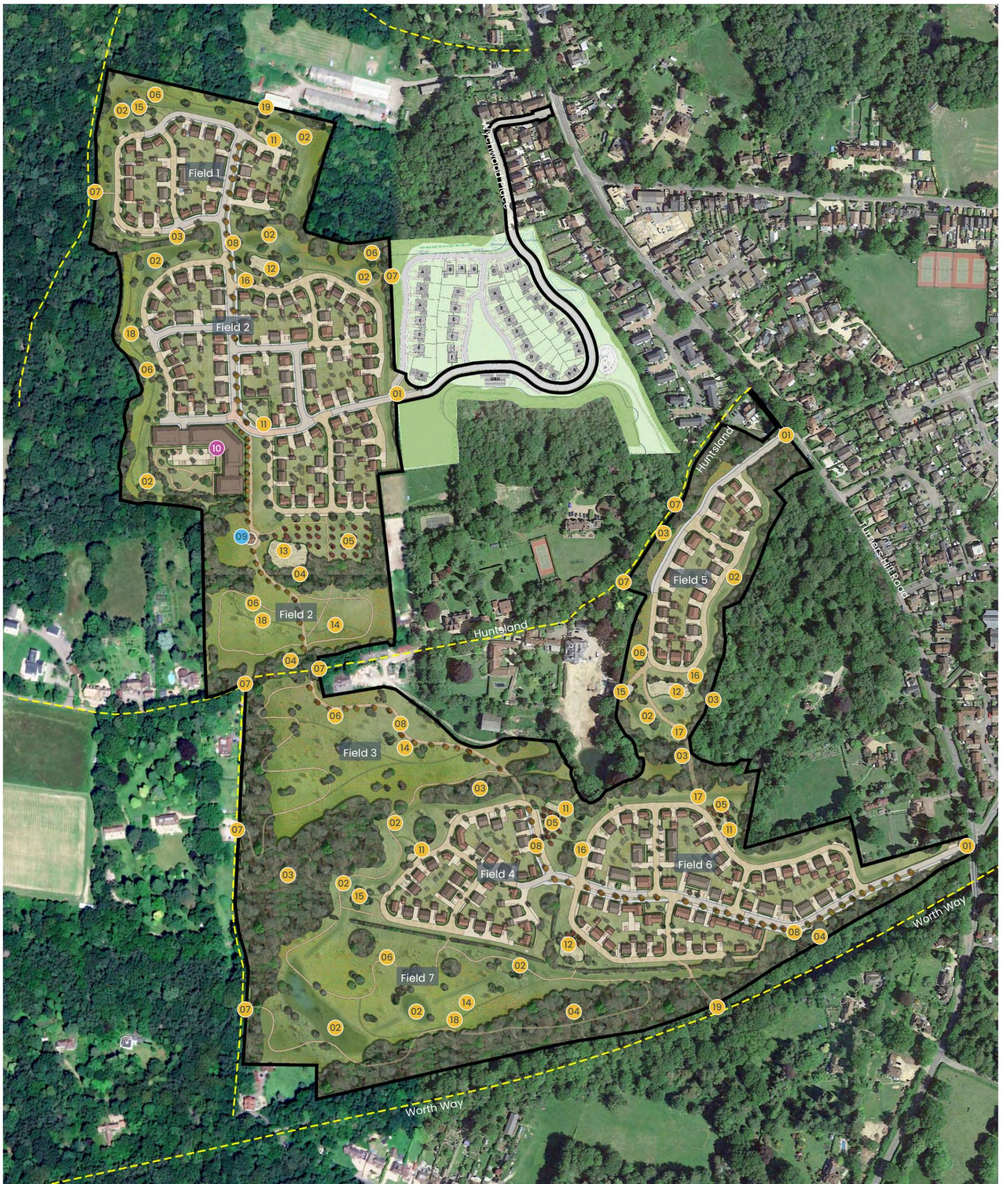


APPENDIX A. Study Area Masterplan



- Study area
- 01 Vehicular/pedestrian and cycle access point
- 02 Sustainable drainage system including swales
- 03 Retained and enhanced vegetation
- 04 Tree belt planting
- 05 Community orchard/garden

- 06 Meadow planting and species-rich landscapes
- 07 Pedestrian connection points
- 08 Shared cycle/footpath
- 09 Community heart including gathering space/band stand area and St Leonards lookout

- 10 65 bed care home
- 11 Local Area for Play
- 12 Local Equipped Area for Play
- 13 Neighbourhood Equipped Area for Play
- 14 Countryside open space
- 15 Pumping station

- 16 Substation
- 17 Emergency, Cycle and pedestrian link
- 18 Mown paths
- 19 Cycle and pedestrian connection point
- Public right of way: Footpath



Not to scale

CLIENT: WATES DEVELOPMENTS

PROJECT: LAND WEST OF CRAWLEY DOWN

DRAWING: **STUDY AREA** COMPREHENSIVE ILLUSTRATIVE MASTERPLAN: 350 UNITS

PROJECT NUMBER: 1314

DRAWING NUMBER: SK001

REVISION: V15

DATE: 15.01.2025

APPENDIX B. Road Safety Audits



Specialists in Road Safety Engineering

Stage 1 Road Safety Audit

Turners Hill Road, Crawley Down

Proposed Site Access Arrangements onto Turners Hill Road

On behalf of: **i-Transport**

Report Ref: 22042-3

Date: 28 July 2022

Courzons Ltd
23 Oaktree Drive
Hook
Hampshire
RG27 9RA

Email: office@courzons.co.uk

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SECTION 1 DOCUMENT CONTROL

Report Title:	Stage 1 Road Safety Audit
Date:	August 22
Document reference and revision:	22042-3
Prepared by:	Courzons Limited
On behalf of the Overseeing Organisation:	West Sussex County Council
Design Organisation:	i-Transport
Project Sponsor:	Wates Developments

REV	ISSUE PURPOSE	AUTHOR	CHECKED	APPROVED	DATE
0	Draft for Audit Team Review	ZB			26 th July 2022
1	Report finalised and issued to the Design Organisation	ZB	JJF	ZB	28 th July 2022



SECTION 2 INTRODUCTION

2.1 Background

2.1.1 This report has been prepared by Courzons Limited and describes a Stage 1 Road Safety Audit carried out on two site access arrangement options onto Turners Hill Road in Crawley Down, Hampshire. It is understood the proposed site access arrangements subject to this document are to serve circa. 250 dwellings of a wider emerging site allocation for up to 350 residential dwellings. Additional site access arrangements are proposed to serve the remaining dwellings, however, these do not form part of the scope of this Audit.

2.1.2 The works proposed as part of the two options, include the following which are not compared by the Audit Team but are included within separate tables to allow for easy comparison by the Design Organisation and Overseeing Organisation:-

Option A - Proposed Signal Controlled junction arrangement at Turners Hill Road / Vicarage Road / Proposed Site Access - as illustrated on drawing ITB9155-GA-027B

- Single lane on each approach.
- 6.75 metre wide access.
- 2 metre footway on southern side of access, connecting with access onto Worth Way and a crossing on Turners Hill Road.
- Signal controlled crossings on Turners Hill Road and Vicarage Road - pedestrians cross during all red stage.
- New section of 1.5 metre wide footway on Vicarage Road to tie in to crossing.
- Forward visibility to signal heads on all approaches based on recorded 85th percentile speeds, as follows: -
 - Turners Hill Road northbound – 33.33mph
 - Turners Hill Road southbound - 38.48mph
 - Vicarage Road westbound - 27.68mph
- Forward visibility to back of queue based on recorded 85th percentile speeds, as follows: -



- Turners Hill Road northbound: 39.48 mph
- Turners Hill Road southbound: 40.82 mph
- Nearside and offside signal heads on all approaches.
- Junction to operate over 120 second cycle time in the following order:
 - Turners Hill Road southbound traffic;
 - Turners Hill Road northbound traffic;
 - Vicarage Road and access arm; and
 - Pedestrian crossings in walk with phase (on demand but for purpose of model assumed to be called up every three cycles, reflecting relatively low demands expected at site with multiple points of pedestrian access further north).

Option B - Proposed Staggered Priority junction arrangement at Turners Hill Road / Vicarage Road / Proposed Site Access - as illustrated on drawing ITB9155-GA-029A

- A new 6 metre wide carriageway access road and 2 metre wide footway on the southern side.
- Junction visibility splays of 2.4 x 49.9 metres to the right and 2.4 x 61.7 metres to the left in line with the recorded 85th percentile speeds on Turners Hill Road of 33.33mph northbound and 38.48mph southbound.
- Pedestrian crossing facility with dropped kerb and tactile paving across Turners Hill Road.

