breakdown is provided in Appendix G.

Table 11-1: Costing Summary

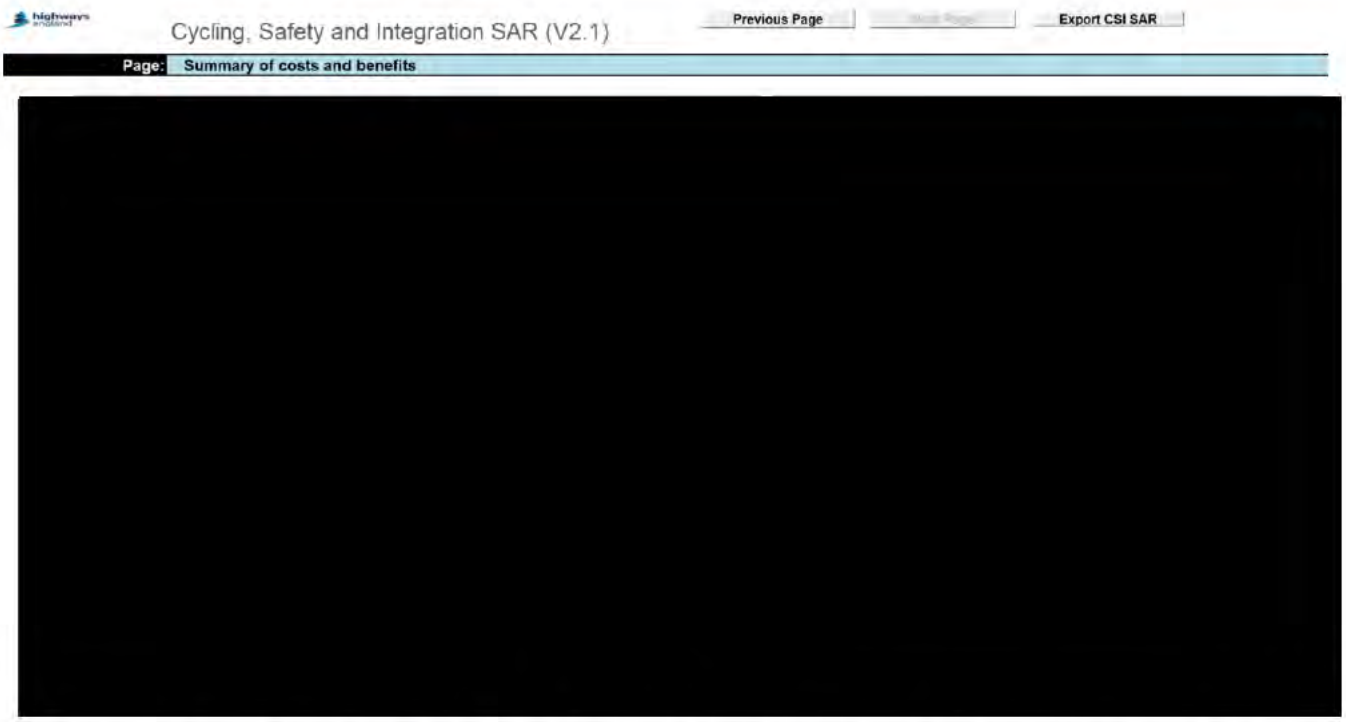


11.3 SAR SUMMARY

11.3.1. The highest indicative benefits are predicted to come from increased physical activity, a reduction in road traffic collisions and improved journey quality.

11.3.2. The SAR report table details the Present Value of Benefits (PVB), the Present Value of Costs (PVC) and the Benefit to Cost Ratio (BCR). The overall impacts of the scheme produce a Net Present Value (NPV) of £[redacted], with a positive Benefit to Cost Ratio (BCR) of 3.5. The SAR summary table is shown below.

Figure 11-1: SAR Summary Table



11.3.3. The proposed option produces a BCR of 3.5. WebTAG value for money framework guidance states that a BCR between 2 and 4 falls into the high value for money category. Therefore, providing a continuous safe route for cyclists at this location represents a high value for money investment. A full breakdown of the SAR is provided in Appendix H.

12 CONCLUSION AND RECOMMENDATION

12.1 SUMMARY

12.1.1. This report has provided a feasibility study of implementing improved pedestrian and cycle facilities on the A259 Corridor between Emsworth and Chichester. The proposals have been based upon the objective of facilitating trips along the corridor by active modes. This route is considered as a high priority corridor for WSCC and was identified for feasibility study through stakeholder consultation and the MCAF process completed in late 2019.

12.1.2. A review of existing conditions along the A259 corridor were assessed including pedestrian and cycle facilities, local facilities, the nearby PRoW network, collision data, traffic flows and NMU survey data. A preliminary ecological and environmental assessment has also been undertaken to identify significant constraints to development of the proposals.

12.1.3. At present there is lack of consistent dedicated cycle facilities along the corridor to link users to connect Chichester and Emsworth. Collision data has shown there to be a high number of incidents involving cyclists, mainly at junctions.

12.1.4. Following on from the assessment exiting conditions, an optioneering exercise was completed to assess the options available to improve cycle infrastructure along the corridor. Two options were proposed and rated against the scheme objectives, existing conditions and design guidance, with a preferred option being taken forward for stakeholder consultation.

12.1.5. The preferred option proposes a mainly off-carriageway shared-use path, which will run between the eastern end of Emsworth (at the A259 junction with Queen Street) and the Chichester City Centre (eastern end of Westgate). Within Emsworth itself, along Havant Road, the existing on-road provision has recently been upgraded as part of resurfacing works. Due to the conflicts associated with a shared use path facility and numerous private access driveways with restricted visibility, the option of off-road cycle provision was excluded for this section.

12.1.6. The final scheme was then subject to a road safety review, which did not highlight any fundamental concerns with the proposals and only issues that can be mitigated as part of the detailed design process.

12.2 CONCLUSION

12.2.1. Following on from the completion of preliminary designs, these were subject to a costing exercise and assessed through a SAR. The report found that the proposals produce a BCR of 3.5, which is categorised as representing high value for money in WebTAG guidance.

12.3 NEXT STEPS

12.3.1. Once this report has been published the proposals will be subject to a technical review by Highways England. Following on from this review, the decision to apply for Designated Funds for the next stage of work will be made by Highways England. Should detailed design commence, there will be further consultation with key stakeholders and user groups.

Appendix A

CLOS TABLES

Cycling Level of Service assessment matrix

Scheme 1 - Link 1

**For highlighted critical indicators, score is multiplied by 3 (basic = 0, good = 3, highest = 6)*

Factor	Indicator	Critical * (fail)	Basic CLoS (score=0)	Good CLoS (score=1)	Highest CLoS (score=2)	Score		
Safety	(max possible = 48)							
Collision risk	Left/right hook at junctions	Heavy streams of turning traffic cut across main cycling stream	Side road junctions frequent and/or untreated. Conflicting movements at major junctions not separated	Fewer side road junctions. Use of entry treatments. Conflicting movements on cycle routes are separated at major junctions	Side roads closed or footway is continuous. All conflicting streams separated at major junctions	0	x3	
	Collision alongside or from behind	Nearside lane in range 3.2m to 4.0m	Cyclists in wide (4m+) nearside traffic lanes or cycle lanes less than 2m wide	Cyclists in dedicated cycle lanes at least 2m wide	Cyclists separated from motorised traffic	0	x3	
	Kerbside activity or risk of collision with door	Cycle lanes <1.5m alongside parking / loading with no buffer	Frequent kerbside activity / effective width for cyclists of 1.5m	Less frequent kerbside activity / effective width for cyclists of 2m	No kerbside activity / No interaction with vehicles parking or loading	3	x3	
	Other vehicle fails to give way or disobeys signals		Poor visibility, no route continuity across junctions and unclear priority	Clear route continuity through junctions, good visibility, priority clear for all users, visual priority for cyclists across side roads	Cycle priority at signalised junctions; visual priority for cyclists across side roads	1		
Feeling of safety	Separation from heavy traffic		Cyclists in general traffic lanes or cycle lanes less than 2m	Cycle lanes at least 2m wide	Cyclists physically separated from other traffic at junctions and on links, or no heavy freight	0		
	Speed of traffic (where cyclists are not separated)	85th percentile greater than 30mph	85th percentile greater than 25mph	85th percentile 20-25mph	85th percentile less than 20mph	0	x3	n/a cyclists seperated
	Total volume of traffic (where cyclists are not separated)	>1,000 vehicles/ hour at peak	500 - 1,000 vehicles / hour at peak (but becomes critical if 5 per cent or more are HGVs)	200 - 500 vehicles / hour at peak (but becomes basic if 2 per cent or more are HGVs)	<200 vehicles / hour at peak	0	x3	
	Interaction with HGVs	Frequent, close interaction	Frequent interaction	Occasional interaction	No interaction	0	x3	
Social safety	Risk/fear of crime		High risk: ambush spots , loitering, poor maintenance	Low risk: area is open, well designed and maintained	No fear of crime: high quality streetscene and pleasant interaction	1		
	Lighting		Long stretches of darkness	Short stretches of darkness	Route lit thoroughly	2		
	Isolation		Route passes far from other activity, for most of the day	Route close to activity, for all of the day	Route always overlooked	2		
	Impact of highway design on behaviour		Layout encourages aggressive behaviour	Layout controls behaviour throughout	Layout encourages civilised behaviour: negotiation and forgiveness	0		
					Max 36 (minus 2 n/a factors)	9	19%	

Directness	**(max possible = 8)**							
Journey time	Ability to maintain own speed on links		Cyclists travel at speed of slowest vehicle ahead (including other cyclists)	Cyclists can usually pass other vehicles (including cyclists)	Cyclists can always pass other vehicles	1		
	Delay to cyclists at junctions		Journey time longer than motor vehicles	Journey time around the same as motor vehicles	Journey time less than motor vehicles	1		
Value of time	For cyclists compared to private car use (normal weather conditions)		VOT greater than private car use value due to some site- specific factors	VOT equivalent to private car use value: similar delay-inducing factors and convenience	VOT less than private car use value due to attractive nature of route	1		
Directness	Deviation of route (against straight line or nearest main road alternative)		Deviation factor greater than 40 per cent	Deviation factor 20-40 per cent	Deviation factor less than 20 per cent	2		
					Max 8	**5**	**63%**	
Coherence	**(max possible = 6)**							
Connections	Ability to join/leave route safely and easily		Cyclists cannot connect to other routes without dismounting	Cyclists share connections with motor traffic	Cyclists have dedicated connections to other routes	2		
	Density of other routes		Network density mesh width >400m	Network density mesh width 250-400m	Network density mesh width <250m	n/a		n/a beyond project scope as factor concerns urban environments
Way-finding	Signing		Basic direction signing (cyclists follow road signs and markings)	Some cycle-specific direction signing	Consistent signing of range of routes and destinations at decision points	1		
					Score out of 4 (minus n/a factor)	**3**	**75%**	
Comfort	**(max possible = 20)**							
Surface quality	Defects: non cycle friendly ironworks, raised/ sunken covers/gullies	Major defects	Many minor defects	Few minor defects	Smooth, high-grip surface	3	x3	
Surface material	Construction		Hand-laid asphalt or unstable blocks/sets	Machine laid asphalt concrete or HRA; smooth blocks	Machine laid asphalt concrete; smooth and firm blocks undisturbed by turning vehicles	1		
Effective width without conflict	Clear nearside space in secondary position or motor vehicle speed/ volume in primary position	Secondary: <1.5m Primary: high motor vehicle flow	Secondary: 1.5m Primary: medium motor vehicle flow	Secondary: 1.5-2.0m Primary: low motor vehicle flow	Secondary: >2.0m Primary: no overtaking by motor vehicles	0	x3	
Gradient	Uphill gradient over 100m		>5 per cent	3-5 per cent	<3 per cent	2		
Deflections	Pinch points caused by horizontal deflections		(Remaining) lane width <3.2m	(Remaining) lane width >4.0m or <3.0m (low motor vehicle flow)	Traffic is calmed so no need for horizontal deflections	0		
Undulations	Vertical deflections		Round top humps	Sinusoidal humps	No vertical deflections	2		
					Max 20	**8**	**40%**	
Attractiveness	**(max possible = 12)**							
Impact on walking	Pedestrian Comfort Level (PCL)		Reduction in PCL	No impact on pedestrian provision or PCL	Pedestrian provision enhanced by cycling provision	1		
Greening	Green infrastructure or sustainable materials incorporated into design		No greening element	Some greening elements	Full integration of greening elements	1		
Air quality	PM10 & NOX values referenced from concentration maps		Medium to High	Low to Medium	Low	0		No accurate info available. Assumption made due to proximity to carriageway.
Noise pollution	Noise level from recommended riding range		>78DB	65-78DB	<65DB	0		No accurate info available. Assumption made due to proximity to carriageway.
Minimise street clutter	Signing required to support scheme layout		Large amounts of regulatory signing to conform with complex layout	Moderate amount of signing, particularly around junctions	Minimal signing, eg for wayfinding purposes only	2		
Secure cycle parking	Ease of access to secure cycle parking on- and off-street		No additional secure cycle parking	Minimum levels of cycle parking provided (ie to London Plan standards)	Cycle parking is provided to meet future demand and is of good quality and securely located	n/a		n/a beyond project scope
					Max 10 (minus n/a factor)	**4**	**40%**	
Adaptability	**(max possible = 6)**							

Public transport integration	Smooth transition between modes or route continuity maintained through interchanges		No consideration for cyclists within interchange area	Cycle route continuity maintained through interchange and some cycle parking available	Cycle route continuity maintained and secure cycle parking provided. Transport of cycles available.	n/a		n/a beyond project scope
Flexibility	Facility can be expanded or layouts adopted within area constraints		No adjustments are possible within constraints. Road works may require some closure	Links can be adjusted to meet demand but junctions are constrained by vehicle capacity limitations. Road works will not require closure; cycling will be maintained although route quality may be compromised	Layout can be adapted freely without constrain to meet demand or collision risk. Adjustments can be made to maintain full route quality when roadworks are present	1		
Growth enabled	Route matches predicted usage and has exceedence built into the design		Provision does not match current levels of demand	Provision is matched to predicted demand flows	Provision has spare capacity for large increases in predicted cycle use	1		
					Max 4 (minus n/a factor)	2	50%	
					TOTAL (max 94 minus n/a factors)	31	33%	

**For highlighted critical indicators, score is multiplied by 3 (basic = 0, good = 3, highest = 6)*

Cycling Level of Service assessment matrix

Scheme 1 - Link 2

**For highlighted critical indicators, score is multiplied by 3 (basic = 0, good = 3, highest = 6)*

Factor	Indicator	Critical * (fail)	Basic CLoS (score=0)	Good CLoS (score=1)	Highest CLoS (score=2)	Score	
Safety	(max possible = 48)						
Collision risk	Left/right hook at junctions	Heavy streams of turning traffic cut across main cycling stream	Side road junctions frequent and/or untreated. Conflicting movements at major junctions not separated	Fewer side road junctions. Use of entry treatments. Conflicting movements on cycle routes are separated at major junctions	Side roads closed or footway is continuous. All conflicting streams separated at major junctions	0	x3
	Collision alongside or from behind	Nearside lane in range 3.2m to 4.0m	Cyclists in wide (4m+) nearside traffic lanes or cycle lanes less than 2m wide	Cyclists in dedicated cycle lanes at least 2m wide	Cyclists separated from motorised traffic	0	x3
	Kerbside activity or risk of collision with door	Cycle lanes <1.5m alongside parking / loading with no buffer	Frequent kerbside activity / effective width for cyclists of 1.5m	Less frequent kerbside activity / effective width for cyclists of 2m	No kerbside activity / No interaction with vehicles parking or loading	0	x3
	Other vehicle fails to give way or disobeys signals		Poor visibility, no route continuity across junctions and unclear priority	Clear route continuity through junctions, good visibility, priority clear for all users, visual priority for cyclists across side roads	Cycle priority at signalised junctions; visual priority for cyclists across side roads	1	
Feeling of safety	Separation from heavy traffic		Cyclists in general traffic lanes or cycle lanes less than 2m	Cycle lanes at least 2m wide	Cyclists physically separated from other traffic at junctions and on links, or no heavy freight	0	
	Speed of traffic (where cyclists are not separated)	85th percentile greater than 30mph	85th percentile greater than 25mph	85th percentile 20-25mph	85th percentile less than 20mph	2	x3
	Total volume of traffic (where cyclists are not separated)	>1,000 vehicles/ hour at peak	500 - 1,000 vehicles / hour at peak (but becomes critical if 5 per cent or more are HGVs)	200 - 500 vehicles / hour at peak (but becomes basic if 2 per cent or more are HGVs)	<200 vehicles / hour at peak	3	x3
	Interaction with HGVs	Frequent, close interaction	Frequent interaction	Occasional interaction	No interaction	6	x3
Social safety	Risk/fear of crime		High risk: ambush spots , loitering, poor maintenance	Low risk: area is open, well designed and maintained	No fear of crime: high quality streetscene and pleasant interaction	2	
	Lighting		Long stretches of darkness	Short stretches of darkness	Route lit thoroughly	2	
	Isolation		Route passes far from other activity, for most of the day	Route close to activity, for all of the day	Route always overlooked	2	
	Impact of highway design on behaviour		Layout encourages aggressive behaviour	Layout controls behaviour throughout	Layout encourages civilised behaviour: negotiation and forgiveness	2	
					Max 48	20	42%

Directness	**(max possible = 8)**							
Journey time	Ability to maintain own speed on links		Cyclists travel at speed of slowest vehicle ahead (including other cyclists)	Cyclists can usually pass other vehicles (including cyclists)	Cyclists can always pass other vehicles	1		
	Delay to cyclists at junctions		Journey time longer than motor vehicles	Journey time around the same as motor vehicles	Journey time less than motor vehicles	0		
Value of time	For cyclists compared to private car use (normal weather conditions)		VOT greater than private car use value due to some site- specific factors	VOT equivalent to private car use value: similar delay-inducing factors and convenience	VOT less than private car use value due to attractive nature of route	1		
Directness	Deviation of route (against straight line or nearest main road alternative)		Deviation factor greater than 40 per cent	Deviation factor 20-40 per cent	Deviation factor less than 20 per cent	1		
					Max 8	**3**	**38%**	
Coherence	**(max possible = 6)**							
Connections	Ability to join/leave route safely and easily		Cyclists cannot connect to other routes without dismounting	Cyclists share connections with motor traffic	Cyclists have dedicated connections to other routes	1		
	Density of other routes		Network density mesh width >400m	Network density mesh width 250-400m	Network density mesh width <250m	n/a		n/a beyond project scope as factor concerns urban environments
Way-finding	Signing		Basic direction signing (cyclists follow road signs and markings)	Some cycle-specific direction signing	Consistent signing of range of routes and destinations at decision points	0		
					Score out of 4 (minus n/a factor)	**1**	**25%**	
Comfort	**(max possible = 20)**							
Surface quality	Defects: non cycle friendly ironworks, raised/ sunken covers/gullies	Major defects	Many minor defects	Few minor defects	Smooth, high-grip surface	3	x3	
Surface material	Construction		Hand-laid asphalt or unstable blocks/sets	Machine laid asphalt concrete or HRA; smooth blocks	Machine laid asphalt concrete; smooth and firm blocks undisturbed by turning vehicles	1		
Effective width without conflict	Clear nearside space in secondary position or motor vehicle speed/ volume in primary position	Secondary: <1.5m Primary: high motor vehicle flow	Secondary: 1.5m Primary: medium motor vehicle flow	Secondary: 1.5-2.0m Primary: low motor vehicle flow	Secondary: >2.0m Primary: no overtaking by motor vehicles	3	x3	
Gradient	Uphill gradient over 100m		>5 per cent	3-5 per cent	<3 per cent	2		
Deflections	Pinch points caused by horizontal deflections		(Remaining) lane width <3.2m	(Remaining) lane width >4.0m or <3.0m (low motor vehicle flow)	Traffic is calmed so no need for horizontal deflections	0		
Undulations	Vertical deflections		Round top humps	Sinusoidal humps	No vertical deflections	2		
					Max 20	**11**	**55%**	
Attractiveness	**(max possible = 12)**							
Impact on walking	Pedestrian Comfort Level (PCL)		Reduction in PCL	No impact on pedestrian provision or PCL	Pedestrian provision enhanced by cycling provision	1		
Greening	Green infrastructure or sustainable materials incorporated into design		No greening element	Some greening elements	Full integration of greening elements	1		
Air quality	PM10 & NOX values referenced from concentration maps		Medium to High	Low to Medium	Low	1		No accurate info available. Assumption made due to proximity to carriageway.
Noise pollution	Noise level from recommended riding range		>78DB	65-78DB	<65DB	1		No accurate info available. Assumption made due to proximity to carriageway.
Minimise street clutter	Signing required to support scheme layout		Large amounts of regulatory signing to conform with complex layout	Moderate amount of signing, particularly around junctions	Minimal signing, eg for wayfinding purposes only	2		
Secure cycle parking	Ease of access to secure cycle parking on- and off-street		No additional secure cycle parking	Minimum levels of cycle parking provided (ie to London Plan standards)	Cycle parking is provided to meet future demand and is of good quality and securely located	n/a		n/a beyond project scope
					Max 10 (minus n/a factor)	**6**	**60%**	
Adaptability	**(max possible = 6)**							

Public transport integration	Smooth transition between modes or route continuity maintained through interchanges		No consideration for cyclists within interchange area	Cycle route continuity maintained through interchange and some cycle parking available	Cycle route continuity maintained and secure cycle parking provided. Transport of cycles available.	n/a		n/a beyond project scope
Flexibility	Facility can be expanded or layouts adopted within area constraints		No adjustments are possible within constraints. Road works may require some closure	Links can be adjusted to meet demand but junctions are constrained by vehicle capacity limitations. Road works will not require closure; cycling will be maintained although route quality may be compromised	Layout can be adapted freely without constrain to meet demand or collision risk. Adjustments can be made to maintain full route quality when roadworks are present	1		
Growth enabled	Route matches predicted usage and has exceedence built into the design		Provision does not match current levels of demand	Provision is matched to predicted demand flows	Provision has spare capacity for large increases in predicted cycle use	1		
					Max 4 (minus n/a factor)	2	50%	
					TOTAL (max 94 minus n/a factors)	43	46%	

**For highlighted critical indicators, score is multiplied by 3 (basic = 0, good = 3, highest = 6)*

Cycling Level of Service assessment matrix

Scheme 1 - Link 3

**For highlighted critical indicators, score is multiplied by 3 (basic = 0, good = 3, highest = 6)*

Factor	Indicator	Critical * (fail)	Basic CLoS (score=0)	Good CLoS (score=1)	Highest CLoS (score=2)	Score		
Safety	(max possible = 48)							
Collision risk	Left/right hook at junctions	Heavy streams of turning traffic cut across main cycling stream	Side road junctions frequent and/or untreated. Conflicting movements at major junctions not separated	Fewer side road junctions. Use of entry treatments. Conflicting movements on cycle routes are separated at major junctions	Side roads closed or footway is continuous. All conflicting streams separated at major junctions	0	x3	
	Collision alongside or from behind	Nearside lane in range 3.2m to 4.0m	Cyclists in wide (4m+) nearside traffic lanes or cycle lanes less than 2m wide	Cyclists in dedicated cycle lanes at least 2m wide	Cyclists separated from motorised traffic	*	x3	
	Kerbside activity or risk of collision with door	Cycle lanes <1.5m alongside parking / loading with no buffer	Frequent kerbside activity / effective width for cyclists of 1.5m	Less frequent kerbside activity / effective width for cyclists of 2m	No kerbside activity / No interaction with vehicles parking or loading	0	x3	
	Other vehicle fails to give way or disobeys signals		Poor visibility, no route continuity across junctions and unclear priority	Clear route continuity through junctions, good visibility, priority clear for all users, visual priority for cyclists across side roads	Cycle priority at signalised junctions; visual priority for cyclists across side roads	0		
Feeling of safety	Separation from heavy traffic		Cyclists in general traffic lanes or cycle lanes less than 2m	Cycle lanes at least 2m wide	Cyclists physically separated from other traffic at junctions and on links, or no heavy freight	0		
	Speed of traffic (where cyclists are not separated)	85th percentile greater than 30mph	85th percentile greater than 25mph	85th percentile 20-25mph	85th percentile less than 20mph	0	x3	n/a cyclists seperated
	Total volume of traffic (where cyclists are not separated)	>1,000 vehicles/ hour at peak	500 - 1,000 vehicles / hour at peak (but becomes critical if 5 per cent or more are HGVs)	200 - 500 vehicles / hour at peak (but becomes basic if 2 per cent or more are HGVs)	<200 vehicles / hour at peak	0	x3	
	Interaction with HGVs	Frequent, close interaction	Frequent interaction	Occasional interaction	No interaction	0	x3	
Social safety	Risk/fear of crime		High risk: ambush spots , loitering, poor maintenance	Low risk: area is open, well designed and maintained	No fear of crime: high quality streetscene and pleasant interaction	1		
	Lighting		Long stretches of darkness	Short stretches of darkness	Route lit thoroughly	2		
	Isolation		Route passes far from other activity, for most of the day	Route close to activity, for all of the day	Route always overlooked	1		
	Impact of highway design on behaviour		Layout encourages aggressive behaviour	Layout controls behaviour throughout	Layout encourages civilised behaviour: negotiation and forgiveness	0		
					Max 48	4	8%	

Directness	**(max possible = 8)**							
Journey time	Ability to maintain own speed on links		Cyclists travel at speed of slowest vehicle ahead (including other cyclists)	Cyclists can usually pass other vehicles (including cyclists)	Cyclists can always pass other vehicles	1		
	Delay to cyclists at junctions		Journey time longer than motor vehicles	Journey time around the same as motor vehicles	Journey time less than motor vehicles	1		
Value of time	For cyclists compared to private car use (normal weather conditions)		VOT greater than private car use value due to some site- specific factors	VOT equivalent to private car use value: similar delay-inducing factors and convenience	VOT less than private car use value due to attractive nature of route	1		
Directness	Deviation of route (against straight line or nearest main road alternative)		Deviation factor greater than 40 per cent	Deviation factor 20-40 per cent	Deviation factor less than 20 per cent	2		
					Max 8	**5**	**63%**	
Coherence	**(max possible = 6)**							
Connections	Ability to join/leave route safely and easily		Cyclists cannot connect to other routes without dismounting	Cyclists share connections with motor traffic	Cyclists have dedicated connections to other routes	1		
	Density of other routes		Network density mesh width >400m	Network density mesh width 250-400m	Network density mesh width <250m	n/a		n/a beyond project scope as factor concerns urban environments
Way-finding	Signing		Basic direction signing (cyclists follow road signs and markings)	Some cycle-specific direction signing	Consistent signing of range of routes and destinations at decision points	1		
					Score out of 4 (minus n/a factor)	**2**	**50%**	
Comfort	**(max possible = 20)**							
Surface quality	Defects: non cycle friendly ironworks, raised/ sunken covers/gullies	Major defects	Many minor defects	Few minor defects	Smooth, high-grip surface	0	x3	
Surface material	Construction		Hand-laid asphalt or unstable blocks/sets	Machine laid asphalt concrete or HRA; smooth blocks	Machine laid asphalt concrete; smooth and firm blocks undisturbed by turning vehicles	0		
Effective width without conflict	Clear nearside space in secondary position or motor vehicle speed/ volume in primary position	Secondary: <1.5m Primary: high motor vehicle flow	Secondary: 1.5m Primary: medium motor vehicle flow	Secondary: 1.5-2.0m Primary: low motor vehicle flow	Secondary: >2.0m Primary: no overtaking by motor vehicles	*	x3	
Gradient	Uphill gradient over 100m		>5 per cent	3-5 per cent	<3 per cent	2		
Deflections	Pinch points caused by horizontal deflections		(Remaining) lane width <3.2m	(Remaining) lane width >4.0m or <3.0m (low motor vehicle flow)	Traffic is calmed so no need for horizontal deflections	0		
Undulations	Vertical deflections		Round top humps	Sinusoidal humps	No vertical deflections	2		
					Max 20	**4**	**20%**	
Attractiveness	**(max possible = 12)**							
Impact on walking	Pedestrian Comfort Level (PCL)		Reduction in PCL	No impact on pedestrian provision or PCL	Pedestrian provision enhanced by cycling provision	1		
Greening	Green infrastructure or sustainable materials incorporated into design		No greening element	Some greening elements	Full integration of greening elements	1		
Air quality	PM10 & NOX values referenced from concentration maps		Medium to High	Low to Medium	Low	1		No accurate info available. Assumption made due to proximity to carriageway.
Noise pollution	Noise level from recommended riding range		>78DB	65-78DB	<65DB	0		No accurate info available. Assumption made due to proximity to carriageway.
Minimise street clutter	Signing required to support scheme layout		Large amounts of regulatory signing to conform with complex layout	Moderate amount of signing, particularly around junctions	Minimal signing, eg for wayfinding purposes only	1		
Secure cycle parking	Ease of access to secure cycle parking on- and off-street		No additional secure cycle parking	Minimum levels of cycle parking provided (ie to London Plan standards)	Cycle parking is provided to meet future demand and is of good quality and securely located	n/a		n/a beyond project scope
					Max 10 (minus n/a factor)	**4**	**40%**	
Adaptability	**(max possible = 6)**							

Public transport integration	Smooth transition between modes or route continuity maintained through interchanges		No consideration for cyclists within interchange area	Cycle route continuity maintained through interchange and some cycle parking available	Cycle route continuity maintained and secure cycle parking provided. Transport of cycles available.	n/a		n/a beyond project scope
Flexibility	Facility can be expanded or layouts adopted within area constraints		No adjustments are possible within constraints. Road works may require some closure	Links can be adjusted to meet demand but junctions are constrained by vehicle capacity limitations. Road works will not require closure; cycling will be maintained although route quality may be compromised	Layout can be adapted freely without constrain to meet demand or collision risk. Adjustments can be made to maintain full route quality when roadworks are present	1		
Growth enabled	Route matches predicted usage and has exceedence built into the design		Provision does not match current levels of demand	Provision is matched to predicted demand flows	Provision has spare capacity for large increases in predicted cycle use	1		
					Max 4 (minus n/a factor)	2	50%	
					TOTAL (max 94 minus n/a factors)	21	22%	

**For highlighted critical indicators, score is multiplied by 3 (basic = 0, good = 3, highest = 6)*

Cycling Level of Service assessment matrix

Scheme 1 - Link 4

**For highlighted critical indicators, score is multiplied by 3 (basic = 0, good = 3, highest = 6)*

Factor	Indicator	Critical * (fail)	Basic CLoS (score=0)	Good CLoS (score=1)	Highest CLoS (score=2)	Score		
Safety	(max possible = 48)							
Collision risk	Left/right hook at junctions	Heavy streams of turning traffic cut across main cycling stream	Side road junctions frequent and/or untreated. Conflicting movements at major junctions not separated	Fewer side road junctions. Use of entry treatments. Conflicting movements on cycle routes are separated at major junctions	Side roads closed or footway is continuous. All conflicting streams separated at major junctions	*	x3	
	Collision alongside or from behind	Nearside lane in range 3.2m to 4.0m	Cyclists in wide (4m+) nearside traffic lanes or cycle lanes less than 2m wide	Cyclists in dedicated cycle lanes at least 2m wide	Cyclists separated from motorised traffic	0	x3	
	Kerbside activity or risk of collision with door	Cycle lanes <1.5m alongside parking / loading with no buffer	Frequent kerbside activity / effective width for cyclists of 1.5m	Less frequent kerbside activity / effective width for cyclists of 2m	No kerbside activity / No interaction with vehicles parking or loading	*	x3	
	Other vehicle fails to give way or disobeys signals		Poor visibility, no route continuity across junctions and unclear priority	Clear route continuity through junctions, good visibility, priority clear for all users, visual priority for cyclists across side roads	Cycle priority at signalised junctions; visual priority for cyclists across side roads	0		
Feeling of safety	Separation from heavy traffic		Cyclists in general traffic lanes or cycle lanes less than 2m	Cycle lanes at least 2m wide	Cyclists physically separated from other traffic at junctions and on links, or no heavy freight	0		
	Speed of traffic (where cyclists are not separated)	85th percentile greater than 30mph	85th percentile greater than 25mph	85th percentile 20-25mph	85th percentile less than 20mph	*	x3	n/a cyclists seperated
	Total volume of traffic (where cyclists are not separated)	>1,000 vehicles/ hour at peak	500 - 1,000 vehicles / hour at peak (but becomes critical if 5 per cent or more are HGVs)	200 - 500 vehicles / hour at peak (but becomes basic if 2 per cent or more are HGVs)	<200 vehicles / hour at peak	0	x3	
	Interaction with HGVs	Frequent, close interaction	Frequent interaction	Occasional interaction	No interaction	0	x3	
Social safety	Risk/fear of crime		High risk: ambush spots , loitering, poor maintenance	Low risk: area is open, well designed and maintained	No fear of crime: high quality streetscene and pleasant interaction	1		
	Lighting		Long stretches of darkness	Short stretches of darkness	Route lit thoroughly	2		
	Isolation		Route passes far from other activity, for most of the day	Route close to activity, for all of the day	Route always overlooked	1		
	Impact of highway design on behaviour		Layout encourages aggressive behaviour	Layout controls behaviour throughout	Layout encourages civilised behaviour: negotiation and forgiveness	0		
					Max 48	4	8%	

Directness	**(max possible = 8)**							
Journey time	Ability to maintain own speed on links		Cyclists travel at speed of slowest vehicle ahead (including other cyclists)	Cyclists can usually pass other vehicles (including cyclists)	Cyclists can always pass other vehicles	1		
	Delay to cyclists at junctions		Journey time longer than motor vehicles	Journey time around the same as motor vehicles	Journey time less than motor vehicles	1		
Value of time	For cyclists compared to private car use (normal weather conditions)		VOT greater than private car use value due to some site- specific factors	VOT equivalent to private car use value: similar delay-inducing factors and convenience	VOT less than private car use value due to attractive nature of route	1		
Directness	Deviation of route (against straight line or nearest main road alternative)		Deviation factor greater than 40 per cent	Deviation factor 20-40 per cent	Deviation factor less than 20 per cent	2		
					Max 8	**5**	**63%**	
Coherence	**(max possible = 6)**							
Connections	Ability to join/leave route safely and easily		Cyclists cannot connect to other routes without dismounting	Cyclists share connections with motor traffic	Cyclists have dedicated connections to other routes	1		
	Density of other routes		Network density mesh width >400m	Network density mesh width 250-400m	Network density mesh width <250m	n/a		n/a beyond project scope as factor concerns urban environments
Way-finding	Signing		Basic direction signing (cyclists follow road signs and markings)	Some cycle-specific direction signing	Consistent signing of range of routes and destinations at decision points	1		
					Score out of 4 (minus n/a factor)	**2**	**50%**	
Comfort	**(max possible = 20)**							
Surface quality	Defects: non cycle friendly ironworks, raised/ sunken covers/gullies	Major defects	Many minor defects	Few minor defects	Smooth, high-grip surface	0	x3	
Surface material	Construction		Hand-laid asphalt or unstable blocks/sets	Machine laid asphalt concrete or HRA; smooth blocks	Machine laid asphalt concrete; smooth and firm blocks undisturbed by turning vehicles	1		
Effective width without conflict	Clear nearside space in secondary position or motor vehicle speed/ volume in primary position	Secondary: <1.5m Primary: high motor vehicle flow	Secondary: 1.5m Primary: medium motor vehicle flow	Secondary: 1.5-2.0m Primary: low motor vehicle flow	Secondary: >2.0m Primary: no overtaking by motor vehicles	*	x3	
Gradient	Uphill gradient over 100m		>5 per cent	3-5 per cent	<3 per cent	2		
Deflections	Pinch points caused by horizontal deflections		(Remaining) lane width <3.2m	(Remaining) lane width >4.0m or <3.0m (low motor vehicle flow)	Traffic is calmed so no need for horizontal deflections	0		
Undulations	Vertical deflections		Round top humps	Sinusoidal humps	No vertical deflections	2		
					Max 20	**5**	**25%**	
Attractiveness	**(max possible = 12)**							
Impact on walking	Pedestrian Comfort Level (PCL)		Reduction in PCL	No impact on pedestrian provision or PCL	Pedestrian provision enhanced by cycling provision	1		
Greening	Green infrastructure or sustainable materials incorporated into design		No greening element	Some greening elements	Full integration of greening elements	1		
Air quality	PM10 & NOX values referenced from concentration maps		Medium to High	Low to Medium	Low	1		No accurate info available. Assumption made due to proximity to carriageway.
Noise pollution	Noise level from recommended riding range		>78DB	65-78DB	<65DB	0		No accurate info available. Assumption made due to proximity to carriageway.
Minimise street clutter	Signing required to support scheme layout		Large amounts of regulatory signing to conform with complex layout	Moderate amount of signing, particularly around junctions	Minimal signing, eg for wayfinding purposes only	1		
Secure cycle parking	Ease of access to secure cycle parking on- and off-street		No additional secure cycle parking	Minimum levels of cycle parking provided (ie to London Plan standards)	Cycle parking is provided to meet future demand and is of good quality and securely located	n/a		n/a beyond project scope
					Max 10 (minus n/a factor)	**4**	**40%**	
Adaptability	**(max possible = 6)**							

Public transport integration	Smooth transition between modes or route continuity maintained through interchanges		No consideration for cyclists within interchange area	Cycle route continuity maintained through interchange and some cycle parking available	Cycle route continuity maintained and secure cycle parking provided. Transport of cycles available.	n/a		n/a beyond project scope
Flexibility	Facility can be expanded or layouts adopted within area constraints		No adjustments are possible within constraints. Road works may require some closure	Links can be adjusted to meet demand but junctions are constrained by vehicle capacity limitations. Road works will not require closure; cycling will be maintained although route quality may be compromised	Layout can be adapted freely without constrain to meet demand or collision risk. Adjustments can be made to maintain full route quality when roadworks are present	1		
Growth enabled	Route matches predicted usage and has exceedence built into the design		Provision does not match current levels of demand	Provision is matched to predicted demand flows	Provision has spare capacity for large increases in predicted cycle use	2		
					Max 4 (minus n/a factor)	3	75%	
					TOTAL max 94	23	24%	

**For highlighted critical indicators, score is multiplied by 3 (basic = 0, good = 3, highest = 6)*

Cycling Level of Service assessment matrix

Scheme 1 - Link 5

**For highlighted critical indicators, score is multiplied by 3 (basic = 0, good = 3, highest = 6)*

Factor	Indicator	Critical * (fail)	Basic CLoS (score=0)	Good CLoS (score=1)	Highest CLoS (score=2)	Score		
Safety	(max possible = 48)							
Collision risk	Left/right hook at junctions	Heavy streams of turning traffic cut across main cycling stream	Side road junctions frequent and/or untreated. Conflicting movements at major junctions not separated	Fewer side road junctions. Use of entry treatments. Conflicting movements on cycle routes are separated at major junctions	Side roads closed or footway is continuous. All conflicting streams separated at major junctions	*	x3	
	Collision alongside or from behind	Nearside lane in range 3.2m to 4.0m	Cyclists in wide (4m+) nearside traffic lanes or cycle lanes less than 2m wide	Cyclists in dedicated cycle lanes at least 2m wide	Cyclists separated from motorised traffic	0	x3	
	Kerbside activity or risk of collision with door	Cycle lanes <1.5m alongside parking / loading with no buffer	Frequent kerbside activity / effective width for cyclists of 1.5m	Less frequent kerbside activity / effective width for cyclists of 2m	No kerbside activity / No interaction with vehicles parking or loading	0	x3	
	Other vehicle fails to give way or disobeys signals		Poor visibility, no route continuity across junctions and unclear priority	Clear route continuity through junctions, good visibility, priority clear for all users, visual priority for cyclists across side roads	Cycle priority at signalised junctions; visual priority for cyclists across side roads	0		
Feeling of safety	Separation from heavy traffic		Cyclists in general traffic lanes or cycle lanes less than 2m	Cycle lanes at least 2m wide	Cyclists physically separated from other traffic at junctions and on links, or no heavy freight	0		
	Speed of traffic (where cyclists are not separated)	85th percentile greater than 30mph	85th percentile greater than 25mph	85th percentile 20-25mph	85th percentile less than 20mph	*	x3	n/a cyclists seperated
	Total volume of traffic (where cyclists are not separated)	>1,000 vehicles/ hour at peak	500 - 1,000 vehicles / hour at peak (but becomes critical if 5 per cent or more are HGVs)	200 - 500 vehicles / hour at peak (but becomes basic if 2 per cent or more are HGVs)	<200 vehicles / hour at peak	0	x3	
	Interaction with HGVs	Frequent, close interaction	Frequent interaction	Occasional interaction	No interaction	0	x3	
Social safety	Risk/fear of crime		High risk: ambush spots , loitering, poor maintenance	Low risk: area is open, well designed and maintained	No fear of crime: high quality streetscene and pleasant interaction	1		
	Lighting		Long stretches of darkness	Short stretches of darkness	Route lit thoroughly	2		
	Isolation		Route passes far from other activity, for most of the day	Route close to activity, for all of the day	Route always overlooked	1		
	Impact of highway design on behaviour		Layout encourages aggressive behaviour	Layout controls behaviour throughout	Layout encourages civilised behaviour: negotiation and forgiveness	0		
					Max 48	4	8%	

Directness	**(max possible = 8)**							
Journey time	Ability to maintain own speed on links		Cyclists travel at speed of slowest vehicle ahead (including other cyclists)	Cyclists can usually pass other vehicles (including cyclists)	Cyclists can always pass other vehicles	1		
	Delay to cyclists at junctions		Journey time longer than motor vehicles	Journey time around the same as motor vehicles	Journey time less than motor vehicles	1		
Value of time	For cyclists compared to private car use (normal weather conditions)		VOT greater than private car use value due to some site- specific factors	VOT equivalent to private car use value: similar delay-inducing factors and convenience	VOT less than private car use value due to attractive nature of route	1		
Directness	Deviation of route (against straight line or nearest main road alternative)		Deviation factor greater than 40 per cent	Deviation factor 20-40 per cent	Deviation factor less than 20 per cent	2		
					Max 8	**5**	**63%**	
Coherence	**(max possible = 6)**							
Connections	Ability to join/leave route safely and easily		Cyclists cannot connect to other routes without dismounting	Cyclists share connections with motor traffic	Cyclists have dedicated connections to other routes	1		
	Density of other routes		Network density mesh width >400m	Network density mesh width 250-400m	Network density mesh width <250m	n/a		n/a beyond project scope as factor concerns urban environments
Way-finding	Signing		Basic direction signing (cyclists follow road signs and markings)	Some cycle-specific direction signing	Consistent signing of range of routes and destinations at decision points	1		
					Score out of 4 (minus n/a factor)	**2**	**50%**	
Comfort	**(max possible = 20)**							
Surface quality	Defects: non cycle friendly ironworks, raised/ sunken covers/gullies	Major defects	Many minor defects	Few minor defects	Smooth, high-grip surface	0	x3	
Surface material	Construction		Hand-laid asphalt or unstable blocks/sets	Machine laid asphalt concrete or HRA; smooth blocks	Machine laid asphalt concrete; smooth and firm blocks undisturbed by turning vehicles	1		
Effective width without conflict	Clear nearside space in secondary position or motor vehicle speed/ volume in primary position	Secondary: <1.5m Primary: high motor vehicle flow	Secondary: 1.5m Primary: medium motor vehicle flow	Secondary: 1.5-2.0m Primary: low motor vehicle flow	Secondary: >2.0m Primary: no overtaking by motor vehicles	*	x3	
Gradient	Uphill gradient over 100m		>5 per cent	3-5 per cent	<3 per cent	2		
Deflections	Pinch points caused by horizontal deflections		(Remaining) lane width <3.2m	(Remaining) lane width >4.0m or <3.0m (low motor vehicle flow)	Traffic is calmed so no need for horizontal deflections	0		
Undulations	Vertical deflections		Round top humps	Sinusoidal humps	No vertical deflections	2		
					Max 20	**5**	**25%**	
Attractiveness	**(max possible = 12)**							
Impact on walking	Pedestrian Comfort Level (PCL)		Reduction in PCL	No impact on pedestrian provision or PCL	Pedestrian provision enhanced by cycling provision	1		
Greening	Green infrastructure or sustainable materials incorporated into design		No greening element	Some greening elements	Full integration of greening elements	1		
Air quality	PM10 & NOX values referenced from concentration maps		Medium to High	Low to Medium	Low	0		No accurate info available. Assumption made due to proximity to carriageway.
Noise pollution	Noise level from recommended riding range		>78DB	65-78DB	<65DB	0		No accurate info available. Assumption made due to proximity to carriageway.
Minimise street clutter	Signing required to support scheme layout		Large amounts of regulatory signing to conform with complex layout	Moderate amount of signing, particularly around junctions	Minimal signing, eg for wayfinding purposes only	2		
Secure cycle parking	Ease of access to secure cycle parking on- and off-street		No additional secure cycle parking	Minimum levels of cycle parking provided (ie to London Plan standards)	Cycle parking is provided to meet future demand and is of good quality and securely located	n/a		n/a beyond project scope
					Max 10 (minus n/a factor)	**4**	**40%**	
Adaptability	**(max possible = 6)**							

Public transport integration	Smooth transition between modes or route continuity maintained through interchanges		No consideration for cyclists within interchange area	Cycle route continuity maintained through interchange and some cycle parking available	Cycle route continuity maintained and secure cycle parking provided. Transport of cycles available.	n/a		n/a beyond project scope
Flexibility	Facility can be expanded or layouts adopted within area constraints		No adjustments are possible within constraints. Road works may require some closure	Links can be adjusted to meet demand but junctions are constrained by vehicle capacity limitations. Road works will not require closure; cycling will be maintained although route quality may be compromised	Layout can be adapted freely without constrain to meet demand or collision risk. Adjustments can be made to maintain full route quality when roadworks are present	1		
Growth enabled	Route matches predicted usage and has exceedence built into the design		Provision does not match current levels of demand	Provision is matched to predicted demand flows	Provision has spare capacity for large increases in predicted cycle use	1		
					Max 4 (minus n/a factor)	2	50%	
					TOTAL (max 94 minus n/a factors)	22	23%	

**For highlighted critical indicators, score is multiplied by 3 (basic = 0, good = 3, highest = 6)*

Cycling Level of Service assessment matrix

Scheme 1 - Link 6

**For highlighted critical indicators, score is multiplied by 3 (basic = 0, good = 3, highest = 6)*

Factor	Indicator	Critical * (fail)	Basic CLoS (score=0)	Good CLoS (score=1)	Highest CLoS (score=2)	Score		
Safety	(max possible = 48)							
Collision risk	Left/right hook at junctions	Heavy streams of turning traffic cut across main cycling stream	Side road junctions frequent and/or untreated. Conflicting movements at major junctions not separated	Fewer side road junctions. Use of entry treatments. Conflicting movements on cycle routes are separated at major junctions	Side roads closed or footway is continuous. All conflicting streams separated at major junctions	*	x3	
	Collision alongside or from behind	Nearside lane in range 3.2m to 4.0m	Cyclists in wide (4m+) nearside traffic lanes or cycle lanes less than 2m wide	Cyclists in dedicated cycle lanes at least 2m wide	Cyclists separated from motorised traffic	0	x3	
	Kerbside activity or risk of collision with door	Cycle lanes <1.5m alongside parking / loading with no buffer	Frequent kerbside activity / effective width for cyclists of 1.5m	Less frequent kerbside activity / effective width for cyclists of 2m	No kerbside activity / No interaction with vehicles parking or loading	0	x3	
	Other vehicle fails to give way or disobeys signals		Poor visibility, no route continuity across junctions and unclear priority	Clear route continuity through junctions, good visibility, priority clear for all users, visual priority for cyclists across side roads	Cycle priority at signalised junctions; visual priority for cyclists across side roads	0		
Feeling of safety	Separation from heavy traffic		Cyclists in general traffic lanes or cycle lanes less than 2m	Cycle lanes at least 2m wide	Cyclists physically separated from other traffic at junctions and on links, or no heavy freight	0		
	Speed of traffic (where cyclists are not separated)	85th percentile greater than 30mph	85th percentile greater than 25mph	85th percentile 20-25mph	85th percentile less than 20mph	*	x3	n/a cyclists seperated
	Total volume of traffic (where cyclists are not separated)	>1,000 vehicles/ hour at peak	500 - 1,000 vehicles / hour at peak (but becomes critical if 5 per cent or more are HGVs)	200 - 500 vehicles / hour at peak (but becomes basic if 2 per cent or more are HGVs)	<200 vehicles / hour at peak	0	x3	
	Interaction with HGVs	Frequent, close interaction	Frequent interaction	Occasional interaction	No interaction	0	x3	
Social safety	Risk/fear of crime		High risk: ambush spots , loitering, poor maintenance	Low risk: area is open, well designed and maintained	No fear of crime: high quality streetscene and pleasant interaction	1		
	Lighting		Long stretches of darkness	Short stretches of darkness	Route lit thoroughly	2		
	Isolation		Route passes far from other activity, for most of the day	Route close to activity, for all of the day	Route always overlooked	1		
	Impact of highway design on behaviour		Layout encourages aggressive behaviour	Layout controls behaviour throughout	Layout encourages civilised behaviour: negotiation and forgiveness	0		
					Max 48	4	8%	