2.1.3 Road Safety Audit has been undertaken by an Audit Team whose qualifications and experience accord with the requirements of GG119. The Audit Team comprised:

Audit Team Leader

Zane Beswick – MCIHT, MSoRSA Road Safety / Highway Engineer – Courzons Limited

Audit Team Member

Jamie Fenning - BSc(Hons), MIHE, MCIHT, MSoRSA, Highways England RSA Certificate of Competency, Road Safety / Highway Engineer – Courzons Limited



-
- 2.1.4 The audit was carried out in accordance with GG 119 of The Design Manual for Roads and Bridges (DMRB).
- 2.1.5 The Audit took place during June and July 2022 and comprised an examination of the drawings and other information provided, as is listed in **Appendix A**.
- 2.1.6 A site visit and inspection was undertaken by the Audit Team Leader and Audit Team Member during the afternoon on Tuesday 28th June 2022 between 4pm and 4:35pm. The weather during the site visit was clear with scattered clouds, the road surface was dry and visibility was good. Vehicular traffic to include motorcycles, cars and light goods vehicles were observed during the site visit. A number of pedestrians and a cyclist were also observed during the site visit.
- 2.1.7 The Audit Brief identifies that the potential signal controlled junction arrangement is subject to a Departure from Standard (DfS) that relates to the achievable junction intervisibility zone. Standards detailed in the Design Manual for Roads and Bridges (DMRB) CD123 Section 7 paragraph 4 sets out a requirement for an intervisibility zone to be provided that incorporates an area that extends across the full carriageway width of each arm from a distance of 2.5 metres back from each stop line.
- 2.1.8 The Audit Brief indicates a review of the most recent five-year period of Personal Injury Accident's (PIA's) indicated on Crashmap demonstrates that there have been five 'slight' injury accidents within the local area, with only one recorded at the Vicarage Road / Turners Hill Road junction. At the time of the site visit, sympathy / empathy items, such as flowers, typically associated with a 'serious' or 'fatal' PIA were observed placed against the bridge parapet on the eastern side of Turners Hill Road, within the vicinity of an existing uncontrolled crossing located on the southern kerb radii of Vicarage Road. No further details are available at this time. Up to date PIA data should be obtained at the application stage and reviewed accordingly.
- 2.1.9 Following queries raised by the Audit Team relating to intergreen times, the model was revised by the Design Organisation and the Audit Brief re-issued to the Audit Team where it was confirmed by the Design Organisation that the revised model is considered acceptable.



2.1.10 A scheme drawing illustrating where the locations of specific problems are referenced is included in **Appendix B**.

2.1.11 This Road Safety Audit has been compiled, only with regards to the safety implications for road users of the proposals presented in the supplied documentation. It has not been examined or verified for compliance with any other standards or criteria. This safety audit does not perform any “Technical Check” function on these proposals, however, in order to clearly explain a safety problem or the recommendation to resolve a problem, the Audit Team may on occasion have referred to a design standard for information only.



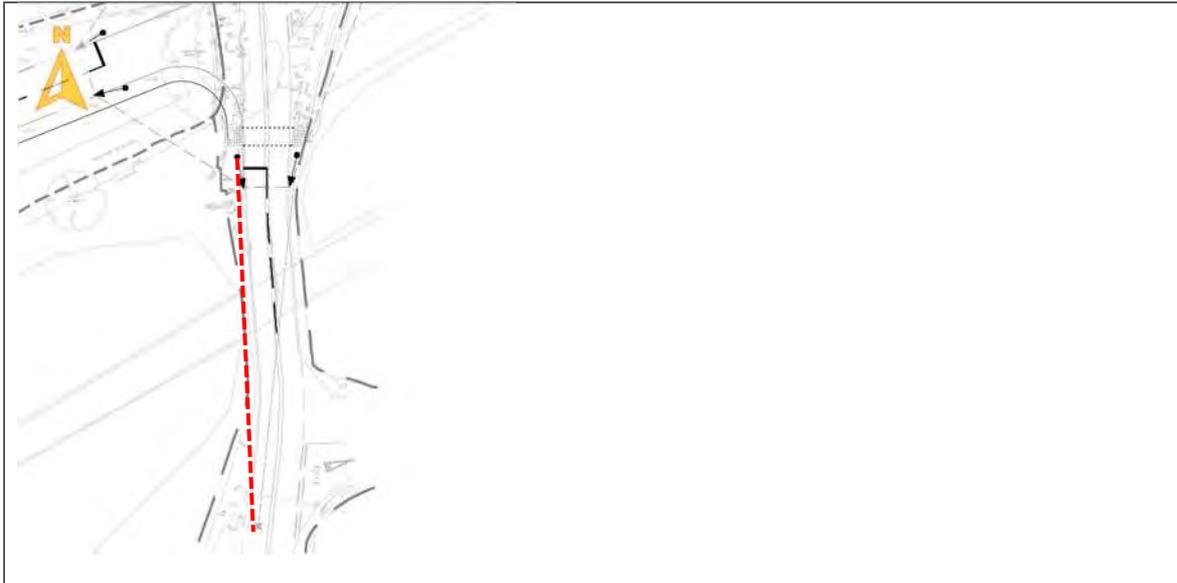
SECTION 3 SAFETY ISSUES RAISED AT PREVIOUS AUDITS

- 3.1** Courzons Limited have not been made aware of any previous road safety audits associated with the proposals that form part of this audit.

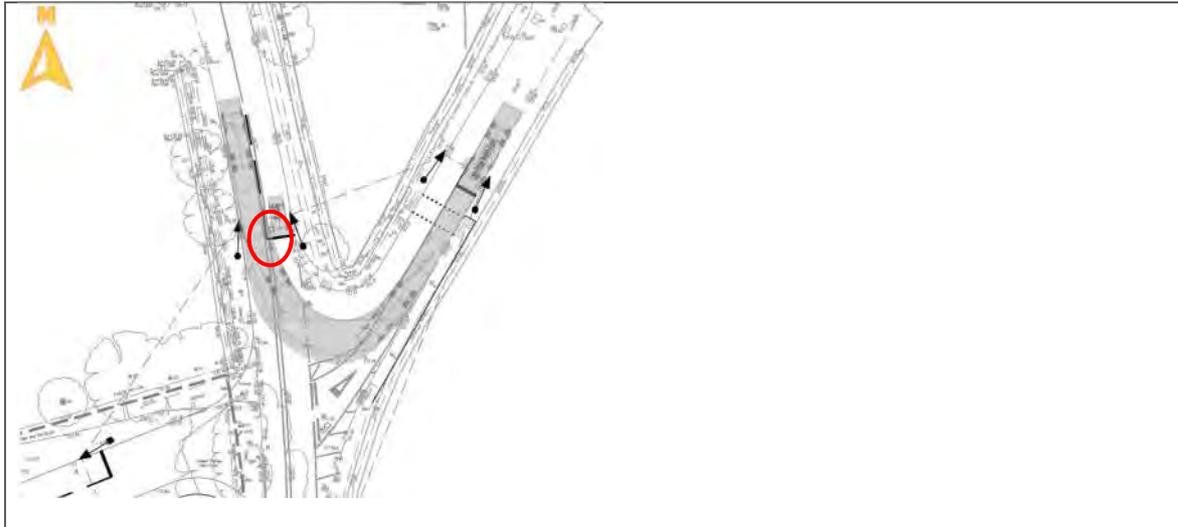


SECTION 4 ITEMS RAISED AT THIS STAGE 1 AUDIT – OPTION A

4.1	LOCAL ALIGNMENT
	No road safety concerns raised at this stage.
4.2	GENERAL
4.2.1	Problem
Location:	Turners Hill Road Southern Arm
Summary:	Insufficient visibility to primary signal head
<p>The scheme includes the provision of a new access on the western side of Turners Hill Road and the signalling of the junction arrangement at Turners Hill Road / Vicarage Road / Proposed Site Access. Primary signal heads are shown on either side of the carriageway on all arms. Visibility in accordance with the recorded 85th percentile speed of 33.33mph, which is identified to equate to 49.9 metres in accordance with Manual for Streets criteria, is shown to a signal head located on the eastern side of Turners Hill Road for the northbound approach, however, no visibility splay is shown to the signal head located on the western side of Turners Hill Road. The Audit Team have concerns that if the signal head on the eastern side fails, there may be insufficient visibility to the signal head on the western side. Furthermore, that a high sided southbound vehicle could obstruct the signal head on the eastern side of the carriageway. Insufficient visibility could result in an approaching driver failing to notice a red signal ahead with sufficient time to stop, leading to junction overshoots, heavy vehicle braking and loss of control type incidents.</p>	
Recommendation:	
It is recommended that an appropriate level of visibility to the primary signal head on the eastern side of Turners Hill Road is achievable.	
Location Plan:	



4.2.2	Problem
Location:	Scheme
Summary:	Arrangement may not be adequate to accommodate the expected vehicles
<p>The scheme includes the provision of a new access on the western side of Turners Hill Road and the signalling of the junction arrangement at Turners Hill Road / Vicarage Road / Proposed Site Access. Swept path analysis of a Refuse / Recycling Collection Vehicle (RCV) undertaking various manoeuvres at the junction has been provided. The swept path analysis of a RCV turning right out of Vicarage Lane is shown to successfully pass a stationary car at the stop line, however, the RCV is shown to cross the centreline at the stop line. The Audit Brief identifies Heavy Goods Vehicles (HGV's) can be expected to negotiate north / south through the junction. There is a risk a right turning RCV may be unable to pass a stationary HGV at the stop line. Insufficient space to enable the two vehicles to pass could result in sideswipes or the need for one of the drivers to reverse, potentially leading to rear end collisions or collisions with kerbs / adjacent infrastructure.</p>	
Recommendation:	
It is recommended that the scheme allows for the expected vehicles and manoeuvres.	
Location Plan:	



4.2.3	Problem
Location:	Turners Hill Road – Proposed Access
Summary:	Existing utility cover is situated within the proposed access
<p>Turners Hill Road is a single carriageway two-way road that accommodates a number of service / utility covers within the grass verge on the western side of the carriageway. The scheme includes the provision of a new access on the western side of Turners Hill Road and the signalling of the junction arrangement at Turners Hill Road / Vicarage Road / Proposed Site Access. As observed on-site, a cover is present within the proposed access at the location where a vehicle entering the priority access will be slowing and turning. The Audit Brief does not provide any details of utilities at this stage, however, a cover within the existing verge may not be sufficient to accommodate vehicular traffic or benefit from sufficient frictional properties, which could lead to failure / skidding and loss of control type collisions, particularly at locations where two-wheeled vehicles could be expected to undertake turns.</p>	
Recommendation:	
It is recommended that the service / utility cover is relocated and / or adjusted accordingly.	
Location Plan:	



4.2.4

Problem

Location:

Turners Hill Road – Proposed Access

Summary:

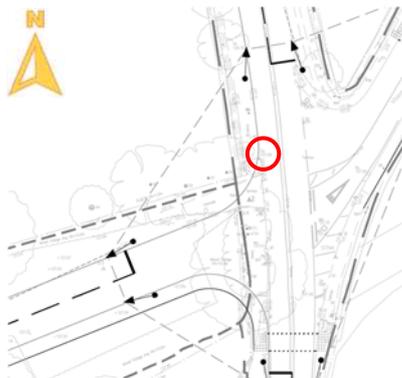
Surface water may not drain sufficiently

Turners Hill Road is a single carriageway two-way road that is subject to a 30mph speed limit in the vicinity of the scheme and accommodates a crossfall, encouraging surface water to flow to the western side of the carriageway where it drains to a drainage ditch. The scheme includes the provision of a new access on the western side of Turners Hill Road and the signalling of the junction arrangement at Turners Hill Road / Vicarage Road / Proposed Site Access. At the location of the proposed access an existing road gully is present. No drainage details have been provided at this stage, however, the removal of the road gully will increase the amount of surface water that will flow across Turners Hill Road and the proposed access, which could lead to surface water ponding and loss of control type incidents, particularly during inclement and freezing conditions.

Recommendation:

It is recommended that the proposals allow for surface water to drain sufficiently.

Location Plan:



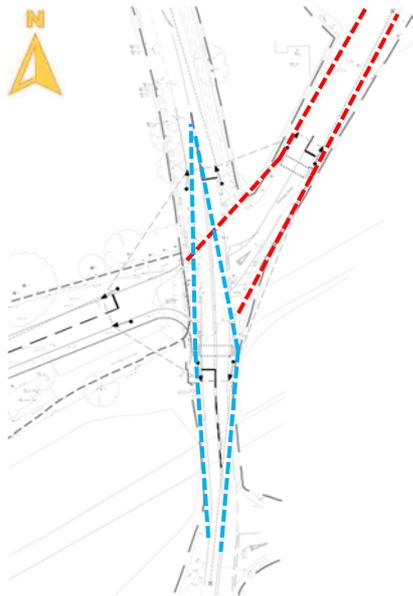
4.3	JUNCTIONS
4.3.1	Problem
Location:	Scheme
Summary:	Insufficient junction intervisibility zone
<p>The scheme includes the provision of a new access on the western side of Turners Hill Road and the signalling of the junction arrangement at Turners Hill Road / Vicarage Road / Proposed Site Access. The scheme drawing provided with the Audit Brief illustrates the junction intervisibility zone encroaches third party land as well as areas where a number of obstructions, such as vegetation, to include mature trees, and street furniture, are present. The achievable junction intervisibility zone is therefore restricted. The Audit Team are concerned that, should the signals fail, the restricted achievable junction intervisibility could result in drivers attempting to navigate the junction when it is unsafe to do so, leading to side/rear impact collisions, or pedestrians inadvertently stepping out into the path of a vehicle.</p>	
Recommendation:	
It is recommended that an appropriate level of junction intervisibility is achievable.	
Location Plan:	
4.4	NON-MOTORISED USER PROVISION
4.4.1	Problem
Location:	Scheme
Summary:	Insufficient visibility to / from users at the uncontrolled crossing points
<p>Turners Hill Road is a single carriageway two-way road that is subject to a 30mph speed limit in the vicinity of the scheme, with an existing uncontrolled pedestrian crossing</p>	

present on the southern radius of Vicarage Road within the vicinity of the scheme. The scheme includes the provision of a new access on the western side of Turners Hill Road and the signalling of the junction arrangement at Turners Hill Road / Vicarage Road / Proposed Site Access and the relocation and signalling of the existing uncontrolled pedestrian crossing on Vicarage Road, south of its existing location. The Audit Brief identifies visibility splays of 38.3 metres on Vicarage Road and 61.7 metres and 49.9 metres to the north and south on Turners Hill Road respectively, however, no visibility splays have been shown for users at the proposed crossing points. The Audit Team are unsure if suitable visibility is achievable from the crossing points, particularly on Vicarage Road where visibility appears restricted by the vegetation, bridge parapets and guard railing. Limited visibility from and to a crossing point could lead to a pedestrian / cyclist entering into the path of an approaching vehicle, resulting in a vehicle to pedestrian / cyclist collision or heavy vehicle braking and loss of control.

Recommendation:

It is recommended that sufficient visibility to / from the crossing points is achievable and that any obstructions, to include vegetation and street furniture, within the visibility splay envelopes are cleared, and maintained clear, to ensure an appropriate level of visibility is achievable.

Location Plan:



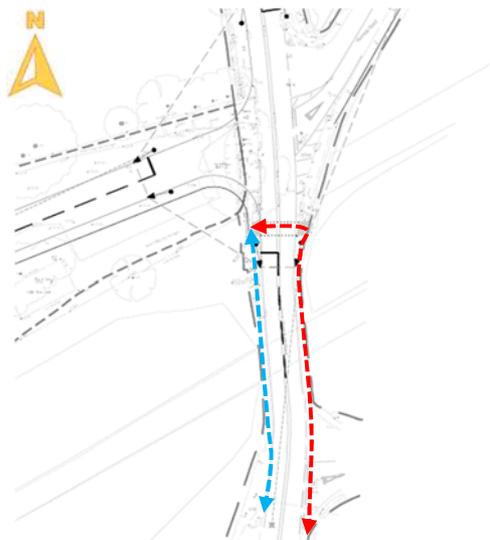
4.4.2	Problem
Location:	Turners Hill Road
Summary:	Insufficient facilities for footway users along a likely desire line
Turners Hill Road is a single carriageway two-way road that is subject to a 30mph speed limit in the vicinity of the scheme. A footway is present on the eastern side of Turners Hill Road, with the closest bus stops located on Turners Hill Road, some 100 metres to the	

south and some 800 metres north. The scheme includes the provision of a new access on the western side of Turners Hill Road and the signalling of the junction arrangement at Turners Hill Road / Vicarage Road / Proposed Site Access, alongside the provision of signal controlled pedestrian crossings on the Vicarage Road and Turners Hill Road (south) arms. A desire line will be present southbound to / from the closest bus stops, where a post box is also present on the western side of Turners Hill Road. While a proposed controlled crossing is illustrated to the south on Turners Hill Road, a lack of crossing facilities at the Turners Hill Road / Grange Road junction and at the bus stops could lead to pedestrians continuing via the narrow footway over the bridge and the grass verge on the western side of Turners Hill Road. If opposed by other users a pedestrian could enter the live carriageway where vehicles are manoeuvring, potentially into the path of vehicles, resulting in vehicle to pedestrian collisions.

Recommendation:

It is recommended that measures are provided to discourage pedestrians from continuing southbound via the narrow footway over the bridge and grass verge on the western side of Turners Hill Road and that suitable facilities are provided at the Turners Hill Road / Grange Road junction and at the northbound bus stop to encourage pedestrians to navigate via the existing footway on the eastern side of Turners Hill Road.

Location Plan:



4.4.3	Problem
Location:	Turners Hill Road – Proposed Access
Summary:	Footway users likely to cross Turners Hill Road where full height kerbs are present
<p>Turners Hill Road and Vicarage Road are single carriageway two-way roads that are subject to a 30mph speed limit in the vicinity of the scheme. Footways are present on the eastern side of Turners Hill Road and the northern side of Vicarage Road. The scheme includes the provision of a new 6.75 metre wide access on the western side of</p>	

Turners Hill Road with a 2 metre wide footway on the southern side, alongside two signal controlled pedestrian crossings on Vicarage Road and Turners Hill Road and a section of 1.5 metre wide footway on the southern side of Vicarage Road. A footway user looking to travel to / from the north via the footway on the eastern side of Turners Hill Road to / from the access is unlikely to divert to the proposed signal controlled pedestrian crossings on Turners Hill Road and Vicarage Road and instead will cross Turners Hill Road at the junction, where full height kerbs and vegetation are present, which could lead to trips falls and personal injuries.

Recommendation:

It is recommended that facilities for footway users are provided along the likely desire line.

Location Plan:



4.4.4

Problem

Location:

Turners Hill Road / Proposed Access

Summary:

Insufficient facilities to accommodate pedestrians and cyclists along a likely desire line

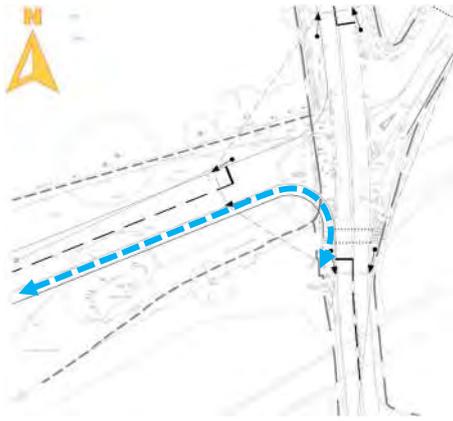
Turners Hill Road is a single carriageway two-way road that is subject to a 30mph speed limit in the vicinity of the scheme. A footway is present on the eastern side of the Turners Hill Road that connects to Worth Way, an 11km footpath and bridleway linking Crawley and East Grinstead via the village of Crawley Down, access to which is currently gained on the western side of Turners Hill Road via an uncontrolled crossing. The scheme includes the provision of a new access on the western side of Turners Hill Road, with a 2 metre wide footway on the southern side that provides a direct connection to the Worth Way footpath and bridleway. Residents of the potential development will be expected to travel to / from Worth Way by foot and cycle. The Audit Team is concerned that the proposed 2 metre wide footway is not wide enough to accommodate pedestrians and cyclists. An inadequate width footway / cycleway could lead to cyclist to pedestrian collisions or pedestrians / cyclists attempting to enter / exit the footway where full height kerbs are present, which could destabilise a cyclist, leading to a fall and personal injury

or potentially vehicle to cyclist collisions and pedestrian trips and falls or potentially vehicle to pedestrian collisions.