Directness	**(max possible = 8)**							
Journey time	Ability to maintain own speed on links		Cyclists travel at speed of slowest vehicle ahead (including other cyclists)	Cyclists can usually pass other vehicles (including cyclists)	Cyclists can always pass other vehicles	1		
	Delay to cyclists at junctions		Journey time longer than motor vehicles	Journey time around the same as motor vehicles	Journey time less than motor vehicles	1		
Value of time	For cyclists compared to private car use (normal weather conditions)		VOT greater than private car use value due to some site- specific factors	VOT equivalent to private car use value: similar delay-inducing factors and convenience	VOT less than private car use value due to attractive nature of route	1		
Directness	Deviation of route (against straight line or nearest main road alternative)		Deviation factor greater than 40 per cent	Deviation factor 20-40 per cent	Deviation factor less than 20 per cent	2		
					Max 8	**5**	**63%**	
Coherence	**(max possible = 6)**							
Connections	Ability to join/leave route safely and easily		Cyclists cannot connect to other routes without dismounting	Cyclists share connections with motor traffic	Cyclists have dedicated connections to other routes	1		
	Density of other routes		Network density mesh width >400m	Network density mesh width 250-400m	Network density mesh width <250m	n/a		n/a beyond project scope as factor concerns urban environments
Way-finding	Signing		Basic direction signing (cyclists follow road signs and markings)	Some cycle-specific direction signing	Consistent signing of range of routes and destinations at decision points	1		
					Score out of 4 (minus n/a factor)	**2**	**50%**	
Comfort	**(max possible = 20)**							
Surface quality	Defects: non cycle friendly ironworks, raised/ sunken covers/gullies	Major defects	Many minor defects	Few minor defects	Smooth, high-grip surface	0	x3	
Surface material	Construction		Hand-laid asphalt or unstable blocks/sets	Machine laid asphalt concrete or HRA; smooth blocks	Machine laid asphalt concrete; smooth and firm blocks undisturbed by turning vehicles	1		
Effective width without conflict	Clear nearside space in secondary position or motor vehicle speed/ volume in primary position	Secondary: <1.5m Primary: high motor vehicle flow	Secondary: 1.5m Primary: medium motor vehicle flow	Secondary: 1.5-2.0m Primary: low motor vehicle flow	Secondary: >2.0m Primary: no overtaking by motor vehicles	*	x3	
Gradient	Uphill gradient over 100m		>5 per cent	3-5 per cent	<3 per cent	2		
Deflections	Pinch points caused by horizontal deflections		(Remaining) lane width <3.2m	(Remaining) lane width >4.0m or <3.0m (low motor vehicle flow)	Traffic is calmed so no need for horizontal deflections	0		
Undulations	Vertical deflections		Round top humps	Sinusoidal humps	No vertical deflections	2		
					Max 20	**5**	**25%**	
Attractiveness	**(max possible = 12)**							
Impact on walking	Pedestrian Comfort Level (PCL)		Reduction in PCL	No impact on pedestrian provision or PCL	Pedestrian provision enhanced by cycling provision	1		
Greening	Green infrastructure or sustainable materials incorporated into design		No greening element	Some greening elements	Full integration of greening elements	1		
Air quality	PM10 & NOX values referenced from concentration maps		Medium to High	Low to Medium	Low	1		No accurate info available. Assumption made due to proximity to carriageway.
Noise pollution	Noise level from recommended riding range		>78DB	65-78DB	<65DB	0		No accurate info available. Assumption made due to proximity to carriageway.
Minimise street clutter	Signing required to support scheme layout		Large amounts of regulatory signing to conform with complex layout	Moderate amount of signing, particularly around junctions	Minimal signing, eg for wayfinding purposes only	1		
Secure cycle parking	Ease of access to secure cycle parking on- and off-street		No additional secure cycle parking	Minimum levels of cycle parking provided (ie to London Plan standards)	Cycle parking is provided to meet future demand and is of good quality and securely located	n/a		n/a beyond project scope
					Max 10 (minus n/a factor)	**4**	**40%**	
Adaptability	**(max possible = 6)**							

Public transport integration	Smooth transition between modes or route continuity maintained through interchanges		No consideration for cyclists within interchange area	Cycle route continuity maintained through interchange and some cycle parking available	Cycle route continuity maintained and secure cycle parking provided. Transport of cycles available.	n/a		n/a beyond project scope
Flexibility	Facility can be expanded or layouts adopted within area constraints		No adjustments are possible within constraints. Road works may require some closure	Links can be adjusted to meet demand but junctions are constrained by vehicle capacity limitations. Road works will not require closure; cycling will be maintained although route quality may be compromised	Layout can be adapted freely without constrain to meet demand or collision risk. Adjustments can be made to maintain full route quality when roadworks are present	1		
Growth enabled	Route matches predicted usage and has exceedence built into the design		Provision does not match current levels of demand	Provision is matched to predicted demand flows	Provision has spare capacity for large increases in predicted cycle use	1		
					Max 4 (minus n/a factor)	2	50%	
					TOTAL (max 94 minus n/a factors)	22	23%	

**For highlighted critical indicators, score is multiplied by 3 (basic = 0, good = 3, highest = 6)*

Cycling Level of Service assessment matrix

Scheme 1 - Link 7

**For highlighted critical indicators, score is multiplied by 3 (basic = 0, good = 3, highest = 6)*

Factor	Indicator	Critical * (fail)	Basic CLoS (score=0)	Good CLoS (score=1)	Highest CLoS (score=2)	Score	
Safety	(max possible = 48)						
Collision risk	Left/right hook at junctions	Heavy streams of turning traffic cut across main cycling stream	Side road junctions frequent and/or untreated. Conflicting movements at major junctions not separated	Fewer side road junctions. Use of entry treatments. Conflicting movements on cycle routes are separated at major junctions	Side roads closed or footway is continuous. All conflicting streams separated at major junctions	6	x3
	Collision alongside or from behind	Nearside lane in range 3.2m to 4.0m	Cyclists in wide (4m+) nearside traffic lanes or cycle lanes less than 2m wide	Cyclists in dedicated cycle lanes at least 2m wide	Cyclists separated from motorised traffic	6	x3
	Kerbside activity or risk of collision with door	Cycle lanes <1.5m alongside parking / loading with no buffer	Frequent kerbside activity / effective width for cyclists of 1.5m	Less frequent kerbside activity / effective width for cyclists of 2m	No kerbside activity / No interaction with vehicles parking or loading	6	x3
	Other vehicle fails to give way or disobeys signals		Poor visibility, no route continuity across junctions and unclear priority	Clear route continuity through junctions, good visibility, priority clear for all users, visual priority for cyclists across side roads	Cycle priority at signalised junctions; visual priority for cyclists across side roads	2	
Feeling of safety	Separation from heavy traffic		Cyclists in general traffic lanes or cycle lanes less than 2m	Cycle lanes at least 2m wide	Cyclists physically separated from other traffic at junctions and on links, or no heavy freight	2	
	Speed of traffic (where cyclists are not separated)	85th percentile greater than 30mph	85th percentile greater than 25mph	85th percentile 20-25mph	85th percentile less than 20mph	n/a	x3
	Total volume of traffic (where cyclists are not separated)	>1,000 vehicles/ hour at peak	500 - 1,000 vehicles / hour at peak (but becomes critical if 5 per cent or more are HGVs)	200 - 500 vehicles / hour at peak (but becomes basic if 2 per cent or more are HGVs)	<200 vehicles / hour at peak	n/a	x3
	Interaction with HGVs	Frequent, close interaction	Frequent interaction	Occasional interaction	No interaction	6	x3
Social safety	Risk/fear of crime		High risk: ambush spots , loitering, poor maintenance	Low risk: area is open, well designed and maintained	No fear of crime: high quality streetscene and pleasant interaction	1	
	Lighting		Long stretches of darkness	Short stretches of darkness	Route lit thoroughly	1	
	Isolation		Route passes far from other activity, for most of the day	Route close to activity, for all of the day	Route always overlooked	1	
	Impact of highway design on behaviour		Layout encourages aggressive behaviour	Layout controls behaviour throughout	Layout encourages civilised behaviour: negotiation and forgiveness	1	
					Max 36 (minus n/a factors)	32	89%

n/a if cyclists seperated

Directness	**(max possible = 8)**							
Journey time	Ability to maintain own speed on links		Cyclists travel at speed of slowest vehicle ahead (including other cyclists)	Cyclists can usually pass other vehicles (including cyclists)	Cyclists can always pass other vehicles	1		
	Delay to cyclists at junctions		Journey time longer than motor vehicles	Journey time around the same as motor vehicles	Journey time less than motor vehicles	0		
Value of time	For cyclists compared to private car use (normal weather conditions)		VOT greater than private car use value due to some site- specific factors	VOT equivalent to private car use value: similar delay-inducing factors and convenience	VOT less than private car use value due to attractive nature of route	1		
Directness	Deviation of route (against straight line or nearest main road alternative)		Deviation factor greater than 40 per cent	Deviation factor 20-40 per cent	Deviation factor less than 20 per cent	2		
					Max 8	**4**	**50%**	
Coherence	**(max possible = 6)**							
Connections	Ability to join/leave route safely and easily		Cyclists cannot connect to other routes without dismounting	Cyclists share connections with motor traffic	Cyclists have dedicated connections to other routes	1		
	Density of other routes		Network density mesh width >400m	Network density mesh width 250-400m	Network density mesh width <250m	n/a		n/a beyond project scope as factor concerns urban environments
Way-finding	Signing		Basic direction signing (cyclists follow road signs and markings)	Some cycle-specific direction signing	Consistent signing of range of routes and destinations at decision points	1		
					Score out of 4 (minus n/a factor)	**2**	**50%**	
Comfort	**(max possible = 20)**							
Surface quality	Defects: non cycle friendly ironworks, raised/ sunken covers/gullies	Major defects	Many minor defects	Few minor defects	Smooth, high-grip surface	3	x3	
Surface material	Construction		Hand-laid asphalt or unstable blocks/sets	Machine laid asphalt concrete or HRA; smooth blocks	Machine laid asphalt concrete; smooth and firm blocks undisturbed by turning vehicles	1		
Effective width without conflict	Clear nearside space in secondary position or motor vehicle speed/ volume in primary position	Secondary: <1.5m Primary: high motor vehicle flow	Secondary: 1.5m Primary: medium motor vehicle flow	Secondary: 1.5-2.0m Primary: low motor vehicle flow	Secondary: >2.0m Primary: no overtaking by motor vehicles	3	x3	
Gradient	Uphill gradient over 100m		>5 per cent	3-5 per cent	<3 per cent	2		
Deflections	Pinch points caused by horizontal deflections		(Remaining) lane width <3.2m	(Remaining) lane width >4.0m or <3.0m (low motor vehicle flow)	Traffic is calmed so no need for horizontal deflections	2		
Undulations	Vertical deflections		Round top humps	Sinusoidal humps	No vertical deflections	2		
					Max 20	**13**	**65%**	
Attractiveness	**(max possible = 12)**							
Impact on walking	Pedestrian Comfort Level (PCL)		Reduction in PCL	No impact on pedestrian provision or PCL	Pedestrian provision enhanced by cycling provision	0		
Greening	Green infrastructure or sustainable materials incorporated into design		No greening element	Some greening elements	Full integration of greening elements	2		
Air quality	PM10 & NOX values referenced from concentration maps		Medium to High	Low to Medium	Low	1		No accurate info available. Assumption made due to proximity to carriageway.
Noise pollution	Noise level from recommended riding range		>78DB	65-78DB	<65DB	0		No accurate info available. Assumption made due to proximity to carriageway.
Minimise street clutter	Signing required to support scheme layout		Large amounts of regulatory signing to conform with complex layout	Moderate amount of signing, particularly around junctions	Minimal signing, eg for wayfinding purposes only	2		
Secure cycle parking	Ease of access to secure cycle parking on- and off-street		No additional secure cycle parking	Minimum levels of cycle parking provided (ie to London Plan standards)	Cycle parking is provided to meet future demand and is of good quality and securely located	n/a		n/a beyond project scope
					Max 10 (minus n/a factor)	**5**	**50%**	
Adaptability	**(max possible = 6)**							

Public transport integration	Smooth transition between modes or route continuity maintained through interchanges		No consideration for cyclists within interchange area	Cycle route continuity maintained through interchange and some cycle parking available	Cycle route continuity maintained and secure cycle parking provided. Transport of cycles available.	n/a		n/a beyond project scope
Flexibility	Facility can be expanded or layouts adopted within area constraints		No adjustments are possible within constraints. Road works may require some closure	Links can be adjusted to meet demand but junctions are constrained by vehicle capacity limitations. Road works will not require closure; cycling will be maintained although route quality may be compromised	Layout can be adapted freely without constrain to meet demand or collision risk. Adjustments can be made to maintain full route quality when roadworks are present	1		
Growth enabled	Route matches predicted usage and has exceedence built into the design		Provision does not match current levels of demand	Provision is matched to predicted demand flows	Provision has spare capacity for large increases in predicted cycle use	1		
					Max 4 (minus n/a factor)	2	50%	
					TOTAL (max 82 minus n/a factors)	58	71%	

**For highlighted critical indicators, score is multiplied by 3 (basic = 0, good = 3, highest = 6)*

Cycling Level of Service assessment matrix

Scheme 1 - Link 8

**For highlighted critical indicators, score is multiplied by 3 (basic = 0, good = 3, highest = 6)*

Factor	Indicator	Critical * (fail)	Basic CLoS (score=0)	Good CLoS (score=1)	Highest CLoS (score=2)	Score		
Safety	(max possible = 48)							
Collision risk	Left/right hook at junctions	Heavy streams of turning traffic cut across main cycling stream	Side road junctions frequent and/or untreated. Conflicting movements at major junctions not separated	Fewer side road junctions. Use of entry treatments. Conflicting movements on cycle routes are separated at major junctions	Side roads closed or footway is continuous. All conflicting streams separated at major junctions	3	x3	
	Collision alongside or from behind	Nearside lane in range 3.2m to 4.0m	Cyclists in wide (4m+) nearside traffic lanes or cycle lanes less than 2m wide	Cyclists in dedicated cycle lanes at least 2m wide	Cyclists separated from motorised traffic	0	x3	
	Kerbside activity or risk of collision with door	Cycle lanes <1.5m alongside parking / loading with no buffer	Frequent kerbside activity / effective width for cyclists of 1.5m	Less frequent kerbside activity / effective width for cyclists of 2m	No kerbside activity / No interaction with vehicles parking or loading	3	x3	
	Other vehicle fails to give way or disobeys signals		Poor visibility, no route continuity across junctions and unclear priority	Clear route continuity through junctions, good visibility, priority clear for all users, visual priority for cyclists across side roads	Cycle priority at signalised junctions; visual priority for cyclists across side roads	1		
Feeling of safety	Separation from heavy traffic		Cyclists in general traffic lanes or cycle lanes less than 2m	Cycle lanes at least 2m wide	Cyclists physically separated from other traffic at junctions and on links, or no heavy freight	2		
	Speed of traffic (where cyclists are not separated)	85th percentile greater than 30mph	85th percentile greater than 25mph	85th percentile 20-25mph	85th percentile less than 20mph	6	x3	
	Total volume of traffic (where cyclists are not separated)	>1,000 vehicles/ hour at peak	500 - 1,000 vehicles / hour at peak (but becomes critical if 5 per cent or more are HGVs)	200 - 500 vehicles / hour at peak (but becomes basic if 2 per cent or more are HGVs)	<200 vehicles / hour at peak	6	x3	n/a if cyclists seperated
	Interaction with HGVs	Frequent, close interaction	Frequent interaction	Occasional interaction	No interaction	6	x3	
Social safety	Risk/fear of crime		High risk: ambush spots , loitering, poor maintenance	Low risk: area is open, well designed and maintained	No fear of crime: high quality streetscene and pleasant interaction	2		
	Lighting		Long stretches of darkness	Short stretches of darkness	Route lit thoroughly	2		
	Isolation		Route passes far from other activity, for most of the day	Route close to activity, for all of the day	Route always overlooked	2		
	Impact of highway design on behaviour		Layout encourages aggressive behaviour	Layout controls behaviour throughout	Layout encourages civilised behaviour: negotiation and forgiveness	1		
					Max 48	34	71%	

Directness	**(max possible = 8)**							
Journey time	Ability to maintain own speed on links		Cyclists travel at speed of slowest vehicle ahead (including other cyclists)	Cyclists can usually pass other vehicles (including cyclists)	Cyclists can always pass other vehicles	2		
	Delay to cyclists at junctions		Journey time longer than motor vehicles	Journey time around the same as motor vehicles	Journey time less than motor vehicles	0		
Value of time	For cyclists compared to private car use (normal weather conditions)		VOT greater than private car use value due to some site- specific factors	VOT equivalent to private car use value: similar delay-inducing factors and convenience	VOT less than private car use value due to attractive nature of route	1		
Directness	Deviation of route (against straight line or nearest main road alternative)		Deviation factor greater than 40 per cent	Deviation factor 20-40 per cent	Deviation factor less than 20 per cent	2		
					Max 8	**5**	**63%**	
Coherence	**(max possible = 6)**							
Connections	Ability to join/leave route safely and easily		Cyclists cannot connect to other routes without dismounting	Cyclists share connections with motor traffic	Cyclists have dedicated connections to other routes	1		
	Density of other routes		Network density mesh width >400m	Network density mesh width 250-400m	Network density mesh width <250m	n/a		n/a beyond project scope as factor concerns urban environments
Way-finding	Signing		Basic direction signing (cyclists follow road signs and markings)	Some cycle-specific direction signing	Consistent signing of range of routes and destinations at decision points	1		
					Score out of 4 (minus n/a factor)	**2**	**50%**	
Comfort	**(max possible = 20)**							
Surface quality	Defects: non cycle friendly ironworks, raised/ sunken covers/gullies	Major defects	Many minor defects	Few minor defects	Smooth, high-grip surface	3	x3	
Surface material	Construction		Hand-laid asphalt or unstable blocks/sets	Machine laid asphalt concrete or HRA; smooth blocks	Machine laid asphalt concrete; smooth and firm blocks undisturbed by turning vehicles	1		
Effective width without conflict	Clear nearside space in secondary position or motor vehicle speed/ volume in primary position	Secondary: <1.5m Primary: high motor vehicle flow	Secondary: 1.5m Primary: medium motor vehicle flow	Secondary: 1.5-2.0m Primary: low motor vehicle flow	Secondary: >2.0m Primary: no overtaking by motor vehicles	3	x3	
Gradient	Uphill gradient over 100m		>5 per cent	3-5 per cent	<3 per cent	2		
Deflections	Pinch points caused by horizontal deflections		(Remaining) lane width <3.2m	(Remaining) lane width >4.0m or <3.0m (low motor vehicle flow)	Traffic is calmed so no need for horizontal deflections	2		
Undulations	Vertical deflections		Round top humps	Sinusoidal humps	No vertical deflections	2		
					Max 20	**13**	**65%**	
Attractiveness	**(max possible = 12)**							
Impact on walking	Pedestrian Comfort Level (PCL)		Reduction in PCL	No impact on pedestrian provision or PCL	Pedestrian provision enhanced by cycling provision	1		
Greening	Green infrastructure or sustainable materials incorporated into design		No greening element	Some greening elements	Full integration of greening elements	2		
Air quality	PM10 & NOX values referenced from concentration maps		Medium to High	Low to Medium	Low	1		No accurate info available. Assumption made due to proximity to carriageway.
Noise pollution	Noise level from recommended riding range		>78DB	65-78DB	<65DB	1		No accurate info available. Assumption made due to proximity to carriageway.
Minimise street clutter	Signing required to support scheme layout		Large amounts of regulatory signing to conform with complex layout	Moderate amount of signing, particularly around junctions	Minimal signing, eg for wayfinding purposes only	2		
Secure cycle parking	Ease of access to secure cycle parking on- and off-street		No additional secure cycle parking	Minimum levels of cycle parking provided (ie to London Plan standards)	Cycle parking is provided to meet future demand and is of good quality and securely located	n/a		n/a beyond project scope
					Max 10 (minus n/a factor)	**7**	**70%**	
Adaptability	**(max possible = 6)**							

Public transport integration	Smooth transition between modes or route continuity maintained through interchanges		No consideration for cyclists within interchange area	Cycle route continuity maintained through interchange and some cycle parking available	Cycle route continuity maintained and secure cycle parking provided. Transport of cycles available.	n/a		n/a beyond project scope
Flexibility	Facility can be expanded or layouts adopted within area constraints		No adjustments are possible within constraints. Road works may require some closure	Links can be adjusted to meet demand but junctions are constrained by vehicle capacity limitations. Road works will not require closure; cycling will be maintained although route quality may be compromised	Layout can be adapted freely without constrain to meet demand or collision risk. Adjustments can be made to maintain full route quality when roadworks are present	1		
Growth enabled	Route matches predicted usage and has exceedence built into the design		Provision does not match current levels of demand	Provision is matched to predicted demand flows	Provision has spare capacity for large increases in predicted cycle use	1		
					Max 4 (minus n/a factor)	2	50%	
					TOTAL (max 94 minus n/a factors)	63	67%	

**For highlighted critical indicators, score is multiplied by 3 (basic = 0, good = 3, highest = 6)*

Cycling Level of Service assessment matrix

Scheme 1 - Link 9

**For highlighted critical indicators, score is multiplied by 3 (basic = 0, good = 3, highest = 6)*

Factor	Indicator	Critical * (fail)	Basic CLoS (score=0)	Good CLoS (score=1)	Highest CLoS (score=2)	Score	
Safety	(max possible = 48)						
Collision risk	Left/right hook at junctions	Heavy streams of turning traffic cut across main cycling stream	Side road junctions frequent and/or untreated. Conflicting movements at major junctions not separated	Fewer side road junctions. Use of entry treatments. Conflicting movements on cycle routes are separated at major junctions	Side roads closed or footway is continuous. All conflicting streams separated at major junctions	0	x3
	Collision alongside or from behind	Nearside lane in range 3.2m to 4.0m	Cyclists in wide (4m+) nearside traffic lanes or cycle lanes less than 2m wide	Cyclists in dedicated cycle lanes at least 2m wide	Cyclists separated from motorised traffic	6	x3
	Kerbside activity or risk of collision with door	Cycle lanes <1.5m alongside parking / loading with no buffer	Frequent kerbside activity / effective width for cyclists of 1.5m	Less frequent kerbside activity / effective width for cyclists of 2m	No kerbside activity / No interaction with vehicles parking or loading	6	x3
	Other vehicle fails to give way or disobeys signals		Poor visibility, no route continuity across junctions and unclear priority	Clear route continuity through junctions, good visibility, priority clear for all users, visual priority for cyclists across side roads	Cycle priority at signalised junctions; visual priority for cyclists across side roads	0	
Feeling of safety	Separation from heavy traffic		Cyclists in general traffic lanes or cycle lanes less than 2m	Cycle lanes at least 2m wide	Cyclists physically separated from other traffic at junctions and on links, or no heavy freight	0	
	Speed of traffic (where cyclists are not separated)	85th percentile greater than 30mph	85th percentile greater than 25mph	85th percentile 20-25mph	85th percentile less than 20mph	n/a	x3
	Total volume of traffic (where cyclists are not separated)	>1,000 vehicles/ hour at peak	500 - 1,000 vehicles / hour at peak (but becomes critical if 5 per cent or more are HGVs)	200 - 500 vehicles / hour at peak (but becomes basic if 2 per cent or more are HGVs)	<200 vehicles / hour at peak	n/a	x3
	Interaction with HGVs	Frequent, close interaction	Frequent interaction	Occasional interaction	No interaction	3	x3
Social safety	Risk/fear of crime		High risk: ambush spots , loitering, poor maintenance	Low risk: area is open, well designed and maintained	No fear of crime: high quality streetscene and pleasant interaction	1	
	Lighting		Long stretches of darkness	Short stretches of darkness	Route lit thoroughly	1	
	Isolation		Route passes far from other activity, for most of the day	Route close to activity, for all of the day	Route always overlooked	1	
	Impact of highway design on behaviour		Layout encourages aggressive behaviour	Layout controls behaviour throughout	Layout encourages civilised behaviour: negotiation and forgiveness	1	
					Max 36 (minus n/a factors)	19	53%

n/a if cyclists seperated

Directness	**(max possible = 8)**							
Journey time	Ability to maintain own speed on links		Cyclists travel at speed of slowest vehicle ahead (including other cyclists)	Cyclists can usually pass other vehicles (including cyclists)	Cyclists can always pass other vehicles	1		
	Delay to cyclists at junctions		Journey time longer than motor vehicles	Journey time around the same as motor vehicles	Journey time less than motor vehicles	0		
Value of time	For cyclists compared to private car use (normal weather conditions)		VOT greater than private car use value due to some site- specific factors	VOT equivalent to private car use value: similar delay-inducing factors and convenience	VOT less than private car use value due to attractive nature of route	1		
Directness	Deviation of route (against straight line or nearest main road alternative)		Deviation factor greater than 40 per cent	Deviation factor 20-40 per cent	Deviation factor less than 20 per cent	2		
					Max 8	**4**	**50%**	
Coherence	**(max possible = 6)**							
Connections	Ability to join/leave route safely and easily		Cyclists cannot connect to other routes without dismounting	Cyclists share connections with motor traffic	Cyclists have dedicated connections to other routes	1		
	Density of other routes		Network density mesh width >400m	Network density mesh width 250-400m	Network density mesh width <250m	n/a		n/a beyond project scope as factor concerns urban environments
Way-finding	Signing		Basic direction signing (cyclists follow road signs and markings)	Some cycle-specific direction signing	Consistent signing of range of routes and destinations at decision points	1		
					Score out of 4 (minus n/a factor)	**2**	**50%**	
Comfort	**(max possible = 20)**							
Surface quality	Defects: non cycle friendly ironworks, raised/ sunken covers/gullies	Major defects	Many minor defects	Few minor defects	Smooth, high-grip surface	1	x3	
Surface material	Construction		Hand-laid asphalt or unstable blocks/sets	Machine laid asphalt concrete or HRA; smooth blocks	Machine laid asphalt concrete; smooth and firm blocks undisturbed by turning vehicles	1		
Effective width without conflict	Clear nearside space in secondary position or motor vehicle speed/ volume in primary position	Secondary: <1.5m Primary: high motor vehicle flow	Secondary: 1.5m Primary: medium motor vehicle flow	Secondary: 1.5-2.0m Primary: low motor vehicle flow	Secondary: >2.0m Primary: no overtaking by motor vehicles	6	x3	
Gradient	Uphill gradient over 100m		>5 per cent	3-5 per cent	<3 per cent	2		
Deflections	Pinch points caused by horizontal deflections		(Remaining) lane width <3.2m	(Remaining) lane width >4.0m or <3.0m (low motor vehicle flow)	Traffic is calmed so no need for horizontal deflections	1		
Undulations	Vertical deflections		Round top humps	Sinusoidal humps	No vertical deflections	2		
					Max 20	**13**	**65%**	
Attractiveness	**(max possible = 12)**							
Impact on walking	Pedestrian Comfort Level (PCL)		Reduction in PCL	No impact on pedestrian provision or PCL	Pedestrian provision enhanced by cycling provision	0		
Greening	Green infrastructure or sustainable materials incorporated into design		No greening element	Some greening elements	Full integration of greening elements	2		
Air quality	PM10 & NOX values referenced from concentration maps		Medium to High	Low to Medium	Low	1		No accurate info available. Assumption made due to proximity to carriageway.
Noise pollution	Noise level from recommended riding range		>78DB	65-78DB	<65DB	0		No accurate info available. Assumption made due to proximity to carriageway.
Minimise street clutter	Signing required to support scheme layout		Large amounts of regulatory signing to conform with complex layout	Moderate amount of signing, particularly around junctions	Minimal signing, eg for wayfinding purposes only	1		
Secure cycle parking	Ease of access to secure cycle parking on- and off-street		No additional secure cycle parking	Minimum levels of cycle parking provided (ie to London Plan standards)	Cycle parking is provided to meet future demand and is of good quality and securely located	n/a		n/a beyond project scope
					Max 10 (minus n/a factor)	**4**	**40%**	
Adaptability	**(max possible = 6)**							

Public transport integration	Smooth transition between modes or route continuity maintained through interchanges		No consideration for cyclists within interchange area	Cycle route continuity maintained through interchange and some cycle parking available	Cycle route continuity maintained and secure cycle parking provided. Transport of cycles available.	n/a		n/a beyond project scope
Flexibility	Facility can be expanded or layouts adopted within area constraints		No adjustments are possible within constraints. Road works may require some closure	Links can be adjusted to meet demand but junctions are constrained by vehicle capacity limitations. Road works will not require closure; cycling will be maintained although route quality may be compromised	Layout can be adapted freely without constrain to meet demand or collision risk. Adjustments can be made to maintain full route quality when roadworks are present	1		
Growth enabled	Route matches predicted usage and has exceedence built into the design		Provision does not match current levels of demand	Provision is matched to predicted demand flows	Provision has spare capacity for large increases in predicted cycle use	1		
					Max 4 (minus n/a factor)	2	50%	
					TOTAL (max 82 minus n/a factors)	44	54%	

**For highlighted critical indicators, score is multiplied by 3 (basic = 0, good = 3, highest = 6)*

Cycling Level of Service assessment matrix

Scheme 1 - Link 10

**For highlighted critical indicators, score is multiplied by 3 (basic = 0, good = 3, highest = 6)*

Factor	Indicator	Critical * (fail)	Basic CLoS (score=0)	Good CLoS (score=1)	Highest CLoS (score=2)	Score		
Safety	(max possible = 48)							
Collision risk	Left/right hook at junctions	Heavy streams of turning traffic cut across main cycling stream	Side road junctions frequent and/or untreated. Conflicting movements at major junctions not separated	Fewer side road junctions. Use of entry treatments. Conflicting movements on cycle routes are separated at major junctions	Side roads closed or footway is continuous. All conflicting streams separated at major junctions	*	x3	
	Collision alongside or from behind	Nearside lane in range 3.2m to 4.0m	Cyclists in wide (4m+) nearside traffic lanes or cycle lanes less than 2m wide	Cyclists in dedicated cycle lanes at least 2m wide	Cyclists separated from motorised traffic	0	x3	
	Kerbside activity or risk of collision with door	Cycle lanes <1.5m alongside parking / loading with no buffer	Frequent kerbside activity / effective width for cyclists of 1.5m	Less frequent kerbside activity / effective width for cyclists of 2m	No kerbside activity / No interaction with vehicles parking or loading	0	x3	
	Other vehicle fails to give way or disobeys signals		Poor visibility, no route continuity across junctions and unclear priority	Clear route continuity through junctions, good visibility, priority clear for all users, visual priority for cyclists across side roads	Cycle priority at signalised junctions; visual priority for cyclists across side roads	1		
Feeling of safety	Separation from heavy traffic		Cyclists in general traffic lanes or cycle lanes less than 2m	Cycle lanes at least 2m wide	Cyclists physically separated from other traffic at junctions and on links, or no heavy freight	0		
	Speed of traffic (where cyclists are not separated)	85th percentile greater than 30mph	85th percentile greater than 25mph	85th percentile 20-25mph	85th percentile less than 20mph	*	x3	
	Total volume of traffic (where cyclists are not separated)	>1,000 vehicles/ hour at peak	500 - 1,000 vehicles / hour at peak (but becomes critical if 5 per cent or more are HGVs)	200 - 500 vehicles / hour at peak (but becomes basic if 2 per cent or more are HGVs)	<200 vehicles / hour at peak	0	x3	n/a if cyclists seperated
	Interaction with HGVs	Frequent, close interaction	Frequent interaction	Occasional interaction	No interaction	0	x3	
Social safety	Risk/fear of crime		High risk: ambush spots , loitering, poor maintenance	Low risk: area is open, well designed and maintained	No fear of crime: high quality streetscene and pleasant interaction	1		
	Lighting		Long stretches of darkness	Short stretches of darkness	Route lit thoroughly	1		
	Isolation		Route passes far from other activity, for most of the day	Route close to activity, for all of the day	Route always overlooked	1		
	Impact of highway design on behaviour		Layout encourages aggressive behaviour	Layout controls behaviour throughout	Layout encourages civilised behaviour: negotiation and forgiveness	0		
					Max 48	4	8%	

Directness	**(max possible = 8)**							
Journey time	Ability to maintain own speed on links		Cyclists travel at speed of slowest vehicle ahead (including other cyclists)	Cyclists can usually pass other vehicles (including cyclists)	Cyclists can always pass other vehicles	1		
	Delay to cyclists at junctions		Journey time longer than motor vehicles	Journey time around the same as motor vehicles	Journey time less than motor vehicles	1		
Value of time	For cyclists compared to private car use (normal weather conditions)		VOT greater than private car use value due to some site- specific factors	VOT equivalent to private car use value: similar delay-inducing factors and convenience	VOT less than private car use value due to attractive nature of route	1		
Directness	Deviation of route (against straight line or nearest main road alternative)		Deviation factor greater than 40 per cent	Deviation factor 20-40 per cent	Deviation factor less than 20 per cent	2		
					Max 8	**5**	**63%**	
Coherence	**(max possible = 6)**							
Connections	Ability to join/leave route safely and easily		Cyclists cannot connect to other routes without dismounting	Cyclists share connections with motor traffic	Cyclists have dedicated connections to other routes	1		
	Density of other routes		Network density mesh width >400m	Network density mesh width 250-400m	Network density mesh width <250m	n/a		n/a beyond project scope as factor concerns urban environments
Way-finding	Signing		Basic direction signing (cyclists follow road signs and markings)	Some cycle-specific direction signing	Consistent signing of range of routes and destinations at decision points	1		
					Score out of 4 (minus n/a factor)	**2**	**50%**	
Comfort	**(max possible = 20)**							
Surface quality	Defects: non cycle friendly ironworks, raised/ sunken covers/gullies	Major defects	Many minor defects	Few minor defects	Smooth, high-grip surface	0	x3	
Surface material	Construction		Hand-laid asphalt or unstable blocks/sets	Machine laid asphalt concrete or HRA; smooth blocks	Machine laid asphalt concrete; smooth and firm blocks undisturbed by turning vehicles	1		
Effective width without conflict	Clear nearside space in secondary position or motor vehicle speed/ volume in primary position	Secondary: <1.5m Primary: high motor vehicle flow	Secondary: 1.5m Primary: medium motor vehicle flow	Secondary: 1.5-2.0m Primary: low motor vehicle flow	Secondary: >2.0m Primary: no overtaking by motor vehicles	*	x3	
Gradient	Uphill gradient over 100m		>5 per cent	3-5 per cent	<3 per cent	2		
Deflections	Pinch points caused by horizontal deflections		(Remaining) lane width <3.2m	(Remaining) lane width >4.0m or <3.0m (low motor vehicle flow)	Traffic is calmed so no need for horizontal deflections	0		
Undulations	Vertical deflections		Round top humps	Sinusoidal humps	No vertical deflections	2		
					Max 20	**5**	**25%**	
Attractiveness	**(max possible = 12)**							
Impact on walking	Pedestrian Comfort Level (PCL)		Reduction in PCL	No impact on pedestrian provision or PCL	Pedestrian provision enhanced by cycling provision	1		
Greening	Green infrastructure or sustainable materials incorporated into design		No greening element	Some greening elements	Full integration of greening elements	1		
Air quality	PM10 & NOX values referenced from concentration maps		Medium to High	Low to Medium	Low	1		No accurate info available. Assumption made due to proximity to carriageway.
Noise pollution	Noise level from recommended riding range		>78DB	65-78DB	<65DB	0		No accurate info available. Assumption made due to proximity to carriageway.
Minimise street clutter	Signing required to support scheme layout		Large amounts of regulatory signing to conform with complex layout	Moderate amount of signing, particularly around junctions	Minimal signing, eg for wayfinding purposes only	1		
Secure cycle parking	Ease of access to secure cycle parking on- and off-street		No additional secure cycle parking	Minimum levels of cycle parking provided (ie to London Plan standards)	Cycle parking is provided to meet future demand and is of good quality and securely located	n/a		n/a beyond project scope
					Max 10 (minus n/a factor)	**4**	**40%**	
Adaptability	**(max possible = 6)**							

Public transport integration	Smooth transition between modes or route continuity maintained through interchanges		No consideration for cyclists within interchange area	Cycle route continuity maintained through interchange and some cycle parking available	Cycle route continuity maintained and secure cycle parking provided. Transport of cycles available.	n/a		n/a beyond project scope
Flexibility	Facility can be expanded or layouts adopted within area constraints		No adjustments are possible within constraints. Road works may require some closure	Links can be adjusted to meet demand but junctions are constrained by vehicle capacity limitations. Road works will not require closure; cycling will be maintained although route quality may be compromised	Layout can be adapted freely without constrain to meet demand or collision risk. Adjustments can be made to maintain full route quality when roadworks are present	1		
Growth enabled	Route matches predicted usage and has exceedence built into the design		Provision does not match current levels of demand	Provision is matched to predicted demand flows	Provision has spare capacity for large increases in predicted cycle use	0		
					Max 4 (minus n/a factor)	1	25%	
					TOTAL (max 94 minus n/a factors)	21	22%	

**For highlighted critical indicators, score is multiplied by 3 (basic = 0, good = 3, highest = 6)*

Cycling Level of Service assessment matrix

Scheme 1 - Link 11

**For highlighted critical indicators, score is multiplied by 3 (basic = 0, good = 3, highest = 6)*

Factor	Indicator	Critical * (fail)	Basic CLoS (score=0)	Good CLoS (score=1)	Highest CLoS (score=2)	Score	
Safety	(max possible = 48)						
Collision risk	Left/right hook at junctions	Heavy streams of turning traffic cut across main cycling stream	Side road junctions frequent and/or untreated. Conflicting movements at major junctions not separated	Fewer side road junctions. Use of entry treatments. Conflicting movements on cycle routes are separated at major junctions	Side roads closed or footway is continuous. All conflicting streams separated at major junctions	3	x3
	Collision alongside or from behind	Nearside lane in range 3.2m to 4.0m	Cyclists in wide (4m+) nearside traffic lanes or cycle lanes less than 2m wide	Cyclists in dedicated cycle lanes at least 2m wide	Cyclists separated from motorised traffic	6	x3
	Kerbside activity or risk of collision with door	Cycle lanes <1.5m alongside parking / loading with no buffer	Frequent kerbside activity / effective width for cyclists of 1.5m	Less frequent kerbside activity / effective width for cyclists of 2m	No kerbside activity / No interaction with vehicles parking or loading	6	x3
	Other vehicle fails to give way or disobeys signals		Poor visibility, no route continuity across junctions and unclear priority	Clear route continuity through junctions, good visibility, priority clear for all users, visual priority for cyclists across side roads	Cycle priority at signalised junctions; visual priority for cyclists across side roads	1	
Feeling of safety	Separation from heavy traffic		Cyclists in general traffic lanes or cycle lanes less than 2m	Cycle lanes at least 2m wide	Cyclists physically separated from other traffic at junctions and on links, or no heavy freight	1	
	Speed of traffic (where cyclists are not separated)	85th percentile greater than 30mph	85th percentile greater than 25mph	85th percentile 20-25mph	85th percentile less than 20mph	6	x3
	Total volume of traffic (where cyclists are not separated)	>1,000 vehicles/ hour at peak	500 - 1,000 vehicles / hour at peak (but becomes critical if 5 per cent or more are HGVs)	200 - 500 vehicles / hour at peak (but becomes basic if 2 per cent or more are HGVs)	<200 vehicles / hour at peak	6	x3
	Interaction with HGVs	Frequent, close interaction	Frequent interaction	Occasional interaction	No interaction	6	x3
Social safety	Risk/fear of crime		High risk: ambush spots , loitering, poor maintenance	Low risk: area is open, well designed and maintained	No fear of crime: high quality streetscene and pleasant interaction	1	
	Lighting		Long stretches of darkness	Short stretches of darkness	Route lit thoroughly	1	
	Isolation		Route passes far from other activity, for most of the day	Route close to activity, for all of the day	Route always overlooked	1	
	Impact of highway design on behaviour		Layout encourages aggressive behaviour	Layout controls behaviour throughout	Layout encourages civilised behaviour: negotiation and forgiveness	0	
					Max 48	38	79%

n/a if cyclists seperated

Directness	**(max possible = 8)**							
Journey time	Ability to maintain own speed on links		Cyclists travel at speed of slowest vehicle ahead (including other cyclists)	Cyclists can usually pass other vehicles (including cyclists)	Cyclists can always pass other vehicles	1		
	Delay to cyclists at junctions		Journey time longer than motor vehicles	Journey time around the same as motor vehicles	Journey time less than motor vehicles	0		
Value of time	For cyclists compared to private car use (normal weather conditions)		VOT greater than private car use value due to some site- specific factors	VOT equivalent to private car use value: similar delay-inducing factors and convenience	VOT less than private car use value due to attractive nature of route	0		
Directness	Deviation of route (against straight line or nearest main road alternative)		Deviation factor greater than 40 per cent	Deviation factor 20-40 per cent	Deviation factor less than 20 per cent	1		
					Max 8	**2**	**25%**	
Coherence	**(max possible = 6)**							
Connections	Ability to join/leave route safely and easily		Cyclists cannot connect to other routes without dismounting	Cyclists share connections with motor traffic	Cyclists have dedicated connections to other routes	2		
	Density of other routes		Network density mesh width >400m	Network density mesh width 250-400m	Network density mesh width <250m	n/a		n/a beyond project scope as factor concerns urban environments
Way-finding	Signing		Basic direction signing (cyclists follow road signs and markings)	Some cycle-specific direction signing	Consistent signing of range of routes and destinations at decision points	1		
					Score out of 4 (minus n/a factor)	**3**	**75%**	
Comfort	**(max possible = 20)**							
Surface quality	Defects: non cycle friendly ironworks, raised/ sunken covers/gullies	Major defects	Many minor defects	Few minor defects	Smooth, high-grip surface	3	x3	
Surface material	Construction		Hand-laid asphalt or unstable blocks/sets	Machine laid asphalt concrete or HRA; smooth blocks	Machine laid asphalt concrete; smooth and firm blocks undisturbed by turning vehicles	1		
Effective width without conflict	Clear nearside space in secondary position or motor vehicle speed/ volume in primary position	Secondary: <1.5m Primary: high motor vehicle flow	Secondary: 1.5m Primary: medium motor vehicle flow	Secondary: 1.5-2.0m Primary: low motor vehicle flow	Secondary: >2.0m Primary: no overtaking by motor vehicles	6	x3	
Gradient	Uphill gradient over 100m		>5 per cent	3-5 per cent	<3 per cent	2		
Deflections	Pinch points caused by horizontal deflections		(Remaining) lane width <3.2m	(Remaining) lane width >4.0m or <3.0m (low motor vehicle flow)	Traffic is calmed so no need for horizontal deflections	2		
Undulations	Vertical deflections		Round top humps	Sinusoidal humps	No vertical deflections	2		
					Max 20	**16**	**80%**	
Attractiveness	**(max possible = 12)**							
Impact on walking	Pedestrian Comfort Level (PCL)		Reduction in PCL	No impact on pedestrian provision or PCL	Pedestrian provision enhanced by cycling provision	0		
Greening	Green infrastructure or sustainable materials incorporated into design		No greening element	Some greening elements	Full integration of greening elements	2		
Air quality	PM10 & NOX values referenced from concentration maps		Medium to High	Low to Medium	Low	1		No accurate info available. Assumption made due to proximity to carriageway.
Noise pollution	Noise level from recommended riding range		>78DB	65-78DB	<65DB	2		No accurate info available. Assumption made due to proximity to carriageway.
Minimise street clutter	Signing required to support scheme layout		Large amounts of regulatory signing to conform with complex layout	Moderate amount of signing, particularly around junctions	Minimal signing, eg for wayfinding purposes only	1		
Secure cycle parking	Ease of access to secure cycle parking on- and off-street		No additional secure cycle parking	Minimum levels of cycle parking provided (ie to London Plan standards)	Cycle parking is provided to meet future demand and is of good quality and securely located	n/a		n/a beyond project scope
					Max 10 (minus n/a factor)	**6**	**60%**	
Adaptability	**(max possible = 6)**							

Public transport integration	Smooth transition between modes or route continuity maintained through interchanges		No consideration for cyclists within interchange area	Cycle route continuity maintained through interchange and some cycle parking available	Cycle route continuity maintained and secure cycle parking provided. Transport of cycles available.	n/a		n/a beyond project scope
Flexibility	Facility can be expanded or layouts adopted within area constraints		No adjustments are possible within constraints. Road works may require some closure	Links can be adjusted to meet demand but junctions are constrained by vehicle capacity limitations. Road works will not require closure; cycling will be maintained although route quality may be compromised	Layout can be adapted freely without constrain to meet demand or collision risk. Adjustments can be made to maintain full route quality when roadworks are present	2		
Growth enabled	Route matches predicted usage and has exceedence built into the design		Provision does not match current levels of demand	Provision is matched to predicted demand flows	Provision has spare capacity for large increases in predicted cycle use	1		
					Max 4 (minus n/a factor)	3	75%	
					TOTAL (max 94 minus n/a factors)	68	72%	

**For highlighted critical indicators, score is multiplied by 3 (basic = 0, good = 3, highest = 6)*

Cycling Level of Service assessment matrix

Scheme 1 - Link 12

**For highlighted critical indicators, score is multiplied by 3 (basic = 0, good = 3, highest = 6)*

Factor	Indicator	Critical * (fail)	Basic CLoS (score=0)	Good CLoS (score=1)	Highest CLoS (score=2)	Score	
Safety	(max possible = 48)						
Collision risk	Left/right hook at junctions	Heavy streams of turning traffic cut across main cycling stream	Side road junctions frequent and/or untreated. Conflicting movements at major junctions not separated	Fewer side road junctions. Use of entry treatments. Conflicting movements on cycle routes are separated at major junctions	Side roads closed or footway is continuous. All conflicting streams separated at major junctions	0	x3
	Collision alongside or from behind	Nearside lane in range 3.2m to 4.0m	Cyclists in wide (4m+) nearside traffic lanes or cycle lanes less than 2m wide	Cyclists in dedicated cycle lanes at least 2m wide	Cyclists separated from motorised traffic	0	x3
	Kerbside activity or risk of collision with door	Cycle lanes <1.5m alongside parking / loading with no buffer	Frequent kerbside activity / effective width for cyclists of 1.5m	Less frequent kerbside activity / effective width for cyclists of 2m	No kerbside activity / No interaction with vehicles parking or loading	0	x3
	Other vehicle fails to give way or disobeys signals		Poor visibility, no route continuity across junctions and unclear priority	Clear route continuity through junctions, good visibility, priority clear for all users, visual priority for cyclists across side roads	Cycle priority at signalised junctions; visual priority for cyclists across side roads	0	
Feeling of safety	Separation from heavy traffic		Cyclists in general traffic lanes or cycle lanes less than 2m	Cycle lanes at least 2m wide	Cyclists physically separated from other traffic at junctions and on links, or no heavy freight	0	
	Speed of traffic (where cyclists are not separated)	85th percentile greater than 30mph	85th percentile greater than 25mph	85th percentile 20-25mph	85th percentile less than 20mph	6	x3
	Total volume of traffic (where cyclists are not separated)	>1,000 vehicles/ hour at peak	500 - 1,000 vehicles / hour at peak (but becomes critical if 5 per cent or more are HGVs)	200 - 500 vehicles / hour at peak (but becomes basic if 2 per cent or more are HGVs)	<200 vehicles / hour at peak	3	x3
	Interaction with HGVs	Frequent, close interaction	Frequent interaction	Occasional interaction	No interaction	6	x3
Social safety	Risk/fear of crime		High risk: ambush spots , loitering, poor maintenance	Low risk: area is open, well designed and maintained	No fear of crime: high quality streetscene and pleasant interaction	1	
	Lighting		Long stretches of darkness	Short stretches of darkness	Route lit thoroughly	2	
	Isolation		Route passes far from other activity, for most of the day	Route close to activity, for all of the day	Route always overlooked	2	
	Impact of highway design on behaviour		Layout encourages aggressive behaviour	Layout controls behaviour throughout	Layout encourages civilised behaviour: negotiation and forgiveness	1	
					Max 48	21	44%

n/a if cyclists seperated

Directness	**(max possible = 8)**							
Journey time	Ability to maintain own speed on links		Cyclists travel at speed of slowest vehicle ahead (including other cyclists)	Cyclists can usually pass other vehicles (including cyclists)	Cyclists can always pass other vehicles	1		
	Delay to cyclists at junctions		Journey time longer than motor vehicles	Journey time around the same as motor vehicles	Journey time less than motor vehicles	1		
Value of time	For cyclists compared to private car use (normal weather conditions)		VOT greater than private car use value due to some site- specific factors	VOT equivalent to private car use value: similar delay-inducing factors and convenience	VOT less than private car use value due to attractive nature of route	1		
Directness	Deviation of route (against straight line or nearest main road alternative)		Deviation factor greater than 40 per cent	Deviation factor 20-40 per cent	Deviation factor less than 20 per cent	2		
					Max 8	**5**	**63%**	
Coherence	**(max possible = 6)**							
Connections	Ability to join/leave route safely and easily		Cyclists cannot connect to other routes without dismounting	Cyclists share connections with motor traffic	Cyclists have dedicated connections to other routes	1		
	Density of other routes		Network density mesh width >400m	Network density mesh width 250-400m	Network density mesh width <250m	n/a		n/a beyond project scope as factor concerns urban environments
Way-finding	Signing		Basic direction signing (cyclists follow road signs and markings)	Some cycle-specific direction signing	Consistent signing of range of routes and destinations at decision points	0		
					Score out of 4 (minus n/a factor)	**1**	**25%**	
Comfort	**(max possible = 20)**							
Surface quality	Defects: non cycle friendly ironworks, raised/ sunken covers/gullies	Major defects	Many minor defects	Few minor defects	Smooth, high-grip surface	3	x3	
Surface material	Construction		Hand-laid asphalt or unstable blocks/sets	Machine laid asphalt concrete or HRA; smooth blocks	Machine laid asphalt concrete; smooth and firm blocks undisturbed by turning vehicles	1		
Effective width without conflict	Clear nearside space in secondary position or motor vehicle speed/ volume in primary position	Secondary: <1.5m Primary: high motor vehicle flow	Secondary: 1.5m Primary: medium motor vehicle flow	Secondary: 1.5-2.0m Primary: low motor vehicle flow	Secondary: >2.0m Primary: no overtaking by motor vehicles	0	x3	
Gradient	Uphill gradient over 100m		>5 per cent	3-5 per cent	<3 per cent	2		
Deflections	Pinch points caused by horizontal deflections		(Remaining) lane width <3.2m	(Remaining) lane width >4.0m or <3.0m (low motor vehicle flow)	Traffic is calmed so no need for horizontal deflections	1		
Undulations	Vertical deflections		Round top humps	Sinusoidal humps	No vertical deflections	2		
					Max 20	**9**	**45%**	
Attractiveness	**(max possible = 12)**							
Impact on walking	Pedestrian Comfort Level (PCL)		Reduction in PCL	No impact on pedestrian provision or PCL	Pedestrian provision enhanced by cycling provision	1		
Greening	Green infrastructure or sustainable materials incorporated into design		No greening element	Some greening elements	Full integration of greening elements	1		
Air quality	PM10 & NOX values referenced from concentration maps		Medium to High	Low to Medium	Low	1		No accurate info available. Assumption made due to proximity to carriageway.
Noise pollution	Noise level from recommended riding range		>78DB	65-78DB	<65DB	1		No accurate info available. Assumption made due to proximity to carriageway.
Minimise street clutter	Signing required to support scheme layout		Large amounts of regulatory signing to conform with complex layout	Moderate amount of signing, particularly around junctions	Minimal signing, eg for wayfinding purposes only	0		
Secure cycle parking	Ease of access to secure cycle parking on- and off-street		No additional secure cycle parking	Minimum levels of cycle parking provided (ie to London Plan standards)	Cycle parking is provided to meet future demand and is of good quality and securely located	n/a		n/a beyond project scope
					Max 10 (minus n/a factor)	**4**	**40%**	
Adaptability	**(max possible = 6)**							