Recommendation:

It is recommended that the proposed footway on the southern side of the access road and its connection with Worth Way are sufficient to accommodate pedestrians and cyclists.

Location Plan:



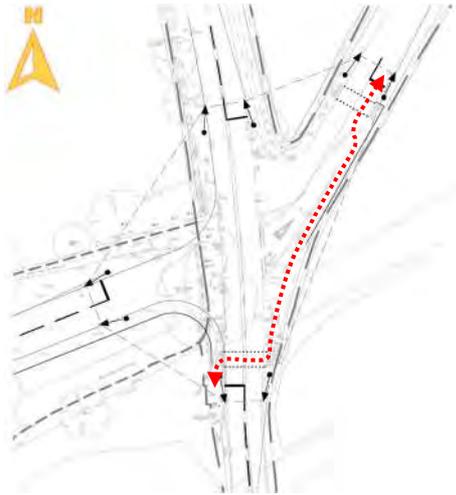
4.4.5	Problem
Location:	Turners Hill Road / Vicarage Road
Summary:	Insufficient facilities to accommodate pedestrians and cyclists along a likely desire line

Turners Hill Road and Vicarage Road are single carriageway two-way roads that are subject to a 30mph speed limit in the vicinity of the scheme. Footways are present on the eastern side of Turners Hill Road and the northern side of Vicarage Road. The scheme includes the provision of a new access on the western side of Turners Hill Road, two signal controlled pedestrian crossings on Vicarage Road and Turners Hill Road and a section of 1.5 metre wide footway on the southern side of Vicarage Road, enabling a connection between the two proposed signal controlled pedestrian crossings. Cyclists travelling between the northeast / centre of Crawley Down and the Worthy Way footpath and bridleway, are likely to utilise the proposed footway on the southern side of Vicarage Road and the proposed signal controlled pedestrian crossing on Turners Hill Road, within the vicinity of the entrance / exit to Worthy Way. There is a concern the proposed 1.5 metre wide footway and the proposed signal controlled pedestrian crossings are insufficient to accommodate both cyclists and pedestrians that can be expected to utilise them. An inadequate width footway and signal controlled crossing could lead to cyclist to pedestrian collisions or pedestrians / cyclists attempting to enter / exit the footway where full height kerbs are present, which could destabilise a cyclist, leading to a fall and personal injury or potentially vehicle to cyclist collisions and pedestrian trips and falls or potentially vehicle to pedestrian collisions.

Recommendation:

It is recommended that dedicated cycle on and off-slips, with associated giveway markings, are provided where appropriate, that the footway and proposed signal controlled pedestrian crossing on Turners Hill Road are suitable to accommodate pedestrians and cyclists and that advance warning, to include hazard warning paving, are provided.

Location Plan:



4.5 ROAD SIGNS, CARRIAGEWAY MARKINGS AND LIGHTING

4.5.1 Problem

Location: Turners Hill Road

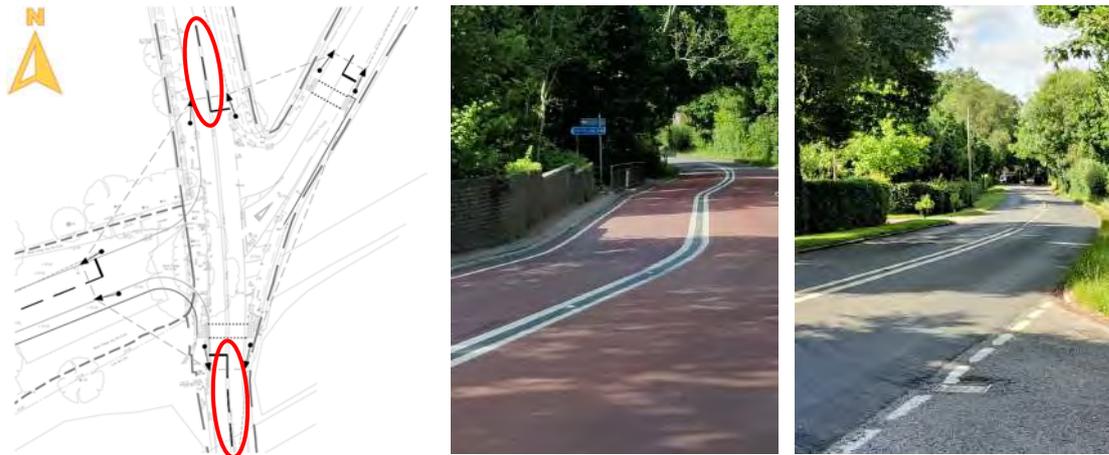
Summary: Vehicles could attempt to overtake where it is not safe to do so

Turners Hill Road is a single carriageway two-way road that is subject to a 30mph speed limit in the vicinity of the scheme. The centreline road markings on Turners Hill Road within the vicinity of Vicarage Lane comprise of double solid lines prohibiting vehicles crossing into the opposing lane unless certain criteria is met. The scheme includes the provision of a new access on the western side of Turners Hill Road and the signalling of the junction arrangement at Turners Hill Road / Vicarage Road / Proposed Site Access, with dashed centreline road markings to diagram 1004 shown on the approaches. Road markings to diagram 1004 do not prohibit vehicles from crossing into the opposing lane. The Audit Team have concerns that the provision of the dashed road centreline marking, in place of the existing road markings that prohibit traffic crossing into the opposing lane, could result in drivers attempting to overtake where it is not safe to do so, which could lead to front end, sideswipe or sudden braking and loss of control type incidents.

Recommendation:

It is recommended that the road markings are amended accordingly.

Location Plan:



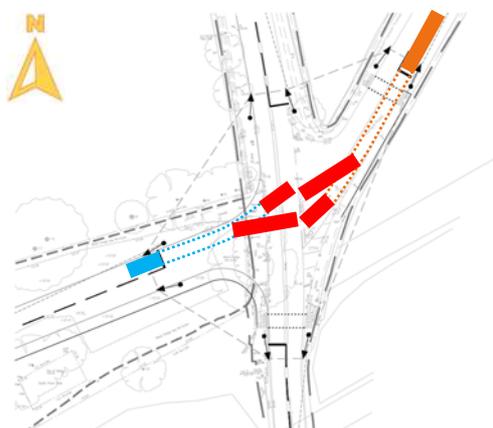
4.5.2	Problem
Location:	Scheme
Summary:	Turning vehicles could obstruct vehicles travelling through the junction

Turners Hill Road is a single carriageway two-way road that is subject to a 30mph speed limit in the vicinity of the scheme. The scheme includes the provision of a new access on the western side of Turners Hill Road and the signalling of the junction arrangement at Turners Hill Road / Vicarage Road / Proposed Site Access. A review of the staging information contained within the Audit Brief indicates that both the Vicarage Road and Proposed Site Access arms are to operate at the same time / in the same stage and with all movements allowed. No road markings are illustrated on the scheme drawings to identify suitable locations for vehicles waiting to turn / entering the centre of the junction. The Audit Team are concerned that the lack of road markings could result in vehicles waiting to turn blocking and / or obstructing through vehicle movements, which could lead to sudden braking and loss of control or side / rear collisions.

Recommendation:

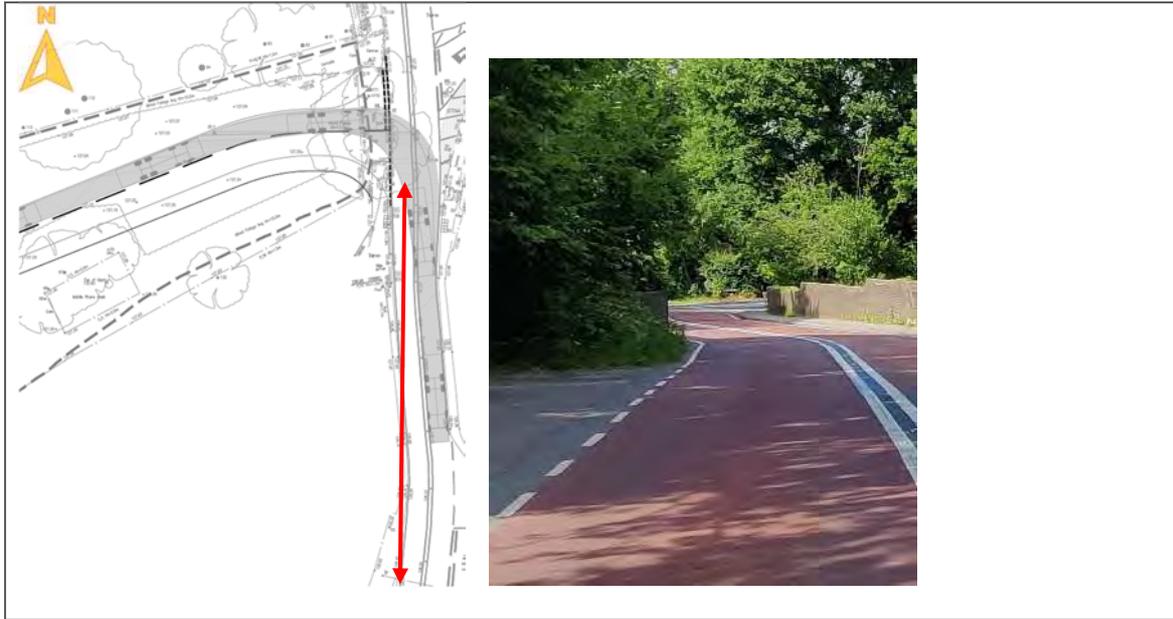
It is recommended that road markings are provided to direct drivers through the junction.