Public transport integration	Smooth transition between modes or route continuity maintained through interchanges		No consideration for cyclists within interchange area	Cycle route continuity maintained through interchange and some cycle parking available	Cycle route continuity maintained and secure cycle parking provided. Transport of cycles available.	n/a		n/a beyond project scope
Flexibility	Facility can be expanded or layouts adopted within area constraints		No adjustments are possible within constraints. Road works may require some closure	Links can be adjusted to meet demand but junctions are constrained by vehicle capacity limitations. Road works will not require closure; cycling will be maintained although route quality may be compromised	Layout can be adapted freely without constrain to meet demand or collision risk. Adjustments can be made to maintain full route quality when roadworks are present	2		
Growth enabled	Route matches predicted usage and has exceedence built into the design		Provision does not match current levels of demand	Provision is matched to predicted demand flows	Provision has spare capacity for large increases in predicted cycle use	1		
					Max 4 (minus n/a factor)	3	75%	
					TOTAL (max 94 minus n/a factors)	43	46%	

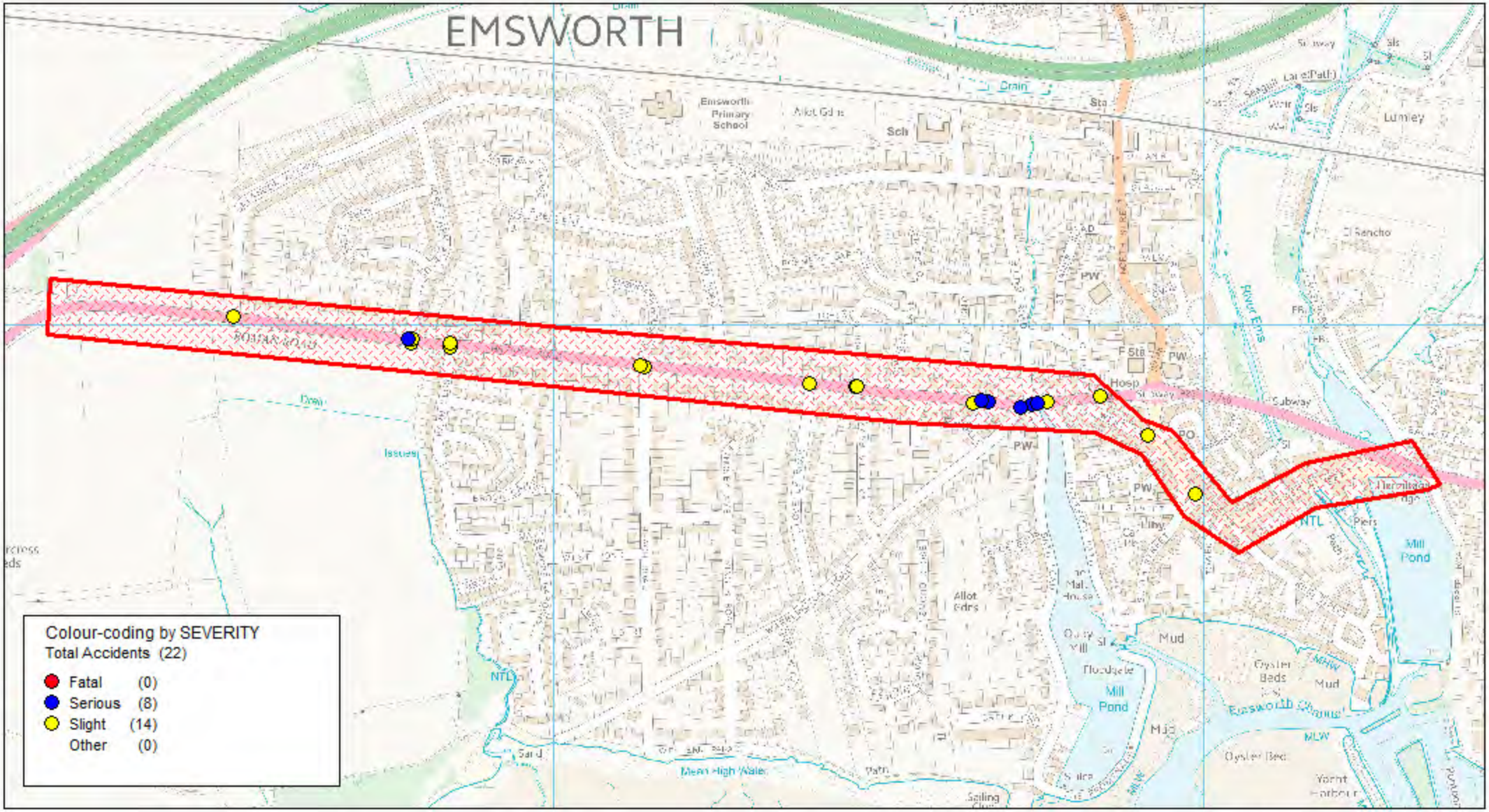
**For highlighted critical indicators, score is multiplied by 3 (basic = 0, good = 3, highest = 6)*

Summary

Link	CLoS
1. Havant Road (Emsworth)	33%
2. Emsworth High Street	46%
3. Emsworth to Southbourne	22%
4. Southbourne to Farm Lane	24%
5. Farm Lane to Broad Road	23%
6. Broad Road to Cutmill Creek	23%
7. Cutmill Creek to Old Bridge Road	71%
8. Old Bridge Road to Brooks Lane	67%
9. Brooks Lane to Hillier Garden Centre	54%
10. Hillier Garden Centre to Salthill Road	22%
11. Roman Way (Fishbourne)	72%
12. Fishbourne Road East to Westgate (Chichester).	46%
Average CLoS	42%

Appendix B

COLLISION DATA



HAMPSHIRE CONSTABULARY

Emsworth

SCALE	1 : 8120
DATE	27/02/2019
DRAWING No.	
DRAWN BY	

Accidents between dates **01/09/2013 and 31/08/2018** (60) months

Selection: **Notes:**

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW EMSWORTH CHQ/SR/0219/023")

Selected Polygon:AW EMSWORTH CHQ/SR/0219/023

140091552 15/03/2014 Time 0929 Vehicles 2 Casualties 1 Slight
E:474759 N: 105882 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: Pelican, puffin, toucan etc. Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: Elsewhere DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Passing too close to cyclist, horse rider or pedestrian	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

VEH 1 (CAR) TOWING HORSEBOX TRAVELLING E ALONG A259 HAVANT ROAD OVERTAKES VEH 2 (P/CYCLE) TRAVELLING IN FRONT BUT PASSES TOO CLOSE CAUSING HORSEBOX TO COLLIDE WITH VEH 2 KNOCKING RIDER OFF. VEH 1 FAILED TO STOP.
Occurred on A259 HAVANT ROAD AT JUNCTION WITH BRIDGEFOOT PATH, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Car Overtaking moving vehicle O/S
Vehicle movement from W to E Single trailer Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or i First impact Nearside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver Not traced
Hit and run Breath test Driver not contacted
Left hand drive: No

Vehicle Reference 2 Pedal Cycle Going ahead other
Vehicle movement from W to E No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or i First impact Offside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 50 Female
Not hit and run Breath test Not applicable
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 50 Female Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not known

Accidents between dates **01/09/2013 and 31/08/2018** (60) months

Selection: **Notes:**

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW EMSWORTH CHQ/SR/0219/023")

140111459 31/03/2014 Time 0849 Vehicles 2 Casualties 1 Slight
E:474140 N: 105935 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Vehicle blind spot	Vehicle 1	Very Likely
2nd:	Vehicle blind spot	Vehicle 2	Very Likely
3rd:	Failed to look properly	Vehicle 1	Possible
4th:	Failed to look properly	Vehicle 2	Possible
5th:			
6th:			

VEH 1 (CAR) TRAVELLING N ALONG BEACH ROAD TURNED RIGHT FOR A259 HAVANT ROAD. VEH 2 (M/CYCLE) TRAVELLING W ALONG HAVANT ROAD OVERTAKING HEAVY TRAFFIC COLLIDED WITH THE OFFSIDE OF VEH 1.
Occurred on A259 HAVANT ROAD AT JUNCTION WITH BEACH ROAD, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Car Turning right
Vehicle movement from S to E No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Entering main road First impact Offside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 37 Female
Not hit and run Breath test Negative
Left hand drive: No

Vehicle Reference 2 Motorcycle over 500cc Overtaking moving vehicle O/S
Vehicle movement from E to W No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 41 Male
Not hit and run Breath test Negative
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 41 Male Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet:

Accidents between dates **01/09/2013 and 31/08/2018** (60) months

Selection: **Notes:**

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW EMSWORTH CHQ/SR/0219/023")

140204692 10/06/2014 Time 1800 Vehicles 2 Casualties 1 Serious
E:474465 N: 105906 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:	Stationary or parked vehicle	Vehicle 1	Possible
3rd:			
4th:			
5th:			
6th:			

VEH 1 (CAR) TRAVELLING W ALONG A259 HAVANT ROAD TURNS RIGHT INTO HIGHLAND ROAD AFTER BEING ALLOWED TO DO SO BY A VEH TRAVELLING E. VEH 1 TURNS ACROSS PATH OF VEH 2 (P/CYCLE) TRAVELLING E ALONG A259 HAVANT ROAD IN CYCLE LANE.
Occurred on A259 HAVANT ROAD AT JUNCTION WITH HIGHLAND ROAD, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Car Turning right
Vehicle movement from E to N No tow / articulation Leaving the main road
Cycle lane (on main carriageway) No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or i First impact Nearside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 45 Male
Not hit and run Breath test Negative
Left hand drive: No

Vehicle Reference 2 Pedal Cycle Going ahead other
Vehicle movement from W to E No tow / articulation Leaving the main road
Cycle lane (on main carriageway) No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or i First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 47 Male
Not hit and run Breath test Not applicable
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 47 Male Driver/rider Severity: Serious
Not a pupil
Seatbelt Not Applicable Cycle helmet: Yes

Accidents between dates **01/09/2013 and 31/08/2018** (60) months

Selection: **Notes:**

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW EMSWORTH CHQ/SR/0219/023")

140432426 03/12/2014 Time 1310 Vehicles 1 Casualties 1 Slight
E:473842 N: 105965 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Fatigue	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

VEH 1 (CAR) TRAVELLING SW ALONG A259 HAVANT ROAD, THE DRIVER FALLS ASLEEP AT THE WHEEL, LEAVES THE CARRIAGEWAY TO THE OFFSIDE, MOUNTS THE PAVEMENT AND COLLIDES WITH A LAMP POST.
Occurred on A259 HAVANT ROAD AT JUNCTION WITH BARN CLOSE, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Car Going ahead other
Vehicle movement from SE to NW No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or i First impact Nearside Hit vehicle:
Hit object in road None Off road: Lamp post
O/S Age of Driver 36 Female
Not hit and run Breath test Negative
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 36 Female Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Accidents between dates **01/09/2013 and 31/08/2018** (60) months

Selection: **Notes:**

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW EMSWORTH CHQ/SR/0219/023")

150013884 13/01/2015 Time 1820 Vehicles 2 Casualties 1 Serious
E:473782 N: 105975 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
Darkness: street lights present and lit Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Possible
2nd:	Failed to look properly	Vehicle 2	Possible
3rd:			
4th:			
5th:			
6th:			

VEH 1 (CAR) TRAVELLING S ALONG NORE FARM AVENUE TURNS RIGHT ONTO A259 HAVANT ROAD AFTER A VEH HAD STOPPED TO LET IT OUT. AS VEH 1 TURNS IT COLLIDES WITH VEH 2 (P/CYCLE) TRAVELLING E ALONG A259 HAVANT ROAD AND PASSING THE STOPPED VEH.
Occurred on A259 HAVANT ROAD AT JUNCTION WITH NORE FARM AVENUE, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Car Turning right
Vehicle movement from N to W No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or i First impact Offside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 32 Female
Not hit and run Breath test Negative
Left hand drive: No

Vehicle Reference 2 Pedal Cycle Overtaking moving vehicle O/S
Vehicle movement from W to E No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or i First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 54 Male
Not hit and run Breath test Not applicable
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 54 Male Driver/rider Severity: Serious
Not a pupil
Seatbelt Not Applicable Cycle helmet: Yes

Accidents between dates **01/09/2013 and 31/08/2018** (60) months

Selection: **Notes:**

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW EMSWORTH CHQ/SR/0219/023")

150061622 21/02/2015 Time 2110 Vehicles 1 Casualties 1 Slight
E:473842 N: 105973 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: Not within 20m of junction

Crossing: Control None Facilities: Central reservation Road surface Dry
Darkness: street lights present and lit Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Impaired by alcohol	Casualty 1	Very Likely
2nd:	Careless/Reckless/In a hurry	Casualty 1	Very Likely
3rd:			
4th:			
5th:			
6th:			

VEH 1 (BUS) TRAVELLING E ALONG A259 HAVANT ROAD WHEN CAS 1 (PEDESTRIAN) RAN TOWARDS THE NEARSIDE OF VEH 1 AND PUNCHED THE SIDE OF THE BUS. CAS 1 THEN FELL TO THE FLOOR.
Occurred on A259 HAVANT ROAD OUTSIDE BARN CLOSE, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Bus or coach Going ahead other
Vehicle movement from W to E No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Not at, or within 20M of Jct First impact Nearside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 68 Male
Not hit and run Breath test Not requested
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 29 Male Pedestrian Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Within 50m ped crossing S bound

Driver's nearside

Accidents between dates **01/09/2013 and 31/08/2018** (60) months

Selection: **Notes:**

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW EMSWORTH CHQ/SR/0219/023")

150071962 02/03/2015 Time 1345 Vehicles 2 Casualties 1 Slight
E:474914 N: 105831 First Road: U Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Loss of control	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

VEH 1 (P/CYCLE) TRAV S HIGH STREET TURNED LEFT INTO WEST STREET, CUTTING CORNER IN THE PROCESS. RIDER FELL DUE TO WEIGHT OF BAG HANGING ON ONE HANDLEBAR. VEH 1 THEN COLLIDED WITH FRONT OF VEH 2 (CAR) WAITING TO TURN LEFT INTO HIGH STREET.
Occurred on HIGH STREET AT JUNCTION WITH WEST STREET, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Pedal Cycle Turning right
Vehicle movement from N to W No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or i First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 87 Male
Not hit and run Breath test Not applicable
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 87 Male Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: No

Vehicle Reference 2 Car Waiting to turn left
Vehicle movement from W to N No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Offside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 74 Female
Not hit and run Breath test Not requested
Left hand drive: No

Accidents between dates **01/09/2013 and 31/08/2018** (60) months

Selection: **Notes:**

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW EMSWORTH CHQ/SR/0219/023")

150149814 04/05/2015 Time 1408 Vehicles 2 Casualties 1 Slight
E:473782 N: 105973 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to judge other persons path or speed	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

VEH 1 (M/CYCLE) TRAVELLING W ALONG A259 HAVANT ROAD FAILED TO REACT TO TRAFFIC AHEAD SLOWING DUE TO A VEHICLE TURNING RIGHT INTO NORE FARM AVENUE AND COLLIDED WITH THE REAR OF VEH 2 (VAN).
Occurred on A259 HAVANT ROAD AT JUNCTION WITH NORE FARM AVENUE, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Motor Cycle over 50 cc and up to 125cc Going ahead other
Vehicle movement from E to W No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 22 Male
Not hit and run Breath test Negative
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 22 Male Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Vehicle Reference 2 Van or Goods 3.5 tonnes mgw and under Going ahead but held up
Vehicle movement from E to W No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 28 Male
Not hit and run Breath test Negative
Left hand drive: No

Accidents between dates **01/09/2013 and 31/08/2018** (60) months

Selection: **Notes:**

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW EMSWORTH CHQ/SR/0219/023")

150304008 02/09/2015 Time 0830 Vehicles 2 Casualties 1 Slight
E:474394 N: 105911 First Road: A 259 Road Type Single carriageway
Speed limit: 40 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

VEH 1 (CAR) TRAVELLING E ALONG A259 HAVANT ROAD AND COLLIDES WITH THE REAR OF VEH 2 (CAR) STATIONARY WAITING TO TURN RIGHT INTO CLOVELLY ROAD
Occurred on A259 HAVANT ROAD AT JUNCTION WITH CLOVELLY ROAD, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Car Going ahead other
Vehicle movement from W to E No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or i First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 27 Male
Not hit and run Breath test Negative
Left hand drive: No

Vehicle Reference 2 Car Waiting to turn right
Vehicle movement from W to S No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or i First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 51 Female
Not hit and run Breath test Negative
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 51 Female Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Accidents between dates **01/09/2013 and 31/08/2018** (60) months

Selection: **Notes:**

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW EMSWORTH CHQ/SR/0219/023")

150329092 22/09/2015 Time 1420 Vehicles 2 Casualties 3 Serious
E:474735 N: 105878 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: Zebra crossing Road surface Wet/Damp
Daylight Raining without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Poor turn or manoevre	Vehicle 1	Very Likely
2nd:	Failed to look properly	Vehicle 1	Very Likely
3rd:	Vehicle blind spot	Vehicle 1	
4th:			
5th:			
6th:			

VEH 1 (CAR) TRAVELLING N ALONG BATH ROAD TURNED RIGHT ONTO A259 HAVANT ROAD THINKING THE ROAD WAS CLEAR AND WAS HIT BY VEH 2 (GOODS VEH) TRAVELLING W ALONG A259 HAVANT ROAD.
Occurred on A259 HAVANT ROAD AT JUNCTION WITH BATH ROAD, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Car Turning right
Vehicle movement from S to E No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or i First impact Offside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 82 Male
Not hit and run Breath test Not applicable
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 82 Male Driver/rider Severity: Serious
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Casualty Reference: 2 Vehicle: 1 Age: 75 Female Passenger Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Back seat

Casualty Reference: 3 Vehicle: 1 Age: 78 Female Passenger Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Front seat

Accidents between dates **01/09/2013** **and** **31/08/2018** (60) months

Selection:

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW EMSWORTH CHQ/SR/0219/023")

Notes:

Vehicle Reference 2 Goods 7.5 tonnes mgw and over Going ahead other
Vehicle movement from E to W No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Nearside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 52 Male
Not hit and run Breath test Not requested
Left hand drive: No

Accidents between dates **01/09/2013 and 31/08/2018** (60) months

Selection: **Notes:**

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW EMSWORTH CHQ/SR/0219/023")

160004572 04/01/2016 Time 1650 Vehicles 2 Casualties 1 Slight
E:474134 N: 105938 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: Crossroads Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Wet/Damp
Darkness: street lights present and lit Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

VEH 1 (CAR) TRAVELLING S OUT OF EMSWORTH HOUSE CLOSE AND TURNING RIGHT ONTO A259 HAVANT ROAD FAILED TO SEE VEH 2 (M/CYCLE) TRAVELLING NW ALONG A259 HAVANT ROAD AND COLLIDED WITH VEH 2.

Occurred on A259 HAVANT ROAD AT JUNCTION WITH EMSWORTH HOUSE CLOSE, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Car Turning right
Vehicle movement from N to NW No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or i First impact Nearside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 79 Male
Not hit and run Breath test Negative
Left hand drive: No

Vehicle Reference 2 Motorcycle over 500cc Going ahead other
Vehicle movement from E to NW No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or i First impact Front Hit vehicle:
Hit object in road None Off road: Wall or fence
Nearside Age of Driver 31 Male
Not hit and run Breath test Not requested
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 31 Male Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Accidents between dates **01/09/2013 and 31/08/2018** (60) months

Selection: **Notes:**

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW EMSWORTH CHQ/SR/0219/023")

160140195 12/04/2016 Time 1730 Vehicles 2 Casualties 1 Slight
E:474466 N: 105906 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: Elsewhere DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Poor turn or manoevre	Vehicle 2	Possible
2nd:	Failed to look properly	Vehicle 2	Possible
3rd:	Swerved	Vehicle 2	
4th:			
5th:			
6th:			

VEH 2 (M/CYCLE) TRAVELLING W ALONG A259 HAVANT ROAD, TURNS RIGHT ONTO HIGHLAND ROAD ACROSS THE PATH OF VEH 1 (P/CYCLE) TRAVELLING ALONG E ALONG A259 HAVANT ROAD, SWERVES TO AVOID A COLLISION CAUSING THE RIDER TO FALL OFF.
Occurred on A259 HAVANT ROAD AT JUNCTION WITH HIGHLAND ROAD, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Pedal Cycle Going ahead other
Vehicle movement from W to E No tow / articulation Leaving the main road
On main carriageway Skidded
Location at impact Mid Junction - on roundabout or i First impact Nearside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 28 Male
Not hit and run Breath test Driver not contacted
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 28 Male Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: No

Vehicle Reference 2 Motorcycle - unknown cc Turning right
Vehicle movement from E to N No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or i First impact Did not impact Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 18 Male
Not hit and run Breath test Driver not contacted
Left hand drive: No

Accidents between dates **01/09/2013 and 31/08/2018** (60) months

Selection: **Notes:**

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW EMSWORTH CHQ/SR/0219/023")

160167096 04/05/2016 Time 1010 Vehicles 2 Casualties 1 Slight
E:473784 N: 105978 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Possible
2nd:	Failed to judge other persons path or speed	Vehicle 1	Very Likely
3rd:			
4th:			
5th:			
6th:			

VEH 1 (CAR) TRAVELLING S ALONG NORE FARM AVENUE TURNED RIGHT INTO A259 HAVANT ROAD AND COLLIDED WITH THE NEARSIDE OF VEH 2 (CAR) TRAVELLING E.
Occurred on A259 HAVANT ROAD AT JUNCTION WITH NORE FARM AVENUE, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Car Turning right
Vehicle movement from N to W No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Entering main road First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 86 Male
Not hit and run Breath test Negative
Left hand drive: No

Vehicle Reference 2 Car Going ahead other
Vehicle movement from W to E No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Nearside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 56 Female
Not hit and run Breath test Negative
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 56 Female Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Accidents between dates **01/09/2013 and 31/08/2018** (60) months

Selection: **Notes:**

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW EMSWORTH CHQ/SR/0219/023")

160261723 14/07/2016 Time 0750 Vehicles 2 Casualties 1 Serious
E:474717 N: 105873 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:	Passing too close to cyclist, horse rider or pedestrian	Vehicle 1	Very Likely
3rd:			
4th:			
5th:			
6th:			

VEH 1 (CAR) TRAVELLING W ALONG A259 HAVANT ROAD TURNED LEFT INTO WARBLINGTON ROAD AND COLLIDED WITH FRONT WHEEL OF VEH 2 (P/CYCLE) ALSO TRAVELLING W. RIDER OF VEH 2 FELL OFF CAUSING HELMET TO CRACK.
Occurred on A259 HAVANT ROAD AT JUNCTION WITH WARBLINGTON ROAD, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Car Turning left
Vehicle movement from E to S No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or i First impact Nearside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 37 Male
Not hit and run Breath test Negative
Left hand drive: No

Vehicle Reference 2 Pedal Cycle Going ahead other
Vehicle movement from E to W No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or i First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 45 Male
Not hit and run Breath test Not applicable
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 45 Male Driver/rider Severity: Serious
Not a pupil
Seatbelt Not Applicable Cycle helmet: Yes

Accidents between dates **01/09/2013 and 31/08/2018** (60) months

Selection: **Notes:**

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW EMSWORTH CHQ/SR/0219/023")

160386916 13/10/2016 Time 1215 Vehicles 2 Casualties 1 Serious
E:474668 N: 105883 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: Not within 20m of junction

Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to judge other persons path or speed	Vehicle 1	Very Likely
2nd:	Passing too close to cyclist, horse rider or pedestrian	Vehicle 1	Very Likely
3rd:			
4th:			
5th:			
6th:			

VEH 2 (P/CYCLE) TRAVELLING E ALONG A259 HAVANT ROAD IN CYCLE LANE HAD TO OVERTAKE A VAN PARKED IN THE CYCLE LANE. VEH 1 (CAR) ALSO TRAVELLING E OVERTOOK THE VAN BUT MISJUDGED VEH 2, COLLIDING WITH VEH 2 AND KNOCKING RIDER OFF.
Occurred on A259 HAVANT ROAD OUTSIDE THE KINGS ARM PUBLIC HOUSE, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Car Overtaking stat vehicle O/S
Vehicle movement from W to E No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 71 Female
Not hit and run Breath test Negative
Left hand drive: No

Vehicle Reference 2 Pedal Cycle Going ahead other
Vehicle movement from W to E No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Not at, or within 20M of Jct First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 54 Male
Not hit and run Breath test Not applicable
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 54 Male Driver/rider Severity: Serious
Not a pupil
Seatbelt Not Applicable Cycle helmet: Yes

Accidents between dates **01/09/2013 and 31/08/2018** (60) months

Selection: **Notes:**

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW EMSWORTH CHQ/SR/0219/023")

160419443 06/11/2016 Time 1236 Vehicles 2 Casualties 1 Slight
E:474839 N: 105891 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: Not within 20m of junction

Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Passing too close to cyclist, horse rider or pedestrian	Vehicle 1	Possible
2nd:	Failed to look properly	Vehicle 1	Possible
3rd:			
4th:			
5th:			
6th:			

VEH 1 (CAR) TRAVELLING E ALONG A259 HAVANT ROAD FAILED TO NOTICE AND COLLIDED WITH VEH 2 (P/CYCLE) ALSO TRAVELLING E.
Occurred on A259 HAVANT ROAD 73 METRES WEST OF B2148 NORTH STREET, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Car Going ahead other
Vehicle movement from W to E No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 72 Female
Not hit and run Breath test Negative
Left hand drive: No

Vehicle Reference 2 Pedal Cycle Going ahead other
Vehicle movement from W to E No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Not at, or within 20M of Jct First impact Back Hit vehicle:
Hit object in road None Off road: None
Nearside Age of Driver 34 Male
Not hit and run Breath test Not applicable
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 34 Male Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: No

Accidents between dates **01/09/2013 and 31/08/2018** (60) months

Selection: **Notes:**

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW EMSWORTH CHQ/SR/0219/023")

160485710 26/12/2016 Time 1705 Vehicles 2 Casualties 1 Serious
E:473776 N: 105979 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: Central reservation Road surface Dry
Darkness: street lights present and lit Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

VEH 1 (CAR) TRAVELLING W ALONG A259 HAVANT ROAD TURNED RIGHT INTO NORE FARM AVENUE ACROSS PATH OF VEH 2 (M/CYCLE) TRAVELLING E ALONG A259 HAVANT ROAD CAUSING COLLISION.
Occurred on A259 HAVANT ROAD AT JUNCTION WITH NORE FARM AVENUE, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Car Turning right
Vehicle movement from E to N No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or i First impact Nearside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 78 Female
Not hit and run Breath test Negative
Left hand drive: No

Vehicle Reference 2 Motor Cycle over 50 cc and up to 125cc Going ahead other
Vehicle movement from W to E No tow / articulation Leaving the main road
On main carriageway Skidded
Location at impact Mid Junction - on roundabout or i First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 18 Male
Not hit and run Breath test Negative
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 18 Male Driver/rider Severity: Serious
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Accidents between dates **01/09/2013 and 31/08/2018** (60) months

Selection: **Notes:**

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW EMSWORTH CHQ/SR/0219/023")

44170035256 28/01/2017 Time 1025 Vehicles 2 Casualties 1 Slight
E:473508 N: 106013 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Poor turn or manoevre	Vehicle 1	Possible
2nd:	Failed to look properly	Vehicle 1	Possible
3rd:			
4th:			
5th:			
6th:			

VEH 1 (CAR) TRAVELLING S ALONG SELANGOR AVENUE EMERGES ONTO A259 HAVANT ROAD INTENDING TO TURN RIGHT. VEH 2 (MOTORCYCLE) TRAVELLING EASTBOUND ON A259 HAVANT ROAD COLLIDES WITH VEH 1.
Occurred on A259 HAVANT ROAD AT JUNCTION WITH SELANGOR AVENUE, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Car Turning right
Vehicle movement from N to W No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Entering main road First impact Offside Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 55 Male
Not hit and run Breath test Negative
Left hand drive: No

Vehicle Reference 2 Motor Cycle over 50 cc and up to 125cc Going ahead other
Vehicle movement from W to E No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 28 Male
Not hit and run Breath test Negative
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 28 Male Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Accidents between dates **01/09/2013 and 31/08/2018** (60) months

Selection: **Notes:**

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW EMSWORTH CHQ/SR/0219/023")

44170129280 07/04/2017 Time 0715 Vehicles 2 Casualties 1 Slight
E:474644 N: 105880 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: Not within 20m of junction

Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Possible
2nd:	Careless/Reckless/In a hurry	Vehicle 1	Possible
3rd:	Following too close	Vehicle 1	
4th:			
5th:			
6th:			

VEH 1 (VAN) TRAVELLING W ALONG A259 HAVANT ROAD, FAILS TO STOP IN SLOWING TRAFFIC AND COLLIDES WITH THE REAR OF VEH 2 (CAR) STATIONARY WAITING FOR A VEH IN FRONT TO TURN INTO GARAGE.
Occurred on A259 HAVANT ROAD OUTSIDE OF NUMBER 21 TO 25, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Van or Goods 3.5 tonnes mgw and under Stopping
Vehicle movement from E to W No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Not at, or within 20M of Jct First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 52 Male
Not hit and run Breath test Negative
Left hand drive: No

Vehicle Reference 2 Car Going ahead but held up
Vehicle movement from E to W No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Not at, or within 20M of Jct First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 49 Male
Not hit and run Breath test Negative
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 49 Male Driver/rider Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Accidents between dates **01/09/2013 and 31/08/2018** (60) months

Selection: **Notes:**

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW EMSWORTH CHQ/SR/0219/023")

44170324660 22/08/2017 Time 1126 Vehicles 2 Casualties 1 Serious
E:474743 N: 105881 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: Crossroads Give way or controlled Unclassified
Crossing: Control None Facilities: Zebra crossing Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to judge other persons path or speed	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

VEH 1 (VAN) TRAVELLING E ALONG A259 HAVANT ROAD FAILS TO REACT TO QUEUE AND COLLIDES WITH THE REAR OF VEH 2 (CAR) STATIONARY WAITING AT PEDESTRIAN CROSSING .
Occurred on A259 HAVANT ROAD AT JUNCTION WITH BRIDGE ROAD, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Van or Goods 3.5 tonnes mgw and under Going ahead other
Vehicle movement from W to E No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Cleared junction or waiting/park First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 25 Male
Not hit and run Breath test Negative
Left hand drive: No

Vehicle Reference 2 Car Going ahead but held up
Vehicle movement from W to E No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Cleared junction or waiting/park First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 57 Male
Not hit and run Breath test Negative
Left hand drive: No

Casualty Reference: 1 Vehicle: 2 Age: 37 Male Passenger Severity: Serious
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Front seat

Accidents between dates **01/09/2013 and 31/08/2018** (60) months

Selection: **Notes:**

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW EMSWORTH CHQ/SR/0219/023")

44170373256 24/09/2017 Time 1230 Vehicles 1 Casualties 1 Slight
E:474985 N: 105740 First Road: U Road Type Single carriageway
Speed limit: 30 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: Elsewhere DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

VEH 1 (CAR) REVERSES NW ALONG HIGH STREET WITHOUT CHECKING BEHIND AND COLLIDES WITH CAS 1 (PEDESTRIAN) TRAVELLING SW ACROSS HIGH STREET BEHIND VEH 1, KNOCKING HER OVER.
Occurred on HIGH STREET AT JUNCTION WITH ST PETERS SQUARE, EMSWORTH, HAMPSHIRE

Vehicle Reference 1 Car Reversing
Vehicle movement from SE to NW No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Cleared junction or waiting/park First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 86 Male
Not hit and run Breath test Driver not contacted
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 69 Female Pedestrian Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist
In carr elsewhere SW bound
Driver's nearside

Accidents between dates **01/09/2013 and 31/08/2018** (60) months

Selection: **Notes:**

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW EMSWORTH CHQ/SR/0219/023")

44180248891 03/07/2018 Time 0912 Vehicles 1 Casualties 1 Serious
E:474658 N: 105885 First Road: A 259 Road Type Single carriageway
Speed limit: 30 Junction Detail: Pri Drive Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: Elsewhere DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:	Failed to look properly	Casualty 1	Very Likely
3rd:			
4th:			
5th:			
6th:			

CAS1 (PEDESTRIAN) TRAVELLING W ALONG A259 HAVANT ROAD ON THE PAVEMENT RUNS ACROSS THE EXIT TO JET PETROL STATION AND IS HIT BY VEH1 (CAR) EXITING THE PETROL STATION AND TURNING LEFT ONTO HAVANT ROAD.
Occurred on A259 HAVANT ROAD, OUTSIDE JET PETROL STATION, EMSWORTH, HAMPSHIRE.

Vehicle Reference 1 Car Turning left
Vehicle movement from N to E No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or i First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 80 Male
Not hit and run Breath test Driver not contacted
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 55 Female Pedestrian Severity: Serious
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist
On footpath / verge W bound
In carr back to traffic

Accidents between dates **01/09/2013 and 31/08/2018** (60) months

Selection:

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW EMSWORTH CHQ/SR/0219/023")

Notes:

Accidents involving:

	Fatal	Serious	Slight	Total
Motor vehicles only (excluding 2-wheels)	0	3	6	9
2-wheeled motor vehicles	0	1	5	6
Pedal cycles	0	4	4	8
Horses & other	0	0	0	0
Total	0	8	14	22

Casualties:

	Fatal	Serious	Slight	Total
Vehicle driver	0	1	4	5
Passenger	0	1	2	3
Motorcycle rider	0	1	4	5
Cyclist	0	4	4	8
Pedestrian	0	1	2	3
Other	0	0	0	0
Total	0	8	16	24

A259 – Fishbourne – WSP

Collision report 01/02/2014 – 31/01/2019

Date produced
22 February 2019

The information included in this report is provided for analysis and is based on the data provided by Sussex Police. Some of the data included in this report is subjective and as such is not considered suitable for general release. In view of this it should not be transmitted to any other person in its original form, including in any report which may be available to the public. If you have any doubt regarding how this data may be used other than for analysis please contact SSRP for advice.

Sussex Safer Roads
PARTNERSHIP

Safer Roads
Safer Communities
Sharing the Responsibility

Produced by Sussex Safer Roads Partnership on behalf of Sussex Police

Data regarding personal injury collisions is recorded by Sussex Police in accordance with the DfT Stats 19 requirements. The data is subsequently used by Sussex Safer Roads Partnership for monitoring and planning. While every effort is made to ensure that this data is accurate, it is subject to change should further information become available.

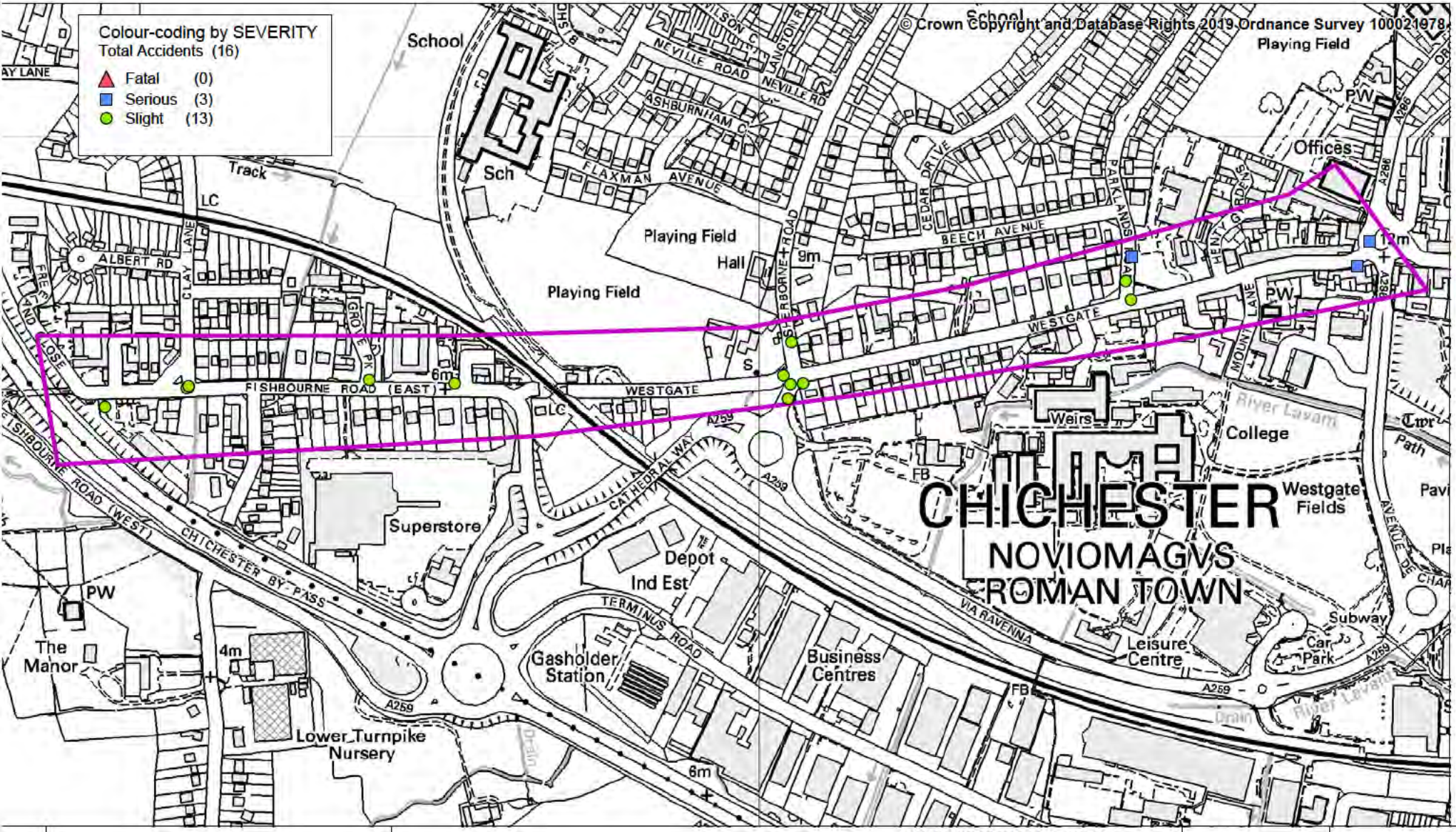
This data may not be fully validated and while every effort is made to ensure its accuracy any statistics provided may not match those published elsewhere.

Sussex Safer Roads Partnership does not hold collision data either where there are no recorded casualties or the incident has not been reported to Sussex Police.

For further information:

web: www.sussexsaferroads.gov.uk

email: data@sussexsaferroads.gov.uk



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Sussex Safer Roads
PARTNERSHIP

Westgate, Chichester
Collision Dates 01/02/2014 - 31/01/2019
WSP

SCALE	1 : 6000
DATE	22/02/2019
DRAWING No.	
DRAWN BY	

Details of Personal Injury Accidents for Period - **01/02/2014** **to** **31/01/2019** (60) months

Selection:
Selected using Manual Selection

Notes:

			Vehicles					Casualties			
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class					Sex / Age / Sev			
	Date										
Road No.	Time										
2nd Road No.	D/L										
Grid Ref.	R S C										
	Weather										
	Speed										
	Account of Accident										
Causation Factor:											

1401270 Friday 07/03/2014 1500hrs — U PARKLANDS ROAD CHICHESTER AT JUNCTION OF U WESTGATE

Veh 1	Goods < 3.5t	Turning left	N	to E					
Veh 2	Pedal cycle	Going ahead	W	to E	Dri	F	58	Slight	

R1: U
R2: U Daylight:street lights present
E 485,414 Dry
N 104,819 Fine without high winds
20 mph

Causation Factor: **Participant:** **Confidence:**

1st: Failed to look properly — Vehicle 1 — Very Likely

V2 (PEDAL CYCLE) TRAVELING EAST ON WESTGATE V1 HAS PULLED OUT OF PARKLANDS ROAD, TURNING EAST ONTO WESTGATE AND HAS COLLIDED WITH V2. DETAILS HAVE BEEN EXCHANGED BUT RIDER OF V2 REPORTING SLIGHT INJURY.

1401431 Thursday 13/03/2014 2020hrs — U PARKLANDS ROAD CHICHESTER 35M NORTH OF U WESTGATE OUTSIDE OPP PET DOCTORS VETS

Veh 1	Car	O/take m/veh o/side	N	to S					
Veh 2	Pedal cycle	Going ahead	N	to S	Dri	M	31	Serious	

R1: U
Darkness: street lights present a
E 485,415 Dry
N 104,867 Fog or mist
20 mph

Causation Factor: **Participant:** **Confidence:**

1st: Passing too close to cyclist, horse rider or pedestrian — Vehicle 1 — Very Likely

SERIOUS INJURY FTS RTC BY DEFINITION. V2 (PEDAL CYCLE)TRAVELLING SOUTH ON PARKLANDS ROAD. V1 TRAVELLING IN SAME DIRECTION. V1 HAS OVERTAKEN V2 AND HAS CLIPPED THE RIDER OF V2 WITH THE NEARSIDE WINGMIRROR. RIDER HAS FALLEN FROM PEDAL CYCLE AND SUSTAINED A
BROKEN ARM V1 DID NOT STOP AT SCENE

1402396 Wednesday 30/04/2014 1520hrs — U SHERBORNE ROAD CHICHESTER AT JUNCTION OF U WESTGATE OUTSIDE SCOUT HUT

Veh 1	Car	Going ahead	N	to S					
Veh 2	Car	Wait go ahead held	N	to S	RSP	F	11	Slight	
Veh 2	Car	Wait go ahead held	N	to S	Dri	M	26	Slight	

R1: U
R2: U Daylight:street lights present
E 485,036 Dry
N 104,772 Fine without high winds
20 mph

Causation Factor: **Participant:** **Confidence:**

1st: Failed to look properly — Vehicle 1 — Very Likely

V1 TRAVELLING ON SHERBORNE ROAD HEADING TOWARDS WESTGATE MINI ROUNDABOUT HAS DRIVEN INTO THE REAR OF A STATIONARY V2. V2 STOPPED IN ROAD WAITING FOR ONCOMING TRAFFIC TO PASS.

Details of Personal Injury Accidents for Period - **01/02/2014** **to** **31/01/2019** (60) months

Selection: **Notes:**
Selected using Manual Selection

			Vehicles					Casualties		
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class					Sex / Age / Sev		
	Date									
Road No.	Time									
2nd Road No.										
Grid Ref.	D/L									
	R S C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

1500327	Friday	U FISHBOURNE ROAD (EAST)	Veh 1	Car	Turning right	E	to N	Dri	F	69	Slight
	16/01/2015	CHICHESTER AT JUNCTION OF U	Veh 2	Car	Turning right	E	to N				
R1: U	1440hrs	CLAY LANE									
R2: U	Daylight:street lights present										
E 484,365	Dry										
N 104,722	Fine without high winds										
	30 mph										

Causation Factor:		**Participant:**	**Confidence:**
1st:	Failed to signal/Misleading signal	Vehicle 1	Very Likely
2nd:	Failed to look properly	Vehicle 1	Very Likely

V2 WAS RESPONDING TO AN EMERGENCY CALL AND WAS APPROACHING THEN JUNCTION, V1 WAS INDICATING TO THE OFFSIDE, HOWEVER ON THE APPROACH OF V2 MOVED TO THE NEARSDIE, WITHOUT WARNING THEN TURNED RIGHT IINTO THE PATH OF V2 CAUSING THE COLLISION

1503550	Wednesday	U FISHBOURNE ROAD EAST	Veh 1	Car	Turning right	E	to N				
	24/06/2015	CHICHESTER AT JUNCTION OF U	Veh 2	Pedal cycle	Going ahead	W	to E	Dri	M	68	Slight
R1: U	1654hrs	CLAY LANE									
R2: U	Daylight:street lights present										
E 484,363	Dry										
N 104,721	Fine without high winds										
	30 mph										

Causation Factor:		**Participant:**	**Confidence:**
1st:	Failed to judge other persons path or speed	Vehicle 1	Very Likely
2nd:	Failed to look properly	Vehicle 1	Very Likely
3rd:	Poor turn or manoevre	Vehicle 1	

VEH1 MADE HER RIGHT TURN WITHOUT GIVING WAY TO THE APPROACHING VEH 2.

1501782	Monday	U FISHBOURNE ROAD CHICHESTER	Veh 1	Car	Turning left	N	to E				
	30/03/2015	AT JUNCTION OF U FREELAND	Veh 2	Pedal cycle	Going ahead	W	to E	Dri	F	63	Slight
R1: U	0820hrs	CLOSE									
R2: U	Daylight:street lights present										
E 484,272	Dry										
N 104,700	Fine without high winds										
	30 mph										

Causation Factor:		**Participant:**	**Confidence:**
1st:	Failed to look properly	Vehicle 1	Very Likely

V1 SOUTH IN FREELAND CLOSE V2 EASTBOUND ON CYCLEPATH & CROSSING JUNCTION WHEN STRUCK BY V1

Details of Personal Injury Accidents for Period - **01/02/2014** **to** **31/01/2019** (60) months

Selection:
Selected using Manual Selection

Notes:

			Vehicles					Casualties			
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class					Sex / Age / Sev			
	Date										
Road No.	Time										
2nd Road No.											
Grid Ref.	D/L										
	R S C										
	Weather										
	Speed										
	Account of Accident										
Causation Factor:											

1602276	Monday	A286 ORCHARD STREET	Veh 1	Car	O/take m/veh o/side	W	to N				
	18/04/2016	CHICHESTER AT JUNCTION OF U	Veh 2	Pedal cycle	Going ahead	W	to E	Dri	F	63	Serious
R1: A 286	0920hrs	WESTGATE									
R2: U	Daylight:street lights present										
E 485,679	Dry										
N 104,884	Fine without high winds										
	30 mph										

Causation Factor:		**Participant:**	**Confidence:**
1st:	Passing too close to cyclist, horse rider or pedestrian	Vehicle 1	Possible
2nd:	Swerved	Vehicle 2	Possible

TWO CYCLISTS HAVE ENTERED WESTGATE ROUNDABOUT IN SINGLE FILE FROM WESTGATE, INTENDING TO TAKE THE THIRD EXIT ONTO WEST STREET. VEHICLE 1 HAS FOLLOWED THE CYCLES OUT OF WESTGATE WITH THE DRIVER INTENDING TO TAKE THE FIRST EXIT ONTO ORCHARD STREET. IT APPE
ARS THAT AS THE CAR PASSED THE REAR CYCLE ON THE INSIDE, THE TWO HAVE MADE CONTACT AND THE CYCLIST HAS FALLEN. THE DRIVER STATED THAT THE CYCLIST WOBBLED AND STRUCK HER OFFSIDE WING. THE CYCLIST IS UNSURE WHAT HAPPENED.