Location Plan:



SECTION 5 ITEMS RAISED AT THIS STAGE 1 AUDIT – OPTION B

4.1	LOCAL ALIGNMENT
	No road safety concerns raised at this stage.
4.2	GENERAL
4.2.1	Problem
Location:	Turners Hill Road – Proposed Access
Summary:	Insufficient visibility to the rear of a Refuse / Recycling Collection Vehicle
<p>Turners Hill Road is a single carriageway two-way road that is subject to a 30mph speed limit in the vicinity of the scheme. The scheme includes the provision of a new simple priority access on the western side of Turners Hill Road. The Scheme drawings provided with the Audit Brief illustrate visibility splays of 61.7 metres and 49.9 metres to the north and south on Turners Hill Road respectively. Swept path analysis of a Refuse / Recycling Collection Vehicle (RCV) manoeuvring into and out of the proposed access has been provided. The swept path analysis of a RCV turning right out of the access identifies that the trailer of the RCV remains in the northbound opposing lane for an extended period of time upon having exited the access. It is unclear from the drawings provided if sufficient forward visibility between a northbound vehicle and the rear of the RCV, while it is in the opposing lane, is achievable. There is a risk a vehicle travelling northbound may not have sufficient clear forward visibility to the rear of the RCV while it is in the opposing lane, which could result in a vehicle failing to stop in time, leading to rear end / side impact collisions.</p>	
Recommendation:	
It is recommended that sufficient clear forward visibility to the rear of the RCV while it is in the opposing lane is achievable.	
Location Plan:	



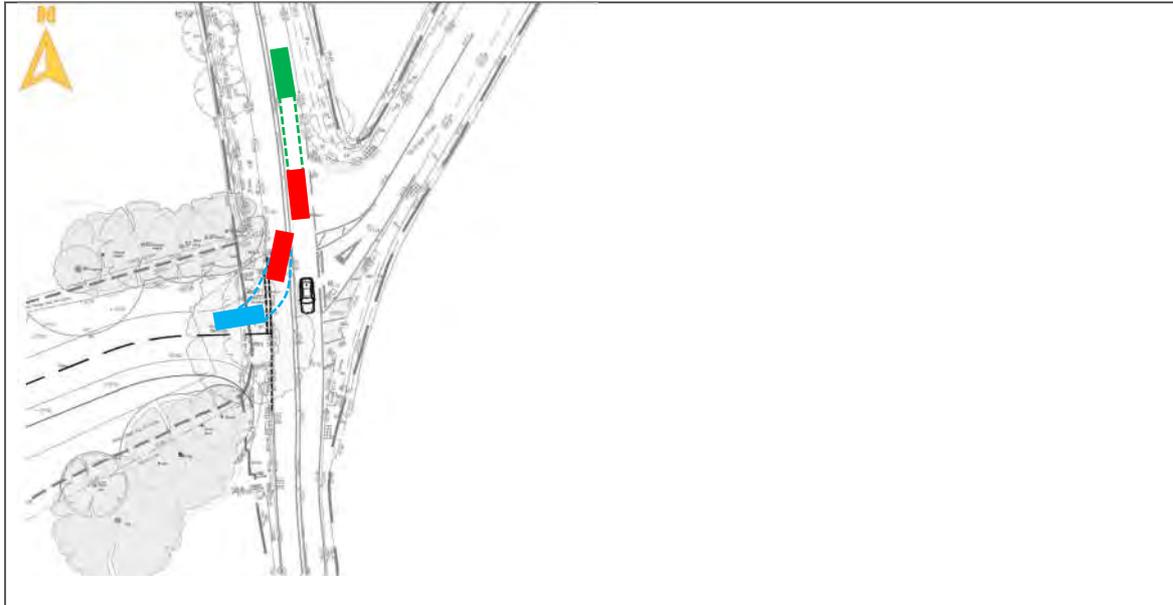
4.2.2	Problem
Location:	Turners Hill Road – Proposed Access
Summary:	Existing utility cover is situated within the proposed access
<p>Turners Hill Road is a single carriageway two-way road that accommodates a number of service / utility covers within the grass verge on the western side of the carriageway. The scheme includes the provision of a new simple priority access on the western side of Turners Hill Road. As observed on-site, a cover is present within the proposed access at the location where a vehicle entering the priority access will be slowing and turning. The Audit Brief does not provide any details of utilities at this stage, however, a cover within the existing verge may not be sufficient to accommodate vehicular traffic or benefit from sufficient frictional properties, which could lead to failure / skidding and loss of control type collisions, particularly at locations where two-wheeled vehicles could be expected to undertake turns.</p>	
Recommendation:	
It is recommended that the service / utility cover is relocated and / or adjusted accordingly.	
Location Plan:	



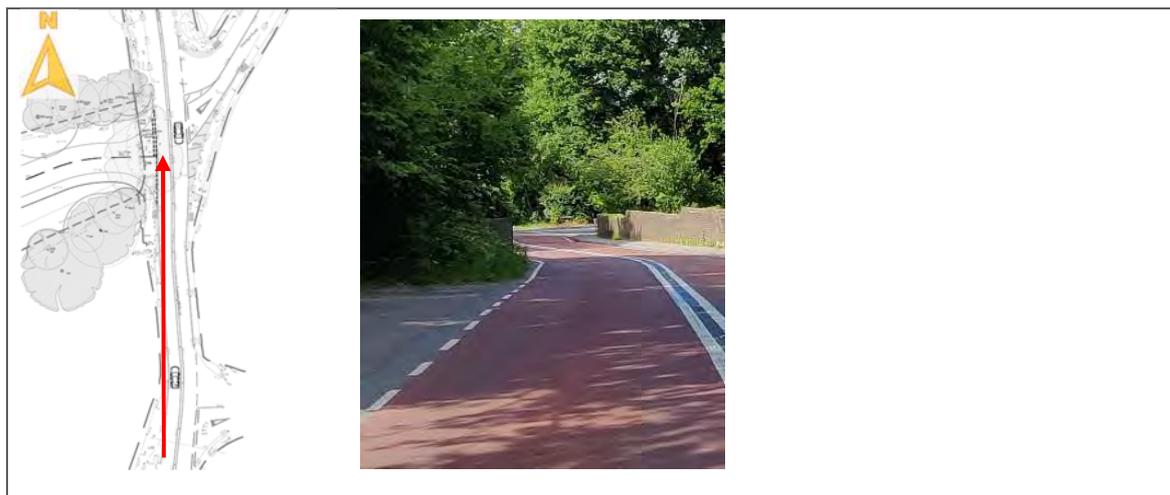
4.3	
JUNCTIONS	
4.3.1	Problem
Location:	Turners Hill Road – Proposed Access
Summary:	Insufficient visibility to / from vehicles
<p>Turners Hill Road is a single carriageway two-way road that is subject to a 30mph speed limit in the vicinity of the scheme. The scheme includes the provision of a new simple priority access on the western side of Turners Hill Road. The Audit Brief identifies visibility splays of 61.7 metres and 49.9 metres to the north and south on Turners Hill Road respectively. Observations show that the visibility splays to / from the proposed access extend across areas where vegetation and street furniture is present, to include a hedge and guard railing. Visibility from and to the proposed access is therefore restricted, which could lead to a vehicle attempting to exit when it is not safe to do so resulting in side / rear impact collisions.</p>	
Recommendation:	
<p>It is recommended that sufficient visibility to / from the proposed access is achievable and that any obstructions, to include vegetation and street furniture, within the visibility splay envelopes are cleared, and maintained clear, to ensure adequate visibility is achievable.</p>	
Location Plan:	