1605690	Monday	A259 CHICHESTER AT JUNCTION OF	Veh 1	Car	Going ahead	SW	to NE				
	19/09/2016	U WESTGATE OUTSIDE ENTRANCE	Veh 2	Pedal cycle	Going ahead	E	to W	Dri	F	16	Slight
R1: A 259	2030hrs	TO CHICHESTER COLLEGE CAR									
R2: U	Darkness: street lighting unkno										
E 485,032	Wet/Damp										
N 104,709	Raining without high winds										
	30 mph										

PEDAL CYCLIST WAS TRAVELLING ACROSS THE ROAD (EAST TO WEST DIRECTION) UNKNOWN VEHICLE 1 WAS TRAVELLING AT SPEED AROUND THE ROUNDABOUT AND HIT REAR WHEEL OF PEDAL CYCLIST CAUSING DAMAGE TO BIKE AND CAUSING RIDER TO DISMOUNT DRIVER OF VEHICLE 1 THEN DROVE
OVER PEDAL CYCLISTS FOOT WHILST SHE WAS IN THE ROAD AND CONTINUED INTO CHICHESTER COLLEGE CAR PARK. DRIVER OF VEHICLE 1 FAILED TO STOP AFTER RTC THERE ARE CCTV CAMERAS TO THE ENTRANCE OF THE CAR PARK

1701688	Monday	U WESTGATE CHICHESTER AT	Veh 1	Car	Going ahead	W	to E				
	27/03/2017	JUNCTION OF U SHERBORNE ROAD	Veh 2	Pedal cycle	Turning right	E	to N	Dri	M	13	Slight
R1: U	0755hrs	OUTSIDE MINI ROUNDABOUT @									
R2: U	Daylight:street lights present										
E 485,027	Dry										
N 104,735	Fine without high winds										
	30 mph										

V2 TURNING & HAND SIGNALLING RIGHT ON THE ROUNDABOUT HAVING COME FROM THE EAST AND IS HIT BY V1 WHICH WAS ENTERING ROUNDABOUT EASTBOUND

Details of Personal Injury Accidents for Period - **01/02/2014** **to** **31/01/2019** (60) months

Selection:
Selected using Manual Selection

Notes:

			Vehicles					Casualties			
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class					Sex / Age / Sev			
	Date										
Road No.	Time										
2nd Road No.	D/L										
Grid Ref.	R S C										
	Weather										
	Speed										
	Account of Accident										
Causation Factor:											

1703613 Friday 30/06/2017 1226hrs — U WESTGATE CHICHESTER AT JUNCTION OF U SHERBOURNE ROAD

Veh 1	Car	Going ahead	S	to	N					
Veh 2	Pedal cycle	Going ahead	E	to	W	Dri	M	30	Slight	

R1: U
R2: U Daylight:street lights present
E 485,035 Dry
N 104,725 Fine without high winds
20 mph

Causation Factor: **Participant:** **Confidence:**

1st: Failed to look properly — Vehicle 1 — Very Likely

VEH2 P/CYCLIST WAS TRAVELLING ACROSS THE ROUNDABOUT AND VEHICLE 1 DIDN'T SEE HIM AND MADE CONTACT

1705053 Friday 08/09/2017 1458hrs — U FISHBOURNE ROAD EAST CHICHESTER AT JUNCTION OF U GROVE PARK

Veh 1	M/C < 125 cc	Stopping	W	to	E	Dri	M	18	Slight	
Veh 2	Car	Stopping	W	to	E					
Veh 3	Bus/coach	Starting	E	to	W					

R1: U
R2: U Daylight:street lights present
E 484,566 Wet/Damp
N 104,730 Fine without high winds
20 mph

Causation Factor: **Participant:** **Confidence:**

1st: Inexperienced or learner driver/rider — Vehicle 1 — Very Likely

MOTORCYCLIST TRAVELLING EAST ALONG FISHBOURNE ROAD EAST, BROKE AND SKIDDED INTO BACK OF VEHICLE 2 CAUSING MINOR DAMAGE. IMPACT DISMOUNTED RIDER INTO CENTRE OF ROAD AND INTO PATH OF ON COMING BUS TRAVELLING WEST WHICH STRUCK MOTORCYCLIST AT LOW SPEED

1800310 Tuesday 16/01/2018 0725hrs — U PARKLANDS ROAD CHICHESTER AT JUNCTION OF U WESTGATE OUTSIDE ADJACENT OT VETS

Veh 1	Car	Turning right	E	to	N	Ped	F	63	Slight	

R1: U
R2: U Darkness: street lights present a
E 485,408 Wet/Damp
N 104,840 Raining without high winds
30 mph

V1 TURNING RIGHT INTO PARKLANDS ROAD, COLLIDED WITH PEDESTRIAN CROSSING PARKLANDS ROAD, LOW SPEED.

Details of Personal Injury Accidents for Period - **01/02/2014** **to** **31/01/2019** (60) months

Selection: **Notes:**
Selected using Manual Selection

			Vehicles					Casualties		
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class					Sex / Age / Sev		
	Date									
Road No.	Time									
2nd Road No.										
Grid Ref.	D/L									
	R S C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

1800453 Thursday 25/01/2018 1910hrs — U FISHBOURNE ROAD (EAST) CHICHESTER AT JUNCTION OF U DOLPHIN MEWS OUTSIDE CLOSE TO

Veh 1	Car	Going ahead	E	to	W				
Veh 2	Pedal cycle	Going ahead	E	to	W	Dri	M	42	Slight

R1: U
R2: U Darkness: street lights present a
E 484,661 Wet/Damp
N 104,726 Fine without high winds
30 mph

VEH 2(CYCLIST)CYCLING WEST ON FISHBOURNE ROAD, WHEN THE PEDAL CYCLIST WAS STRUCK BY PASSING WING MIRROR OF VEHICLE 1. VEHICLE 1 DROVE OFF. INJURY CAUSED WHEN PEDAL CYCLIST HIT ROAD.

1803740 Thursday 05/07/2018 1710hrs — A286 AVENUE DE CHARTRES CHICHESTER AT JUNCTION OF U WESTGATE OUTSIDE OPPOSITE

Veh 1	Car	Going ahead	E	to	W	Ped	M	5	Serious

R1: A 286
R2: U Daylight:street lights present
E 485,666 Dry
N 104,857 Fine without high winds
20 mph

Causation Factor:	**Participant:**	**Confidence:**
1st: Failed to look properly	Casualty 1	Very Likely

MOTHER WITH BABY IN PRAM AND YOUNG CHILD ON SOUTH SIDE OF WESTGATE OPPOSITE PUBLIC HOUSE ATTEMPTING TO CROSS ROAD ONTO NORTH SIDE. BEGAN TO CROSS ROAD. VEH 1 NAVIGATES ROUNDABOUT AND EXITS WESTBOUND ONTO WESTGATE. MOTHER SEES VEHICLE AND ABORTS ATTEMPT
TO CROSS ROAD YOUNG CHILD FAILS TO HEED MOTHER'S SHOUT AND CONTINUES OUT INTO ROAD STRUCK BY VEH 1 AT LOW SPEED AND KNOCKED TO FLOOR WITH F/N/S WHEEL GOING OVER CHILDS FOOT/ANKLE.

1805313 Wednesday 26/09/2018 0940hrs — U CLAY LANE CHICHESTER AT JUNCTION OF U FISHBOURNE ROAD EAST

Veh 1	Goods < 3.5t	Turning left	N	to	E				
Veh 2	Pedal cycle	Going ahead	W	to	E	Dri	F	69	Slight

R1: U
R2: U Daylight:street lights present
E 484,365 Dry
N 104,723 Fine without high winds
20 mph

V1 HAS EXITED CLAY LANE, TURNING LEFT ONTO FISHBOURNE ROAD EAST AND STRUCK THE REAR WHEEL OF V2 BICYCLE, KNOCKING HER OFF OF IT.

Details of Personal Injury Accidents for Period - **01/02/2014** **to** **31/01/2019** (60) months

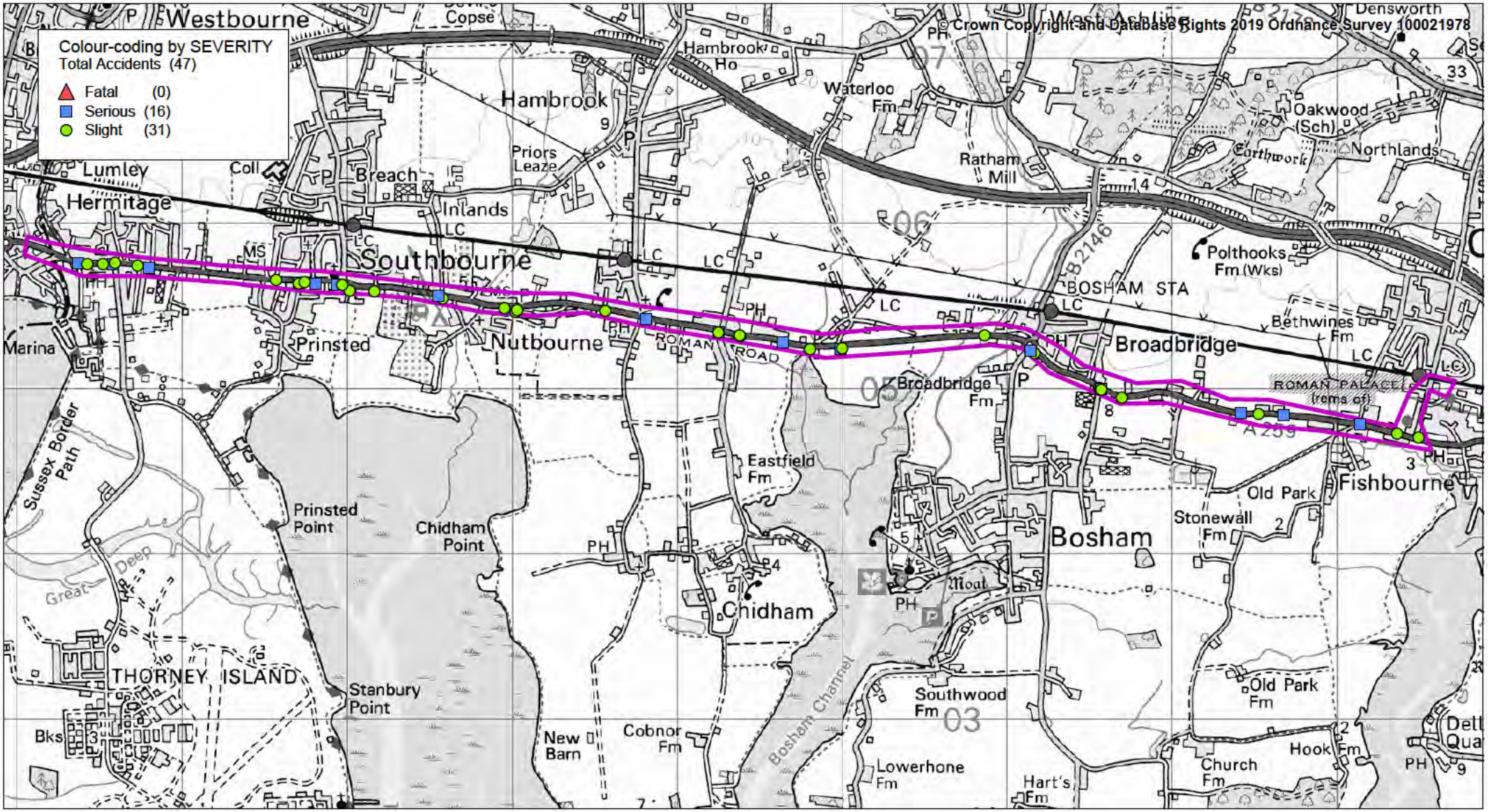
Selection:
Selected using Manual Selection

Notes:

			Vehicles					Casualties			
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class					Sex / Age / Sev			
	Date										
Road No.	Time										
2nd Road No.	D/L										
Grid Ref.	R S C										
	Weather										
	Speed										
	Account of Accident										
Causation Factor:											
1806967	Saturday	U SHERBORNE ROAD CHICHESTER	Veh 1	Car	Going ahead	N	to S	Dri	F	49	Slight
	15/12/2018	AT JUNCTION OF U WESTGATE									
R1: U	0645hrs										
R2: U	Darkness: street lights present a										
E 485,049	Wet/Damp										
N 104,726	Raining without high winds										
	30 mph										

Causation Factor:	**Participant:**	**Confidence:**
1st: Impaired by alcohol	Vehicle 1	Very Likely

VEHICLE 1 WAS TRAVELLING SOUTH FROM SHERBORNE ROAD TO TAKE THE SECOND EXIT ON THE ROUNDABOUT V1 HAS THEN COME OFF THE ROUNDABOUT ONTO THE PAVEMENT AND THE FRONT NEARSIDE OF THE VEHICLE HAS COLLIDED WITH THE WALL OF THE GARDEN OF 107 WESTGATE, CAUSING SI
GNIFICANT DAMAGE TO THE VEHICLE AND THE WALL. AIR BAGS HAVE BEEN DEPLOYED. FOLLOWING RSBT, DRIVER OF VEHICLE 1 HAS BEEN FOUND TO BE OVER THE PRESCRIBED LIMIT.



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Sussex Safer Roads
PARTNERSHIP

A259, Fishbourne
Collision Dates 01/02/2014 - 31/01/2019
WSP

SCALE	1 : 32000
DATE	22/02/2019
DRAWING No.	
DRAWN BY	

Details of Personal Injury Accidents for Period - **01/02/2014** **to** **31/01/2019** (60) months

Selection:
Selected using Manual Selection

Notes:

			Vehicles					Casualties			
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class					Sex / Age / Sev			
	Date										
Road No.	Time										
2nd Road No.											
Grid Ref.	D/L										
	R S C										
	Weather										
	Speed										
	Account of Accident										
Causation Factor:											

1400972	Tuesday	A259 MAIN ROAD SOUTHBOURNE	Veh 1	Pedal cycle	Turning right	E	to N	Dri	M	30	Slight
	18/02/2014	AT JUNCTION OF U INLANDS ROAD	Veh 2	M/C > 500 cc	Going ahead	E	to W				
R1: A 259	0750hrs										
R2: U	Daylight:street lights present										
E 477,577	Wet/Damp										
N 105,547	Fine without high winds										
	40 mph										

Causation Factor:		**Participant:**	**Confidence:**
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:	Poor turn or manoevre	Vehicle 1	Very Likely

VEHICLE 2 WESTBOUND A259 TOWARDS ABOVE JUNCTION. VEHICLE 1 (PEDAL CYCLE) ALSO WESTBOUND AHEAD OF VEHICLE 2. RIDER OF VEHICLE 1 MOVES TO THE RIGHT ACROSS THE PATH OF VEHICLE 2 AND BOTH COLLIDE. RIDER OF VEHICLE 1 FALLS FROM CYCLE CAUSING INJURIES.

1401499	Tuesday	A259 MAIN ROAD FISHBOURNE AT	Veh 1	Car	Going ahead	W	to E				
	18/03/2014	JUNCTION OF U PRIVATE	Veh 2	Car	Wait to turn right	W	to S	Dri	F	55	Slight
R1: A 259	1054hrs	ENTRANCE OUTSIDE O/S ENTRANCE									
R2: U	Daylight:street lights present										
E 483,362	Dry										
N 104,727	Fine without high winds										
	30 mph										

Causation Factor:		**Participant:**	**Confidence:**
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:	Failed to judge other persons path or speed	Vehicle 1	Very Likely

V1 FAILED TO OBSERVE V2 STATIONARY WAITING TO TURN RIGHT

1402359	Monday	A259 NUTBOURNE CHICHESTER	Veh 1	Goods < 3.5t	Going ahead	E	to W				
	28/04/2014	100M EAST OF U FARM LANE	Veh 2	Pedal cycle	Going ahead	E	to W	Dri	M	32	Slight
R1: A 259	1545hrs										
	Daylight street lights present										
E 477,951	Dry										
N 105,489	Fine without high winds										
	30 mph										

Causation Factor:		**Participant**	**Confidence:**
1st	Passing too close to cyclist, horse rider or pedestrian	Vehicle 1	Very Likely

CYCLIST TRAVELLING IN WESTERLY DIRECTION WHEN VEHICLE 1 OVERTOOK AND CLIPPED CYCLIST WITH THE NEARSIDE WING MIRROR ON CYCLIST'S OFFSIDE SHOULDER. DRIVER OF VEHICLE 1 FAILED TO STOP.

Details of Personal Injury Accidents for Period - **01/02/2014** **to** **31/01/2019** (60) months

Selection:
Selected using Manual Selection

Notes:

			Vehicles					Casualties		
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class					Sex / Age / Sev		
	Date									
Road No.	Time									
2nd Road No.	D/L									
Grid Ref.	R S C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

1404951 Wednesday 27/08/2014 1718hrs — A259 EMSWORTH AT JUNCTION OF U PRIVATE DRIVE

Veh 1	Car	Turning right	E	to	N			
Veh 2	M/C > 500 cc	O/take on n/side	W	to	E	Dri	M	35 Serious
Veh 3	Car	Wait to turn right	W	to	S			

R1: A 259
R2: U
E 475,575
N 105,757
Daylight:street lights present
Dry
Fine without high winds
30 mph

Causation Factor:		**Participant:**	**Confidence:**
1st:	Careless/Reckless/In a hurry	Vehicle 1	Possible
2nd:	Poor turn or manoevre	Vehicle 1	Very Likely
3rd:	Failed to judge other persons path or speed	Vehicle 1	Very Likely
4th:	Failed to look properly	Vehicle 1	Very Likely

IT WOULD APPEAR THAT VEHICLE ONE WAS TRAVELLING WEST BOUND INTENDING TO TURN INTO A PRIVATE DRIVE ON THE NORTH SIDE OF THE ROAD. VEHICLE THREE TRAVELLING EAST SLOWED AND BECKONED V1 ACROSS ITS PATH TO ALLOW ACCESS TO THE DRIVE WAY. AS V 1 TURNED RIGHT,
V2 THE MOTORCYCLE UNDERTOOK V3 AND A COLLISION OCCURED. THE MOTORCYCLE STRUCK THE REAR NEARSIDE OF V1.

1405275 Friday 12/09/2014 1550hrs — A259 MAIN ROAD EMSWORTH 30M WEST OF U WOODFIELD PARK ROAD

Veh 1	Car	Stopping	W	to	E			
Veh 2	Goods < 3.5t	Wait go ahead held	W	to	E	Dri	M	30 Slight
Veh 2	Goods < 3.5t	Wait go ahead held	W	to	E		M	30 Slight

R1: A 259
Daylight:street lights present
E 475,590
Dry
N 105,764
Fine without high winds
30 mph

Causation Factor:		**Participant:**	**Confidence:**
1st:	Sudden braking	Vehicle 1	Very Likely

V2 TRAVELLING EAST AND STATIONARY IN TRAFFIC. V1 ALSO TRAVELLING EAST AND APPROACHING V2 FROM BEHIND. V1 FAILED TO STOP AND COLLIDED WITH REAR OF V2.

1406263 Friday 24/10/2014 1535hrs — A259 MAIN ROAD EMSWORTH AT JUNCTION OF U PRINSTED LANE

Veh 1	M/C < 125 cc	Going ahead	W	to	E	Dri	M	30 Serious
Veh 2	Car	Turning right	W	to	S			

R1: A 259
R2: U
E 476,703
N 105,642
Daylight:street lights present
Wet/Damp
Fine without high winds
30 mph

Causation Factor		**Participant:**	**Confidence:**
1st:	Failed to look properly	Vehicle 1	Very Likely

VEH 1 WAS TRAVELLING EASTBOUND ON THE A259 TOWARDS CHICHESTER BEHIND VEH 2. VEH 2 INDICATED TO TURN RIGHT INTO PRINSTED LANE AND VEH 1 DIDN'T NOTICE, COLLIDING WITH IT AND THE RIDER BREAKING HIS FINGER.

Details of Personal Injury Accidents for Period - **01/02/2014** **to** **31/01/2019** (60) months

Selection:
Selected using Manual Selection

Notes:

			Vehicles					Casualties		
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class					Sex / Age / Sev		
	Date									
Road No.	Time									
2nd Road No.	D/L									
Grid Ref.	R S C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

1405149 Saturday 06/09/2014 1008hrs — A259 MAIN ROAD CHIDHAM AT JUNCTION OF U CHIDHAM LANE OUTSIDE ON JUNCTION

Veh 1	Car	Turning right	S	to	E				
Veh 2	M/C > 500 cc	Going ahead	E	to	W	Dri	M	19	Serious

R1: A 259
R2: U Daylight:street lights present
E 479,252 Dry
N 105,342 Fine without high winds
30 mph

Causation Factor: **Participant:** **Confidence:**

1st: Failed to look properly — Vehicle 1 — Possible

VEH (2) MOTORCYCLE TRAVELLING WEST TOWARDS JUNCTION NEARSIDE VEH (1) HAS PULLED OUT OF JUCTION TURING RIGHT/EAST INTO PATH OF VEH(2).

1407021 Thursday 27/11/2014 1800hrs — A259 MAINE ROAD BOSHAM AT JUNCTION OF U DELLING LANE OUTSIDE ON ROUNDABOUT

Veh 1	Car	Going ahead	E	to	W				
Veh 2	Pedal cycle	Going ahead	N	to	S	Dri	M	18	Slight

R1: A 259
R2: U Darkness: street lights present a
E 481,139 Dry
N 105,232 Fine without high winds
30 mph

Causation Factor: **Participant:** **Confidence:**

1st: Failed to look properly — Vehicle 1 — Very Likely

V1 WESTBOUND A259 V2 SOUTHBOUND & ALREADY ON ROUNDABOUT V1 ENTERS ROUNDABOUT & HIT BY V2

1407465 Wednesday 17/12/2014 0813hrs — A259 BOSHAM AT JUNCTION OF U DELLING LANE

Veh 1	Car	Starting	E	to	W				
Veh 2	Pedal cycle	Going ahead	N	to	S	Dri	F	22	Slight

R1: A 259
R2: U Daylight:street lights present
E 481,140 Wet/Damp
N 105,229 Raining without high winds
30 mph

Causation Factor: **Participant:** **Confidence:**

1st: Failed to look properly — Vehicle 1 — Very Likely

VEHICLE 1 WAS TRAVELLING ON A259 WB, VEH2 (PUSHBIKE) TRAVELLING SB FROM STATION ROAD OVER THE RA TO DELLING LANE. AS VEH 1 HAS ENTERED THE RA VEHICLE 2 HAS STRUCK THE VEH1 ON OFFSIDE DRIVER DOOR AND REAR DOOR LEAVING MARKS ON THE VEHICLE. RIDER OF VEH2 H
AS FALLEN TO THE FLOOR AND SUSTAINED BACK, PELVIS AND KNEE PAIN.

Details of Personal Injury Accidents for Period - **01/02/2014** **to** **31/01/2019** (60) months

Selection:
Selected using Manual Selection

Notes:

			Vehicles					Casualties		
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class					Sex / Age / Sev		
	Date									
Road No.	Time									
2nd Road No.										
Grid Ref.	D/L									
	R S C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

1406698 Wednesday 05/11/2014 1224hrs — A259 MAIN ROAD EMSWORTH 40M WEST OF U THORNEY ROAD OUTSIDE OPPOSITE OFF LICENCE

Veh 1	Car	Going ahead	W	to	E	Dri	F	58	Slight
Veh 2	Car	Parked	0	to	0	Dri	M	56	Slight
Veh 3	Car	Parked	0	to	0				

R1: A 259
Daylight:street lights present
E 475,517
Dry
N 105,755
Fine without high winds
30 mph

Causation Factor:		**Participant:**	**Confidence:**
1st:	Illness or disability, mental or physical	Vehicle 1	Very Likely
2nd:	Failed to look properly	Vehicle 1	Possible
3rd:	Uncorrected, defective eyesight	Vehicle 1	

IT WOULD APPEAR THAT VEHICLE ONE WAS TRAVELLING EAST ALONG THE A259 FROM EMSWORTH TOWARDS CHICHESTER. AS IT APPROACHED THE JUNCTION OF THORNEY ROAD ON ITS OFF SIDE , FIOR A REASON UNKNOWN, BELIEVED MEDICAL, THE DRIVER DROVE INTO THE REAR OF A PARKED VEHI
CLE AND TRAILER THAT WAS CLEARLY VISIBLE PARKED ON THE NEARSIDE.

1500850 Tuesday 10/02/2015 1430hrs — A259 MAIN ROAD BOSHAM 138M EAST OF U WALTON LANE

Veh 1	Car	Going ahead LH bend	W	to	N	Dri	F	54	Slight

R1: A 259
Daylight:street lights present
E 481,694
Dry
N 104,945
Fine without high winds
40 mph

Causation Factor:		**Participant:**	**Confidence:**
1st:	Illness or disability, mental or physical	Vehicle 1	Very Likely

VEH 1 EASTBOUND ON A259 WHEN DRIVER FAINTED, LOSING CONTROL OF CAR AND LEAVING ROAD ON OFFSIDE. VEHICLE COLLIDED WITH BARBED WIRE FENCE BEFORE COMING TO A HALT IN FIELD.

1500466 Thursday 22/01/2015 1157hrs — A259 EMSWORTH 100M EAST OF U SLIPER ROAD OUTSIDE 12 MAIN ROAD EMSWORTH

Veh 1	Pedal cycle	Going ahead	E	to	W	Dri	M	41	Slight
Veh 1	Pedal cycle	Going ahead	E	to	W	Ped	F	81	Serious

R1: A 259
Daylight:street lights present
E 475,369
Dry
N 105,759
Fine without high winds
30 mph

Causation Factor:		**Participant:**	**Confidence:**
1st:	Failed to look properly	Casualty 2	Very Likely

VEHICLE 1 CYCLIST TRAVELLING WEST ALONG SINGLE CARRIAGEWAY ROAD, PEDESTRIAN STEPPED OFF OF ROAD NORTHWARD DIRECTION INTO PATH OF CYCLIST. FEMALE PEDESTRAIN FELL ONTO ROAD CAUSING INJURY TO SELF.

Details of Personal Injury Accidents for Period - **01/02/2014** **to** **31/01/2019** (60) months

Selection:
Selected using Manual Selection

Notes:

			Vehicles					Casualties		
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class					Sex / Age / Sev		
	Date									
Road No.	Time									
2nd Road No.	D/L									
Grid Ref.	R S C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

1503290	Friday	A259 MAIN ROAD FISHBOURNE AT	Veh 1	Goods < 3.5t	Turning left	W	to N				
	12/06/2015	JUNCTION OF U SALTHILL ROAD	Veh 2	Car	Wait to turn right	N	to W	Dri	F	29	Slight
R1: A 259	1612hrs										
R2: U	Daylight:street lights present										
E 483,493	Wet/Damp										
N 104,705	Fine without high winds										
	30 mph										

Causation Factor: **Participant:** **Confidence:**

1st: Junction overshoot — Vehicle 1 — Very Likely

V1 HAS OVERSHOT THE JUNCTION WHEN TURNING LEFT AND COLLIDED WITH V2 TURNING RIGHT

1405445	Monday	A259 MAIN ROAD BOSHAM AT	Veh 1	Pedal cycle	Going ahead	W	to E	Dri	F	26	Serious
	22/09/2014	JUNCTION OF U PRIVATE	Veh 2	Car	Turning right	N	to W				
R1: A 259	1419hrs	DRIVEWAY OUTSIDE KINGS LODGE									
R2: U	Daylight:street lights present										
E 479,641	Dry										
N 105,282	Fine without high winds										
	40 mph										

Causation Factor: **Participant:** **Confidence:**

1st: Failed to look properly — Vehicle 1 — Very Likely

VEH 1 (PEDAL CYCLE) IS TRAVELLING EASTBOUND ON A259 ON A DESIGNATED CYCLE PATH, WITH THE RIDER NOT WEARING A HELMET, LISTENING TO MUSIC AND ACCORDING TO INDEPENDENT WITNESSES, NOT PAYING ATTENTION TO DRIVEWAYS. VEH 2 HAS PULLED VERY SLOWLY OUT OF KINGS L
ODGE NURSING HOME AND THE CYCLIST HAS CLIPPED THE FRONT OFFSIDE OF THE VEHICLE AND FALLEN TO THE PAVEMENT, POSSIBLY BREAKING ALL THE TOES OF HER LEFT FOOT.

1504586	Monday	A259 MAIN ROAD EMSWORTH AT	Veh 1	Car	Turning right	W	to S	Dri	F	52	Slight
	10/08/2015	JUNCTION OF U PRINSTED LANE	Veh 2	Car	Going ahead	E	to W	Dri	F	44	Slight
R1: A 259	1535hrs	OUTSIDE AT JUNCTION									
R2: U	Daylight:street lights present										
E 476,705	Wet/Damp										
N 105,637	Raining without high winds										
	30 mph										

Causation Factor: **Participant:** **Confidence:**

1st: Failed to look properly — Vehicle 1 — Very Likely

V1 WAS TRAVELLING EASTBOUND ALONG A259 MAIN ROAD WHILST V2 WAS TRAVELLING WESTBOUND. V1 TURNED RIGHT INTO PRINSTED LANE AND COLLIDED WITH V2. V2 THEN STRUCK CENTRAL BOLLARD CAUSING MINOR DAMAGE

Details of Personal Injury Accidents for Period - **01/02/2014** **to** **31/01/2019** (60) months

Selection:
Selected using Manual Selection

Notes:

			Vehicles					Casualties			
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class					Sex / Age / Sev			
	Date										
Road No.	Time										
2nd Road No.											
Grid Ref.	D/L										
	R S C										
	Weather										
	Speed										
	Account of Accident										
Causation Factor:											

1505736	Wednesday	A259 MAIN ROAD BOSHAM 25M	Veh 1	Goods < 3.5t	Going ahead	W	to E	Dri	M	26	Slight
	30/09/2015	EAST OF U DELLING LANE	Veh 2	Agric. veh	Going ahead	E	to W				
R1: A 259	1305hrs										
	Daylight:street lights present										
E 481,164	Dry										
N 105,215	Fine without high winds										
	30 mph										

Causation Factor:		**Participant:**	**Confidence:**
1st:	Failed to judge other persons path or speed	Vehicle 1	Very Likely

VEHICLE 2 WESTBOUND ON A259 TOWARDS ROUNDABOUT VEHICLE 1 EASTBOUND FROM SAID ROUNDABOUT WHEN DRIVER STRIKES TRAILER WHEELS OF VEHICLE 2. VEHICLE 1 OVERTURNS.

1507436	Tuesday	A259 MAIN ROAD SOUTHBOURNE	Veh 1	Car	Going ahead	E	to W	Ped	F	74	Serious
	15/12/2015	AT JUNCTION OF U STEIN ROAD									
R1: A 259	1600hrs	OUTSIDE ST JOHNS CHURCH									
R2: U	Darkness: street lights present a										
E 476,934	Wet/Damp										
N 105,632	Raining without high winds										
	30 mph										

Causation Factor:		**Participant:**	**Confidence:**
1st:	Failed to look properly	Casualty 1	Possible
2nd:	Disobeyed pedestrian crossing facility	Vehicle 1	Possible

V1 TRAVELLING WESTBOUND ON A259 FROM MINI ROUNDABOUT, STRUCK PEDESTRIAN IN CARRIAGEWAY WHO WAS CROSSING THE ROAD FROM THE SOUTH SIDE OF MAIN ROAD BY ST JOHNS CHURCH, OVER TO THE SOUTH SIDE OF MAIN ROAD.

1505992	Tuesday	A259 MAIN ROAD EMSWORTH AT	Veh 1	Car	Turning right	W	to SE				
	13/10/2015	JUNCTION OF U GORDON ROAD	Veh 2	M/C < 125 cc	O/take s/veh o/side	W	to E	Dri	M	18	Slight
R1 A 259	0859hrs										
R2: U	Daylight:street lights present										
E 475,727	Dry										
N 105,746	Fine without high winds										
	30 mph										

Causation Factor:		**Participant:**	**Confidence:**
1st:	Poor turn or manoevre	Vehicle 1	Very Likely

V2 TRAVELLING EAST AND OVERTAKING STATIONARY TRAFFIC ON OFFSIDE. V1 ALSO TRAVELLING EAST IN STAIONARY TRAFFIC. V1 BEGAN TO TURN RIGHT INTO SIDE TURNING AND COLLIDED WITH V2.

Details of Personal Injury Accidents for Period - **01/02/2014** **to** **31/01/2019** (60) months

Selection:
Selected using Manual Selection

Notes:

			Vehicles					Casualties		
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class					Sex / Age / Sev		
	Date									
Road No.	Time									
2nd Road No.										
Grid Ref.	D/L									
	R S C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

1506617 Thursday 05/11/2015 1422hrs — A259 MAIN ROAD CHICHESTER 131M WEST OF U THORNEY ROAD OUTSIDE 36 SUSSEX BREWERY

Veh 1	Car	Going ahead	W	to	E	Dri	M	22	Slight
Veh 2	Car	Going ahead	W	to	E				

R1: A 259
Daylight:street lights present
E 475,422
Dry
N 105,755
Fine without high winds
30 mph

Causation Factor:		**Participant:**	**Confidence:**
1st:	Sudden braking	Vehicle 2	Very Likely
2nd:	Failed to judge other persons path or speed	Vehicle 1	Possible

BOTH VEHS EASTBOUND VEH RECORDED AS V2 WAS IN FRONT BUT THEN BRAKED TO A HALT FOR NO APPARENT REASON & WAS HIT BY V1 V2 DROVE OFF W/O STOPPING & LATER TURNED RIGHT

1600510 Friday 22/01/2016 0925hrs — A259 MAIN ROAD NUTBOURNE AT JUNCTION OF U PRIVATE DRIVEWAY OUTSIDE THE HAVEN

Veh 1	Car	Starting	E	to	W				
Veh 2	Car	Starting	W	to	E	Dri	F	39	Slight

R1: A 259
R2: U
Daylight:street lights present
E 478,018
Dry
N 105,465
Fine without high winds
30 mph

Causation Factor:		**Participant:**	**Confidence:**
1st:	Poor turn or manoevre	Vehicle 1	Very Likely

V2 REVERSING ONTO MAIN ROAD INTENDING TO TRAVEL EAST. V1 HAD BEEN PARKED WITH N/S TO KERB AND FACING WEST. V1 PULLED OUT ONTO ROAD FROM PARKING SPACE TO TRAVEL WEST AND COLLIDED WITH V2 TRAVELLING EAST AND COLLIDED WITH FNS OF V2.

1504985 Thursday 27/08/2015 1940hrs — A259 BOSHAM AT JUNCTION OF U DELLING LANE

Veh 1	Car	Starting	SE	to	W				
Veh 2	Pedal cycle	Going ahead	NW	to	SW	Dri	F	27	Serious

R1: A 259
R2: U
Daylight:street lights present
E 481,141
Dry
N 105,231
Fine without high winds
30 mph

Causation Factor:		**Participant:**	**Confidence:**
1st:	Failed to look properly	Vehicle 1	Very Likely

VEHICLE 1 PULLED ONTO ROUNDABOUT AND COLLIDED WITH ONCOMING CYCLIST.

Details of Personal Injury Accidents for Period - **01/02/2014** **to** **31/01/2019** (60) months

Selection:
Selected using Manual Selection

Notes:

			Vehicles					Casualties		
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class					Sex / Age / Sev		
	Date									
Road No.	Time									
2nd Road No.										
Grid Ref.	D/L									
	R S C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

1601296 Wednesday 02/03/2016 0740hrs — A259 MAIN ROAD NUTBOURNE AT JUNCTION OF U BROAD ROAD OUTSIDE AT JUNCTION

Veh 1	Car	Going ahead	E	to	W				
Veh 2	Pedal cycle	Going ahead	E	to	W	Dri	M	59	Serious

R1: A 259
R2: U Daylight:street lights present
E 478,812 Wet/Damp
N 105,421 Fine without high winds
40 mph

Causation Factor:		**Participant:**	**Confidence:**
1st:	Careless/Reckless/In a hurry	Vehicle 1	Very Likely
2nd:	Travelling too fast for conditions	Vehicle 1	Possible

VEH (2) PEDAL CYCLIST TRAVELLING EAST VEH (1) TRAVELLING EAST BEHIND VEH (2) VEH (1) HAS IMPACTED WITH THE REAR OF CYCLIST CAUSING CYCLIST TO FALL OFF.

1601367 Sunday 06/03/2016 1700hrs — A259 MAIN ROAD EMSWORTH AT JUNCTION OF U INLANDS ROAD OUTSIDE TRAVELLERS JOY PUBLIC

Veh 1	Car	Going ahead	W	to	E				
Veh 2	Pedal cycle	Going ahead	W	to	E	Dri	M	15	Serious

R1: A 259
R2: U Daylight:street lights present
E 477,548 Dry
N 105,560 Fine without high winds
30 mph

Causation Factor:		**Participant:**	**Confidence:**
1st:	Swerved	Vehicle 1	Very Likely

PEDAL CYCLIST IN CYCLE LANE HEADING EAST WHEN VEHICLE 1 SWERVED TO AVOID BOLLARD IN ROAD AND HIT PEDAL CYCLIST CAUSING RIDER TO DISMOUNT AND SUSTAIN INJURIES DRIVER OF VEHICLE 1 FAILED TO STOP AFTER RTC PEDAL CYCLIST SUSTAINED INJURIES NO WITNESSES

1604038 Thursday 07/07/2016 0100hrs — A259 MAIN ROAD CHICHESTER AT JUNCTION OF U WALTON LANE

Veh 1	Car	Turning right	S	to	E				
Veh 2	Pedal cycle	Going ahead	E	to	W	Dri	M	20	Slight

R1: A 259
R2: U Darkness: street lights present a
E 481,556 Dry
N 105,005 Fine without high winds
40 mph

Causation Factor:		**Participant:**	**Confidence:**
1st:	Failed to look properly	Vehicle 1	Very Likely

VEHICLE 1 WAS PULLING OUT THE JUNCTION OF WALTON LANE BOSHAM ON TO THE A259 TURNING RIGHT IN EASTERLY DIRECTION, VEHICLE 2 CYCLIST WAS TRAVELLING ALONG A259 IN WESTERLY DIRECTION. DRIVER OF VEHICLE 1 DIDNOT SEE CYCLISTS, CYCLIST DID NOT HAVE TIME TO
ADJUST AND COLLIDED WITH NEARSIDE OF FRONT WING OF VEHICLE AND IMPACTING ON WINDSCREEN.MANY CUTS AND LACERATION RECEIVED BY CYCLIST AND ATTENDING A & E ST RICHARDS DUE IMPACT ON VEHICLE.

Details of Personal Injury Accidents for Period - **01/02/2014** **to** **31/01/2019** (60) months

Selection:
Selected using Manual Selection

Notes:

			Vehicles					Casualties			
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class					Sex / Age / Sev			
	Date										
Road No.	Time										
2nd Road No.											
Grid Ref.	D/L										
	R S C										
	Weather										
	Speed										
	Account of Accident										
Causation Factor:											

1604296	Monday	U GARSONS ROAD CHICHESTER AT	Veh 1	Car	Turning left	W	to N	Ped	M	8	Slight
	18/07/2016	JUNCTION OF A259 MAIN ROAD	Veh 2	Car	Wait go ahead held	W	to E				
R1: U	1605hrs	OUTSIDE ON JUNCTION									
R2: A 259	Daylight:street lights present										
E 476,566	Dry										
N 105,659	Fine without high winds										
	30 mph										

Causation Factor:		**Participant:**	**Confidence:**
1st:	Crossed road masked by stationary veh	Casualty 1	Very Likely
2nd:	Failed to look properly	Casualty 1	Very Likely

VEH 1 TRAVELLING EAST ON A259 TURNING LEFT INTO GARSONS ROAD. PED 8YR OLD CHILD RAN IN BETWEEN ANOTHER VEHICLE AND VEHICLE 2. VEH 1 COLLIDED WITH PED CHILD KNOCKING HIM INTO VEH 2.

1604809	Thursday	A259 MAIN ROAD CHIDHAM AT	Veh 1	Car	Turning left	S	to W				
	11/08/2016	JUNCTION OF U CHIDHAM LANE	Veh 2	Car	Going ahead	W	to E	Dri	F	55	Slight
R1: A 259	1652hrs										
R2: U	Daylight:street lights present										
E 479,248	Dry										
N 105,341	Fine without high winds										
	40 mph										

Causation Factor:		**Participant:**	**Confidence:**
1st:	Failed to look properly	Vehicle 1	Very Likely

VEHICLE 2 WAS TRAVELLING EASTBOUND ON A259 MAIN ROAD INTO CHIDHAM. VEHICLE 1 HAS PULLED OUT OF CHIDHAM LANE INTO THE NEARSIDE BUMPER CAUSING SIGNIFICANT DAMAGE TO THE BUMPER OF VEHICLE 2 AND SLIGHT DAMAGE TO VEHICLE 1. THE DRIVER OF VEHICLE 2 HAS RECEIVE
D VERY MINOR BRUISING TO HER CHEST AS A RESULT. THE OFFENDING DRIVER CLAIMS THE VEHICLE 2 WAS INDICATING TO PULL INTO CHIDHAM LANE BUT THIS IS DISPUTED.

1605280	Wednesday	A259 CHICHESTER AT JUNCTION OF	Veh 1	Car	Starting	N	to W				
	31/08/2016	U POTTERY LANE	Veh 2	Pedal cycle	Going ahead	W	to E	Dri	M	52	Slight
R1: A 259	0627hrs										
R2: U	Daylight:street lights present										
E 478,563	Dry										
N 105,472	Fine without high winds										
	40 mph										

Causation Factor:		**Participant:**	**Confidence:**
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:	Failed to judge other persons path or speed	Vehicle 1	Very Likely
3rd:	Disobeyed Give Way or Stop sign or markings	Vehicle 1	

APPARENTLY VEH 1 FAILED TO STOP AT THE GIVE WAY JUNCTION AND COLLIDED WITH THE CYCLIST.

Details of Personal Injury Accidents for Period - **01/02/2014** **to** **31/01/2019** (60) months

Selection:
Selected using Manual Selection

Notes:

			Vehicles					Casualties		
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class					Sex / Age / Sev		
	Date									
Road No.	Time									
2nd Road No.	D/L									
Grid Ref.	R S C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

1602862 Thursday 05/05/2016 1815hrs — **R1: A 259** — **R2: U** — **E 479,380** — **N 105,320**

A259 MAIN ROAD BOSHAM AT JUNCTION OF U ENTRANCE TO BOSHAM INN OUTSIDE BOSHAM INN

Veh 1	Car	Turning left	W to N			
Veh 2	Pedal cycle	Going ahead	W to E	Dri	M 40	Slight

Daylight:street lights present
Dry
Fine without high winds
60 mph

Causation Factor:		**Participant:**	**Confidence:**
1st:	Poor turn or manoevre	Vehicle 1	Very Likely

V2 CYCLING EAST ON CYCLE PATH AND CROSSING ENTRANCE TO PUBLIC HOUSE ON HIS LEFT V1 ALSO TRAVELLING EAST V1 OVERTOOK V2 AND TURNED LEFT IN FRONT OF HIM TO TURN INTO PUB. RIDER V2 COLLIDED WITH FNS OF V1.

1605722 Wednesday 21/09/2016 0024hrs — **R1: A 259** — **E 482,677** — **N 104,840**

A259 MAIN ROAD FISHBOURNE 296M WEST OF U OLD PARK LANE

Veh 1	Car	Going ahead	W to E	Dri	M 20	Serious

Darkness: street lights present b
Dry
Fine without high winds
30 mph

Causation Factor:		**Participant:**	**Confidence:**
1st:	Loss of control	Vehicle 1	Very Likely

VEHICLE 1 COLLIDED WITH LAMPOST

1606424 Friday 09/09/2016 1640hrs — **R1: A 259** — **R2: U** — **E 475,795** — **N 105,735**

A259 MAIN ROAD SOUTHBOURNE AT JUNCTION OF U SOUTHBOURNE AVENUE

Veh 1	Goods < 3.5t	Going ahead	W to E	Dri	M 68	Serious
Veh 2	Car	Going ahead	E to W	Dri	F 27	Slight

Daylight:street lights present
Dry
Fine without high winds
30 mph

Causation Factor:		**Participant:**	**Confidence:**
1st:	Loss of control	Vehicle 1	Very Likely
2nd:	Illness or disability, mental or physical	Vehicle 1	Very Likely

V1 HEADING EAST ON A259 WHEN OWING TO MEDCON DRIVER LOST CONTROL AND DRIFTED WITHOUT BRAKING INTO OPOSING CARRIAGEWAY. V1 COLLIDED WITH ONCOMING V2 CAUSING MINOR INJURY TO DRIVER. V1 THEN COLLIDED WITH FLINT WALL CAUSING DAMAGE TO PROPERTY AND PED X CONT
ROL BOX.

Details of Personal Injury Accidents for Period - **01/02/2014** **to** **31/01/2019** (60) months

Selection:
Selected using Manual Selection

Notes:

			Vehicles					Casualties			
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class					Sex / Age / Sev			
	Date										
Road No.	Time										
2nd Road No.											
Grid Ref.	D/L										
	R S C										
	Weather										
	Speed										
	Account of Accident										
Causation Factor:											

1605658	Sunday	A259 MAIN ROAD BOSHAM AT	Veh 1	Car	Turning right	E to N				
	18/09/2016	JUNCTION OF U PRIVATE	Veh 2	M/C > 125 cc	Going ahead	W to E	Dri	M	21	Slight
R1: A 259	2012hrs	ENTRANCE TO PH								
R2: U	Darkness: street lights present a									
E 479,377	Dry									
N 105,324	Fine without high winds									
	40 mph									

Causation Factor:		**Participant:**	**Confidence:**
1st:	Failed to judge other persons path or speed	Vehicle 1	Very Likely
2nd:	Failed to look properly	Vehicle 1	Very Likely

CAR TRAVELLING WEST BOUND ON A259, TURNED RIGHT INTO PUBLIC HOUSE CAR PARK (BOSHAM INN), CROSSED PATH OF ON COMING MOTORCYCLE WHICH COLLIDED WITH NEARSIDE OF CAR. MINOR INJURY TO MOTORCYCLIST, MINOR DAMAGE TO CAR AND MOTORCYCLE.

1700184	Monday	A259 MAIN ROAD CHICHESTER 220M	Veh 1	Car	Starting	W to E				
	09/01/2017	EAST OF U FARM LANE OUTSIDE	Veh 2	Car	Going ahead	W to E	RSP	F	43	Slight
R1: A 259	1800hrs	VICINITY OLD POST OFFICE								
	Darkness: street lighting unkno									
E 478,027	Wet/Damp									
N 105,476	Raining without high winds									
	40 mph									

NO CONTACT BETWEEN VEHS BUT WHIPLASH INJ TO V2 PASSENGER V1 PARKED SOUTH SIDE OF ROAD FACING EAST SO O/S TO KERB V2 EASTBOUND V1 MOVES OFF CUTTING ACCROSS CARRAIGWAY INTENDING TO TRAVEL EAST & WOULD HAVE HIT V2 HAD V2 NOT TAKEN EVASIVE ACTION BY SWERVIN
G & MOUNTING THE N/S KERB

1702846	Wednesday	A259 SOUTHBOURNE 50M EAST OF	Veh 1	Car	Wait to turn left	E to W				
	24/05/2017	U PRINSTEAD LANE	Veh 2	Pedal cycle	Going ahead	E to W	Dri	M	21	Slight
R1: A 259	1250hrs									
	Daylight:street lights present									
E 476,739	Dry									
N 105,646	Fine without high winds									
	30 mph									

Causation Factor:		**Participant:**	**Confidence:**
1st:	Failed to signal/Misleading signal	Vehicle 1	Very Likely

VEHICLE 1 (CAR) PULLED INTO PATH OF VEHICLE 2 (PEDAL CYCLE) CAUSING RIDER OF VEHICLE 2 TO FALL OFF

Details of Personal Injury Accidents for Period - **01/02/2014** **to** **31/01/2019** (60) months

Selection:
Selected using Manual Selection

Notes:

			Vehicles					Casualties		
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class					Sex / Age / Sev		
	Date									
Road No. **2nd Road No.**	Time									
Grid Ref.	D/L									
	R S C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

1703148	Wednesday 07/06/2017 1912hrs	A259 MAIN ROAD CHIDHAM AT JUNCTION OF U NEWELLS LANE	Veh 1		Turning right	E	to N	Dri	M	94	Serious
			Veh 2	Car	Going ahead	E	to W				
R1: A 259												
R2: U	Daylight:street lights present											
E 479,989	Dry											
N 105,244	Fine without high winds											
	60 mph											

Causation Factor: **Participant:** **Confidence:**

1st: Poor turn or manoevre — Vehicle 1 — Very Likely

VEHICLE 1 A MOBILITY SCOOTER TRAVELLING WESTBOUND ON THE PAVEMENT HAS TURNED NORTH TO CROSS THE ROAD AND FAILED TO SEE VEHCILE2 TRAVELLING ON THE ROAD AND COLLIDED.

1704497	Monday 07/08/2017 1127hrs	A259 MAIN ROAD SOUTHBOURNE 50M EAST OF U STEIN ROAD	Veh 1	Bus/coach	Parked	0	to 0	Board	M	67	Slight
R1: A 259												
	Daylight:street lights present											
E 477,012	Dry											
N 105,594	Fine without high winds											
	30 mph											

V1 STATIONARY WITH N/S TO KERB. PASSENGER TRIPPED AS HE GOT ONTO BUS

1704765	Monday 21/08/2017 1149hrs	A259 SOUTHBOURNE AT JUNCTION OF U THE DRIVE OUTSIDE 276	Veh 1	Pedal cycle	Going ahead	E	to W	Dri	M	70	Serious
			Veh 2	Goods > 7.5t	Parked	0	to 0				
R1: A 259												
R2: U	Daylight:street lights present											
E 476,807	Dry											
N 105,635	Fine without high winds											
	30 mph											

Causation Factor: **Participant:** **Confidence:**

1st: Loss of control — Vehicle 1 — Very Likely

V1 CYCLIST ATTEMPTS TO MOUNT PAVEMENT TO ROUND PARKED V2 HGV NEARSIDE AND FALLS OFF IN THE PROCESS CAUSED LACERATION INJURY TO RIGHT HAND WHEN STRIKING THE HGV

Details of Personal Injury Accidents for Period - **01/02/2014** **to** **31/01/2019** (60) months

Selection:
Selected using Manual Selection

Notes:

			Vehicles				Casualties			
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class				Sex / Age / Sev			
	Date									
Road No.	Time									
2nd Road No.	D/L									
Grid Ref.	R S C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

1706265 Monday 06/11/2017 1755hrs — A259 BOSHAM AT JUNCTION OF U WALTON LANE
R1: A 259 **R2: U** **E 481,563** **N 104,994**
Darkness: street lights present a
Dry
Fine without high winds
30 mph

Veh 1	Car	Turning right	S to SE		
Veh 2	Pedal cycle	Going ahead	NW to SE	Dri	M 18 Slight

V1 TRAVELLING NORTH ON WALTON LANE, APPROACHED T JUNCTION A259 V2 PEDAL CYCLE TRAVEL WEST ON A259, V1 COLLIDED WITH V2.

1801985 Saturday 14/04/2018 1014hrs — A259 MAIN ROAD FISHBOURNE AT JUNCTION OF U BLACKBOY LANE
R1: A 259 **R2: U** **E 483,139** **N 104,786**
Daylight:street lights present
Dry
Fine without high winds
30 mph

Veh 1	Car	Turning right	E to N		
Veh 2	Pedal cycle	Going ahead	W to E	Dri	F 52 Serious

Causation Factor:	**Participant:**	**Confidence:**
1st: Failed to look properly	Vehicle 1	Very Likely

V1 IS WAITING TO TURN RIGHT INTO BLACKBOY LANE ONCE THE ONCOMING TRAFFIC HAS CLEARED. WHEN V1 BELIEVES IT IS SAFE TO GO, THE DRIVER NEGOTIATES THE TURN, DOES NOT SEE V2, AND COLLIDES WITH V2 TRAVELLING WEST TO EAST.

1800684 Tuesday 06/02/2018 1705hrs — A259 MAIN ROAD SOUTHBOURNE AT JUNCTION OF U NEW ROAD
R1: A 259 **R2: U** **E 477,162** **N 105,590**
Darkness: street lighting unkno
Dry
Fine without high winds
40 mph

Veh 1	Car	Turning left	W to N		
Veh 2	Pedal cycle	Going ahead	W to E	Dri	M 41 Slight
Veh 3	Goods < 3.5t	Going ahead	W to E		

BOTH VEHS EAST BOUND V1 OVERTOOK & TURNED LEFT IN FRONT OF V2 MAKING CONTACT WITH V2 CAUSING RIDER TO FALL OFF

Details of Personal Injury Accidents for Period - **01/02/2014** **to** **31/01/2019** (60) months

Selection:
Selected using Manual Selection

Notes:

			Vehicles				Casualties			
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class				Sex / Age / Sev			
	Date									
Road No.	Time									
2nd Road No.										
Grid Ref.	D/L									
	R S C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

1706396 Monday 13/11/2017 1145hrs — A259 MAIN ROAD BOSHAM 483M EAST OF U CHEQUER LANE

R1: A 259

Daylight:street lights present

E 482,523

Dry

N 104,847

Fine without high winds

60 mph

Veh 1	Car	Going ahead	W	to	E				
Veh 2	Goods < 3.5t	Stopping	W	to	E	Dri	M	38	Slight
Veh 3	Car	Stopping	W	to	E	Dri	M	49	Slight

Causation Factor:		**Participant:**	**Confidence:**
1st:	Failed to judge other persons path or speed	Vehicle 1	Very Likely
2nd:	Sudden braking	Vehicle 1	Very Likely

VEHICLE 3 INDICATED TO PULL OVER AND BRAKED. VEHICLE 2 STOPPED CLOSELY BEHIND AS WAS TRAVELLING TOO CLOSE. VEHICLE 1 TRAVELLING BEHIND V2 FAILED TO BRAKE IN TIME COLLIDED WITH V2 SHUNTING V2 INTO REAR OF V3.

1803445 Friday 22/06/2018 0920hrs — A259 MAIN ROAD BOSHAM 146M WEST OF U NEWELLS LANE OUTSIDE ADJACENT TO CUTMILL

R1: A 259

Daylight:street lights present

E 479,803

Dry

N 105,239

Fine without high winds

60 mph

Veh 1	Car	Going ahead	E	to	W	Dri	F	53	Slight
Veh 2	Car	Stopping	E	to	W	Dri	M	73	Slight
Veh 2	Car	Stopping	E	to	W	FSP	F	70	Slight

Causation Factor:		**Participant:**	**Confidence:**
1st:	Careless/Reckless/In a hurry	Vehicle 1	Possible
2nd:	Failed to judge other persons path or speed	Vehicle 1	Very Likely
3rd:	Sudden braking	Vehicle 1	

V1 IS IN TRAFFIC BEHIND V2 AT WHAT IS DESCRIBED AS A REASONABLE DISTANCE. A FOX OR DOG RUNS OUTS INTO THE ROAD IN FRONT OF V2 WHO APPLIES HIS BRAKES HARD AND V1 COLLIDES WITH THE REAR OF V2. MINOR INJURIES TO ALL PERSONS WITHIN THE VEHICLES.

1804207 Monday 30/07/2018 0626hrs — A259 BOSHAM AT JUNCTION OF U NEWELLS LANE OUTSIDE JUST PRIOR TO THE SAAB GARAGE

R1: A 259

R2: U

Daylight street lights present

E 479,998

Wet/Damp

N 105,245

Fine without high winds

60 mph

Veh 1	M/C > 500 cc	Going ahead	E	to	W	Dri	M	59	Slight
Veh 2	Car	Going ahead	E	to	W				

V2 TRAVELLING WEST SLOWED TO A STOP RAPIDLY, V1 COLLIDED WITH THE REAR OF V2

Details of Personal Injury Accidents for Period - **01/02/2014** **to** **31/01/2019** (60) months

Selection:
Selected using Manual Selection

Notes:

			Vehicles					Casualties			
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class					Sex / Age / Sev			
	Date										
Road No.	Time										
2nd Road No.	D/L										
Grid Ref.	R S C										
	Weather										
	Speed										
	Account of Accident										
Causation Factor:											

1804964	Friday	A259 MAIN ROAD CHICHESTER AT	Veh 1	Car	Turning right	S to SE				
	07/09/2018	JUNCTION OF U WALTON LANE	Veh 2	Pedal cycle	Going ahead	NW to SE	Dri	M	45	Serious
R1: A 259	0800 hrs	OUTSIDE OPPOSITE WALTON LANE								
R2: U	Daylight:street lights present									
E 481,568	Dry									
N 104,998	Fine without high winds									
	30 mph									

Causation Factor:		**Participant:**	**Confidence:**
1st:	Dazzling sun	Vehicle 1	Very Likely
2nd:	Failed to look properly	Vehicle 1	Very Likely
3rd:	Failed to judge other persons path or speed	Vehicle 2	

V1 PULLED OUT OF WALTONS LANE ON TO A259 TOWARDS CHICHESTER. DRIVER DID NOT SEE CYCLIST DUE TO LOW SUN DAZZLING THEM, CYCLIST IMPACTED OFFSIDE OF CAR

1801251	Saturday	A259 BOSHAM 285M WEST OF B2146	Veh 1	Car	Going ahead	W to E				
	03/03/2018	STATION ROAD	Veh 2	Car	O/take m/veh o/side	W to E				
R1: A 259	0752 hrs		Veh 3	Car	Going ahead	W to E	Dri	F	64	Slight
	Daylight:street lights present									
E 480,861	Frost/Ice									
N 105,324	Fine without high winds									
	30 mph									

Causation Factor:		**Participant:**	**Confidence:**
1st:	Impaired by alcohol	Vehicle 1	Very Likely
2nd:	Impaired by drugs (illicit or medicinal)	Vehicle 1	Very Likely

VEHICLE 1 WAS TRAVELLING AT SPEED HEADING EAST TOWARDS BOSHAM. HAS OVERTAKEN V2 AND COLLIDED. ON APPROACH THE SPEED LIMIT DROPS TO 30 MPH WHERE VEHICLE 3 HAS BEEN TRAVELLING IN THE SAME DIRECTION THE FEMALE DRIVER SINGLE OCCUPANT HAS BEEN HIT TWICE FROM
BEHIND, CAUSING HER TO SPIN AND CRASH INTO A DITCH AND INTO A TREE SUSPECT VEHICLE HAS CONTINUED FAILING TO STOP AND THEN CRASHED INTO THE BOSHAM ROUND-A-BOUT AND DECAMPED.

Details of Personal Injury Accidents for Period - **01/02/2014** **to** **31/01/2019** (60) months

Selection:
Selected using Manual Selection

Notes:

			Vehicles					Casualties		
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class					Sex / Age / Sev		
	Date									
Road No.	Time									
2nd Road No.										
Grid Ref.	D/L									
	R S C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

1805366	Friday	A259 MAIN ROAD BOSHAM AT JUNCTION OF U GARDEN CENTRE ENTRANCE OUTSIDE HILLIERS	Veh 1	Car	Turning right	W to S	Dri	M	87	Slight
	28/09/2018		Veh 1	Car	Turning right	W to S	FSP	F	79	Slight
R1: A 259	1409hrs		Veh 2	M/C > 500 cc	Going ahead	E to W	Dri	M	21	Serious
R2: U	Daylight:street lights present									
E 482,415	Dry									
N 104,853	Fine without high winds									
	40 mph									

Causation Factor:		**Participant:**	**Confidence:**
1st:	Failed to judge other persons path or speed	Vehicle 1	Very Likely
2nd:	Failed to look properly	Vehicle 1	Possible
3rd:	Careless/Reckless/In a hurry	Vehicle 2	Possible
4th:	Exceeding speed limit	Vehicle 2	Possible

V1 ON THE A259 HEADING EAST TO TURN RIGHT INTO HILLIERS GARDEN CENTRE. V2 IS TRAVELLING EAST TO WEST ON A259 MAIN ROAD. V1 TURNS RIGHT INTO ENTRANCE OF THE GARDEN CENTRE AND ACROSS THE PATH OF V2 RESULTING IN A SIGNIFICANT COLLISION. RIDER OF V2 SUSTAIN
S LIFE THREATENING INJURIES.

1806747	Wednesday	A259 BOSHAM AT JUNCTION OF U WALTON LANE	Veh 1	Taxi	Turning right	S to E				
	05/12/2018		Veh 2	Pedal cycle	Going ahead	E to W	Dri	F	53	Slight
R1: A 259	1647hrs									
R2: U	Darkness: street lighting unkno									
E 481,569	Wet/Damp									
N 104,994	Raining without high winds									
	30 mph									

Causation Factor:		**Participant:**	**Confidence:**
1st:	Failed to look properly	Vehicle 1	Possible
2nd:	Rain, sleet, snow, or fog	Vehicle 1	Possible
3rd:	Not displaying lights at night or in poor visibility	Vehicle 2	

VEH 1 WAS TURNING RIGHT OUT OF WALTON LANE TO JOIN THE A259. DRIVER FAILED TO SEE PEDAL CYCLIST HEADING WEST ON MAIN ROAD. VEH PULLED ACROSS PATH OF CYCLIST AND HIT BACK WHEEL OF PEDAL CYCLE. THIS CAUSED RIDER TO GO ACROSS BONNET AND HIT WINDSCREEN.

1900385	Tuesday	A259 MAIN ROAD SOUTHBOURNE AT JUNCTION OF U STEIN ROAD	Veh 1	Car	Going ahead	W to E	Dri	F	18	Slight
	22/01/2019		Veh 2	Car	Turning right	E to N				
R1: A 259	0916hrs									
R2 U	Daylight:street lights present									
E 476,967	Dry									
N 105,629	Fine without high winds									
	30 mph									

Causation Factor:		**Participant:**	**Confidence:**
1st:	Dazzling sun	Vehicle 1	Very Likely

V2 TURNING RIGHT AT ROUNDABOUT. V1 TRAVELLING EAST FAILED TO GIVE WAY TO V2 TURNING RIGHT. BOTH VEHICLES COLLIDED.

Appendix C

PRELIMINARY DESIGN DRAWINGS

DO NOT SCALE

NOTES:

1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
2. DO NOT SCALE THIS DRAWING.
3. THIS IS A FEASIBILITY DESIGN AND IS NOT TO BE USED FOR CONSTRUCTION. IT HAS BEEN BASED ON OS DATA THEREFORE THE ACCURACY OF THE DIMENSIONS CAN NOT BE GUARANTEED.
4. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL RELEVANT DOCUMENTATION, DRAWINGS AND STANDARD DETAILS.
5. **HIGHWAY BOUNDARY ASSUMED TO BE BACK OF FOOTWAY WITHIN HAMPSHIRE**

KEY:

- PROPOSED 2.5m SHARED USE PATH (UNSEGREGATED)
- PROPOSED 2.5m TWO-WAY CYCLE TRACK WITH 0.3m BUFFER
- PROPOSED 3m SHARED USE PATH (UNSEGREGATED)
- PROPOSED 3.5m SHARED USE PATH (UNSEGREGATED)
- EXISTING OFF ROAD SHARED USE PATH (UNSEGREGATED) TO BE RETAINED
- EXISTING OFF ROAD SHARED USE PATH (SEGREGATED) TO BE RETAINED
- EXISTING ADVISORY CYCLE LANE TO BE RETAINED
- EXISTING MANDATORY CYCLE LANE TO BE RETAINED
- HIGHWAY BOUNDARY (ONLY SHOWN IN WSCC)
- PROPOSED REALIGNED KERBLINE
- EXISTING CYCLE LANE TO BE REMOVED

REV	DATE	BY	DESCRIPTION	CHK	APP
B	04/02/20	AVT	REVISED AS PER COMMENTS	HL	AK
A	31/01/20	WP	FIRST ISSUE	HL	AK

DRAWING STATUS: S2 - FOR INFORMATION

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SO15 2BE, UK
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CLIENT: HIGHWAYS ENGLAND

ARCHITECT: -

PROJECT: A27 DESIGNATED FUNDS NMU LINKS FEASIBILITY STUDY SCHEME 1

TITLE: CYCLING INFRASTRUCTURE GOLD OPTION EMSWORTH TO CHICHESTER SHEET 1 OF 10

SCALE @ A1:	CHECKED:		APPROVED:
1:1000	HL		AK
PROJECT No:	DESIGNED:	DRAWN:	DATE:
70055187	WP	WP	February 20

DRAWING No: 5187/GA/101 REV: B

DO NOT SCALE

NOTES:

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5. **HIGHWAY BOUNDARY ASSUMED TO BE BACK OF FOOTWAY WITHIN HAMPSHIRE**

KEY:

- PROPOSED 2.5m SHARED USE PATH (UNSEGREGATED)
- PROPOSED 2.5m TWO-WAY CYCLE TRACK WITH 0.3m BUFFER
- PROPOSED 3m SHARED USE PATH (UNSEGREGATED)
- PROPOSED 3.5m SHARED USE PATH (UNSEGREGATED)
- EXISTING OFF ROAD SHARED USE PATH (UNSEGREGATED) TO BE RETAINED
- EXISTING OFF ROAD SHARED USE PATH (SEGREGATED) TO BE RETAINED
- EXISTING ADVISORY CYCLE LANE TO BE RETAINED
- EXISTING MANDATORY CYCLE LANE TO BE RETAINED
- HIGHWAY BOUNDARY (ONLY SHOWN IN WSCC)
- PROPOSED REALIGNED KERBLINE
- EXISTING CYCLE LANE TO BE REMOVED

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REV	DATE	BY	DESCRIPTION	CHK	APP
B	04/02/20	WP	REVISED AS PER COMMENTS	HL	AK
A	31/01/20	WP	FIRST ISSUE	HL	AK

DRAWING STATUS: S2 - FOR INFORMATION

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CLIENT: HIGHWAYS ENGLAND

ARCHITECT: -

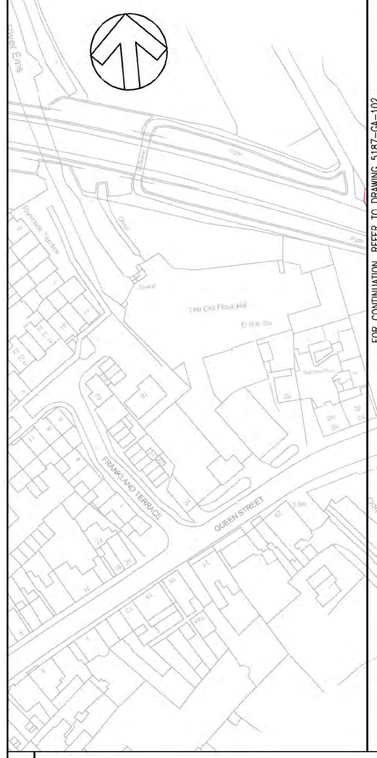
PROJECT: A27 DESIGNATED FUNDS NMU LINKS FEASIBILITY STUDY SCHEME 1

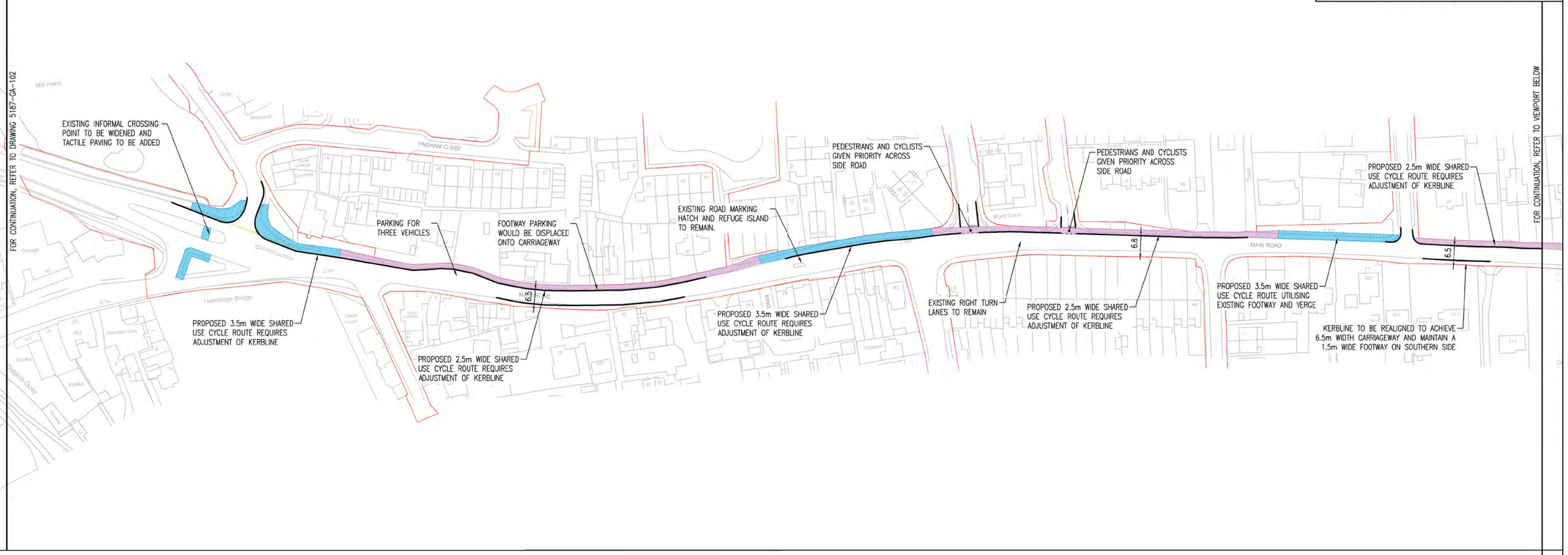
TITLE: CYCLING INFRASTRUCTURE PREFERRED OPTION EMSWORTH TO CHICHESTER SHEET 2 OF 10

SCALE @ A1:	CHECKED:		APPROVED:
1:1000	HL		AK
PROJECT No:	DESIGNED:	DRAWN:	DATE:
70055187	WP	WP	February 20

DRAWING No: 5187/GA/102 REV: B

DO NOT SCALE





NOTES:

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4. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL RELEVANT DOCUMENTATION, DRAWINGS AND STANDARD DETAILS.

KEY:

- PROPOSED 2.5m SHARED USE PATH (UNSEGREGATED)
- PROPOSED 2.5m TWO-WAY CYCLE TRACK WITH 0.3m BUFFER
- PROPOSED 3m SHARED USE PATH (UNSEGREGATED)
- PROPOSED 3.5m SHARED USE PATH (UNSEGREGATED)
- EXISTING OFF ROAD SHARED USE PATH (UNSEGREGATED) TO BE RETAINED
- EXISTING OFF ROAD SHARED USE PATH (SEGREGATED) TO BE RETAINED
- EXISTING ADVISORY CYCLE LANE TO BE RETAINED
- EXISTING MANDATORY CYCLE LANE TO BE RETAINED
- HIGHWAY BOUNDARY (ONLY SHOWN IN WSCC)
- PROPOSED REALIGNED KERBLINE
- EXISTING CYCLE LANE TO BE REMOVED

UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES OR STATUTORY BODIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR AND / OR EMPLOYER COMMENCE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT THEIR OWN RISK

REV	DATE	BY	DESCRIPTION	CHK	APP
B	04/02/20	AVT	REVISED AS PER COMMENTS	IR	AK
A	21/01/20	WP	FIRST ISSUE	IR	AK

DRAWING STATUS: S2 - FOR INFORMATION

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CLIENT: HIGHWAYS ENGLAND

ARCHITECT: -

PROJECT: A27 DESIGNATED FUNDS NMU LINKS FEASIBILITY STUDY

TITLE: CYCLING INFRASTRUCTURE PREFERRED OPTION EMSWORTH TO CHICHESTER SHEET 3 OF 10

SCALE @ A1:	CHECKED:		APPROVED:
1:1000	HL		AK
PROJECT No:	DESIGNED:	DRAWN:	DATE:
70055187	WP	WP	February 20

DRAWING No: 5187/GA/103 REV: B

DO NOT SCALE

NOTES:

1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
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4. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL RELEVANT DOCUMENTATION, DRAWINGS AND STANDARD DETAILS.

KEY:

- PROPOSED 2.5m SHARED USE PATH (UNSEGREGATED)
- PROPOSED 2.5m TWO-WAY CYCLE TRACK WITH 0.3m BUFFER
- PROPOSED 3m SHARED USE PATH (UNSEGREGATED)
- PROPOSED 3.5m SHARED USE PATH (UNSEGREGATED)
- EXISTING OFF ROAD SHARED USE PATH (UNSEGREGATED) TO BE RETAINED
- EXISTING OFF ROAD SHARED USE PATH (SEGREGATED) TO BE RETAINED
- EXISTING ADVISORY CYCLE LANE TO BE RETAINED
- EXISTING MANDATORY CYCLE LANE TO BE RETAINED
- HIGHWAY BOUNDARY (ONLY SHOWN IN WSCC)
- PROPOSED REALIGNED KERBLINE
- EXISTING CYCLE LANE TO BE REMOVED

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REV	DATE	BY	DESCRIPTION	CHK	APP
B	04/02/20	AVT	REVISED AS PER COMMENTS		
A	21/01/20	WP	FIRST ISSUE		

DRAWING STATUS: S2 - FOR INFORMATION

wsp

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CLIENT: HIGHWAYS ENGLAND

ARCHITECT: -

PROJECT: A27 DESIGNATED FUNDS NMU LINKS FEASIBILITY STUDY

TITLE: CYCLING INFRASTRUCTURE PREFERRED OPTION
EMSWORTH TO CHICHESTER
SHEET 4 OF 10

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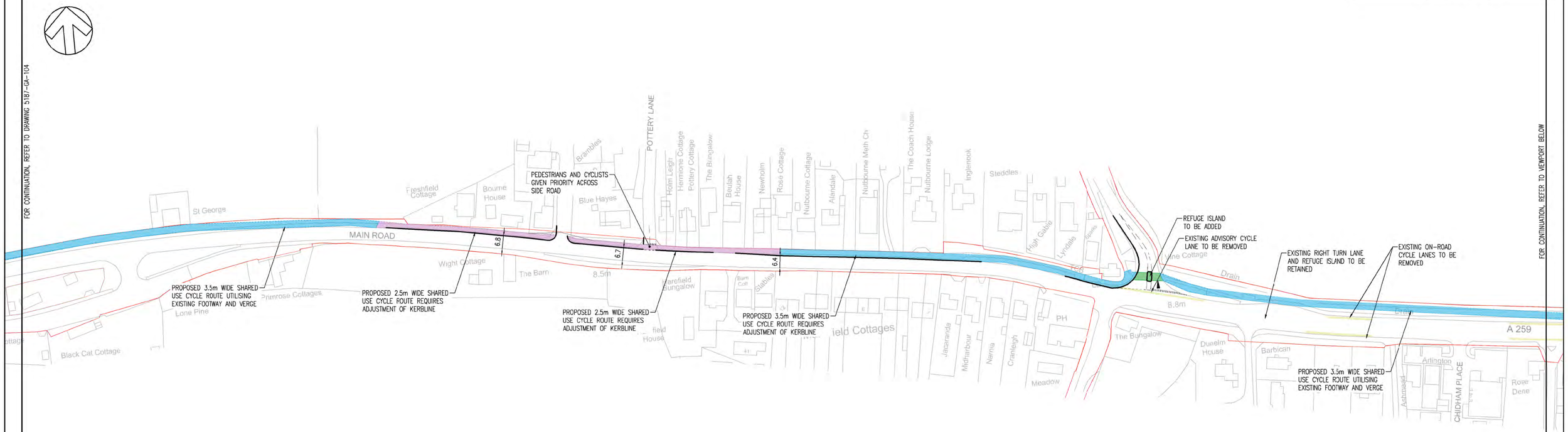

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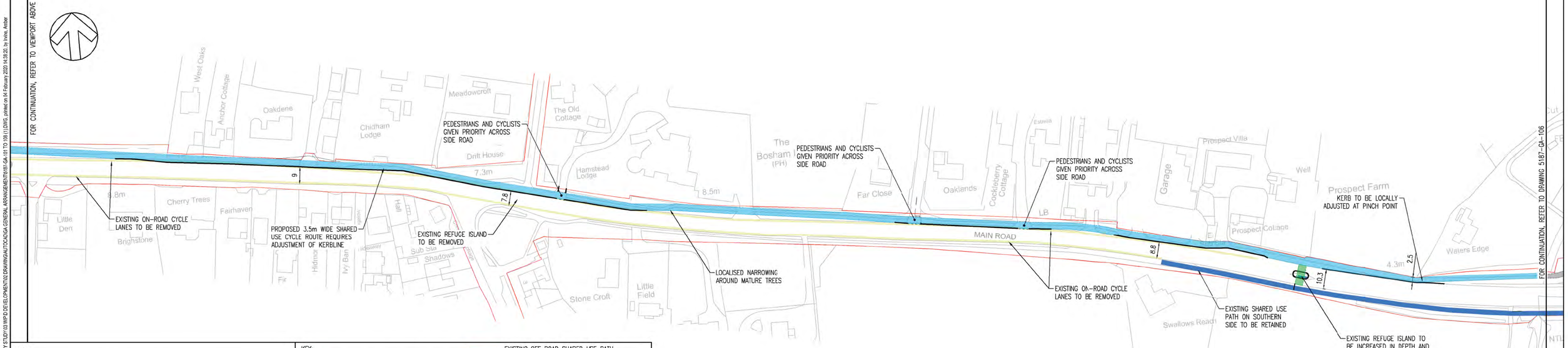

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PROJECT: A27 DESIGNATED FUNDS NMU LINKS FEASIBILITY STUDY

TITLE: CYCLING INFRASTRUCTURE PREFERRED OPTION EMSWORTH TO CHICHESTER SHEET 5 OF 10

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FOR CONTINUATION, REFER TO DRAWING 5187-GA-107

ALTERNATIVE QUIET ROUTE UTILISING HISTORIC ROAD ALIGNMENT. NO FORMAL PROVISION REQUIRED.

ALTERNATIVE QUIET ON ROAD ROUTE. NO FORMAL PROVISION REQUIRED.

EXISTING SHARED USE PATH. USABLE WIDTH TO BE MAXIMISED THROUGH VEGETATION CLEARANCE. WIDTH CURRENTLY BETWEEN 2-2.m.

Pondfield
Sub Sta
7.3m
Compass Barn
Colner House
5.2m
Drain
Flint Cottage
NEWELL'S LANE
Sluice
Mill Pond
Sluice
Pond
Orchard Cottage
Issues
Sluice
Wundiwindi
Issues
Brookside Cottage
Keymers
A 259
FB
DW
NTL
Cut Mill Cottage
Snow Goose

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PROJECT: A27 DESIGNATED FUNDS NMU LINKS FEASIBILITY STUDY

TITLE: CYCLING INFRASTRUCTURE PREFERRED OPTION EMSWORTH TO CHICHESTER SHEET 6 OF 10

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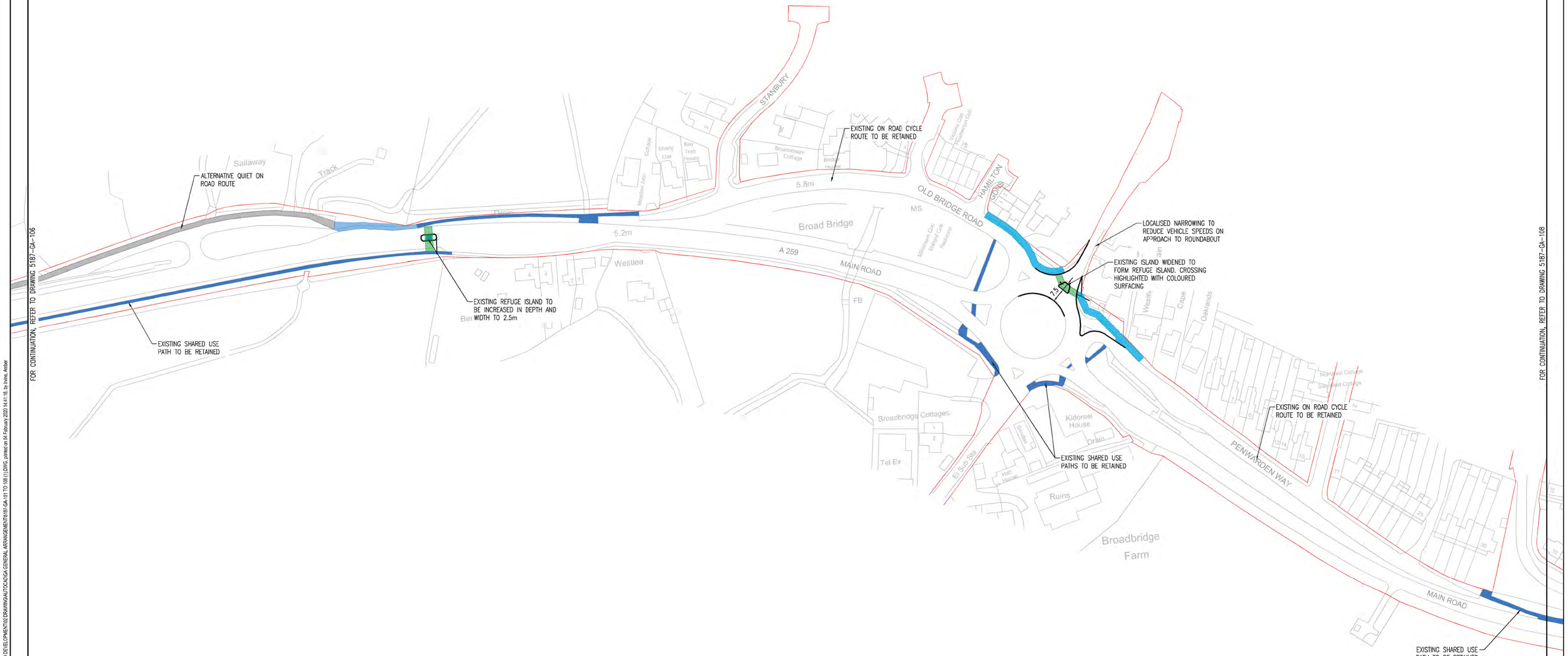

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PROJECT: A27 DESIGNATED FUNDS NMU LINKS FEASIBILITY STUDY

TITLE: CYCLING INFRASTRUCTURE PREFERRED OPTION EMSWORTH TO CHICHESTER SHEET 7 OF 10

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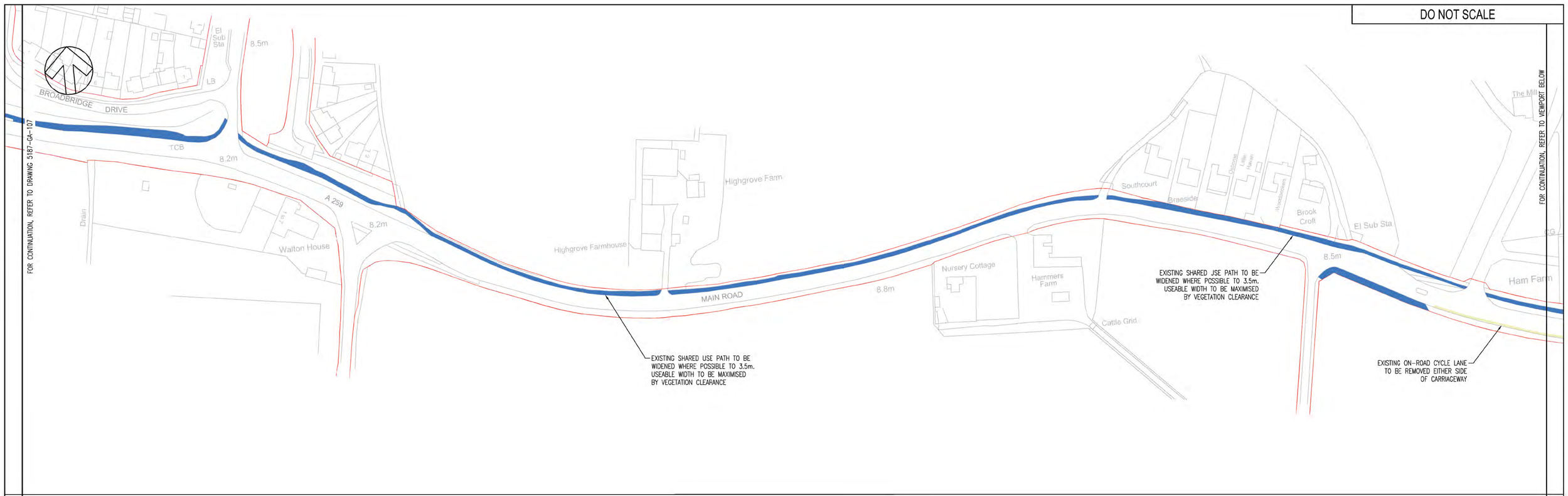

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PROJECT: A27 DESIGNATED FUNDS NMU LINKS FEASIBILITY STUDY

TITLE: CYCLING INFRASTRUCTURE PREFERRED OPTION EMSWORTH TO CHICHESTER SHEET 8 OF 10

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FOR CONTINUATION, REFER TO VIEWPORT ABOVE

FOR CONTINUATION, REFER TO DRAWING 5187-GA-110

PROPOSED 2.5m WIDE SHARED USE CYCLE ROUTE REQUIRES ADJUSTMENT OF KERBLINE

PROPOSED 3.5m WIDE SHARED USE CYCLE ROUTE UTILISING EXISTING FOOTWAY AND VERGE. REQUIRES ADJUSTMENT OF KERBLINE.

EXISTING ON-ROAD CYCLE LANE TO BE REMOVED EITHER SIDE OF CARRIAGEWAY

6.4

6.8

EXISTING OFF-ROAD CYCLE TRACK TO BE RESURFACED TO IMPROVE DRAINAGE, AND SOLAR LIGHTING TO BE USED TO INCREASE PERCEPTION OF SAFETY

EXISTING SHARED USE PATH TO BE RETAINED

SHORT LENGTH OF 2.5m SHARED USE ROUTE TO LINK EXISTING SECTION. DROPPED KERB TO BE PROVIDED OPPOSITE LANGRUNE CLOSE

EXISTING OFF-ROAD CYCLE TRACK. SOLAR LIGHTING TO BE USED TO INCREASE PERCEPTION OF SAFETY

EXISTING SEGREGATED CYCLE TRACK

VEHICLE SPEEDS AND FLOW LOW ON FISHBOURNE ROAD (EAST). NO FORMAL PROVISION NECESSARY.

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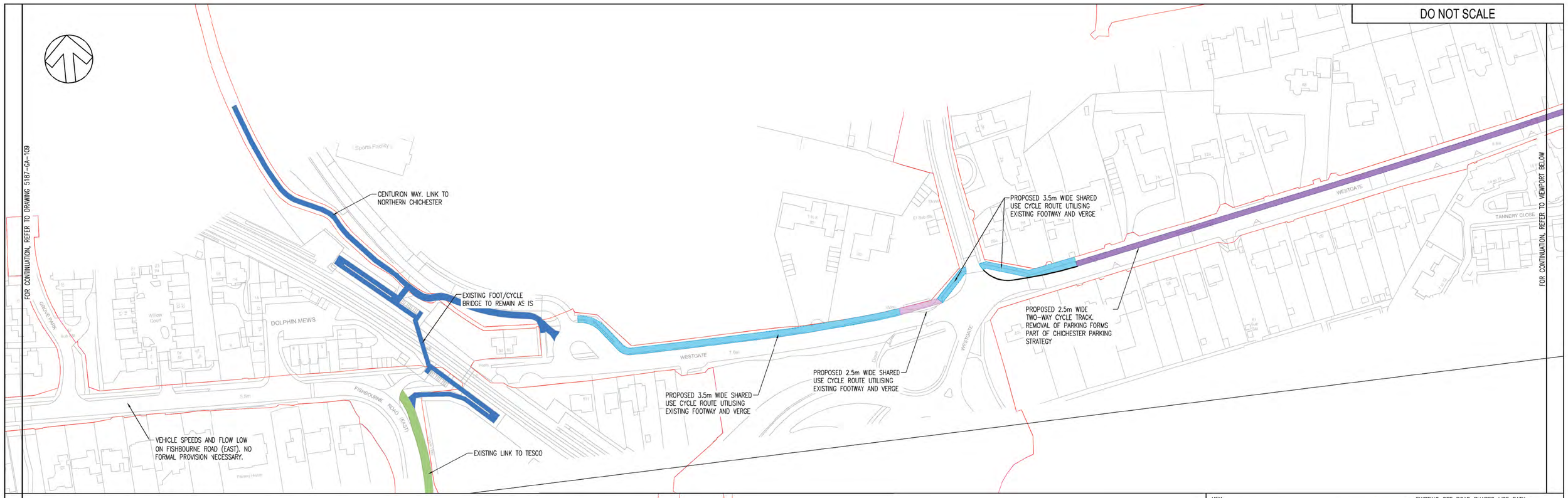

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Appendix D

ENVIRONMENTAL REPORT

Highways England

A27 DESIGNATED FUNDS NMU LINKS FEASIBILITY STUDY -

Scheme 1 - Emsworth to Chichester - Desktop Environmental Study

70055187
JANUARY 2020

CONFIDENTIAL

Highways England

A27 DESIGNATED FUNDS NMU LINKS FEASIBILITY STUDY -

Scheme 1 - Emsworth to Chichester - Desktop Environmental Study

TYPE OF DOCUMENT (VERSION) CONFIDENTIAL

PROJECT NO. 70055187

OUR REF. NO. 70055187

DATE: JANUARY 2020

Highways England

A27 DESIGNATED FUNDS NMU LINKS FEASIBILITY STUDY -

Scheme 1 - Emsworth to Chichester - Desktop Environmental Study

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QUALITY CONTROL

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	P01			
Date	January 2020			
Prepared by	[redacted]			
Signature				
Checked by	[redacted]			
Signature				
Authorised by	[redacted]			
Signature				
Project number	70055187			

CONTENTS

TABLES

FIGURES

1 INTRODUCTION

1.1 OVERVIEW

1.1.1. WSP has been commissioned by Highways England to undertake a high-level environmental constraints desktop study for the proposed works contained within the A27 Designated Funds Non-Motorised User (NMU) Feasibility Study prepared by WSP (70055187-CHEM).

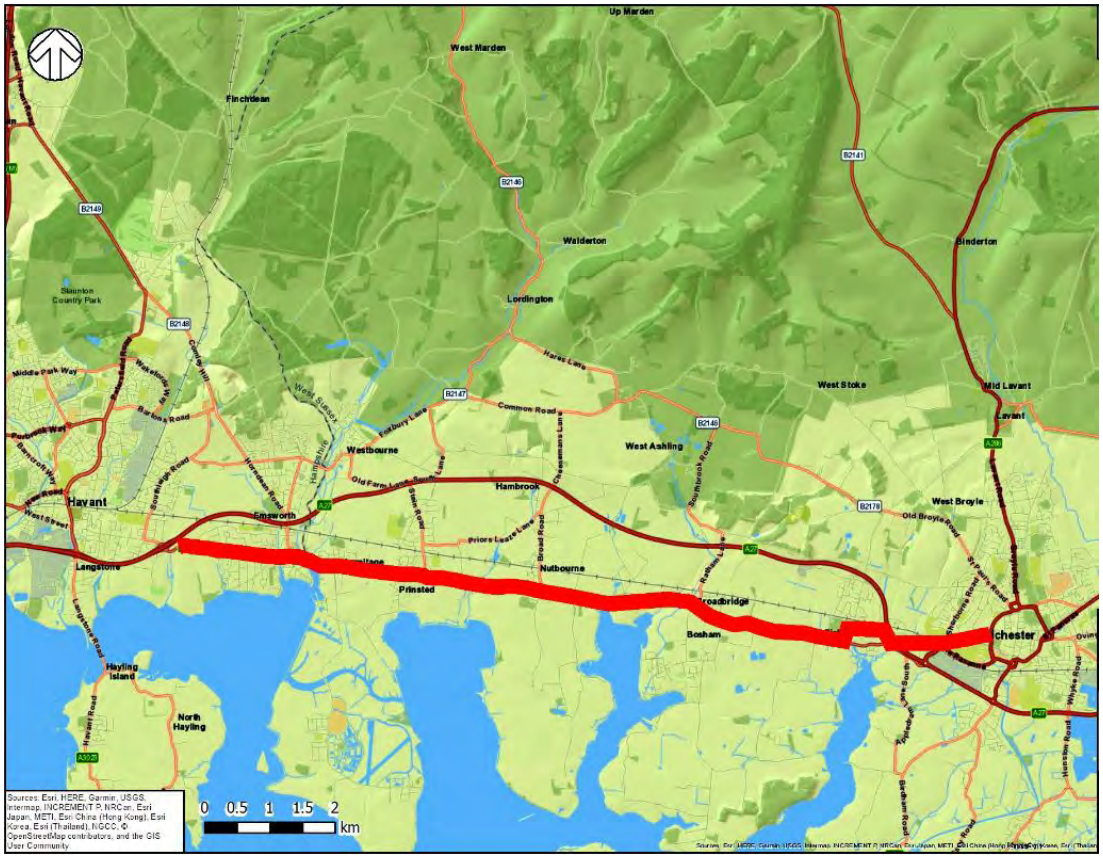
1.1.2. This report provides a desktop review of 'Scheme 1' of the potential NMU projects (hereafter known as the 'Scheme').

1.2 THE SCHEME

1.2.1. The Scheme is located between the A27/A259 Havant Road junction west of Emsworth and the A286 Westgate Road roundabout in Chichester. The area of works (the 'Site') runs along the A259 Havant Road through Emsworth and Hermitage east towards Fishbourne. The Site then continue off the A259, entering Chichester and ending at the A286 Westgate Roundabout (see Figure 1-1). The Scheme is approximately 11.2 km long. The Site falls within the Borough of Havant and Chichester District.

1.2.2. The Scheme consists of a series of infrastructure improvements along the existing road network to enhance access for pedestrians, cyclists and equestrians at high priority locations on the A27 and A259.

Figure 1-1 - Site Location Plan



2 APPROACH TO THE REPORT

2.1 PURPOSE OF THE REPORT

2.1.1. The purpose of this Environmental Desktop Study is to collate existing information from desktop sources in order to identify key potential environmental constraints and impacts associated with the Scheme.

2.2 SCOPE

2.2.1. This constraints report is exclusively a desktop study, the sources of information are detailed in section 3. The following environmental topics are covered:

- Air Quality;
- Biodiversity (in the form of a standalone report);
- Cultural Heritage;
- Geology and Soils;
- Landscape and Visual;
- Noise and Vibration;
- Population and Health; and
- Road Drainage and the Water Environment.

2.2.2. At this stage, the report provides an overview of the potential environmental constraints based on current, publicly available information.

2.2.3. Baseline information has been collected through readily available desk-based sources, baseline information sources include, but are not limited to, the following:

- MagicMap Geographic Information website[1];
- EA Catchment Data Explorer[2];
- Natural England website[3];
- Chichester District Council website[4]; and
- Havant Borough Council website[5].

[1] Defra (2019) MagicMap GIS [Available at: https://magic.defra.gov.uk/MagicMap.aspx ; Accessed on 10-15/01/2020]
[2] Environment Agency (2019) Catchment Data Explorer [Available at: https://environment.data.gov.uk/catchment-planning/ ; Accessed on 10-15/01/2020]
[3] Natural England (2019) main website [Available at: https://www.gov.uk/government/organisations/natural-england ; Accessed on 10-15/01/2020]
[4] Chichester District Council (2020) CDC website [Available at: https://www.chichester.gov.uk/ ; Accessed on 10-15/01/2020]
[5] Havant Borough Council (2020) HBC website [Available at: https://www.havant.gov.uk/ ; Accessed on 10-15/01/2020]

3 BASELINE AND POTENTIAL CONSTRAINTS

3.1 INTRODUCTION

3.1.1. The following section provides an overview of each environmental topic, the associated study area, baseline levels as they currently exist, and outlines any potential constraints.

3.2 AIR QUALITY

STUDY AREA

3.2.1. For the purposes of this report, the study area for air quality has been limited to within 1km of the Scheme. Sensitive receptors within 200m have been highlighted as of particular importance.

BASELINE

3.2.2. The main sensitive receptors within the Study Area are residential. These are concentrated at the eastern extent of the Site (Chichester) and the western extent of the Site (Emsworth and Hermitage). Large concentrations of residential receptors are within 200m in Hermitage and Chichester. Additionally, commercial and community facilities are present within 1km throughout the Study Area, with concentration in Emsworth and Chichester. These include the following:

- Seven railway stations (Warblington, Emsworth, Southbourne, Nutbourne, Bosham, Fishbourne and Chichester);
- Schools (including nine primary schools, four secondary schools and Chichester College);
- Medical facilities (six GPs); and
- Chichester Cathedral.

3.2.3. The northern extent of a large area of ecological designations is present within the Study Area. These are comprised of Chichester and Langstone Harbours Ramsar Site, Chichester and Langstone Harbours Special Protection Area (SPA), Solent Maritime Special Area of Conservation (SAC) and Chichester Harbour Site of Special Scientific Interest (SSSI). The Impact Risk Zone (IRZ) for the Chichester Harbour SSSI extends across the entirety of the Study Area.

3.2.4. Three Air Quality Management Areas (AQMAs) are within 1km of the Site. These are all located in Chichester (Chichester (Stockbridge Roundabout) AQMA, Chichester (St Pancras) AQMA and Chichester (Orchard St) AQMA).