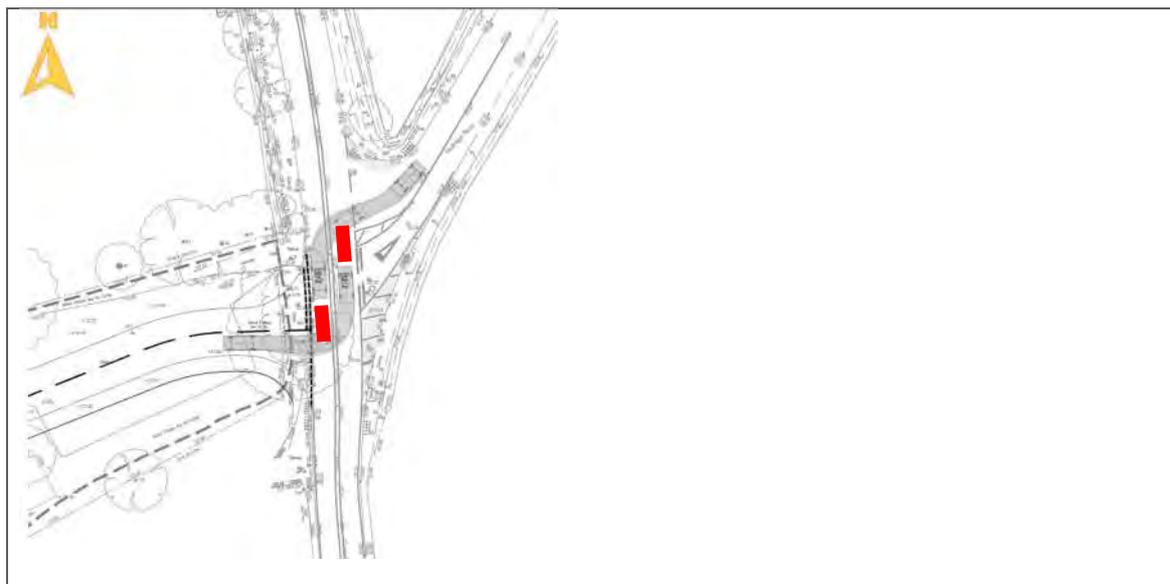
4.3.2	Problem
Location:	Turners Hill Road – Proposed Access
Summary:	Waiting right turning vehicles could encroach the opposing lane
<p>Turners Hill Road is a single carriageway two-way road that is subject to a 30mph speed limit in the vicinity of the scheme. The scheme includes the provision of a new simple priority access on the western side of Turners Hill Road, forming a left / right stagger junction arrangement with Vicarage Road. Swept path analysis of a Refuse / Recycling Collection Vehicle (RCV) undertaking various manoeuvres at the junction has been provided. The swept path analysis of the RCV illustrates the vehicle going straight across between the minor arms. Vehicles expected to visit the site on a regular basis are unlikely to negotiate straight across the junction and instead undertake a left turn out and wait in the Turners Hill Road carriageway prior to turning right into the opposite arm. It is unclear from the drawings provided if vehicles expected to visit the site on a regular basis, such as cars and delivery vehicles, can undertake this manoeuvre without the need to wait / overhang the opposing lane, which could result in sideswipe / front end collisions.</p>	
Recommendation:	
<p>It is recommended that sufficient space is available to enable vehicles expected to visit the site on a regular basis to undertake this manoeuvre without the need to wait / overhang the opposing lane.</p>	
Location Plan:	



4.3.3	Problem
Location:	Turners Hill Road – Proposed Access
Summary:	Northbound vehicles approaching the proposed access arrangement may not have clear visibility of turning traffic
<p>Turners Hill Road is a single carriageway two-way road that is subject to a 30mph speed limit in the vicinity of the scheme. The scheme includes the provision of a new simple priority access on the western side of Turners Hill Road. The Audit Brief identifies a speed survey was undertaken that recorded 85th percentile northbound and southbound speeds of 33.33mph and 38.48mph respectively. It is understood that the visibility splays of 49.9 metres and 61.7 metres have been provided to the south (right) and north (left) in accordance with the Stopping Sight Distance (SSD) set out in Manual for Streets (MfS). The audit team have concerns that, due to the alignment of the Turners Hill Road carriageway to the south, the presence of the bridge parapet and the guard railing on to the western side of Turners Hill Road, approaching northbound traffic may not have clear visibility of a vehicle waiting to turn right into or having just turned left / right out of the proposed access. Restricted forward visibility to a priority access could lead to rear end and side impact collisions or heavy braking and loss of control.</p>	
Recommendation:	
<p>It is recommended that suitable advance warning, such as ‘Side Road Ahead’ / ‘Separated Junction Ahead’, is provided south of the bridge over Worth Way for northbound vehicles travelling on Turners Hill Road on the approach to the proposed access.</p>	
Location Plan:	

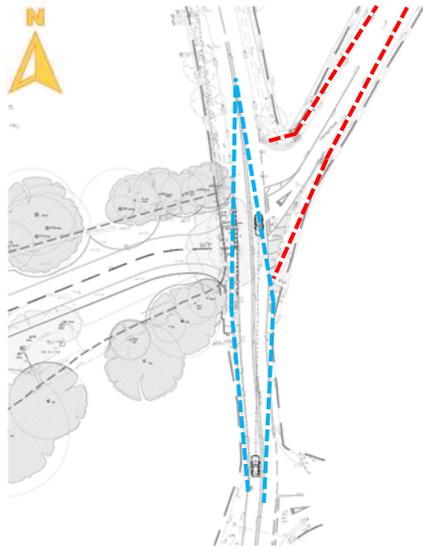


4.3.4	Problem
Location:	Turners Hill Road – Proposed Access
Summary:	Traffic queuing back from the minor arms will restrict turning manoeuvres at the minor arms
<p>Turners Hill Road is a single carriageway two-way road that is subject to a 30mph speed limit in the vicinity of the scheme. The scheme includes the provision of a new simple priority access on the western side of Turners Hill Road. The scheme includes the provision of a new simple priority access on the western side of Turners Hill Road, forming a left / right stagger junction arrangement with Vicarage Road. Following the potential implementation of the proposed scheme, should a queue of approximately two vehicles be observed, vehicles would be prevented from manoeuvring into the proposed access / Vicarage Road, which could lead to rear impact as well as sideswipe type collisions.</p>	
Recommendation:	
<p>It is recommended that 'keep clear' markings are provided where necessary in both the northbound and southbound lanes to ensure queuing traffic does not block vehicles attempting to turn right.</p>	
Location Plan:	



4.4	NON-MOTORISED USER PROVISION
4.4.1	Problem
Location:	Proposed Uncontrolled Crossing Points
Summary:	Insufficient visibility to / from users at the uncontrolled crossing points
<p>Turners Hill Road is a single carriageway two-way road that is subject to a 30mph speed limit in the vicinity of the scheme, with an existing uncontrolled pedestrian crossing present on the southern radius of Vicarage Road within the vicinity of the scheme. The scheme includes the provision of a new simple priority access on the western side of Turners Hill Road, the provision of a new uncontrolled crossing on Vicarage Road and the re-provision of the uncontrolled pedestrian crossing on Vicarage Road, south of its existing location. The Audit Brief identifies visibility splays of 38.3 metres on Vicarage Road and 61.7 metres and 49.9 metres to the north and south on Turners Hill Road respectively, however, no visibility splays have been shown for users at the crossing points on these arms. The Audit Team are unsure if suitable visibility is achievable from the crossing points, particularly on Vicarage Road where visibility appears restricted by the vegetation, bridge parapets and guard railing. Limited visibility from and to a crossing point could lead to a pedestrian / cyclist entering into the path of an approaching vehicle, resulting in a vehicle to pedestrian / cyclist collision or heavy vehicle braking and loss of control.</p>	
Recommendation:	
<p>It is recommended that sufficient visibility to / from the crossing points is achievable and that any obstructions, to include vegetation and street furniture, within the visibility splay envelopes are cleared, and maintained clear, to ensure an appropriate level of visibility is achievable.</p>	

Location Plan:



4.4.2

Problem

Location:

Turners Hill Road

Summary:

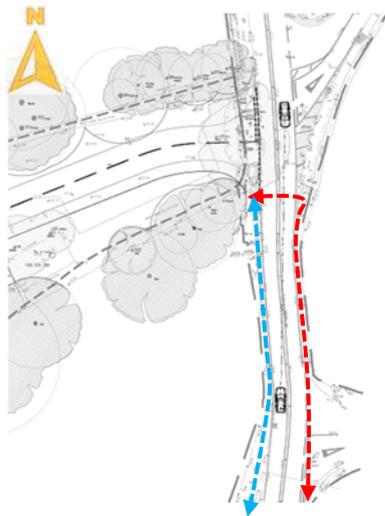
Insufficient facilities for footway users along a likely desire line

Turners Hill Road is a single carriageway two-way road that is subject to a 30mph speed limit in the vicinity of the scheme. A footway is present on the eastern side of Turners Hill Road, with the closest bus stops located on Turners Hill Road, some 100 metres to the south and some 800 metres north. The scheme includes the provision of a new simple priority access on the western side of Turners Hill Road. A desire line will be present southbound to / from the closest bus stops, where a post box is also present on the western side of Turners Hill Road. While a proposed controlled crossing is illustrated to the south on Turners Hill Road, a lack of crossing facilities at the Turners Hill Road / Grange Road junction and at the bus stops could lead to pedestrians continuing via the narrow footway over the bridge and the grass verge on the western side of Turners Hill Road. If opposed by other users a pedestrian could enter the live carriageway where vehicles are manoeuvring, potentially into the path of vehicles, resulting in vehicle to pedestrian collisions.

Recommendation:

It is recommended that measures are provided to discourage pedestrians from continuing southbound via the narrow footway over the bridge and grass verge on the western side of Turners Hill Road and that suitable facilities are provided at the Turners Hill Road / Grange Road junction and at the northbound bus stop to encourage pedestrians to navigate via the existing footway on the eastern side of Turners Hill Road.

Location Plan:



4.4.3

Problem

Location:

Turners Hill Road / Vicarage Road

Summary:

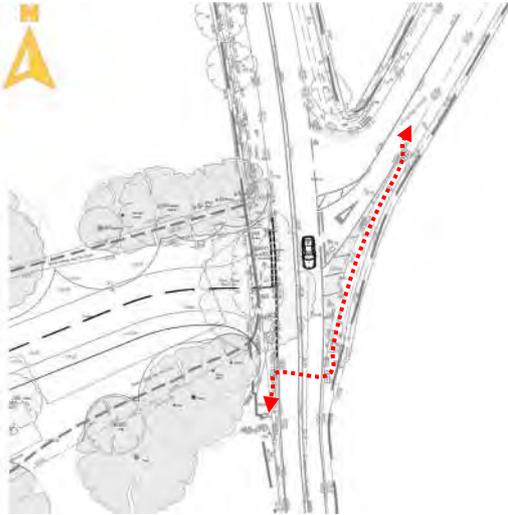
Insufficient facilities to accommodate pedestrians and cyclists along a likely desire line

Turners Hill Road and Vicarage Road are single carriageway two-way roads that are subject to a 30mph speed limit in the vicinity of the scheme. Footways are present on the eastern side of Turners Hill Road and the northern side of Vicarage Road. The scheme includes the provision of a new simple priority access on the western side of Turners Hill Road and two uncontrolled pedestrian crossings on Vicarage Road and Turners Hill Road. Cyclists travelling between the northeast / centre of Crawley Down and the Worthy Way footpath and bridleway, are likely to utilise the dropped kerbs associated with the proposed crossing on Vicarage Road, travel along the footway and utilise the proposed crossing on Turners Hill Road, within the vicinity of the entrance / exit to Worthy Way. There is a concern the existing footway and the proposed uncontrolled crossings are insufficient to accommodate both cyclists and pedestrians that can be expected to utilise them. An inadequate width footway and uncontrolled crossings could lead to cyclist to pedestrian collisions or pedestrians / cyclists attempting to enter / exit the footway where full height kerbs are present, which could destabilise a cyclist, leading to a fall and personal injury or potentially vehicle to cyclist collisions and pedestrian trips and falls or potentially vehicle to pedestrian collisions.