3.2.5. The main air pollutants associated with road traffic emissions are:

- Nitrogen dioxide (NO_2) – Impacts human health;
- Nitrogen oxides (NO_x) – Impacts sensitive vegetation;
- Particulates less than 10 micrometres in diameter (PM_{10}) – Impacts human health; and
- Particulates less than 2.5 micrometres in diameter ($PM_{2.5}$) – Impacts human health.

3.2.6. Defra's Ambient Air Quality Map[6] shows that the Site has low levels of background pollutant levels:

- NO_2 – <10 to 10-20 μm^{-3};
- NO_x – 10-20 to 20-30 μm^{-3};
- PM_{10} – 13-17 μm^{-3}; and
- $PM_{2\,5}$ – 5-10 to 10-12 μm^{-3}

3.2.7. Roadside pollutant levels data is available for parts of the A259 (between Emsworth and Nutbourne) and the centre of Chichester.

- NO_2 – 10-20 to 20-30 μm^{-3};
- NO_x – 30-40 to 40-60 μm^{-3};
- PM_{10} – 13-17 to 17-20 μm^{-3}; and
- $PM_{2\,5}$ – 5-10 to 10-12 μm^{-3}

3.2.8. In the Study Area the A27 shows the highest levels of roadside pollutants. These areas are found at the A27/A259 junction (at the western extent of the Study Area) and between the King's Avenue and Cathedral Way roundabouts south of Chichester:

- NO_2 – 30-40 to 40-50 μm^{-3};
- NO_x – 80-100 to >100 μm^{-3};
- PM_{10} –17-20 to 20-25 μm^{-3}; and
- $PM_{2\,5}$ –10-12.5 to 12.5-15 μm^{-3}

POTENTIAL CONSTRAINTS

3.2.9. Due to the nature and scale of the proposed works, air quality impacts are unlikely to be significant beyond 200m from the Scheme boundary. The construction phase may result in impacts from emissions of dust and particulates from construction vehicles and activities such as earthworks. The urban location and proximity of residential receptors to elements of the Site means that, while the works in each area are small in scale, surrounding properties, people and other receptors may be affected by emissions during construction.

3.2.10. No operational phase impacts or constraints are anticipated due to the nature of the Scheme which will provide NMU infrastructure, and therefore not resulting in an increase in motorised vehicles.

3.2.11. It is likely that potential construction impacts can be managed by standard best practice implemented through a Construction Environmental Management Plan (CEMP), including dust management measures. Due to the proximity of sensitive receptors this consideration is a priority in any CEMP.

3.2.12. Consultation with Natural England would be required regarding the Chichester Harbour SSSI IRZ, as the Site falls within this zone boundary.

[6] Defra (2019) UK Ambient Air Quality Map [Available at: https://uk-air.defra.gov.uk/data/gis-mapping/ ; Accessed on 13/01/2020]

3.3 BIODIVERSITY

3.3.1. An assessment of biodiversity constraints can be found in the standalone report.

3.4 CULTURAL HERITAGE

STUDY AREA

3.4.1. Statutory designated historic assets have been identified within 1km of the Scheme and non-statutory historic assets within 300m have been identified.

BASELINE

3.4.2. The eastern extent of the Site falls within Chichester Conservation Area and Fishbourne Conservation Area. Emsworth Conservation area is located in the western extent of the Site, on the boundary with Hermitage. Two smaller Conservation Areas are also present within the Study Area, located in Bosham and Southbourne.

3.4.3. There are 10 Scheduled Monuments are located within 1km of the Site. These are concentrated around Fishbourne and Chichester.

3.4.4. There are approximately 630 listed buildings within the Study Area (including 15 Grade I and 35 Grade II*). The majority of these listed buildings are within Chichester (and Chichester Conservation Area) with small concentrations in Fishbourne, Pinsted and Hermitage.

3.4.5. Chichester District Council maintain a list of locally designated heritage assets[7]. These are located within Chichester City. Approximately 50 of these fall within the Study Area, 12 of these being directly adjacent to the Site. Havant Borough Council maintain a similar list of locally designated heritage assets[8]. Of these, 13 are in Emsworth and within the Study Area.

POTENTIAL CONSTRAINTS

3.4.6. There is the potential for adverse construction impacts on nearby listed buildings, particularly those adjacent to the Site. However, it is likely that these impacts can be managed and mitigated through standard Best Practice Measures (BPMs) implemented through a CEMP. There is also the potential for the presence of undiscovered archaeology due to the historic context of much of the Study Area, particularly Fishbourne and Chichester. However, due to the Scheme taking place on previously disturbed ground, the potential for such discoveries and disturbances is low.

3.4.7. The nature of the Scheme will not result in major land-use change or changes in traffic conditions on the associated road network. As a result, no operational phase impacts are anticipated.

[7] Chichester District Council (2019) Chichester District Interactive Map [Available at: http://mydistrict.chichester.gov.uk/?MapSource=Chichester/AllMaps&StartEasting=485940.355000&StartNorthing=104386.895000&StartZoom=250&o=1&Layers=locallylisted ; Accessed on 14/01/2020]
[8] Havant Borough Council (Unknown) List of Buildings of Local Interest [Available at: https://www.havant.gov.uk/sites/default/files/documents/List%20of%20Blgs%20of%20Local%20Interest.pdf ; Accessed on: 15/01/2020]

3.5 GEOLOGY AND SOILS

STUDY AREA

3.5.1. For the purposes of this report, the Study Area has been limited to within 1km of the Scheme.

BASELINE

3.5.2. Various superficial geology deposits persist in the Study Area, these are as follows[9]:

- River Terrace Deposits (undifferentiated) – Sand, Silt and Clay;
- Head – Clay and Gravel;
- Alluvium – Clay, Silt, Sand and Gravel;
- Alluvial Fan Deposits – Clay, Silt, Sand and Gravel; and
- Raised Marine Deposits – Clay, Silt, Sand and Gravel.

3.5.3. The bedrock geology of the Study Area consists of the following:

- London Clay Formation – Clay, Silt and Sand;
- Lambeth Group – Clay, Silt and Sand; and
- Lewes Nodular Chalk Formation, Seaford Chalk Formation, Newhaven Chalk Formation, Culver Chalk Formation and Portsdown Chalk Formation (undifferentiated) – Chalk.

3.5.4. The soilscape of the Study Area is divided into the following classifications[10]:

- Loamy soils with naturally high groundwater – Majority of the western extent of the Study Area and the area north of the A259;
- Loamy and clayey floodplain soils with naturally high groundwater – Concentrated around Broadbridge and Hermitage;
- Freely draining slightly acid loamy soils – Majority of the Study Area south of the A259; and
- Unclassified – Urban areas such as Chichester.

3.5.5. Groundwater Source Protection Zones (SPZs) are present within the Study Area and intersect the Scheme. These areas are within and north of Fishbourne and west of Emsworth.

3.5.6. No Regionally Important Geological and Geomorphological Sites (RIGS) are within the Study Area[11].

3.5.7. The Unexploded Ordnance Risk (UXO) throughout the Study Area is deemed low risk with the exception of the Emsworth area, which is classed as a moderate risk[12].

[9] British Geological Survey (2019) Geology of Britain Viewer [Available at: http://mapapps.bgs.ac.uk/geologyofbritain/home.html? ; Accessed on 14/01/2020]
[10] UK Soil Observatory (2019) UKSO Viewer [Available at: http://mapapps2.bgs.ac.uk/ukso/home.html ; Accessed on 14/01/2020]
[11] Sussex Biodiversity Record Centre (2012) Sussex Geodiversity Partnership – Sussex Local Geological Sites [Available at: https://www.geodiversitysussex.org.uk/riggs.php ; Accessed on 13/01/2020]
[12] Zetica (2019) Unexploded Ordnance Risk Maps [Available at: https://zeticauxo.com/downloads-and-resources/risk-maps/ ; 14/01/2020]

3.5.8. Multiple areas of Agricultural Land are located in the eastern portion of the Study Area, between Broadbridge and Chichester. These consist of predominately Grade 3a and Grade 3b land. Much of the area north of the Site is agricultural land.

3.5.9. No contaminated land sites are registered in the Study Area.

POTENTIAL CONSTRAINTS

3.5.10. During the construction phase there is the potential for the accidental release of pollutants to the environment from sources such as spilled fuel or material. The soil quality is unlikely to be affected by this in the urban portions of the Study Area but there is increased potential for adverse impacts in the rural portions of the Study Area due to the land use being primarily agricultural. These impacts would be managed and mitigated through BPMs outlined and implemented in a CEMP and in particular should consider implications on SPZs. In addition, there is the potential for discovery and disturbance of pre-existing contamination during construction works. This would be addressed through Ground Investigation (GI) works prior to construction, alongside associated geotechnical investigations if required.

3.5.11. Operational impacts of the Scheme are unlikely to occur due to the lack of changes to the soil environment, the proposed works are to take place on previously disturbed ground and will not introduce increased traffic levels and the associated pollution risks.

3.6 LANDSCAPE AND VISUAL

STUDY AREA

3.6.1. For the purposes of this report, the Study Area has been limited to within 1km of the Scheme.

BASELINE

3.6.2. The Site is directly adjacent to the Chichester Harbour Area of Outstanding Natural Beauty (AONB), with a small segment to the east of Broadbridge passing within the AONB.

3.6.3. Multiple trees subject to a Tree Preservation Order (TPO) are within the Study Area, these are concentrated in Hermitage, Southbourne, Fishbourne and Chichester. Many of these TPOs in Fishbourne and Chichester (as well as reduced instances in other areas) are directly adjacent to the existing roads that form the Site.

3.6.4. The entirety of the Study Area lies within the South Coast Plain National Character Area (NCA) (NCA no. 126). The area is described as *"a flat, coastal landscape with an intricately indented shoreline lying between the dip slope of the South Downs and South Hampshire Lowlands and the waters of the English Channel, Solent and part of Southampton Water"*[13]. The northern extent of the Study Area is in the South Downs NCA (NCA no. 125). The area is described as *"a 'whale-backed' spine of chalk stretching from the Hampshire Downs in the west to the coastal cliffs of Beachy Head in East Sussex* […] *an extremely diverse and complex landscape with considerable local variation*

[13] Natural England (2014) National Character Area profiles [Available at: https://www.gov.uk/government/publications/national-character-area-profiles-data-for-local-decision-making/national-character-area-profiles#ncas-in-south-east-england-and-london ; accessed on 09/01/2020].

representing physical, historical and economic influences; much of it has been formed and maintained by human activity, in particular in agriculture and forestry".

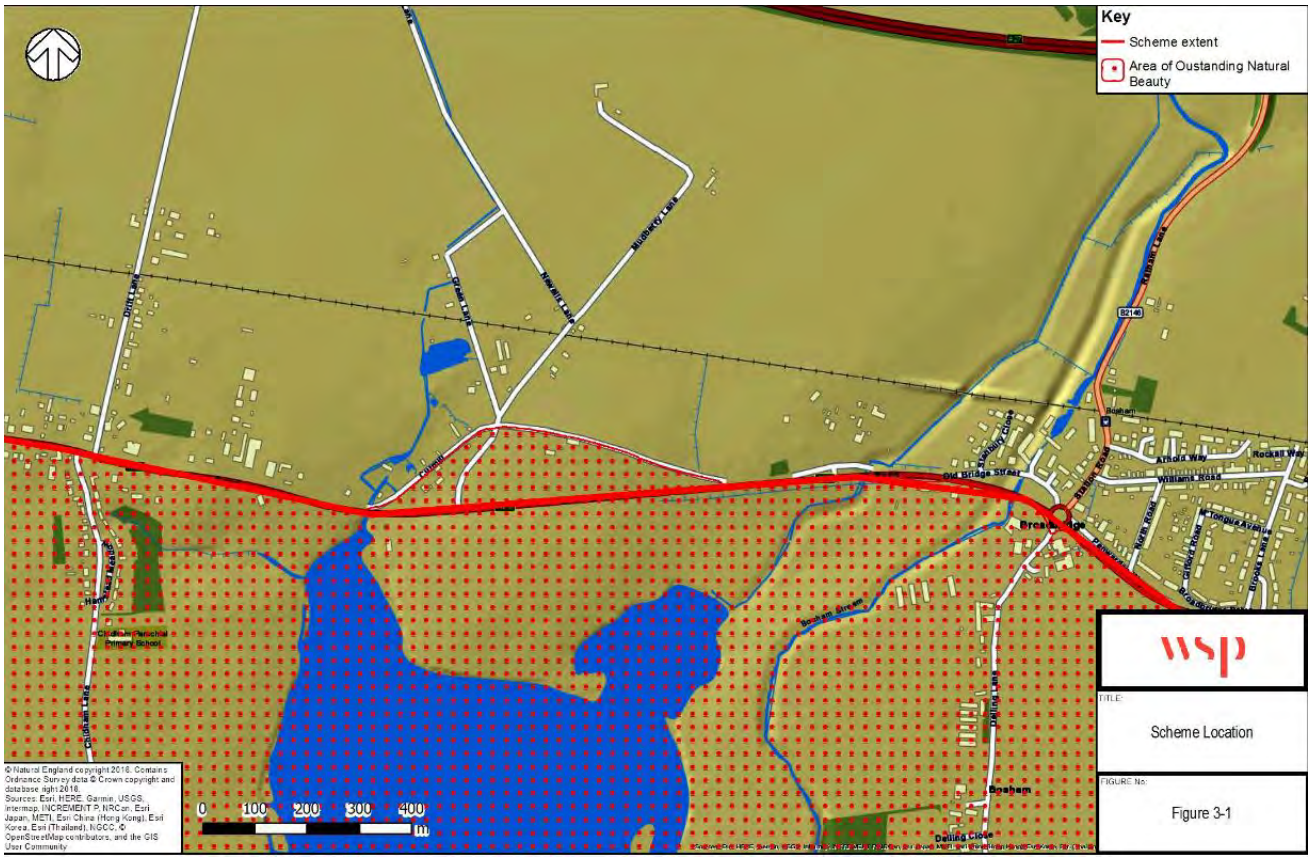
3.6.5. The majority of the Scheme lies within a rural environment, with urban concentrations in the east and western extent of the Site.

POTENTIAL CONSTRAINTS

3.6.6. The Study Area intersects Chichester Harbour AONB (see Figure 3.1), with the Site entering the AONB for a 700m segment. However, this is not anticipated to result in adverse effects due to the nature and scale of the works not significantly altering the landscape characterises of the area. The works may require alteration or removal of some roadside trees, some of these being subject to TPOs. The detailed design stage should ensure that tree removal is avoided. Where this is not possible this would cause impacts to the visual amenity of the immediate surroundings of the streets and may result in adverse impacts to retained trees due to the proximity of the construction works. Construction impacts would then need to be managed and mitigated through BPMs implemented through a CEMP.

3.6.7. No operational phase constraints are anticipated. Impacts of the Scheme in the operation phase are likely to be positive, improving the visual aesthetic of the road network and accessibility to the surrounding landscape.

Figure 3-1 - Chichester Harbour AONB Boundary



3.7 NOISE AND VIBRATION

STUDY AREA

3.7.1. For the purposes of this report, the Study Area has been limited to within 1km of the Scheme. Sensitive receptors within 200m have also been highlighted.

BASELINE

3.7.2. Within the Study Area there are nine Noise Action Planning Important Areas (NIAs). Seven of these are located on or adjacent to the A27, west of Chichester and north of Emsworth. Two of the NIAs are located on the A259 itself, one within Emsworth and the other west of Fishbourne.

3.7.3. The major source of noise in the study area are roads, in particular the A27 with the A259 also being a major source of noise. The A27 sees average roadside noise levels exceeding 75dB (Lden) and the A259 sees mostly 70-74.9dB (Lden) with small areas of >75dB (Lden). Rail noise is also present, with average levels of 65-69.9dB (Lden) along the entirety of track within the Study Area[14].

3.7.4. The main sensitive receptors within the Study Area are residential. These are concentrated in Emsworth and Hermitage to the west and Chichester to the east, with the majority being within 200m. Additionally, commercial and community facilities are present within the Study Area, with concentration in Emsworth and Chichester. These include the following:

- Seven railway stations (Warblington, Emsworth, Southbourne, Nutbourne, Bosham, Fishbourne and Chichester);
- Schools (including nine primary schools, four secondary schools and Chichester College);
- Medical facilities (six GPs); and
- Chichester Cathedral.

POTENTIAL CONSTRAINTS

3.7.5. During the construction phase there is the potential for adverse impacts on adjacent and nearby receptors for increased noise and vibration levels. These increases would be associated with construction activities and temporary disruptions to traffic flow to facilitate the completion of the works. It is likely that potential impacts from construction noise and vibration can be managed be standard BPMs implemented through a CEMP. Due to the proximity of sensitive receptors, particularly residential receptors, this would be a priority issue in any CEMP.

3.7.6. The Scheme would improve accessibility to NMU transports methods. There is the potential for positive effects on noise and vibration levels due to any associated reduction in motorised vehicle usage due to this improved accessibility, however these effects are not anticipated to be significant.

[14] Extrium (2020) England Noise and Air Quality Viewer [Available at: http://www.extrium.co.uk/noiseviewer.html ; Accessed on 14/01/2020]

3.8 POPULATION AND HEALTH

STUDY AREA

3.8.1. For the purposes of this report, the Study Area has been limited to within 1km of the Scheme. Sensitive receptors within 200m have also been highlighted.

BASELINE

3.8.2. Multiple Public Rights of Way (PRoW) are present in the Study Area. These PRoW routes are particularly concentrated south of the A259 and consist of coastal paths in between Emsworth and Chichester.

3.8.3. The main sensitive receptors within the Study Area are residential. These are concentrated in Emsworth and Hermitage to the west and Chichester to the east, with the majority being within 200m. The study area contains the existing road network and NMU network, and the associated receptors. Additionally, commercial and community facilities are present within the Study Area, with concentration in Emsworth and Chichester. These include the following:

- Seven railway stations (Warblington, Emsworth, Southbourne, Nutbourne, Bosham, Fishbourne and Chichester);
- Schools (including nine primary schools, four secondary schools and Chichester College);
- Medical facilities (six GPs); and
- Chichester Cathedral.

POTENTIAL CONSTRAINTS

3.8.4. There is the potential for existing NMU routes, PRoW routes and the existing road network to be adversely affected during the construction phase. These impacts would be temporary but would affect multiple factors such as journey time, NMU and public transport accessibility, journey stress and community connectivity. Due to the small-scale nature of the works, these are not anticipated to be significant and adverse effects would be managed and mitigated through implementation in a CEMP.

3.8.5. The aim of the Scheme is to increase the connectivity of cycle infrastructure and improve pedestrian accessibility as well. Due to this the Scheme is considered to have a positive long-term impact on population and health.

3.9 ROAD DRAINAGE AND THE WATER ENVIRONMENT

STUDY AREA

3.9.1. For the purposes of this report, the Study Area has been limited to 1km of the Scheme.

BASELINE

3.9.2. The Study Area is intersected by multiple rivers; the River Elms and tributaries in Emsworth, Bosham Stream in Broadbridge and the River Lavant in Chichester. The coastal environment of the Study Area means that there is an extensive network of stream, brooks and ponds south of the A259. The sea and associated rivers are the main source of any flood risk within the Study Area.

3.9.3. Much of the coastline and riverbanks within the Study Area are within Flood Zone 3 (greater than 1% annual chance of flooding) and Flood Zone 2 (0.1-1% annual chance of flooding)[15]. These flood zones areas intersect the Site in Chichester, Fishbourne, Broadbridge, Nutbourne, Hermitage and Emsworth.

POTENTIAL CONSTRAINTS

3.9.4. The intersection of the Scheme with surface water bodies and proximity to the coast means there is the potential for adverse impacts as a result of construction activities in the construction phase. There is the potential for impacts on the rivers and coastline from the release of pollutants during the construction phase due to the proximity of these receptors. These risks would be managed through the implementation of a CEMP, and consultation with the EA should be undertaken.

3.9.5. The Scheme is located within Flood Zone 2 and Flood Zone 3 areas, this means the Scheme would be vulnerable, or increase the vulnerability of other receptors, to flood risk. Measures to mitigate flood risk would be required for both the construction phase (through implementation through a CEMP) and the operation phase (through adequate drainage provision).

3.9.6. Due to the nature of the works none of these constraints and effects are anticipated to be significant.

[15] Environment Agency (2020) Flood Map for Planning [Available at: https://flood-map-for-planning.service.gov.uk/confirm-location?easting=474819&northing=106334&placeOrPostcode=emsworth ; Accessed on 15/01/2020]

4 SUMMARY OF KEY CONSTRAINTS

4.1.1. The findings of this desktop environmental constraints study are summarised in the table below:

Table 4-1 – Summary of Key Constraints

Environmental Topic	Key Constraints	Mitigation
Air Quality	▪ Residential Receptors; ▪ Education Facilities; and ▪ Chichester Harbour SSSI.	▪ Consultation with the EA about SSSI IRZ; and ▪ BPM inputs into a CEMP.
Biodiversity	▪ A standalone biodiversity report has been prepared.	▪ A standalone biodiversity report has been prepared.
Cultural Heritage	▪ Chichester and Fishbourne Listed Buildings; and ▪ Chichester and Fishbourne Scheduled Monuments.	▪ BPM inputs into a CEMP.
Geology and Soils	▪ Groundwater SPZs; and ▪ Local soilscape.	▪ GI and associated testing; and ▪ BPM inputs into a CEMP.
Landscape and Visual	▪ Chichester AONB; ▪ TPOs; and ▪ Designated Agricultural Land.	▪ BPM inputs into a CEMP; and ▪ Avoidance of tree removal in the detailed design stage.
Noise and Vibration	▪ Residential Receptors; and ▪ Education Facilities.	▪ BPM inputs into a CEMP.
Population and Health	▪ Road and NMU network users; ▪ Residential Receptors; ▪ Education Facilities; ▪ Community and commercial facilities; and ▪ PRoW network and users.	▪ BPM inputs into a CEMP.
Road Drainage and the Water Environment	▪ Surface Water bodies (River Elms, Bosham Streams, River Lavant, the Sea); ▪ Flood vulnerable receptors; and ▪ The Scheme.	▪ BPM inputs into a CEMP.

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Appendix E

ECOLOGY REPORT

MEMO

TO	[redacted]	**FROM**	[redacted]
DATE	03 February 2020	**CONFIDENTIALITY**	Confidential
SUBJECT	A27 NMU Link Improvements Package – Chichester to Emsworth		

HIGHWAYS ENGLAND – CHICHESTER TO EMSWORTH NON-MOTORISED USER (NMU) LINKS FEASIBILITY STUDY

Introduction

This memo provides a summary of the desk-based assessment in the absence of field surveys at this stage. Highways England are aiming to upgrade a section of the National Cycle Network 2 (NCN2) along the A259 Main Road providing a safe and accessible route for Non-Motorised Users (NMUs). This route currently has a mix of on-road and off-road provisions and connects to several train stations as well as the villages of Bosham and Bournes.

This memo will support a feasibility study examining the proposed upgrade works to a section of the National Cycle Network 2 (NCN2) along the A259 Main Road, to provide a safe and accessible route between Chichester and the Emsworth. The 'Proposed Development' aims to create a consistent, safe route for pedestrians and cyclists whilst also promoting sustainable travel. The Proposed Development will take place within the highways boundary following the 'gold option'. This will consist of filling in gaps in the existing cycle route through provision of a shared use path on the northern side of the carriageway. The Indicative Site for the area expected to be affected by the Proposed Development is shown in Figure 1.

The aerial and street view inspection of the Indicative Site footprint shows that areas bordering the Proposed Development comprise predominantly of arable farmland and hardstanding associated with urban areas. Extensive hedgerows flank the current A259 Main Road with associated roadside verges and scrub. The route is interspersed with deciduous woodland and traditional orchard as well as some coastal habitats.

Methods

A desk study was undertaken in January 2020 to review existing ecological baseline information available in the public domain and to obtain information held by relevant third parties. For the purpose of the desk study exercise, records were collated within various radii around the Indicative Site (as noted below). Various radii were used due to the minimal footprint of the Proposed Development, therefore aerial species such as bats and birds were recorded within 2km whereas terrestrial species were recorded within 1km due to their typically smaller ranges.

FREELY AVAILABLE SOURCES

Freely downloadable datasets (available from Natural England) were consulted for information regarding the presence of statutory designated sites and habitats[1] within 2km of the Indicative Site. This search was extended to 5km for Natura 2000 sites[2] of European importance and internationally designated Ramsar sites. Freely downloadable datasets (available from Natural England) were also consulted for information regarding Habitats of Principal Importance (HPI)[3] within 500m and woodland listed on the Ancient Woodland Inventory[4]. In addition, open source 1:25,000 Ordnance Survey mapping was used to identify any mapped waterbodies and watercourses within 500m of them Indicative Site.

SPECIES RECORDS PROVIDED BY BIOLOGICAL RECORDS CENTRE

To provide the baseline data for the ecological desk study, the following information was requested from Sussex Biological Records Centre (SxBRC):

- records of legally protected, notable and invasive non-native species within 1km of the Indicative Site including Species of Principal Importance (SPI)[5];
- bat and bird records within a 2km radius of the Indicative Site; and
- records of non-statutory sites designated for nature conservation value within 1km of the Indicative Site.

LIMITATIONS

Every effort has been made to provide a comprehensive desk-based assessment of the ecology of the Indicative Site; however, the following specific limitations apply to this assessment:

- Records held by local biological record centres and local recording groups are generally collected on a voluntary basis; therefore, the absence of records does not demonstrate the absence of species, it may simply indicate a gap in recording coverage.
- Desk study data was provided by SxBRC although a small area of the Indicative Site falls outside of Sussex and within Hampshire. This area, surrounding Emsworth in the west, was excluded from the desk-based assessment and therefore ecological species records and information regarding non-statutory designated sites in Hampshire are absent from this report.

[1] Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR) and Local Nature Reserves (LNR).

[2] Special Areas of Conservation (SAC) and Special Protection Areas (SPA).

[3] Mapped locations of HPI are usually not available, but HPI aligns in the most part with UKBAP habitats. Inventories of UKBAP habitat have been prepared by a variety of organisations and at a national (Natural England priority habitat inventory) and local scale (e.g. by local records centres). In some instances, these are primarily based on aerial photograph analysis rather than field survey.

[4] The ancient woodland inventory in England lists areas over two hectares in size which have been continuously wooded since at least 1600.

[5] Species of Principal Importance (SPI) are those species listed until Section 41 of the Natural Environment and Rural Communities Act 2006, and are therefore a material consideration in the planning process.

Results

DESIGNATED SITES

STATUTORY DESIGNATED SITES OF INTERNATIONAL IMPORTANCE

The desk study identified five internationally designated nature conservation site within 5km of the Indicative Site boundary. A description is detailed in Table 1 below and shown in Figure 2.

Table 1. International statutory designated sites

Site Name	Designation	Size (ha)	Distance and orientation from Study Area	Description
Solent Maritime	SAC	11,243	0km, South	The Solent and its inlets are unique in Britain and Europe, experiencing four tides a day and supporting an array of marine and estuarine habitats. The Annex 1 habitats within this SAC include estuaries, Spartina swards (*Spartininj maritimae*) and Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*). Within the site there is a population of Desmoulin's whorl snail *Vertigo moulinsiana* (Annex II) also. The SAC is immediately adjacent to the Indicative Site.
Chichester and Langstone Harbours	Ramsar/SPA	5,811	0km, South	The harbours cover two large estuarine basins and contains extensive intertidal mudflats and sandflats. These habitats, amongst others, support numerous overwintering and breeding bird species. These include dark belled Brent geese *Branta bernicla* that feed on extensive sea grass swards and tern species that nest on the shingle beaches. The Ramsar/SPA is immediately adjacent to the Indicative Site.
Solent and Isle of Wight Lagoons	SAC	38	2.8km, South	A matrix of coastal habitats including tidal rivers, estuaries, sand flats, lagoons (Annex I habitat), salt marshes, salt pastures and salt steppes. Coastal lagoons show a range of salinities and substrates that support a diverse flora and fauna. These include the nationally rare foxtail stonewort *Lamprothamnium papulosum*, the nationally scarce lagoon sand shrimp *Gammarus insensibilis* and starlet sea anemone *Nematostella vectensis*.
Kingley Vale	SAC	201	4.7km, North	This site is the largest area of yew *Taxus baccata* woodland in Britain. It also supports semi-natural dry grasslands and scrubland facies on calcareous substrates, important for orchid species.
Pagham Harbour	SPA	637	5km, South-east	An estuarine basin with extensive saltmarsh and intertidal mud-flats as well as several other wetland habitats. The area is rich in algae and invertebrates as well as providing good foraging habitat for birds. The area supports populations

Site Name	Designation	Size (ha)	Distance and orientation from Study Area	Description
				of little tern *Sterna albifrons* (breeding), ruff *Philomachus pugnax* (overwintering) and pintail *anas acuta* (overwintering), all of which are on Annex I of the Birds Directive.

STATUTORY DESIGNATED SITES OF NATIONAL IMPORTANCE

Seven nationally designated sites are located within 2km Study Area. These sites are described in Table 2 and are shown in Figure 3.

Table 2. National statutory designated sites

Site Name	Designation	Size (ha)	Distance and orientation from Study Area	Description
Brook Meadow (Emsworth)	Local Nature Reserve (LNR)	4.0	0km, North	A small grassland site within the village of Emsworth surrounded by woodland. Within the two streams flanking the site exists a small population of water voles *Arvicola amphibious*. A diverse bird population including blackcap *Sylvia atricapilla* and kingfisher *Alcedo atthis* are present on site as well water rail *Rallus aquaticus* that occasionally overwinter here. The grassland contains both southern marsh *Dactylorhiza praetermissa* and common spotted orchid *Dactylorhiza fuchsii* within its diverse floral community.
Chichester Harbour	Site of Special Scientific Interest (SSSI)	9130.0	0km, South	A large estuarine basin with extensive mudflats and sandflats at low tide. Wintering wildfowl and waders including curlew *Numenius arquata* and ringed plover *Charadrius hiaticula* utilise the site and dark-bellied Brent geese make use of the permanent pasture behind the sea wall. Other habitats present including saltmarsh and fresh marsh support a diverse floral community and notable invertebrate species have been recorded within the site (Natural England, 2020a).
Nutbourne Marshes	LNR	387.0	0.5km, South	This site comprises mainly of saltmarsh and mudflats, the latter supporting an abundance of invertebrates including ragworm *Nereididae* and mud snails. Migrating birds, largely wader species and breeding coastal birds including terns and gulls make use of the site.
Eames Farm	LNR	132.0	0.7km, South	Consisting of coastal grazing marsh, wetland and reedbed, this site supports a rare invertebrate and floral community. Migrating waders and waterfowl rely on the site for foraging and overwintering. This site is adjacent to Nutbourne Marshes LNR.

Site Name	Designation	Size (ha)	Distance and orientation from Study Area	Description
Warblington Meadow	SSSI	4.0	0.8km, South-west	This unimproved grazing marsh has a rich floral composition associated with the grading from freshwater, base rich marsh to saltmarsh. Sedge-rush species within the *Carex* and *Juncus* genera are present as well as numerous grass and herb species (Natural England, 2020b).
Brandy Hole Copse	LNR	7.0	1.9km, North-east	The site is a matrix of broadleaved woodland, coniferous woodland, lowland heathland, tall herb and fen as well as various aquatic habitats. Sweet chestnut *Castanea sativa* trees within the site are coppiced as part of the woodland management regime. Located near to an urban area, these habitats provide a home for several mammal, bird, amphibian, reptile and invertebrate species.
Langstone Harbour	SSSI	2085.0	1.9km, South-west.	This large tidal basin has one of the largest areas of mixed saltmarsh on the south coast and at low tide reveals large mudflats. The harbour supports high densities of intertidal invertebrates, large wader and wildfowl populations and extensive beds of eelgrass *Zoster sp.* Bird species reliant on the site include dunlin *Calidris alpine*, black-tailed godwit *Limosa limosa* and grey plover *Pluvialis squatarola* (Natural England, 2020c).

Part of the Indicative Site also falls within the Chichester Harbour Area of Outstanding Natural Beauty (AONB). As this designation is for landscape and amenity value, it is not discussed further in this report.

NON-STATUTORY DESIGNATED SITES

Five non-statutory nature conservation sites (Local Wildlife Sites (LWS)) are present within the 1km Study Area and detailed below Table 3.

Table 3. Non-statutory designated sites

Site Name	Designation	Size (ha)	Distance and orientation from Study Area	Description
Fishbourne Meadows	LWS	8.4	0km, East.	This site consists of several meadows lying adjacent to Chichester Harbour SSSI. The permanent pasture appears to have been semi-improved with fertilisers yet there are some tall herb and rank grass vegetation. Several locally uncommon plants are found within. The site includes a chalk spring and derelict watercress beds also.
Slipper Mill Pond and Peter Pond	LWS	3.5	0km, West.	Slipper Mill Pond is a saline lagoon supporting rich invertebrate fauna including

Site Name	Designation	Size (ha)	Distance and orientation from Study Area	Description
				the Tentacled Lagoon Worm *Alkamaria romijini*,and the Starlet Sea Anemone *Nematostella vectensis* (both listed as endangered in the IUCN red data book). The ponds attract a range of wintering, breeding and passing migrant birds.
Newells Lane Pond and Meadows	LWS	9.7	0.5km, North.	This area, south of the A27, includes several moderately species-rich grasslands, scrub and a large pond. The pond supports breeding populations of common frog *Rana tempuria*, common toad *Bufo bufo*, smooth newt *Lissotron vulgaris* and great crested newt *Triturus cristata*. The horse-grazed meadows adjacent support a range of butterfly species including meadow brown *Maniola jurtina* and small tortoiseshell *Aglais urticae*.
Nutbourne Pastures	LWS	10.5	0.5km, South.	This is an area of grazing fields at the northern end of Chichester Harbour, just south of Nutbourne. It lies immediately adjacent to Chichester Harbour SSSI and Nutbourne Marshes Local Nature Reserve. It consists of semi-improved grassland and is intersected by drainage ditches that support overwintering birds and likely water vole.
River Lavant Marsh	LWS	6.6	0.8km, South-east.	The site consists of an embanked grazing marsh in the former estuary of the River Lavant. Across the embankment lies Fishbourne Channel, part of Chichester Harbour Site of Special Scientific Interest SSSI. The marsh which includes a small reedbed and grazed marshy grassland is of great botanical and ornithological importance supporting nationally scarce grass species and breeding warbler species.

HABITATS

OTHER HABITATS OF CONSERVATION IMPORTANCE

Within the 500m Study Area the closest patch of ancient woodland was mapped 170m north of the Indicative Site. HPIs located within the Indicative Site Boundary are deciduous woodland, good quality semi-improved grassland, saline lagoons and traditional orchard. Other HPI habitats present within 500m include coastal and floodplain grazing marsh, coastal saltmarsh, lowland meadow, extensive mudflats and reedbeds. A detailed graphic of all HPI and ancient woodland patches is shown in Figure 4.

PROTECTED/NOTABLE SPECIES

A summary of the desk study results returned for protected and notable species is provided below. Focus has been given to species which may utilise the Indicative Site and its surrounds. A number of these are identified as Species of Principal Importance (SPI) in accordance with Section 41 of the NERC Act 2006. Under Section 40 of this legislation, every public body (including planning authorities) must, 'in exercising its functions, have regard so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity'.

BATS

Ten species of bat were returned from the desk study records including common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus,* Nathusius' pipistrelle *Pipistrellus nathusii,* noctule *Nyctalus noctula*, Leisler's *Nyctalus leisleri,* serotine *Eptesicus serotinus*, brown long-eared bat *Plecotus auritus,* Daubenton's bat *Myotis daubentonii,* Natterer's *Myotis nattereri* and Barbastelle *Barbastella barbastellus*.

There were numerous genus-level records including *Pipistrellus, Myotis, Plecotus* and *Nyctalus* as well as several records of unidentified bats. The nearest species record to the Indicative Site is common pipistrelle, for which activity was recorded in 2019 approximately 3m away.

The nearest roost records to the Indicative Site were located 20m south of the Site. These include a brown long-eared roost recorded in 2014 and a noctule and soprano pipistrelle roost recorded in 2016. Several other roost records, comprising several bat species, within 100m of the Indicative Site were returned as part of the desk study. All roost locations and activity records are displayed in Figure 6.

BADGER

No records of badger *Meles meles* were returned from the desk study as such information is confidential and must be specially requested. Badger are widespread and adaptable species able to create setts and forage in a wide range of semi-natural habitats.

HAZEL DORMOUSE

One record of hazel dormouse *Muscardinus avellanarius*, approximately 240m from the Indicative Site, was provided as part of the desk study (Figure 7). This record is from a location towards the easterly point of the Indicative Site and was recorded in 2018.

WATER VOLE AND OTTER

Within 1km of the Indicative Site, there were 22 records of water vole *Arvicola amphibius*, the closest being approximately 30m away and recorded in 2019 (Figure 7). The majority of these records are located to the east of the Indicative Site although several records towards the west were returned. Numerous watercourses run adjacent to, as well as possibly crossing, the Indicative Site which may provide suitable habitat for water vole.

No records of otter *Lutra lutra* were returned as part of the desk study search.

OTHER MAMMALS

Records of four other mammals were returned by the desk study including polecat *Mustela putorius*, European rabbit *Oryctolagus cuniculus*, harvest mouse *Micromys minutus* and European hedgehog

Erinaceus europaeus. Hedgehog records from 2015 and 2018 adjacent to the Indicative Site were also returned (Figure 7).

BIRDS

Records of 87 bird species were retuned by the desk study. These included 25 species listed under Schedule 1 of the Wildlife and Countryside Act such as barn owl *Tyto alba*, firecrest *Regulus ignicapilla*, hobby *Falco subbuteo* and red kite *Milvus milvus*. The records include numerous coastal birds given the location of the Indicative Site on the southern coast of England and the SPA designations given to large areas. These species include osprey *Pandion haliaetus*, avocet *Recurvirostra avosetta*, black-tailed godwit and black tern *Chlidonias niger* amongst others.

Species recorded within 30m of the Indicative Site include Cetti's warbler *Cettia cetti*, yellowhammer *Emberiza citrinella*, barn owl and turtle dove *Streptopelia turtur*, all of which were recorded between 2017 and 2018. Figure 8 shows the species listed under Schedule 1 of the W&CA, SPI and Birds of Conservation Concern (BoCC) red and amber only.

REPTILES

The desk study returned records of three species of reptile including 71 slow-worm *Anguis fragilis* records, five common lizard *Zootoca vivipara*, and two grass-snake *Natrix helvetica*. Of these the closest to the Indicative Site was common lizard, recorded approximately 30m away in 2015 (Figure 9).

AMPHIBIANS

Records of common frog, common toad and smooth newt were returned as part of the desk study search. The nearest amphibian record to the Indicative Site was a common toad recorded approximately 10m away in 2018 (Figure 9). There are numerous waterbodies surrounding the Indicative Site, as seen in, Figures 5a and 5b which could provide suitable habitat for native amphibian species.

Although no records of great crested newt were returned, Newells Lane Pond and Meadows LWS located approximately 0.5km north of the Indicative Site, is known to support a population.

FISH

European eel *Anguilla Anguilla*, bullhead *Cottus gobio*, Atlantic salmon *Salmo salar* and brown/sea trout *Salmo trutta* have been recorded within 1km of the Indicative Site. Both European eel and bullhead have been recorded within 20m in 2012. There are several waterbodies traversing the Indicative Site which may support populations of the aforementioned fish species as well as others not included within the desk study.

INVERTEBRATES

The desk study returned 62 records of invertebrate species within the 2km Study Area. Among these species were records for purple emperor *Apatura iris* and white letter hairstreak protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Invertebrate species listed under Section 41 of the NERC Act 2006 including stag beetle *Lucanus cervus,* small heath *Coenonympha pamphilus* and cinnabar *Tyria jacobaeae* were all recorded within 3m of the Indicative Site. All invertebrate records are displayed in Figure 10.

PLANTS

A total of 33 plant species were returned in the desk study from within the 2km Study Area. This included 19 records of bluebell *Hyacinthoides non-scripta* and one record of the endangered and NERC Act 2006 Section 41 listed spreading hedge-parsley *Torilis arvensis.* The closest of these records was from 2018 of spike star-of-Bethlehem *Ornithogalum pyrenaicum* recorded adjacent to the Indicative Site. Both lizard orchid *Himantoglossum hircinum* and corn parsley *Petroselinum segetum* were recorded within 10m of the Indicative Site boundary also.

INVASIVE NON-NATIVE INVASIVE SPECIES

A total of 21 invasive non-native species (INNS) were recorded within 1km of the Indicative Site including mammals, birds, invertebrates and plants. The closest record to the Indicative Site is black swan *Cygnus atratus* recorded in 2018, 30m away. Several records of INNS from 2019 were returned including eastern grey squirrel *Sciurus carolinensis*, horse-chestnut leaf-miner *Camerdaria ohridella* and Canada goose *Branta canadensis*. Twelve INNS of plant were returned including Japanese knotweed *Reynoutria japonica* approximately 260m from the Indicative Site. All invasive species records are mapped in Figure 11.

Recommendations

Further survey, avoidance and mitigation recommendations have been outlined below to ensure the Proposed Development effects to biodiversity are avoided and minimised and to enable compliance with legislation and planning policy where appropriate. Recommendations for ecological enhancement have also been made.

FURTHER SURVEYS

Further surveys may be required depending on the detailed design of the Proposed Development and the extent to which semi-natural habitats will be affected. Where works do not significantly affect soft estate, it may be possible to avoid the need for any further survey (see Preliminary Avoidance and Mitigation measures below). The requirements for further ecological assessment should be reviewed as proposals emerge.

If required, in the first instance this would include a site survey to undertake an extended Phase 1 habitat survey based on published guidelines (JNCC, 2010). This survey would map and describe the habitats present, as well as noting the potential for protected or notable species to be present.

Dependent on the potential for protected or notable species, further ‘Phase 2’ species or species group surveys may be recommended. The results of these further surveys will inform the requirement or otherwise for ecological avoidance, mitigation and compensation measures to reduce the effects upon ecological features.

The records returned as part of the desk study search suggest that that following ecological surveys will be required;

- Preliminary bat roost assessment (PBRA);
- Bat activity;
- Hazel dormouse;
- Water vole;
- Reptile;
- Great crested newt;
- Fish; and

- INNS.

There may also be a requirement for various bird surveys including those for barn owl as well as a badger survey.

PRELIMINARY AVOIDANCE AND MITIGATION MEASURES (DESIGN)

The following outline recommendations are made to avoid and minimise potential ecological effects associated with the proposed development.

- As the Indicative Site is proximal to Chichester Harbour SSSI and Brook Meadow (Emsworth) LNR, a Habitat Regulations Assessment (HRA) screening assessment will be needed.
- Effects to the adjacent designated Local Wildlife Sites must be avoided. If this is not possible, further ecological assessment would be required.
- The detailed design should seek to retain mature trees, hedgerows, grassland and areas of woodland where possible. Where unavoidable and impacts to these habitats occur, compensation that is ecologically equivalent in line with biodiversity net gain (BNG) requirements should be delivered, in accordance with national planning policy (NPPF, 2019).
- The landscape design for the Proposed Development should seek to include habitats of known value to wildlife to include species rich grassland and areas of scrub. Locally sourced species should be used, and the use of fertilisers avoided. Natural regeneration should be promoted where appropriate and the importation of topsoil should be avoided as far as possible to help maintain local biodiversity.

LIGHTING

Any new or additional lighting associated with the Proposed Development will need to be sensitively designed in order to minimise effects upon wildlife. The following broad principles should be adhered to during design (in accordance with the guidance in 'Bats and artificial lighting in the UK' (ILP, 2018):

- Lighting should be used only where necessary.
- Necessary lighting should be designed to be as directional as possible and light spill into adjacent habitats should be avoided.
- Where lighting is required, lights that emit UV and blue-white short wavelengths should be avoided (BCT, 2018).

Recommendations can be defined further following the progression of design and undertaking the necessary ecology surveys.

MITIGATION MEASURES (CONSTRUCTION PHASE)

Several precautions should be taken to ensure legal compliance during the construction phase. Ideally, these would be included within a Construction Environmental Management Plan (CEMP) which will provide details of appropriate mitigation measures, including programme, and their integration with the construction activities. The following provide an example of what could be included in the CEMP:

- Any necessary clearance of scrub and trees should be timed to be undertaken outside of the breeding bird season (indicatively March-August inclusive). If this is not possible nesting bird checks should be undertaken prior to clearance with active nests checked for and retained with a suitable buffer until such time that they become inactive.
- Appropriate construction phase precautions will need to be implemented to ensure that incidental pollution of adjacent habitats does not occur. This is particularly relevant for watercourses that traverse the Indicative Site.
- Any deep excavations should not be left uncovered, or if this is unavoidable, a means of escape (e.g. a ramp) should be provided to ensure animals including common amphibians and mammals (e.g. badgers) do not get trapped.

Conclusions

Given the results of the desk-based assessment, requirements for further surveys should be reviewed to inform detailed design. It is however, highly likely that further ecological assessment will be required.