Recommendation:

It is recommended that dedicated cycle on and off-slips, with associated giveaway markings, are provided where appropriate, that the footway is suitable to accommodate pedestrians and cyclists, that the proposed uncontrolled pedestrian crossing on Turners Hill Road is also suitable to accommodate pedestrians and cyclists and that advance warning, to include hazard warning paving, are provided.

Location Plan:



4.5

ROAD SIGNS, CARRIAGEWAY MARKINGS AND LIGHTING

No road safety concerns raised at this stage.



SECTION 6 AUDIT TEAM STATEMENT

6.1 We certify that this Road Safety Audit has been carried out in accordance with GG119.

Audit Team Leader

Zane Beswick – MCIHT, MSoRSA

Signed: 

Position: Road Safety / Highway Engineer

Organisation: Courzons Limited

Date: 28th July 2022

Audit Team Member

Jamie Fenning - BSc(Hons), MIHE, MCIHT, MSoRSA, Highways England RSA
Certificate of Competency

Signed: 

Position: Road Safety / Highway Engineer

Organisation: Courzons Limited

Date: 28th July 2022



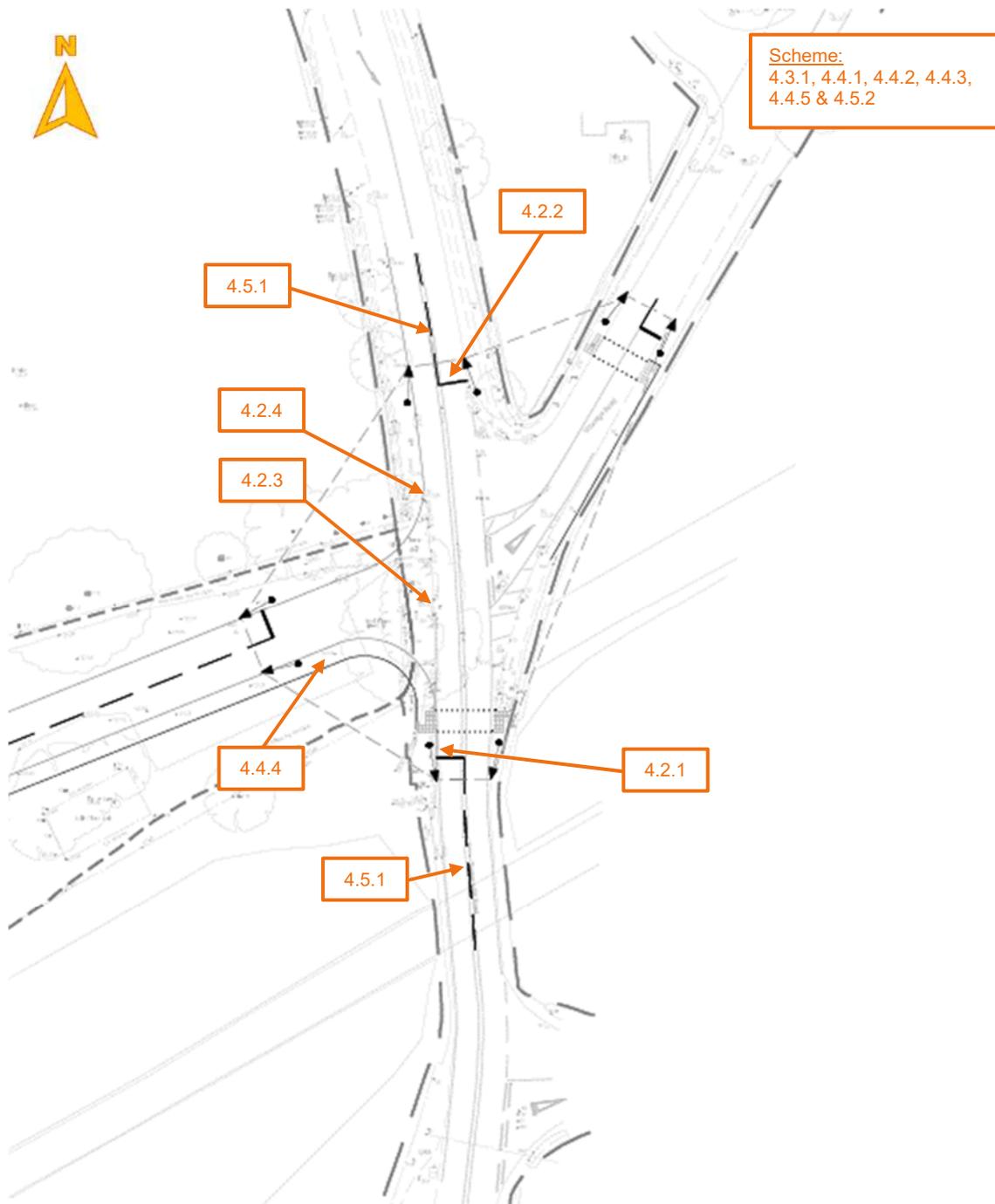
APPENDIX A LIST OF DRAWINGS AND DOCUMENTS SUBMITTED FOR AUDITING

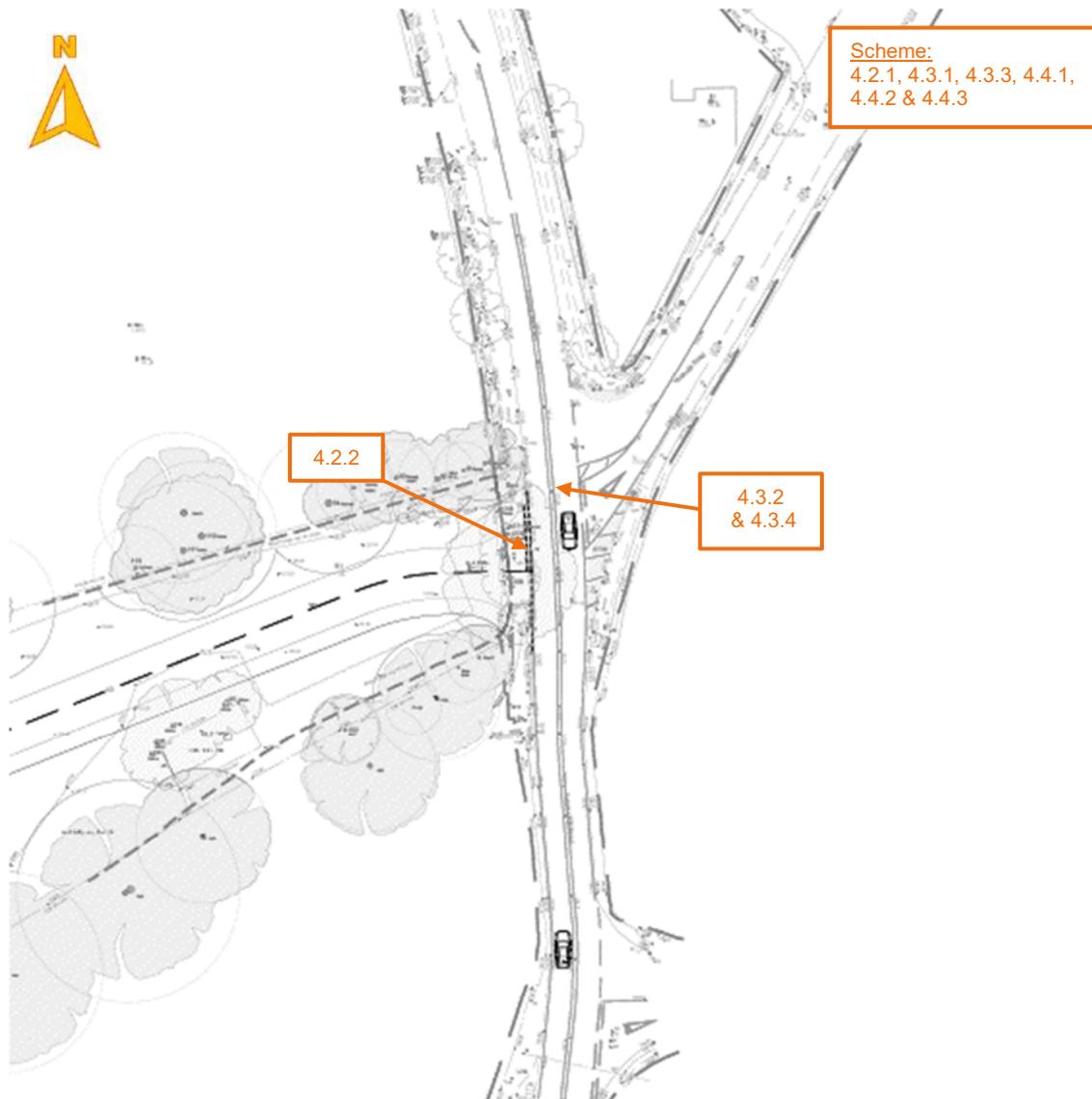
List of items examined as part of this Stage 1 Road Safety Audit