[redacted]
Graduate Ecologist

Reviewed by [redacted]
Authorised by [redacted]

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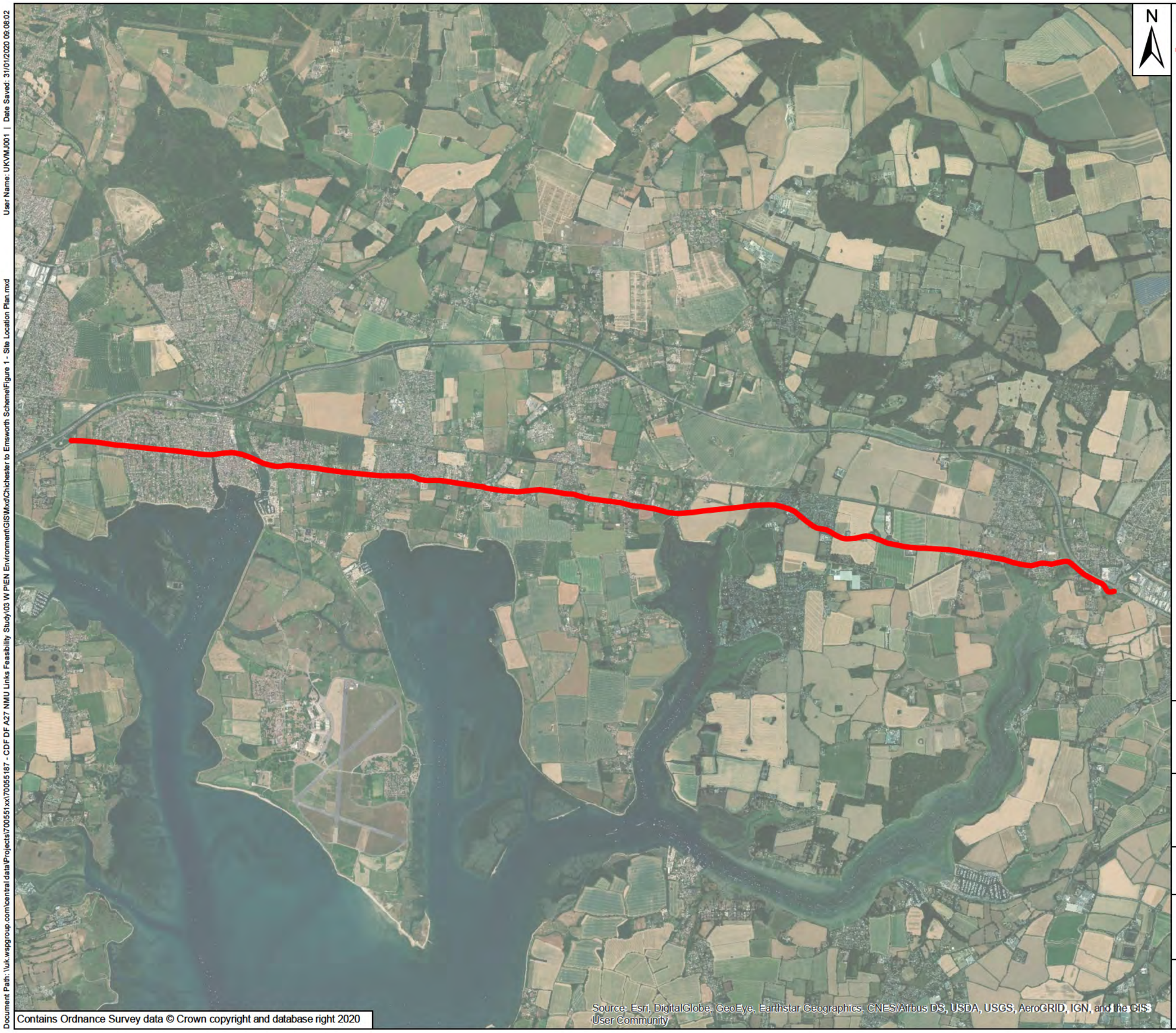
Figures



wsp

Client:
Highways England

Project:
A27 NMU Links Feasibility Study - Chichester to Emsworth Scheme

Title
Indicative Site location plan

Drawing No:	Figure 1	Drawn:	VJ
Date:	February 2020	Checked:	VD
Scale:	1:40,000 @ A3	Approved:	AH

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Client: Highways England

Project: A27 NMU Links Feasibility Study - Chichester to Emsworth Scheme

Title: Internationally designated sites within 5km

Drawing No:	Figure 2	Drawn:	VJ
Date:	February 2020	Checked:	VD
Scale:	1:70,000 @ A3	Approved:	AH

Brook Meadow (Emsworth)

Warblington Meadow

Langstone Harbour

Chichester Harbour

Eames Farm

Nutborne Marshes

Chichester Harbour

Chichester Harbour

Brandy Hole Copse

N

Key

- Indicative Site
- 2km Study Area
- Local Nature Reseve
- Site of Special Scientific Interest

0 0.75 1.5 2.25 3 km

Client: Highways England

Project: A27 NMU Links Feasibility Study - Chichester to Emsworth Scheme

Title: UK statutory designated sites within 2km

Drawing No: Figure 3
Date: February 2020
Scale: 1:50,000 @ A3
Drawn: VJ
Checked: VD
Approved: AH

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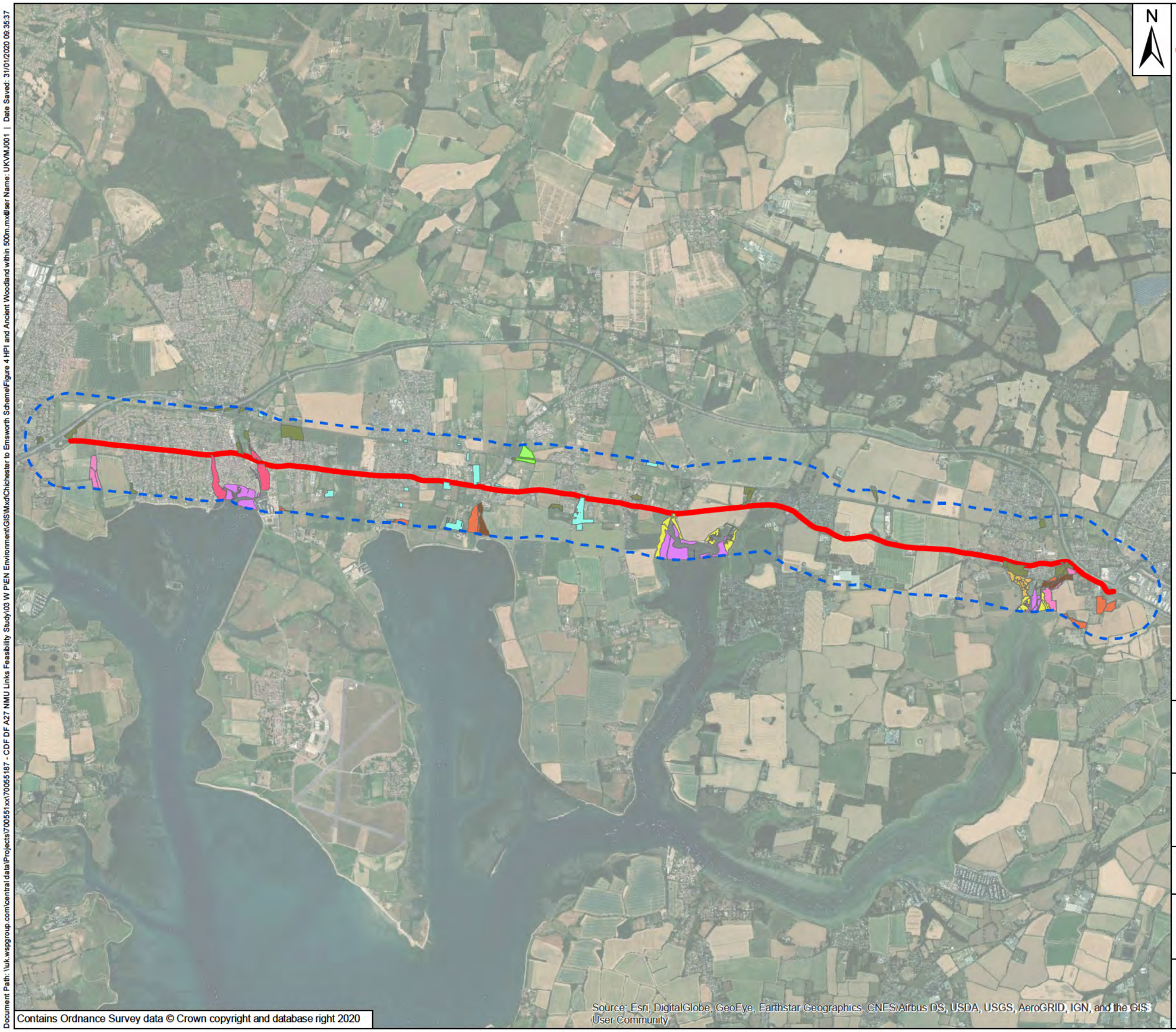

Client: Highways England

Project: A27 NMU Links Feasibility Study - Chichester to Emsworth Scheme

Title: Habitats of Principal Importance (HPI) and ancient woodland within 500m

Drawing No: Figure 4
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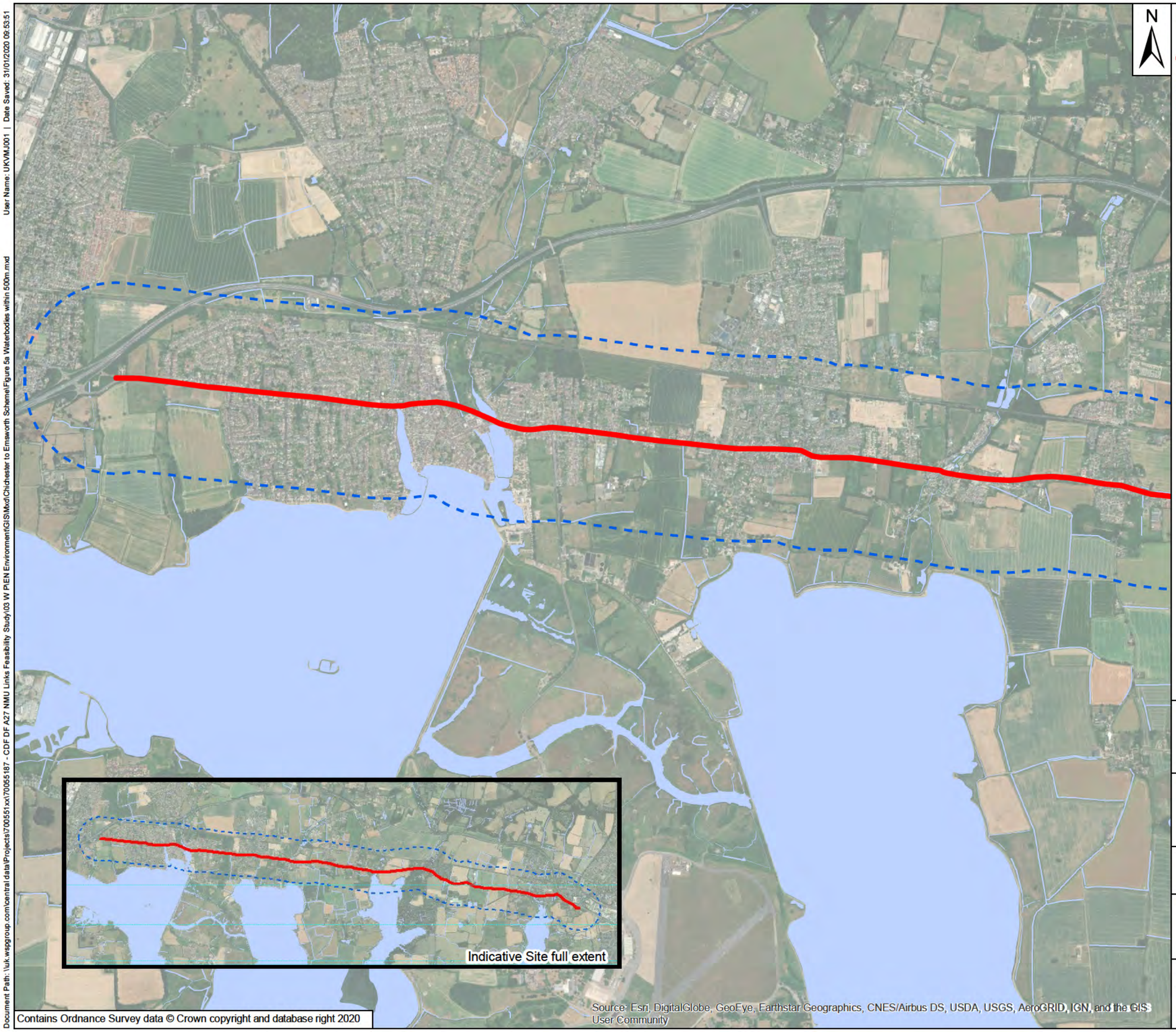

N

Key

Indicative Site

500m Study Area

Water

0 0.3 0.6 0.9 1.2 km

wsp

Client: Highways England

Project: A27 NMU Links Feasibility Study - Chichester to Emsworth Scheme

Title: Waterbodies within 500m

Drawing No: Figure 5a
Date: February 2020
Scale: 1:20,000 @ A3
Drawn: VJ
Checked: VD
Approved: AH

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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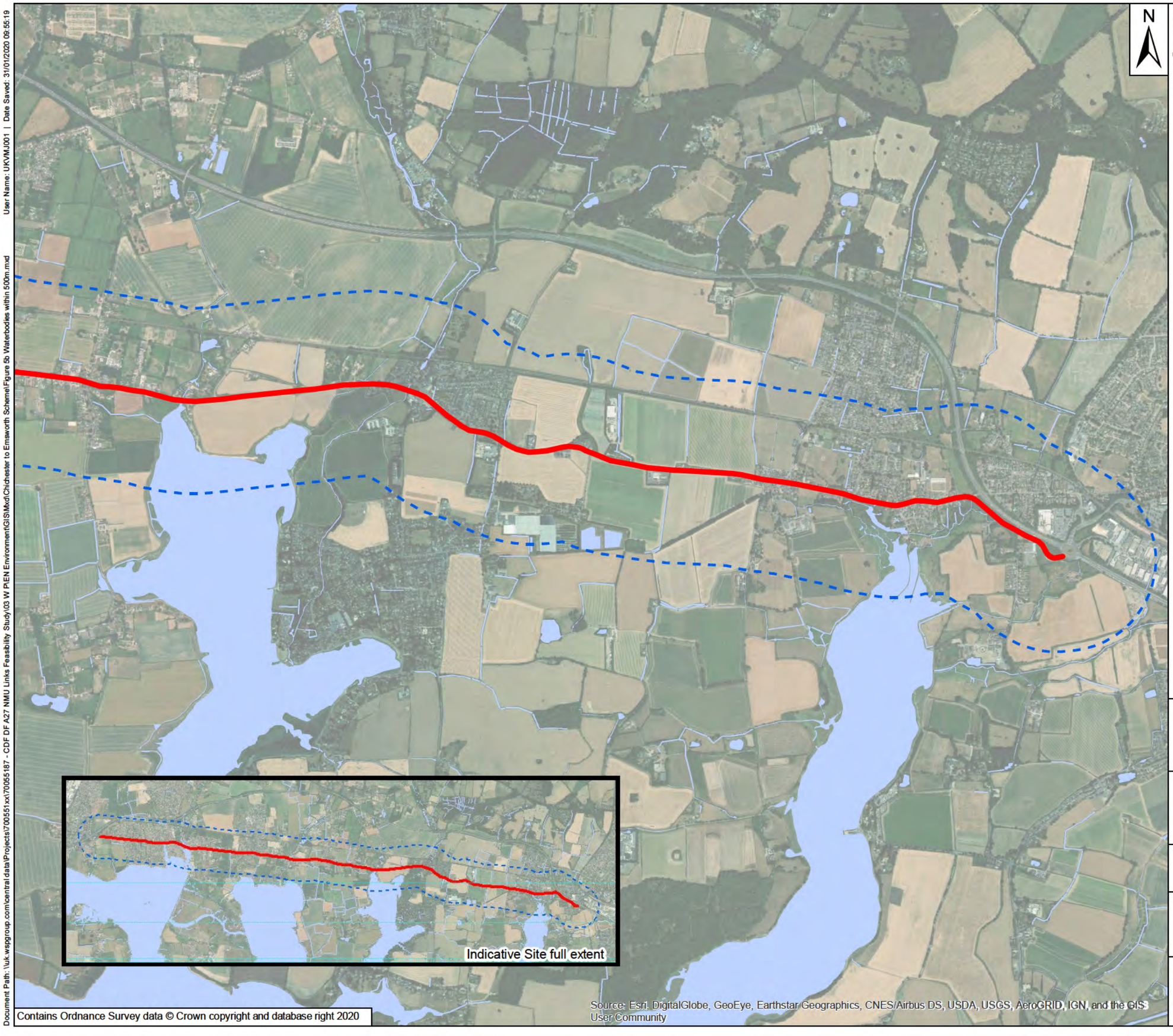

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Client:
Highways England

Project:
A27 NMU Links Feasibility Study - Chichester to Emsworth Scheme

Title
Waterbodies within 500m

Drawing No:	Figure 5b	Drawn:	VJ
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wsp

Client:
Highways England

Project:
A27 NMU Links Feasibility Study - Chichester to Emsworth Scheme

Title
Notable bat species records within 2km

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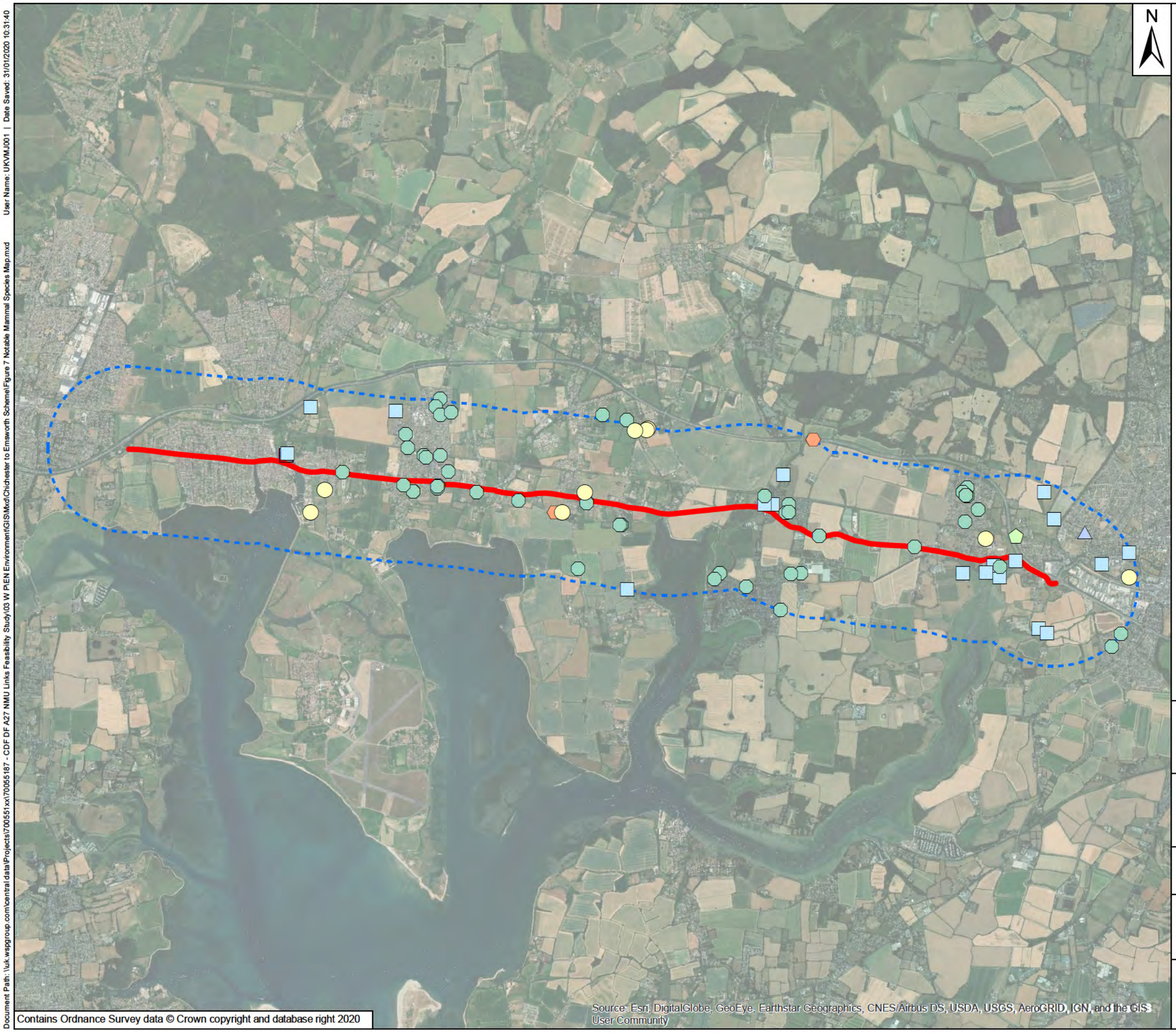

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Client:
Highways England

Project:
A27 NMU Links Feasibility Study - Chichester to Emsworth Scheme

Title
Notable mammal species records within 1km

Drawing No:	Figure 7	Drawn:	VJ
Date:	February 2020	Checked:	VD
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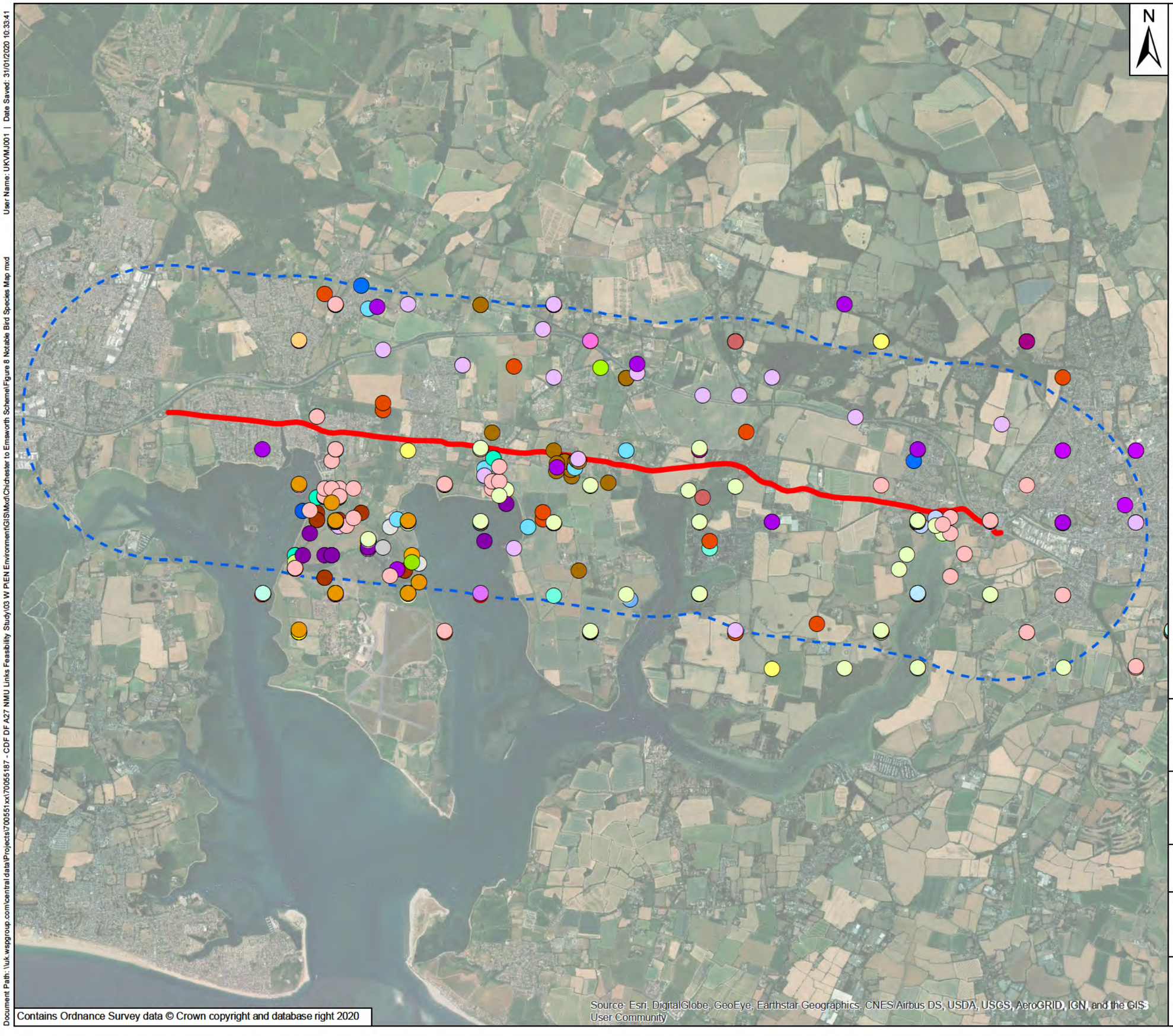

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Client:
Highways England

Project:
A27 NMU Links Feasibility Study - Chichester to Emsworth Scheme

Title
Notable bird species records within 2km

Drawing No: Figure 8
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Client:
Highways England

Project:
A27 NMU Links Feasibility Study - Chichester to Emsworth Scheme

Title
Notable herptile species records within 1km

Drawing No: Figure 9
Date: February 2020
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N

Key

- Indicative Site
- 1km Study Area

Notable Invertebrate Species

- Invertebrate - Ants, Bees, Sawflies & Wasps
- Invertebrate - Beetles
- Invertebrate - Butterflies
- Invertebrate - Dragonflies & Damselflies
- Invertebrate - Grasshoppers & Crickets
- Invertebrate - Moths
- Invertebrate - True Bugs
- Invertebrate - True Flies

0 0.65 1.3 1.95 2.6 km

wsp

Client: Highways England

Project: A27 NMU Links Feasibility Study - Chichester to Emsworth Scheme

Title: Notable invertebrate species records within 1km

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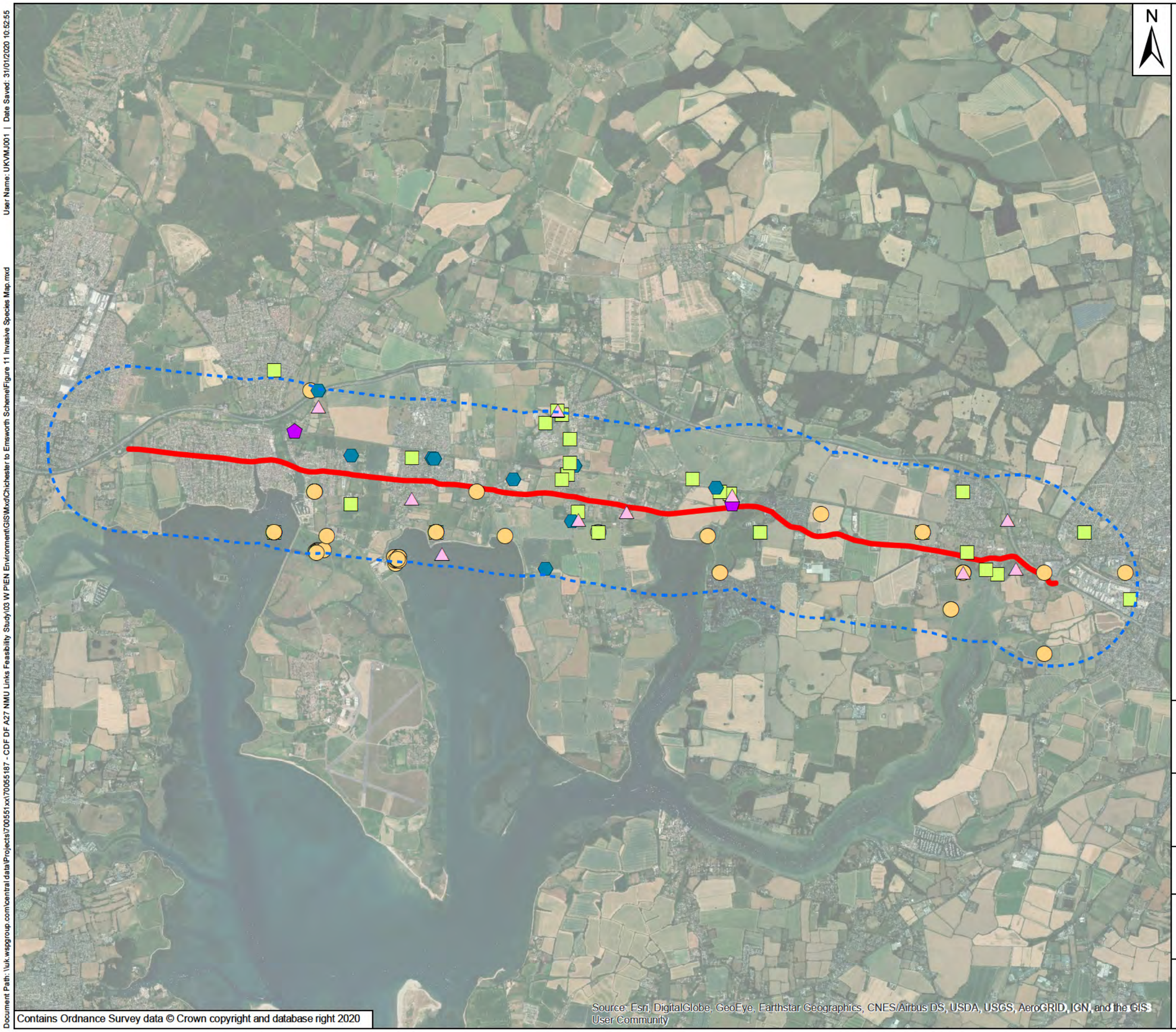

Client:
Highways England

Project:
A27 NMU Links Feasibility Study - Chichester to Emsworth Scheme

Title
Invasive non-native species records within 1km

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Approved: AH

Appendix F

ROAD SAFETY REVIEW

ROAD SAFETY REVIEW

Introduction

A road safety review of the proposed Emsworth to Chichester cycle infrastructure improvements has been undertaken for the identified preferred route.

This review is on the proposed scheme as outlined in the drawings supplied (5187-GA-103-110, Rev A). Actual or forecast traffic flows, NMU flows and existing collision patterns have not been considered in this review. This desktop review was conducted using the drawings supplied and Google Earth imagery.

General Issues/Problems Throughout Scheme

Side road crossings

Throughout the scheme, there are a number of locations where the shared facility crosses side roads and private drives. At a number of these, it is noted on the drawings that “Pedestrians and cyclists given priority across side road”. It is unclear how this would be achieved.

Not all accesses and side roads were identified as having pedestrian/cycle priority, as a result, users of the shared facility may become confused about who has priority along the route and fail to give way. It is recommended that one approach is followed throughout the whole route to remove any ambiguity.

A number of side roads and field accesses have restricted visibility to/from the shared route due to vegetation. Drivers exiting the side roads would not see users on the shared route until they emerge beyond the visibility barrier. This could lead to conflict between vehicles and users of the shared route. It is recommended that vegetation is cleared to provide adequate visibility.

A number of private drives have no visibility to/from the shared route due to vegetation, walls, building lines and fences. Drivers exiting the private drives would not see users on the shared route, leading to conflict between vehicles and users of the shared route. It is recommended that measures be implemented on the shared footway to increase awareness of the private drives for cyclists to encourage them to cycle further away from the back of path where they will have a better chance of seeing emerging vehicles.

Bus Stops

Throughout the proposed scheme, there are a number of bus stops. The introduction of an off carriageway shared cycle route may introduce conflict between cyclists passing the bus stop on the footway and people waiting to board the bus, or when people are alighting from the bus.

Shelters are provided at some of the bus stops. These may restrict space for users to pass, or any overhanging roof may be too low for cyclists to pass under. Visibility of approaching cyclists may also be restricted by the shelters and passengers may step out into the path of a cyclist if they see an approaching bus.

It is not clear whether the bus stops in bus stop laybys are reverting to in-carriageway stops, a number of bus stops were identified as being relocated, the proposed location has not been identified. Consideration of the issues above should be made when relocating the bus stop.

Parking

At a number of locations in the Emsworth area, but also at other areas throughout the scheme, there is evidence of parking in laybys, half on-half off the existing footway, fully on the footway or fully on the verge The proposed scheme widens the footway into the laybys, which could result in parking being displaced. Vehicles may park on the road, creating pinchpoints which could lead to sideswipes. Vehicles may also park on the shared facility reducing the

available width and making it difficult for cyclists and pedestrians to pass on footway. Measures to restrict this should be considered.

Where there is on-street parking adjacent to the shared route, particularly close to shops and schools, car doors may open unexpectedly into the path of cyclists on the shared footway. It is recommended that a buffer zone is provided.

To the west of the junction with Broad Road, there are existing bollards on the edge of the footway. It is unclear whether these are being retained as part of the scheme. If these are being removed, the rationale for installation may have been to prevent pavement parking in this area. Removal of the bollards could lead to footway parking returning in this location which could make it difficult for pedestrians / cyclists using the footway and lead to conflicts.

Existing pedestrian crossings

There are existing controlled and uncontrolled crossings along the route. Where these are on desire lines, or close to shops and schools there may be groups of pedestrians waiting to cross, resulting in reduced space on the shared facility for any other pedestrians and cyclists to navigate past, leading to conflict between users. The width of the footway should be checked to determine whether it is adequate for shared footway and crossing facilities.

Carriageway/Footway widths

There are locations where the footway is widened adjacent to central islands, which reduces the lane width. Where there are lane widths between 3 and 4m, drivers may attempt to pass cyclists that are still using the carriageway when there is insufficient width to do so.

Where there are narrow lanes over prolonged sections, this could lead to large vehicles such as HGVs and buses overhanging the centre line, particularly on bends and have difficulty passing in opposite directions. This could lead to collisions between vehicles or vehicles mounting the shared footway in order to pass.

The shared footway is to be provided by widening into the existing carriageway by varying levels along the route. This results in varying lane and carriageway widths throughout the route. Due to the inconsistent width, drivers (particularly or large vehicles) may not appreciate the changes in width and think there is sufficient width to pass parked vehicles. It is recommended that a consistent carriageway width is provided as far as practicable possible and that it is adequate for the traffic type and volume.

Where the speed limit is 40mph or greater, cyclists may be uncomfortable with vehicles passing close by the edge of the shared footway. A verge or buffer zone 0.5m or greater is recommended in these locations.

An alternative quiet route is shown on the drawings. At the eastern end of the the alternative quiet route, it re-joins the main route close to a bus layby. The footway at this location too narrow for shared use.

Level differences between carriageway and footway

In a number of locations throughout the route, there is a difference between the existing carriageway and footway levels. Where the proposed shared route widens into the footway into the existing verge, the shared route becomes closer to the edge of carriageway, with an increased gradient and height difference. Cyclists may shy away from the edge of the shared route or become unnerved by the proximity to passing traffic and the drop from the edge of the shared route to the carriageway level or lose control and fall off.

Vegetation and trees

Throughout the scheme, there are areas where there was dense vegetation growing into the verge and footway, restricting the available width and height. The proposed route also passes close to mature trees.

To enable cyclists to use the full width of the shared route, vegetation should be trimmed back beyond the back of the footway and a minimum headroom provided of 2.4m. Where the route passes close to mature shrubs and trees, there may be difficulty maintaining the existing footway level due to tree roots. A survey of the route should be undertaken to identify where tree roots may be a problem, with appropriate protection or changes in route or height considered as tree root damage to the footway could result in pedestrians tripping or cyclists losing control.

Location-specific Issues/Problems

A259 close to The Bosham clinic

The proposed shared route diverges from the A259 on an off-road section towards Langrune Close. Cyclists wishing to join the scheme from the southern side would have to cross the A259 using the existing island. The island and northern footway width here are narrow.

Where the shared path joins the A259, there is a steep gradient from the off-carriageway route towards the carriageway, with cyclists having to perform a sharp turn to continue on the northern footway. Adequate width for cyclists to perform this manoeuvre should be provided.

Langrune Close – Roman Way Section

The cycle route emerges into Langrune Close from the off-carriageway route, crossing Salthill Road at the junction with Langrune Close. The crossing from Langrune Close to the eastern side of Salthill Road uses the vehicle crossover for private drive at No. 1 West View. This could lead to conflict between vehicles reversing to/from their drive and cyclists using the cycle route. Other road users may not be anticipating cyclists joining the carriageway at this location.

Shared route on Westgate between the college access and Sherbourne Road roundabout

The proposed shared route continues along the northern footway alongside the playing fields, being widened into the existing verge. It appears that the footway is currently used as a school bus stop, as there is existing guardrail along the kerb edge with regular gaps and parking restriction signage. It is not clear from the proposed scheme how this practice would be impacted by the proposed route. Use of the shared footway as a school bus stop area would result in conflict between waiting pupils and shared footway users.

Eastern extent of the proposed route

To the west of the junction between Westgate and Sherbourne Road, the route becomes a 2.5m two-way cycle track on the northern side of Westgate. It is unclear how the scheme terminates with the existing network close to the junction with Parklands Road. Clear direction for all highway users is required.

The drawings refer to the proposed two-way route being linked to the parking removal as part of the Chichester Parking Strategy. Should this strategy not come forward as anticipated, alternative provision for the termination of the route should be considered.

A two-way cycle track is proposed on the northern side of Westgate, with the existing parking removed. It is unclear whether the traffic calming is to be removed on the northern side. Removal of the traffic calming could lead to increased speeds on the Westgate.

Considerations for the Detailed Design Stage

- Location on shared footway of street furniture including lighting columns, signal infrastructure, cabinets, walls and railings etc
- Lighting – Undertake a lighting review at locations where cyclists may be joining the carriageway
- Signs and markings – consistent approach throughout the scheme, including tactile warnings at pedestrian entry/exit points to the shared route
- Direction and route signage for cyclists joining/leaving the shared route at side roads
- Drainage
- In some areas, the on-carriageway cycle lane on the southern side is shown to be removed. If there is space, consider maintaining this facility as it is currently for any cyclists travelling westbound

Appendix G

SCHEME APPRAISAL REPORT

CSI SAR Name:	**Emsworth to Chichester Cycle Improvements Feasbility Study**
Area / DBFO:	Area 10
Trunk road number:	A27
Full Title:	A27 Emsworth to Chichester Cycle Improvements Feasbility Study

Completed / Amended by:	
Name:	[redacted]
Email:	
Organisation:	WSP
Role:	Assistant Transport Planner
Date:	31/01/2020

Quality Checked by:	
Name:	[redacted]
Email:	
Organisation:	WSP
Role:	Senior Transport Planner
Date:	31/01/2020

Comments regarding the robustness of appraisal:
Assumptions used recorded in separate Word document saved in same directory.

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Cycling, Safety and Integration SAR (V2.0)

Page: (A27) A27 Emsworth to Chichester Cycle Improvements Feasbility Study CSI SAR Project Details

Problem to be addressed: (Brief reasons for carrying out the project)	Stakeholders have highlighted the need to improve the NMU provision on the A259 between Emsworth and Chichester. This is to facilitate journeys made in the area via active modes.
Proposed solution: (Brief description of proposed project)	al Implementation of shared use paths (between 2 and 3.5m wide) and a two-way cycle track, amongst existing cycle infrastructure that has already been deemed suitable quality.
Other solutions considered: (State 'None' if there are none - do not leave blank)	None
Expected outcomes: (Results considered probable given analyses conducted)	Increased NMU numbers associated with improved provision.
Construction year / quarter:	2020 Q2
Expected Date of Opening:	March 2021
Assessment Period:	20 Years !
Annual traffic growth (%):	1.1%

Year of cost estimate	[redacted]	
Investment Cost		*Construction + Land + Other costs in real prices*
Contribution		
Risk Allowanc		
Scheme appraisal stag Optimism bias (%		
Total scheme implementation cos		*Risk and optimism bias adjusted cost*
Annual maintenance cost		*Risk and optimism bias adjusted cost*
Total Estimated Present Value Costs (PVC)		in £ 2010 market prices, discounted to 2010

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Cycling, Safety and Integration SAR (V2.0)

Page: **Vehicular growth forecasts**

Will the intervention benefit pedestrians?:	Yes				
Current number of cycling trips (daily):	281	in	2011		
Current number of walking trips (daily):	0		2011		
Proportion of journeys which are round trips:	100%				
Proportion of trips that are commuting trips:	100.0%				
	57.85				% Growth
Anticipated extra cycling trips (daily):	365.3	in	2020	or	130.0%
Anticipated extra walking trips (daily):	0		2020		0.0%
				Cycle	Walk
Background cycling/walking annual growth rate:	West Sussex			0.25%	0.18%
Proportion of car owners who choose an active mode:	27.3%				
Decay rate (%):	0.0%				
Average cyclist journey length (km):	25		50%	% of average journey length on scheme	
Average walking journey length (km):	20		50%	% of average journey length on scheme	

Cycling, Safety and Integration SAR (V2.0)

Page: Project Intervention Details

What is the type of intervention?:	Cycle Lane
What is the type of cycle Lane?:	Off-road segregated cycle track
Is the intervention upgrade to existing cycle lane?:	Yes
Length of cycling facilities (one direction)? (km):	16.1
Average speed (kph):	40
What is the scheme's impact on severance?:	Large Beneficial

New pedestrian facilities provided:

Street lighting	Yes
Kerb level	Yes
Crowding	No
Pavement evenness	No
Information panels	No
Benches	No
Directional signage	No

Page: Accident savings

Predicted number of Personal Injury Accidents saved in Opening Year: (If the scheme results in a predicted increase in accident rates, enter as a NEGATIVE value).	0.6	*Only applicable if scheme prevents road accidents & casualties*
Road Type:	30/40 mph Speed Limit, Single	
Geographic Area:	Urban	
Average cost of accidents in opening year	[redacted]	
Annual accident benefit in opening year		
Accident benefits capitalisation factor		
Accident benefits over Assessment Period discounted to Opening Year		
Accident benefits over Assessment Period discounted to 2010		
Number of accidents saved over Assessment Period		

Page: **Benefits override sheet**

Measure:		Current Value:	Override Value:		Amount passed to AMCB	Comments:
Noise	£	[redacted]		£	[redacted]	
Local Air Quality	£			£		
Greenhouse Gases	£			£		
Journey Quality	£			£		
Physical Activity	£			£		
Absenteeism	£			£		
Accidents (total from Accidents and MEC)	£			£		
Economic Efficiency (Decongestion)	£			£		
Journey Time Disbenefit	£			£		
Wider Public Finances (Indirect Tax Revenues)	£			£		

Notes:

Cycling, Safety and Integration SAR (V2.0)

Benefits Sensitivity Worksheet

Current BCR (no sensitivity testing) [redacted]

Sensitivity test of Decay Rates and Appraisal Periods

Decay Rate	Appraisal Period 5	10	15	20
-5%	0.7	1.7	2.9	4.3
0%	0.6	1.3	2.0	2.6
10%	0.5	0.8	1.1	1.3
50%	0.2	0.3	0.5	0.6
100%	0.1	0.3	0.4	0.5

= BCR > 2
= BCR > 1.5
= BCR >1
= BCR <1

Quality Benefits Factor						
0.125	0.25	0.5	1	2	4	8
2.2	2.2	2.3	2.6	3.0	3.9	5.7

[redacted]

Willingness to pay (pence per minute)	7.03
Approximate journey length receving benefit	50%
existing or new scheme adjustment	50%

CYCLING		Without sc	With scher	Difference	Benefit pe	existing us
2010	0	30089	30089	0	131.81	
2011	0	30910	30910	0	132.87	
2012	0	30237	30237	0	132.86	
2013	0	30311	30311	0	134.32	
2014	0	30385	30385	0	137.07	
2015	0	30459	30459	0	139.36	
2016	0	30534	30534	0	142.08	
2017	0	30609	30609	0	144.90	
2018	0	30684	30684	0	147.65	
2019	0	30759	30759	0	150.47	
2020	0	30834	30834	0	153.33	
2021	1	30910	71093	40183	156.22	
2022	1	30986	71169	40183	159.14	
2023	1	31062	71245	40183	162.14	
2024	1	31138	71321	40183	165.23	
2025	1	31214	71397	40183	168.40	
2026	1	31291	71474	40183	171.66	
2027	1	31367	71550	40183	175.01	
2028	1	31444	71627	40183	178.46	
2029	1	31521	71704	40183	182.01	
2030	1	31598	71781	40183	185.66	
2031	1	31676	71859	40183	189.41	
2032	1	31753	71936	40183	193.27	
2033	1	31831	72014	40183	197.23	
2034	1	31909	72092	40183	201.30	
2035	1	31987	72170	40183	205.47	
2036	1	32066	72249	40183	209.75	
2037	1	32144	72327	40183	214.14	
2038	1	32223	72406	40183	218.64	
2039	1	32302	72485	40183	223.24	
2040	1	32381	72564	40183	227.94	
2041	0	32460	72643	40183	232.74	
2042	0	32540	72723	40183	237.67	
2043	0	32620	72803	40183	242.72	
2044	0	32700	72883	40183	247.87	
2045	0	32780	72963	40183	253.13	
2046	0	32860	73043	40183	258.50	
2047	0	32940	73123	40183	264.06	
2048	0	33021	73204	40183	269.73	
2049	0	33102	73285	40183	275.54	
2050	0	33183	73366	40183	281.46	

2051	0	33264	73447	40183	287.51
2052	0	33346	73529	40183	293.80
2053	0	33428	73611	40183	300.22
2054	0	33510	73693	40183	306.78
2055	0	33592	73775	40183	313.49
2056	0	33674	73857	40183	320.35
2057	0	33756	73939	40183	327.43
2058	0	33839	74022	40183	334.68
2059	0	33922	74105	40183	342.08
2060	0	34005	74188	40183	349.65
2061	0	34088	74271	40183	357.38
2062	0	34172	74355	40183	365.31
2063	0	34256	74439	40183	373.40
2064	0	34340	74523	40183	381.67
2065	0	34424	74607	40183	390.12
2066	0	34508	74691	40183	398.75
2067	0	34593	74776	40183	407.51
2068	0	34677	74860	40183	416.46
2069	0	34762	74945	40183	425.61
2070	0	34848	75031	40183	434.95
2071	0	34933	75116	40183	444.51
2072	0	35019	75202	40183	454.17
2073	0	35104	75287	40183	464.05
2074	0	35190	75373	40183	474.14
2075	0	35277	75460	40183	484.45
2076	0	35363	75546	40183	494.99
2077	0	35450	75633	40183	505.71
2078	0	35536	75719	40183	516.66
2079	0	35624	75807	40183	527.86
2080	0	35711	75894	40183	539.29

Off-road segregated cyc £ [redacted]
Assumption as per A5.1
benefits halved for upgrades to existing facilities

new user benefits

[redacted]

	WALKING
2010	
2011	
2012	
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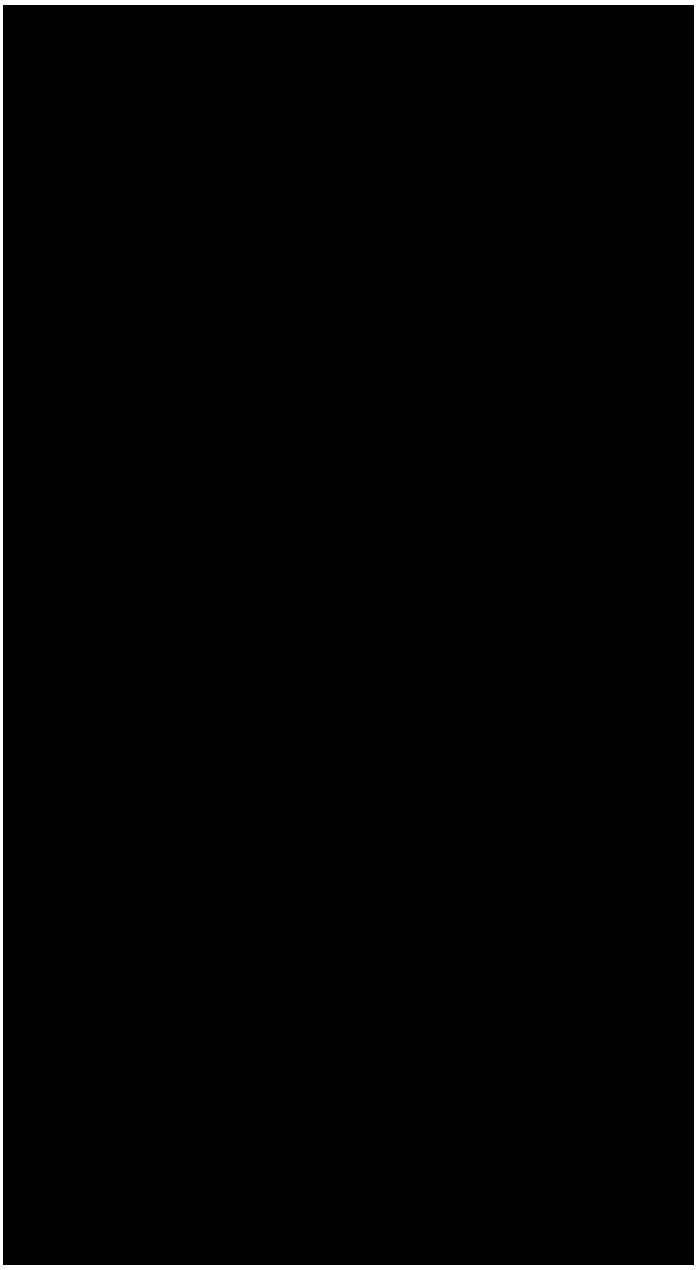

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2079
2080

Willingness to pay (pence per km)	6.56
Approximately journey length receving benefit	50%

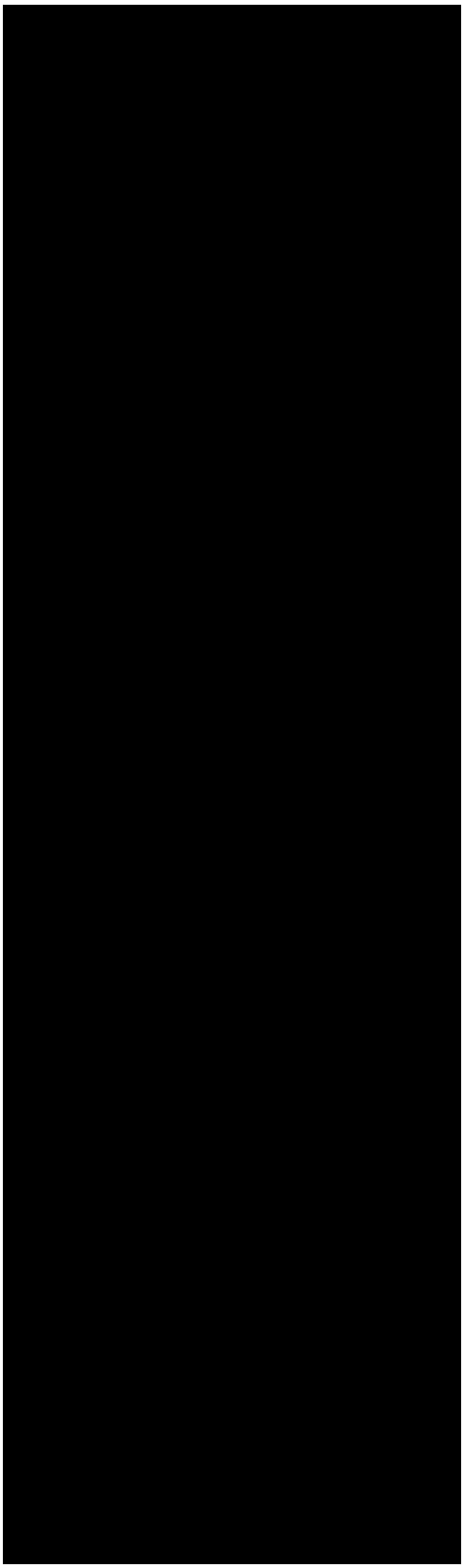
Without sc	With scher	Difference	Benefit per Individual
0	[redacted]	0	66
0		0	66
0		0	66
0		0	67
0		0	68
0		0	69
0		0	71
0		0	72
0		0	74
0		0	75
0		0	76
1		0	78
1		0	79
1		0	81
1		0	82
1		0	84
1		0	85
1		0	87
1		0	89
1		0	91
1		0	92
1		0	94
1		0	96
1		0	98
1		0	100
1		0	102
1		0	104
1		0	107
1		0	109
1		0	111
1		0	113
0		0	116
0		0	118
0		0	121
0		0	123
0		0	126
0		0	129
0		0	131
0		0	134
0		0	137
0		0	140

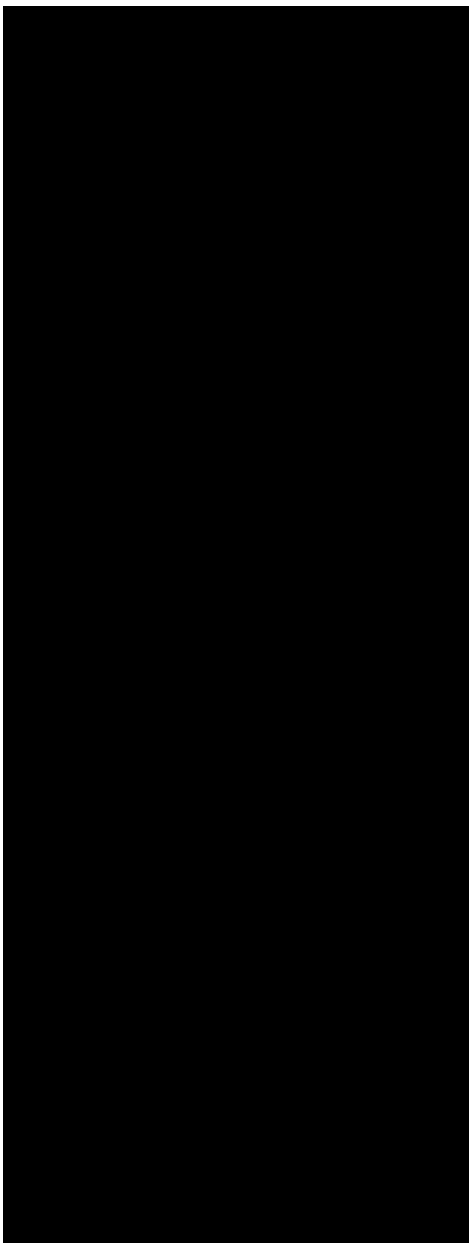
0	[redacted]	0	143
0		0	146
0		0	149
0		0	153
0		0	156
0		0	160
0		0	163
0		0	167
0		0	170
0		0	174
0		0	178
0		0	182
0		0	186
0		0	190
0		0	194
0		0	199
0		0	203
0		0	207
0		0	212
0		0	217
0		0	221
0		0	226
0		0	231
0		0	236
0		0	241
0		0	246
0		0	252
0		0	257
0		0	263
0		0	269

#######

Assumption as per A5.1

Benefit





Physical Activity Benefit: £ [redacted]

		Cyclists	
Years of increasing demand	2	Return	Single
Daily distance (km)		50	25
Average speed (kph)		40	40
Active time per day (mins)		75	37.5
Proportion of individuals		100%	0%
Average active time per day (mins)		75.0	
Reduction in relative risk		0.58	

	Walkers	
	Return	Single
Daily distance (km)	40.00	20.00
Average speed (kph)	5	5
Active time per day (mins)	289.3	144.7
Proportion of individuals	100%	0%
Average active time per day (mins)	289.3	
Reduction in relative risk	2.19	

CYCLING

	Include in ap	Years after opening	Year	20%	40%	60%
2010	0	-11	-10	0	0	0
2011	0	-10	-9	0	0	0
2012	0	-9	-8	0	0	0
2013	0	-8	-7	0	0	0
2014	0	-7	-6	0	0	0
2015	0	-6	-5	0	0	0
2016	0	-5	-4	0	0	0
2017	0	-4	-3	0	0	0
2018	0	-3	-2	0	0	0
2019	0	-2	-1	0	0	0
2020	0	-1	0	0	0	0
2021	1	0	1	183	0	0
2022	1	1	2	0	183	0
2023	1	2	3	0	0	183
2024	1	3	4	0	0	0
2025	1	4	5	0	0	0
2026	1	5	6	0	0	0
2027	1	6	7	0	0	0
2028	1	7	8	0	0	0
2029	1	8	9	0	0	0
2030	1	9	10	0	0	0
2031	1	10	11	0	0	0
2032	1	11	12	0	0	0

2033	1	12	13	0	0	0
2034	1	13	14	0	0	0
2035	1	14	15	0	0	0
2036	1	15	16	0	0	0
2037	1	16	17	0	0	0
2038	1	17	18	0	0	0
2039	1	18	19	0	0	0
2040	1	19	20	0	0	0
2041	0	20	21	0	0	0
2042	0	21	22	0	0	0
2043	0	22	23	0	0	0
2044	0	23	24	0	0	0
2045	0	24	25	0	0	0
2046	0	25	26	0	0	0
2047	0	26	27	0	0	0
2048	0	27	28	0	0	0
2049	0	28	29	0	0	0
2050	0	29	30	0	0	0
2051	0	30	31	0	0	0
2052	0	31	32	0	0	0
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2061	0	40	41	0	0	0
2062	0	41	42	0	0	0
2063	0	42	43	0	0	0
2064	0	43	44	0	0	0
2065	0	44	45	0	0	0
2066	0	45	46	0	0	0
2067	0	46	47	0	0	0
2068	0	47	48	0	0	0
2069	0	48	49	0	0	0
2070	0	49	50	0	0	0
2071	0	50	51	0	0	0
2072	0	51	52	0	0	0
2073	0	52	53	0	0	0
2074	0	53	54	0	0	0
2075	0	54	55	0	0	0
2076	0	55	56	0	0	0
2077	0	56	57	0	0	0
2078	0	57	58	0	0	0
2079	0	58	59	0	0	0
2080	0	59	60	0	0	0

WALKING

	Include in ap	Years after opening	Year	20%	40%	60%
2010	0	-11	-10	0	0	0
2011	0	-10	-9	0	0	0
2012	0	-9	-8	0	0	0
2013	0	-8	-7	0	0	0
2014	0	-7	-6	0	0	0
2015	0	-6	-5	0	0	0
2016	0	-5	-4	0	0	0
2017	0	-4	-3	0	0	0
2018	0	-3	-2	0	0	0
2019	0	-2	-1	0	0	0
2020	0	-1	0	0	0	0
2021	1	0	1	0	0	0
2022	1	1	2	0	0	0
2023	1	2	3	0	0	0
2024	1	3	4	0	0	0
2025	1	4	5	0	0	0
2026	1	5	6	0	0	0
2027	1	6	7	0	0	0
2028	1	7	8	0	0	0
2029	1	8	9	0	0	0
2030	1	9	10	0	0	0
2031	1	10	11	0	0	0
2032	1	11	12	0	0	0
2033	1	12	13	0	0	0
2034	1	13	14	0	0	0
2035	1	14	15	0	0	0
2036	1	15	16	0	0	0
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2046	0	25	26	0	0	0
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2052	0	31	32	0	0	0

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2059	0	38	39	0	0	0
2060	0	39	40	0	0	0
2061	0	40	41	0	0	0
2062	0	41	42	0	0	0
2063	0	42	43	0	0	0
2064	0	43	44	0	0	0
2065	0	44	45	0	0	0
2066	0	45	46	0	0	0
2067	0	46	47	0	0	0
2068	0	47	48	0	0	0
2069	0	48	49	0	0	0
2070	0	49	50	0	0	0
2071	0	50	51	0	0	0
2072	0	51	52	0	0	0
2073	0	52	53	0	0	0
2074	0	53	54	0	0	0
2075	0	54	55	0	0	0
2076	0	55	56	0	0	0
2077	0	56	57	0	0	0
2078	0	57	58	0	0	0
2079	0	58	59	0	0	0
2080	0	59	60	0	0	0

80%	100%	All cause mortality	20%	40%	60%	80%	100%
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
183	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	183	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	183	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	183	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	183	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	183	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	183	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
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0	183	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137

0	183	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	183	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
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0	183	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	183	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137

80%	100%	All cause mortality	20%	40%	60%	80%	100%
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
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0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
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0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
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0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
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0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
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0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137
0	0	0.00235	0.00027	0.00055	0.00082	0.00110	0.00137

Reduction in mortalities					
20%	40%	60%	80%	100%	TOTAL
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0.050177	0	0	0	0	0.050177
7.81E-18	0.100353	0	0	0	0.100353
0	1.56E-17	0.15053	0	0	0.15053
0	0	2.34E-17	0.20070695	0	0.200707
0	0	0	3.1232E-17	0.250884	0.250884
0	0	0	0	0.250884	0.250884
0	0	0	0	0.250884	0.250884
0	0	0	0	0.250884	0.250884
0	0	0	0	0.250884	0.250884
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0	0	0	0	0.250884	0.250884
0	0	0	0	0.250884	0.250884
0	0	0	0	0.250884	0.250884

Reduction in mortalities

20%	40%	60%	80%	100%	TOTAL
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
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0	0	0	0	0	0
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Undiscounted Benefits		Discounted benefits	
£	-	£	-
£	-	£	-
£	-	£	-
£	-	£	-
£	-	£	-
£	-	£	-
£	-	£	-
£	-	£	-
£	-	£	-
£	-	£	-
£	[redacted]		
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		Discounted benefits	
£	-	£	-
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£	-	£	-
£	-	£	-
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£	-	£	-
£	-	£	-
£	-	£	-
£	-	£	-
£	-	£	-
£	-	£	-
£	-	£	-
£	-	£	-
£	-	£	-
£	-	£	-

		Obs Year
Initial number of cycling trips	281	2011
Proportion are round trips	100%	
Proportion of users as commuters	100.0%	(taken from comparative study)
Average cyclist trip length (kms)	25.0	Taken from NTS - independent
Average walk trip length (kms)	20.00	
Car owners who choose to drive	27.3%	(taken from comparative study)
Car kilometres saved per day	2493.2	
Background growth for cycling	0.25%	In this example, taken from NTI
Background growth for walking	0.18%	Taken from NTEM (London)
Scheme opening year	2021	
Induced growth in cycling	130%	(taken from comparative study)
Number of induced growth	365	2020
Induced growth in walking	0%	(taken from comparative study)
Number of induced growth in introduced year	0	2020
Journey Quality Annualisation factor	220	
MEC Annualisation Factor	365	
Initial number of walking trips	512	2011

			Without scheme - Cycle trips		With scheme - Cycle trips	
Year	Years from construction	Induced cycling trips	Without Scheme	Individuals	With Scheme	Individuals
2010	-11	0	274	137	274	137
2011	-10	0	281	141	281	141
2012	-9	0	275	137	275	137
2013	-8	0	276	138	276	138
2014	-7	0	276	138	276	138
2015	-6	0	277	138	277	138
2016	-5	0	278	139	278	139
2017	-4	0	278	139	278	139
2018	-3	0	279	139	279	139
2019	-2	0	280	140	280	140
2020	-1	0	280	140	280	140
2021	0	365	281	141	646	323
2022	1	365	282	141	647	323
2023	2	365	282	141	648	324
2024	3	365	283	142	648	324
2025	4	365	284	142	649	325
2026	5	365	284	142	650	325
2027	6	365	285	143	650	325
2028	7	365	286	143	651	326
2029	8	365	287	143	652	326
2030	9	365	287	144	653	326
2031	10	365	288	144	653	327
2032	11	365	289	144	654	327
2033	12	365	289	145	655	327
2034	13	365	290	145	655	328
2035	14	365	291	145	656	328
2036	15	365	292	146	657	328
2037	16	365	292	146	658	329
2038	17	365	293	146	658	329
2039	18	365	294	147	659	329
2040	19	365	294	147	660	330
2041	20	365	295	148	660	330
2042	21	365	296	148	661	331
2043	22	365	297	148	662	331

2044	23	365	297	149	663	331
2045	24	365	298	149	663	332
2046	25	365	299	149	664	332
2047	26	365	299	150	665	332
2048	27	365	300	150	665	333
2049	28	365	301	150	666	333
2050	29	365	302	151	667	333
2051	30	365	302	151	668	334
2052	31	365	303	152	668	334
2053	32	365	304	152	669	335
2054	33	365	305	152	670	335
2055	34	365	305	153	671	335
2056	35	365	306	153	671	336
2057	36	365	307	153	672	336
2058	37	365	308	154	673	336
2059	38	365	308	154	674	337
2060	39	365	309	155	674	337
2061	40	365	310	155	675	338
2062	41	365	311	155	676	338
2063	42	365	311	156	677	338
2064	43	365	312	156	677	339
2065	44	365	313	156	678	339
2066	45	365	314	157	679	340
2067	46	365	314	157	680	340
2068	47	365	315	158	681	340
2069	48	365	316	158	681	341
2070	49	365	317	158	682	341
2071	50	365	318	159	683	341
2072	51	365	318	159	684	342
2073	52	365	319	160	684	342
2074	53	365	320	160	685	343
2075	54	365	321	160	686	343
2076	55	365	321	161	687	343
2077	56	365	322	161	688	344
2078	57	365	323	162	688	344
2079	58	365	324	162	689	345
2080	59	365	325	162	690	345

of intervention length

ΞM (London)

		Without scheme - Walk trips			With scheme - Walk trips	
Individuals difference	Proportionate change	DM Walk Trips	Walk Individuals	Induced Walking Trips	DS Walk Trips	Individuals
0	0.000	502	251	0	502	251
0	0.000	512	256	0	512	256
0	0.000	504	252	0	504	252
0	0.000	505	252	0	505	252
0	0.000	506	253	0	506	253
0	0.000	507	253	0	507	253
0	0.000	507	254	0	507	254
0	0.000	508	254	0	508	254
0	0.000	509	255	0	509	255
0	0.000	510	255	0	510	255
0	0.000	511	256	0	511	256
183	0.000	512	256	0	512	256
183	1.000	513	256	0	513	256
183	1.000	514	257	0	514	257
183	1.000	515	257	0	515	257
183	1.000	516	258	0	516	258
183	1.000	517	258	0	517	258
183	1.000	518	259	0	518	259
183	1.000	518	259	0	518	259
183	1.000	519	260	0	519	260
183	1.000	520	260	0	520	260
183	1.000	521	261	0	521	261
183	1.000	522	261	0	522	261
183	1.000	523	262	0	523	262
183	1.000	524	262	0	524	262
183	1.000	525	263	0	525	263
183	1.000	526	263	0	526	263
183	1.000	527	263	0	527	263
183	1.000	528	264	0	528	264
183	1.000	529	264	0	529	264
183	1.000	530	265	0	530	265
183	1.000	531	265	0	531	265
183	1.000	532	266	0	532	266
183	1.000	533	266	0	533	266

183	1.000	534	267	0	534	267
183	1.000	535	267	0	535	267
183	1.000	536	268	0	536	268
183	1.000	537	268	0	537	268
183	1.000	537	269	0	537	269
183	1.000	538	269	0	538	269
183	1.000	539	270	0	539	270
183	1.000	540	270	0	540	270
183	1.000	541	271	0	541	271
183	1.000	542	271	0	542	271
183	1.000	543	272	0	543	272
183	1.000	544	272	0	544	272
183	1.000	545	273	0	545	273
183	1.000	546	273	0	546	273
183	1.000	547	274	0	547	274
183	1.000	548	274	0	548	274
183	1.000	549	275	0	549	275
183	1.000	550	275	0	550	275
183	1.000	551	276	0	551	276
183	1.000	552	276	0	552	276
183	1.000	553	277	0	553	277
183	1.000	554	277	0	554	277
183	1.000	555	278	0	555	278
183	1.000	556	278	0	556	278
183	1.000	557	279	0	557	279
183	1.000	558	279	0	558	279
183	1.000	559	280	0	559	280
183	1.000	560	280	0	560	280
183	1.000	561	281	0	561	281
183	1.000	562	281	0	562	281
183	1.000	563	282	0	563	282
183	1.000	564	282	0	564	282
183	1.000	565	283	0	565	283
183	1.000	566	283	0	566	283
183	1.000	567	284	0	567	284
183	1.000	568	284	0	568	284
183	1.000	569	285	0	569	285

			Change in car trips	
Individuals difference	Proportionate change	Change in active mode trips	Change in car trips	Change in active mode kms
0	0.000	0	0	0
0	0.000	0	0	0
0	0.000	0	0	0
0	0.000	0	0	0
0	0.000	0	0	0
0	0.000	0	0	0
0	0.000	0	0	0
0	0.000	0	0	0
0	0.000	0	0	0
0	0.000	0	0	0
0	0.000	0	0	0
0	0.000	365	-100	9133
0	0.000	365	-100	9133
0	0.000	365	-100	9133
0	0.000	365	-100	9133
0	0.000	365	-100	9133
0	0.000	365	-100	9133
0	0.000	365	-100	9133
0	0.000	365	-100	9133
0	0.000	365	-100	9133
0	0.000	365	-100	9133
0	0.000	365	-100	9133
0	0.000	365	-100	9133
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0	0.000	365	-100	9133
0	0.000	365	-100	9133
0	0.000	365	-100	9133
0	0.000	365	-100	9133
0	0.000	365	-100	9133
0	0.000	365	-100	9133
0	0.000	365	-100	9133
0	0.000	365	-100	9133
0	0.000	365	-100	9133
0	0.000	365	-100	9133

0	0.000	365	-100	9133
0	0.000	365	-100	9133
0	0.000	365	-100	9133
0	0.000	365	-100	9133
0	0.000	365	-100	9133
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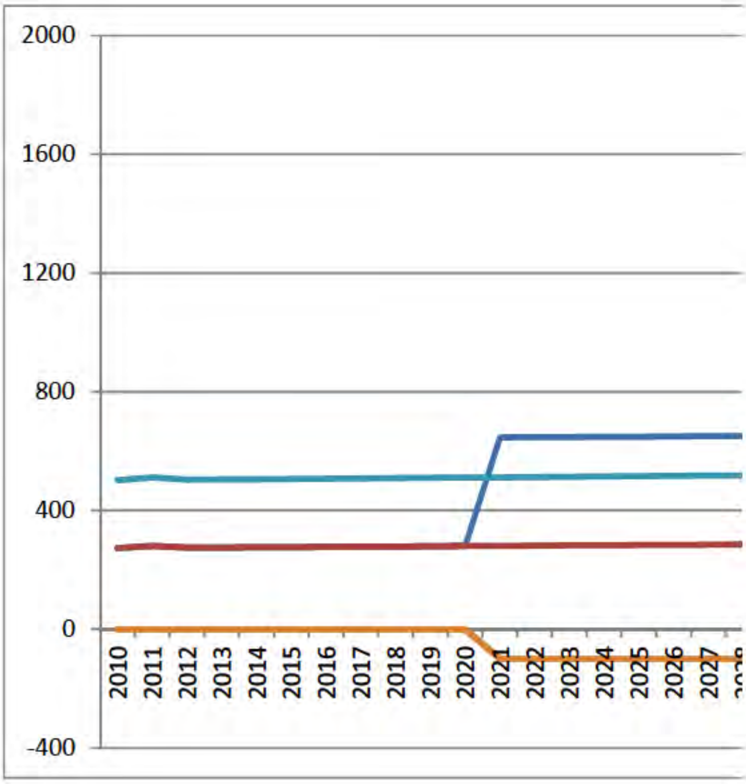
0	0.000	365	-100	9133
0	0.000	365	-100	9133
0	0.000	365	-100	9133



Change in car kms (per day)	Reduction in car kms
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
0	0
-2493	-910008
-2493	-910008
-2493	-910008
-2493	-910008
-2493	-910008
-2493	-910008
-2493	-910008
-2493	-910008
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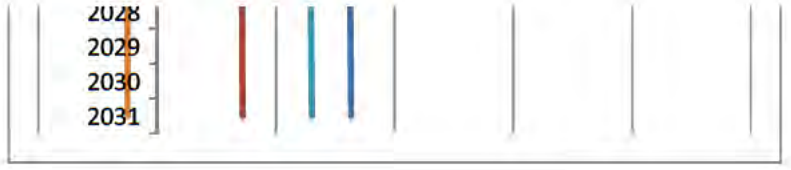
-2493	-910008


2028
2029
2030
2031

Step 1: Estimate change in car kilometre
Step 2: Analyse the characteristics of the car journeys removed
Step 3: Calculate marginal external costs for modelled years
Step 4: Discount costs over the appraisal period

STEP 1

Bike kilometres increased	2493.173
Bike Kilometres factor	-0.46%
Fewer car kilometres	-11.4686

STEP 2

Proportions of traffic by road type for London (table 5.1)

	2010			
	Motorways	A Roads	Other Roa	Motorways
	0.0%	0.0%	0.0%	0.0%
Congestion	0.1	67.1	46.4	2.8
Infrastructure	0.0	0.1	0.1	0.0
Accident	0.0	3.0	3.0	0.0
Local Air Quality	0.3	0.3	0.3	0.2
Noise	0.2	0.2	0.2	0.2
Greenhouse Gases	0.9	1.0	1.2	0.9
Indirect Taxation	-5.3	-5.6	-7.1	-5.2

STEP 3

MECs

		Decongestion	Infrastructu	Accidents	Local Air C	Noise
2010	0	**5.0**	**0.1**	**1.3**	**0.0**	**0.1**
2011	0	5.1	0.1	1.3	0.0	0.1
2012	0	5.2	0.1	1.3	0.0	0.1
2013	0	5.2	0.1	1.3	0.0	0.1
2014	0	5.3	0.1	1.3	0.0	0.1
2015	0	**5.4**	**0.1**	**1.3**	**0.0**	**0.1**
2016	0	5.7	0.1	1.3	0.0	0.1
2017	0	6.0	0.1	1.4	0.0	0.1
2018	0	6.3	0.1	1.4	0.0	0.1
2019	0	6.6	0.1	1.4	0.0	0.1
2020	0	**6.8**	**0.1**	**1.5**	**0.0**	**0.1**
2021	1	7.2	0.1	1.5	0.0	0.1
2022	1	7.6	0.1	1.5	0.0	0.1
2023	1	8.0	0.1	1.5	0.0	0.1

2024	1	8.4	0.1	1.6	0.0	0.1
2025	1	**8.7**	**0.1**	**1.6**	**0.0**	**0.1**
2026	1	9.1	0.1	1.6	0.0	0.1
2027	1	9.5	0.1	1.6	0.0	0.1
2028	1	9.9	0.1	1.7	0.0	0.1
2029	1	10.4	0.1	1.7	0.0	0.1
2030	1	**10.8**	**0.2**	**1.7**	**0.0**	**0.1**
2031	1	11.3	0.2	1.8	0.0	0.1
2032	1	11.8	0.2	1.8	0.0	0.1
2033	1	12.4	0.2	1.8	0.0	0.1
2034	1	12.9	0.2	1.9	0.0	0.1
2035	1	**13.5**	**0.2**	**1.9**	**0.0**	**0.1**
2036	1	14.0	0.2	1.9	0.0	0.1
2037	1	14.5	0.2	2.0	0.0	0.1
2038	1	15.1	0.2	2.0	0.0	0.1
2039	1	15.6	0.2	2.0	0.0	0.1
2040	1	16.2	0.2	2.1	0.0	0.1
2041	0	16.7	0.2	2.1	0.0	0.2
2042	0	17.2	0.2	2.1	0.0	0.2
2043	0	17.8	0.2	2.2	0.0	0.2
2044	0	18.3	0.2	2.2	0.0	0.2
2045	0	18.9	0.2	2.3	0.0	0.2
2046	0	19.4	0.2	2.3	0.0	0.2
2047	0	19.9	0.2	2.3	0.0	0.2
2048	0	20.5	0.2	2.4	0.0	0.2
2049	0	21.0	0.2	2.4	0.0	0.2
2050	0	21.6	0.2	2.4	0.0	0.2
2051	0	22.1	0.2	2.5	0.0	0.2
2052	0	22.6	0.2	2.5	0.0	0.2
2053	0	23.2	0.2	2.5	0.0	0.2
2054	0	23.7	0.2	2.6	0.0	0.2
2055	0	24.3	0.2	2.6	0.0	0.2
2056	0	24.8	0.2	2.6	0.0	0.2
2057	0	25.3	0.2	2.7	0.0	0.2
2058	0	25.9	0.2	2.7	0.0	0.2
2059	0	26.4	0.2	2.7	0.0	0.2
2060	0	27.0	0.2	2.8	0.0	0.2
2061	0	27.5	0.2	2.8	0.0	0.2
2062	0	28.0	0.2	2.8	0.0	0.2
2063	0	28.6	0.2	2.9	0.0	0.2
2064	0	29.1	0.2	2.9	0.0	0.3
2065	0	29.7	0.2	2.9	0.0	0.3
2066	0	30.2	0.2	3.0	0.0	0.3
2067	0	30.7	0.2	3.0	0.0	0.3
2068	0	31.3	0.2	3.0	0.0	0.3
2069	0	31.8	0.2	3.1	0.0	0.3
2070	0	32.4	0.2	3.1	0.0	0.3
2071	0	32.9	0.2	3.1	0.0	0.3
2072	0	33.4	0.2	3.2	0.0	0.3

2073	0	34.0	0.2	3.2	0.0	0.3
2074	0	34.5	0.2	3.2	0.0	0.3
2075	0	35.1	0.2	3.3	0.0	0.3
2076	0	35.6	0.2	3.3	0.0	0.3
2077	0	36.1	0.2	3.3	0.0	0.3
2078	0	36.7	0.2	3.4	0.0	0.3
2079	0	37.2	0.2	3.4	0.0	0.3
2080	0	37.8	0.2	3.4	0.0	0.3

A Roads	Other Roa	A Roads	Other Roa	Motorways	A Roads	Other Roads	
0.0%	0.0%	13.9%	15.7%	16.4%	33.1%	20.9%	
34.2	23.8	13.2	10.8	1.1	2.2	2.7	**5.0**
0.1	0.1	0.1	0.1	0.0	0.1	0.1	**0.1**
3.0	3.0	3.0	3.0	0.0	0.7	0.7	**1.3**
0.1	0.1	0.1	0.1	0.1	0.0	0.0	**0.0**
0.2	0.2	0.2	0.2	0.0	0.0	0.1	**0.1**
0.9	1.0	0.8	0.9	0.9	0.8	0.8	**0.8**
-5.2	-5.7	-4.8	-5.4	-5.3	-4.8	-4.7	**-5.0**

Greenhous	Indirect Ta	Reduction in car kms	Decongesti	Infrastructı	Accidents
0.8	**-5.0**	0	0	0	0
0.8	-4.9	0	0	0	0
0.8	-4.9	0	0	0	0
0.8	-4.9	0	0	0	0
0.8	-4.9	0	0	0	0
0.8	**-4.8**	0	0	0	0
0.8	-4.7	0	0	0	0
0.8	-4.7	0	0	0	0
0.8	-4.6	0	0	0	0
0.8	-4.5	0	0	0	0
0.7	**-4.4**	0	0	0	0
0.7	-4.2	-910008	-65721.5	-758.401	-13478.1
0.7	-4.1	-910008	-69162.06	-757.855	-13710.2
0.7	-4.0	-910008	-72602.62	-757.309	-13942.2

0.7	-3.9	-910008	-76043.18	-756.763	-14174.3
0.7	**-3.7**	-910008	-79483.74	-756.217	-14406.3
0.7	-3.7	-910008	-83167.63	-906.732	-14699.5
0.7	-3.6	-910008	-86851.52	-1057.25	-14992.7
0.7	-3.6	-910008	-90535.42	-1207.76	-15285.9
0.7	-3.5	-910008	-94219.31	-1358.28	-15579.2
0.7	**-3.4**	-910008	-97903.21	-1508.79	-15872.4
0.7	-3.4	-910008	-102818	-1508.79	-16179.4
0.8	-3.4	-910008	-107732.7	-1508.79	-16486.4
0.8	-3.4	-910008	-112647.5	-1508.79	-16793.5
0.9	-3.3	-910008	-117562.3	-1508.79	-17100.5
0.9	**-3.3**	-910008	-122477.1	-1508.79	-17407.5
1.0	-3.3	-910008	-127391.8	-1508.79	-17714.6
1.1	-3.3	-910008	-132306.6	-1508.79	-18021.6
1.1	-3.3	-910008	-137221.4	-1508.79	-18328.7
1.2	-3.2	-910008	-142136.1	-1508.79	-18635.7
1.2	-3.2	-910008	-147050.9	-1508.79	-18942.7
1.3	-3.2	-910008	-151965.7	-1508.79	-19249.8
1.3	-3.2	-910008	-156880.5	-1508.79	-19556.8
1.4	-3.1	-910008	-161795.2	-1508.79	-19863.8
1.4	-3.1	-910008	-166710	-1508.79	-20170.9
1.5	-3.1	-910008	-171624.8	-1508.79	-20477.9
1.5	-3.1	-910008	-176539.5	-1508.79	-20784.9
1.6	-3.1	-910008	-181454.3	-1508.79	-21092
1.6	-3.0	-910008	-186369.1	-1508.79	-21399
1.7	-3.0	-910008	-191283.9	-1508.79	-21706.1
1.8	-3.0	-910008	-196198.6	-1508.79	-22013.1
1.8	-3.0	-910008	-201113.4	-1508.79	-22320.1
1.9	-2.9	-910008	-206028.2	-1508.79	-22627.2
1.9	-2.9	-910008	-210942.9	-1508.79	-22934.2
2.0	-2.9	-910008	-215857.7	-1508.79	-23241.2
2.0	-2.9	-910008	-220772.5	-1508.79	-23548.3
2.1	-2.8	-910008	-225687.3	-1508.79	-23855.3
2.1	-2.8	-910008	-230602	-1508.79	-24162.3
2.2	-2.8	-910008	-235516.8	-1508.79	-24469.4
2.2	-2.8	-910008	-240431.6	-1508.79	-24776.4
2.3	-2.8	-910008	-245346.3	-1508.79	-25083.5
2.3	-2.7	-910008	-250261.1	-1508.79	-25390.5
2.4	-2.7	-910008	-255175.9	-1508.79	-25697.5
2.5	-2.7	-910008	-260090.6	-1508.79	-26004.6
2.5	-2.7	-910008	-265005.4	-1508.79	-26311.6
2.6	-2.6	-910008	-269920.2	-1508.79	-26618.6
2.6	-2.6	-910008	-274835	-1508.79	-26925.7
2.7	-2.6	-910008	-279749.7	-1508.79	-27232.7
2.7	-2.6	-910008	-284664.5	-1508.79	-27539.8
2.8	-2.6	-910008	-289579.3	-1508.79	-27846.8
2.8	-2.5	-910008	-294494	-1508.79	-28153.8
2.9	-2.5	-910008	-299408.8	-1508.79	-28460.9
2.9	-2.5	-910008	-304323.6	-1508.79	-28767.9

3.0	-2.5	-910008	-309238.4	-1508.79	-29074.9
3.0	-2.4	-910008	-314153.1	-1508.79	-29382
3.1	-2.4	-910008	-319067.9	-1508.79	-29689
3.2	-2.4	-910008	-323982.7	-1508.79	-29996
3.2	-2.4	-910008	-328897.4	-1508.79	-30303.1
3.3	-2.3	-910008	-333812.2	-1508.79	-30610.1
3.3	-2.3	-910008	-338727	-1508.79	-30917.2
3.4	-2.3	-910008	-343641.8	-1508.79	-31224.2

2015			
Motorways	A Roads	Other Roa	Motorways
0.0%	0.0%	0.0%	0.0%
0.1	75.1	50.2	1.7
0.0	0.1	0.1	0.0
0.0	3.2	3.2	0.0
0.2	0.1	0.2	0.1
0.2	0.2	0.2	0.2
0.9	0.9	1.2	0.8
-5.2	-5.4	-6.9	-5.0

Local Air Qual	Noise	Greenhous	Indirect Taxation
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	-773.325	-6636.69	38674.43
0	-824.103	-6604.84	37515.99
0	-874.882	-6572.99	36357.55

0	-925.66	-6541.14	35199.11
0	-976.439	-6509.29	34040.67
0	-975.347	-6442.13	33488.11
0	-974.255	-6374.97	32935.55
0	-973.163	-6307.81	32383
0	-972.071	-6240.65	31830.44
0	-970.978	-6173.49	31277.88
0	-1009.38	-6663.26	31071.31
0	-1047.78	-7153.03	30864.74
0	-1086.19	-7642.79	30658.17
0	-1124.59	-8132.56	30451.6
0	-1162.99	-8622.33	30245.02
0	-1201.39	-9112.09	30038.45
0	-1239.79	-9601.86	29831.88
0	-1278.2	-10091.6	29625.31
0	-1316.6	-10581.4	29418.74
0	-1355	-11071.2	29212.17
0	-1393.4	-11560.9	29005.59
0	-1431.81	-12050.7	28799.02
0	-1470.21	-12540.5	28592.45
0	-1508.61	-13030.2	28385.88
0	-1547.01	-13520	28179.31
0	-1585.42	-14009.8	27972.73
0	-1623.82	-14499.5	27766.16
0	-1662.22	-14989.3	27559.59
0	-1700.62	-15479.1	27353.02
0	-1739.03	-15968.8	27146.45
0	-1777.43	-16458.6	26939.88
0	-1815.83	-16948.4	26733.3
0	-1854.23	-17438.1	26526.73
0	-1892.63	-17927.9	26320.16
0	-1931.04	-18417.7	26113.59
0	-1969.44	-18907.4	25907.02
0	-2007.84	-19397.2	25700.44
0	-2046.24	-19887	25493.87
0	-2084.65	-20376.7	25287.3
0	-2123.05	-20866.5	25080.73
0	-2161.45	-21356.2	24874.16
0	-2199.85	-21846	24667.59
0	-2238.26	-22335.8	24461.01
0	-2276.66	-22825.5	24254.44
0	-2315.06	-23315.3	24047.87
0	-2353.46	-23805.1	23841.3
0	-2391.86	-24294.8	23634.73
0	-2430.27	-24784.6	23428.15
0	-2468.67	-25274.4	23221.58
0	-2507.07	-25764.1	23015.01
0	-2545.47	-26253.9	22808.44
0	-2583.88	-26743.7	22601.87

0	-2622.28	-27233.4	22395.3
0	-2660.68	-27723.2	22188.72
0	-2699.08	-28213	21982.15
0	-2737.49	-28702.7	21775.58
0	-2775.89	-29192.5	21569.01
0	-2814.29	-29682.3	21362.44
0	-2852.69	-30172	21155.87
0	-2891.1	-30661.8	20949.29

A Roads	Other Roads	A Roads	Other Roads	Motorways
0.0%	0.0%	13.8%	15.5%	16.5%
35.9	25.7	14.5	11.3	1.1
0.1	0.1	0.1	0.1	0.0
3.2	3.2	3.2	3.2	0.0
0.1	0.1	0.1	0.1	0.0
0.2	0.2	0.2	0.2	0.0
0.8	0.9	0.8	0.9	0.9
-5.0	-5.6	-4.7	-5.3	-5.1

£ [redacted]

Discounted benefits

Decongestion	Infrastructure	Accidents	Local Air Quality	Noise
£ -	£ -	£ -	£ -	£ -
£ -	£ -	£ -	£ -	£ -
£ -	£ -	£ -	£ -	£ -
£ -	£ -	£ -	£ -	£ -
£ -	£ -	£ -	£ -	£ -
£ -	£ -	£ -	£ -	£ -
£ -	£ -	£ -	£ -	£ -
£ -	£ -	£ -	£ -	£ -
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£ -	£ -	£ -	£ -	£ -
£	[redacted]			
£				
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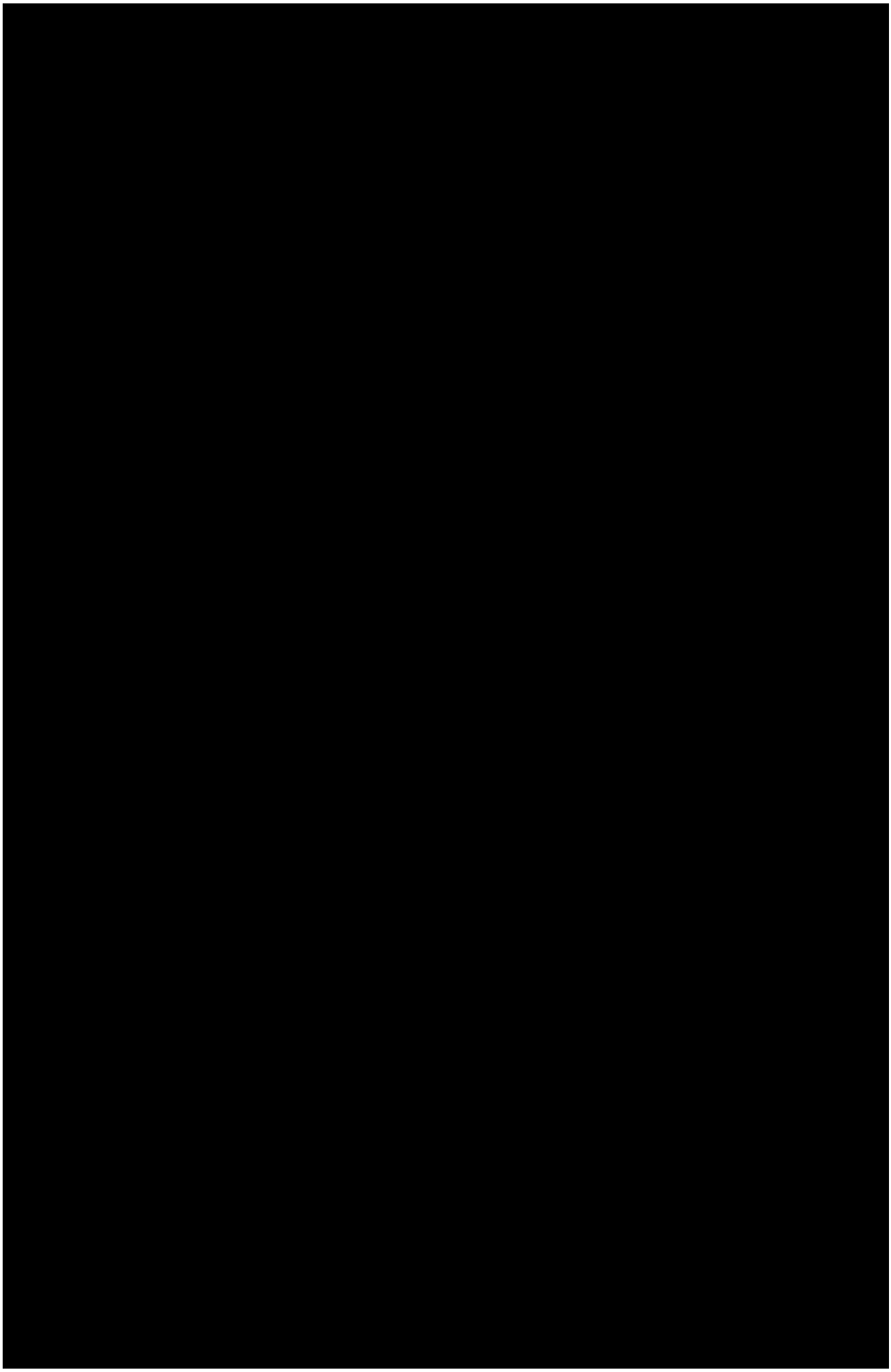

A Roads	Other Roads			2020 Motorways
33.1%	21.0%			0.0%
2.4	3.2	**5.4**		0.4
0.1	0.1	**0.1**		0
0.7	0.7	**1.3**		0
0.0	0.0	**0.0**		0.1
0.0	0.1	**0.1**		0.2
0.8	0.8	**0.8**		0.8
-4.7	-4.6	**-4.8**		-4.7

£ [redacted]

Greenhouse Gases Indirect Taxation

£	-	£	-
£	-	£	-
£	-	£	-
£	-	£	-
£	-	£	-
£	-	£	-
£	-	£	-
£	-	£	-
£	-	£	-
£	-	£	-
£	[redacted]		
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A Roads	Other Roa	Motorways	A Roads	Other Roa	A Roads	Other Roa	Motorways
0.0%	0.0%	0.0%	0.0%	0.0%	13.8%	15.4%	16.7%
100.2	62.6	3.1	46	32.4	18.3	13.6	2
0.1	0.1	0	0.1	0.1	0.1	0.1	0
3.5	3.5	0	3.5	3.5	3.5	3.5	0
0.1	0.1	0	0	0	0	0	0
0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
0.8	1	0.7	0.7	0.8	0.7	0.8	0.8
-5	-6.3	-4.5	-4.6	-5.1	-4.3	-4.8	-4.6

A Roads	Other Roads		2025 Motorways	A Roads
33.2%	21.0%		0.0%	0.0%
3.1	4.1	**6.8**	1.1	141.2
0.1	0.1	**0.1**	0	0.1
0.8	0.8	**1.5**	0	3.8
0	0	**0.0**	0.1	0
0	0.1	**0.1**	0.3	0.3
0.7	0.7	**0.7**	0.7	0.8
-4.2	-4.2	**-4.4**	-4	-4.4

Other Roa	Motorways	A Roads	Other Roa	A Roads	Other Roa	Motorways	A Roads
0.0%	0.0%	0.0%	0.0%	13.5%	15.3%	16.9%	33.4%
76.3	5.5	56.9	42.8	23.1	16.1	3.7	4
0.1	0	0.1	0.1	0.1	0.1	0	0.1
3.8	0	3.8	3.8	3.8	3.8	0	0.9
0	0	0	0	0	0	0	0
0.3	0.3	0.3	0.3	0.3	0.3	0	0
1	0.7	0.7	0.8	0.7	0.8	0.7	0.7
-5.5	-3.8	-4	-4.4	-3.7	-4.1	-3.9	-3.6

Other Roads		2030 Motorways	A Roads	Other Roa
20.9%		0.0%	0.0%	0.0%
5.7	**8.7**	1.9	172.2	90.3
0.1	**0.1**	0	0.2	0.2
0.9	**1.6**	0	4.2	4.2
0	**0.0**	0	0	0
0.1	**0.1**	0.3	0.3	0.3
0.7	**0.7**	0.7	0.8	1
-3.6	**-3.7**	-3.6	-4.2	-5.1

Motorways	A Roads	Other Roa	A Roads	Other Roa	Motorways	A Roads	Other Roa
0.0%	0.0%	0.0%	13.4%	15.2%	17.0%	33.4%	20.9%
7.6	69	51.7	28	18.3	6.3	5	7.1
0	0.2	0.2	0.2	0.2	0	0.2	0.2
0	4.2	4.2	4.2	4.2	0	1	1
0	0	0	0	0	0	0	0
0.3	0.3	0.3	0.3	0.3	0	0	0.1
0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.6
-3.5	-3.7	-4	-3.4	-3.8	-3.6	-3.3	-3.3

ds		2035 Motorways	A Roads	Other Roa	Motorways
		0.0%	0.0%	0.0%	0.0%
10.8		3.1	217.5	106.8	11.3
0.2		0	0.2	0.2	0
1.7		0	4.6	4.6	0
0.0		0.1	0	0	0
0.1		0.3	0.3	0.3	0.3
0.7		1	1.2	1.4	1
-3.4		-3.5	-4.1	-5	-3.4

A Roads	Other Roa	A Roads	Other Roa	Motorways	A Roads	Other Roads	
0.0%	0.0%	13.4%	15.2%	17.1%	33.3%	21.0%	
86.6	63.4	34.3	21.2	10.4	6.3	8.4	**13.5**
0.2	0.2	0.2	0.2	0	0.2	0.2	**0.2**
4.6	4.6	4.6	4.6	0	1.1	1.1	**1.9**
0	0	0	0	0	0	0	**0.0**
0.3	0.3	0.3	0.3	0	0	0.2	**0.1**
1	1.1	0.9	1.1	1	0.9	0.9	**0.9**
-3.6	-3.9	-3.3	-3.7	-3.4	-3.2	-3.2	**-3.3**

Years of increasing demand	2
UK average short term absence of employees	6.46
Expected reduction in absenteeism	6%
Based on…	30
Reduction of sick days:	0.3876
Daily employment cost	[redacted]
… per individual	
Proportion of commuting trips on the route	
Value of reduction in absenteeism per cyclist	
Value of reduction in absenteeism per walker	
Reduced absenteesim days per year	

CYCLING	Include in a	Years after	Year	20%	40%	60%
2010	0	-11	-10	0	0	0
2011	0	-10	-9	0	0	0
2012	0	-9	-8	0	0	0
2013	0	-8	-7	0	0	0
2014	0	-7	-6	0	0	0
2015	0	-6	-5	0	0	0
2016	0	-5	-4	0	0	0
2017	0	-4	-3	0	0	0
2018	0	-3	-2	0	0	0
2019	0	-2	-1	0	0	0
2020	0	-1	0	0	0	0
2021	1	0	1	183	0	0
2022	1	1	2	0	183	0
2023	1	2	3	0	0	183
2024	1	3	4	0	0	0
2025	1	4	5	0	0	0
2026	1	5	6	0	0	0
2027	1	6	7	0	0	0
2028	1	7	8	0	0	0
2029	1	8	9	0	0	0
2030	1	9	10	0	0	0
2031	1	10	11	0	0	0
2032	1	11	12	0	0	0
2033	1	12	13	0	0	0
2034	1	13	14	0	0	0
2035	1	14	15	0	0	0
2036	1	15	16	0	0	0
2037	1	16	17	0	0	0
2038	1	17	18	0	0	0
2039	1	18	19	0	0	0
2040	1	19	20	0	0	0
2041	0	20	21	0	0	0
2042	0	21	22	0	0	0

2043	0	22	23	0	0	0
2044	0	23	24	0	0	0
2045	0	24	25	0	0	0
2046	0	25	26	0	0	0
2047	0	26	27	0	0	0
2048	0	27	28	0	0	0
2049	0	28	29	0	0	0
2050	0	29	30	0	0	0
2051	0	30	31	0	0	0
2052	0	31	32	0	0	0
2053	0	32	33	0	0	0
2054	0	33	34	0	0	0
2055	0	34	35	0	0	0
2056	0	35	36	0	0	0
2057	0	36	37	0	0	0
2058	0	37	38	0	0	0
2059	0	38	39	0	0	0
2060	0	39	40	0	0	0
2061	0	40	41	0	0	0
2062	0	41	42	0	0	0
2063	0	42	43	0	0	0
2064	0	43	44	0	0	0
2065	0	44	45	0	0	0
2066	0	45	46	0	0	0
2067	0	46	47	0	0	0
2068	0	47	48	0	0	0
2069	0	48	49	0	0	0
2070	0	49	50	0	0	0
2071	0	50	51	0	0	0
2072	0	51	52	0	0	0
2073	0	52	53	0	0	0
2074	0	53	54	0	0	0
2075	0	54	55	0	0	0
2076	0	55	56	0	0	0
2077	0	56	57	0	0	0
2078	0	57	58	0	0	0
2079	0	58	59	0	0	0
2080	0	59	60	0	0	0

WALKING

	Include in a	Years after	Year	20%	40%	60%
2010	0	-11	-10	0	0	0
2011	0	-10	-9	0	0	0
2012	0	-9	-8	0	0	0
2013	0	-8	-7	0	0	0
2014	0	-7	-6	0	0	0
2015	0	-6	-5	0	0	0

2016	0	-5	-4	0	0	0
2017	0	-4	-3	0	0	0
2018	0	-3	-2	0	0	0
2019	0	-2	-1	0	0	0
2020	0	-1	0	0	0	0
2021	1	0	1	0	0	0
2022	1	1	2	0	0	0
2023	1	2	3	0	0	0
2024	1	3	4	0	0	0
2025	1	4	5	0	0	0
2026	1	5	6	0	0	0
2027	1	6	7	0	0	0
2028	1	7	8	0	0	0
2029	1	8	9	0	0	0
2030	1	9	10	0	0	0
2031	1	10	11	0	0	0
2032	1	11	12	0	0	0
2033	1	12	13	0	0	0
2034	1	13	14	0	0	0
2035	1	14	15	0	0	0
2036	1	15	16	0	0	0
2037	1	16	17	0	0	0
2038	1	17	18	0	0	0
2039	1	18	19	0	0	0
2040	1	19	20	0	0	0
2041	0	20	21	0	0	0
2042	0	21	22	0	0	0
2043	0	22	23	0	0	0
2044	0	23	24	0	0	0
2045	0	24	25	0	0	0
2046	0	25	26	0	0	0
2047	0	26	27	0	0	0
2048	0	27	28	0	0	0
2049	0	28	29	0	0	0
2050	0	29	30	0	0	0
2051	0	30	31	0	0	0
2052	0	31	32	0	0	0
2053	0	32	33	0	0	0
2054	0	33	34	0	0	0
2055	0	34	35	0	0	0
2056	0	35	36	0	0	0
2057	0	36	37	0	0	0
2058	0	37	38	0	0	0
2059	0	38	39	0	0	0
2060	0	39	40	0	0	0
2061	0	40	41	0	0	0
2062	0	41	42	0	0	0
2063	0	42	43	0	0	0
2064	0	43	44	0	0	0

2065	0	44	45	0	0	0
2066	0	45	46	0	0	0
2067	0	46	47	0	0	0
2068	0	47	48	0	0	0
2069	0	48	49	0	0	0
2070	0	49	50	0	0	0
2071	0	50	51	0	0	0
2072	0	51	52	0	0	0
2073	0	52	53	0	0	0
2074	0	53	54	0	0	0
2075	0	54	55	0	0	0
2076	0	55	56	0	0	0
2077	0	56	57	0	0	0
2078	0	57	58	0	0	0
2079	0	58	59	0	0	0
2080	0	59	60	0	0	0

days per year

minutes activity per day

80%	100%	Employment cost	Per individ	Reduction per cyclist
0	0	£ [redacted]		
0	0	£ [redacted]		
0	0	£ [redacted]		
0	0	£ [redacted]		
0	0	£ [redacted]		
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0	0	£ [redacted]		
0	0	£ [redacted]		
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183	0	£ [redacted]		
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80%	100%	Employment cost Per individ Reduction per walker	
0	0	£	[redacted]
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Undiscounted benefits		Discounted Benefits	
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£	-	£	-
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Undiscounted benefits		Discounted Benefits	
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