Documents

Document Reference	Document Title
ITB9155-034A	RSA Brief - Signal
ITB9155-033	RSA Brief - Staggered

APPENDIX B ITEM LOCATION PLANS







Specialists in Road Safety Engineering

Road Safety Audit Report

**Incorporating
Stage 1 Completion of Preliminary Design.**



Proposed Simple Priority Access
off and Footway along the
B2028 Turners Hill Road
Crawley Down

Client:
i-Transport

Client reference:
ITB9155-058

Fenley
2 Blaenant
Emmer Green
READING
RG4 8PH

E: office@fenley.co.uk
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Report Status 1

Job no	RSA-24-150	Issue no	1	Date	November 2024
Prepared by	JJF	Verified by	ZB	Approved by	JJF
Filename and Path	Fenley/Road Safety Audits/RSA-24/RSA-24-150-1				

1.0 PROJECT DETAILS

Report Title:	Stage 1 Road Safety Audit
Date:	November 2024
Document reference and revision:	RSA-24-150-1
Prepared by:	Fenley Road Safety Limited
County Highway Authority:	West Sussex County Council
Design Organisation:	i-Transport
Project Sponsor:	Wates Developments

REV	ISSUE PURPOSE	AUTHOR	CHECKED	APPROVED	DATE
0	Stage 1 Road Safety Audit drafted for Audit Team discussions.	JJF			13 th November 2024
1	Stage 1 Road Safety Audit finalised and issued to the Design Organisation	JJF	ZB	JJF	22 nd November 2024

Contents:

1.0	Project Details	1
2.0	Introduction	2
3.0	Items Raised in any previous Road Safety Audits	3
4.0	Items Raised in this Stage 1 Road Safety Audit	4
	A.1 Alignment	
	A.2 General	
	A.3 Junctions	
	A.4 Walking, Cycling and Horse Riding	
	A.5 Traffic Signs, Carriageway Markings and Lighting	
5.0	Audit Team Statement	7

Appendices:

Stage 1	A1	Documents and Drawings provided for this Road Safety Audit
	A2	Item Location Plan

2.0 INTRODUCTION

- 2.1 This report has been prepared by Fenley Road Safety Limited and results from a Stage 1 Road Safety Audit of a proposed access off the western side of and highway works along the B2028 Turners Hill Road in Crawley Down. The proposed access is to take the form of a simple priority bellmouth formed with 8 metre corner radii serving a 5.5 metre wide carriageway that accommodates a 3 metre shared footway cycleway along the northern side. The proposed footway cycleway is to extend around the northern corner radius to an on/off-slip and the footway is to continue to an existing signal controlled pedestrian crossing. The proposals are to facilitate access to a development parcel that is to consist of 50 homes and forms part of a larger allocation of 350 dwellings, with the remaining dwellings accessed via Wychwood Place to the north and off Turners Hill Road to the south.
- 2.2 The Audit Brief identifies that the proposals do not include any Departures from Standard, whether related to strategic decisions or otherwise.
- 2.3 This Road Safety Audit was undertaken during November 2024 in accordance with the Road Safety Audit Brief provided on the 28th October 2024 by the Design Organisation, i-Transport on behalf of the Project Sponsor, Wates Developments. The Road Safety Audit comprised of a site visit as well as an examination of the documents provided which are identified in **Appendix A1**. The Audit Team were satisfied that the Audit Brief was sufficient for the purpose of this Audit. It has been confirmed that items such as surface water drainage, street lighting, existing and proposed signage as well as bollards and utilities to include covers and telegraph poles, are to be assessed during the detail design stage of the scheme and therefore are only raised as road safety concerns if fundamental to the scheme.
- 2.4 The Road Safety Audit has been undertaken by an Audit Team whose qualifications as well as experience accord with the requirements of GG119. The Audit Team consists:
- Audit Team Leader**
Jamie Fenning *BSc(Hons), MIHE, MCIHT, MSoRSA, National Highways RSA Certificate of Competency*
Road Safety / Highway Engineer
- Audit Team Member**
Zane Beswick *MCIHT, MSORSA*
Road Safety / Highway Engineer
- 2.5 The site has been visited twice; once as part of a previous Road Safety Audit in June 2022 and again as part of this Audit in November 2024. The latest site visit associated with this Audit was undertaken during the late morning of Thursday 21st November 2024 between the hours of 12:15 and 12:35. This site visit involved walking and driving around the local highway network for a 20-minute period whilst observing local infrastructure and current off-peak traffic conditions. The weather during the site visit was overcast, the road surface was

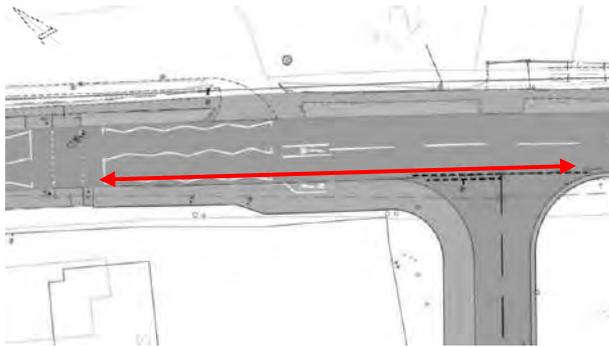
dry with damp patches and visibility was good. A number of pedestrians but no cyclists were observed during the site visit. Vehicular traffic was observed to include cars, a passenger service vehicle and light as well as heavy goods vehicles. Vehicular speeds were not recorded by the Audit Team.

- 2.6 The terms of reference of this Road Safety Audit are as described in GG119. The scheme has been examined and this report compiled, only with regard to the safety implications for road users of the scheme as presented. It has not been examined or verified for compliance with any other standards or criteria. However, in order to clearly explain a safety problem or the recommendation to resolve a problem, the Audit Team may on occasion have referred to a design standard for information only. All comments and recommendations are referenced to the design drawings supplied with the Audit Brief and the location of road safety concerns raised have been illustrated beneath the items along with relevant photographs for clarity, where appropriate, as well as on the Location Plan attached at **Appendix A2**.

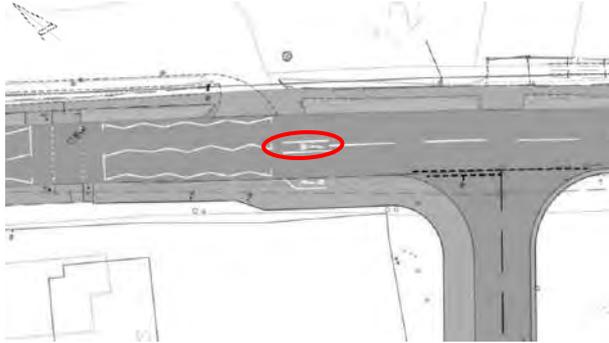
3.0 ITEMS RAISED IN ANY PREVIOUS ROAD SAFETY AUDITS

- 3.1 Fenley Road Safety Limited have not been made aware of any previous Road Safety Audits associated with the current proposals but have visited the site as part of a previous Road Safety Audit of a proposed southern access to the allocated land, off Turner's Hill Road, that was undertaken by Courzons Limited.

4.0 TEMS RAISED AT THIS STAGE 1 ROAD SAFETY AUDIT

A.1	<p>LOCAL ALIGNMENT</p> <p><i>No Road Safety Concerns regarding LOCAL ALIGNMENT have been raised at this stage.</i></p>
A.2	GENERAL
A.2.1	PROBLEM
Location:	Turners Hill Road
Summary:	Provision of the proposed footway and associated kerbing will impact surface water drainage
Acc Type:	Loss of control type collisions
<p>The B2802 Turners Hill Road in Crawley Down benefits from a network of road gullies together with the section of verge abutting the carriageway, cater for surface water. The proposals include the provision of a priority access off the western side of the carriageway as well as a section of footway to link to the existing footway network to the north. Whilst the proposals should not have an adverse impact on the existing contours of the carriageway, the provision of kerbing alongside the proposed footway, will prevent the drainage of surface water through the existing soft verge. The Audit Team have concerns that the proposals could therefore result in excessive surface water ponding which may lead to loss of control type collisions.</p>	
RECOMMENDATION:	
It is recommended that surface water is sufficiently drained from the carriageway.	
<p>Location Plan:</p> 	

A.2.2	PROBLEM
Location:	Turners Hill Road
Summary:	Existing items of street furniture are present within the proposed footway
Acc Type:	Vehicle to pedestrian type collisions
<p>The B2802 Turners Hill Road accommodates both telegraph / electric poles and signs within the verges both sides of the carriageway. The proposals include the provision of a footway along the western side of the carriageway where both signage and telegraph / electric poles are present. It is understood that the Audit Brief identifies that signage and utilities are to be assessed through the detail design stage and it is clear that the sign will be relocated due to it being situated in the middle of the access, nevertheless, the Audit Team have concerns that the existing telegraph / electric pole will reduce the width of the footway and could result in the need for a user to suddenly enter the carriageway which could lead to a vehicle to pedestrian type collision.</p>	
RECOMMENDATION:	
It is recommended that items of street furniture are relocated.	
Location Plan:	
	
A.3	JUNCTIONS
<p><i>No Road Safety Concerns regarding JUNCTIONS have been raised at this stage.</i></p>	

A.4	WALKING CYCLING AND HORSE RIDING
A.4.1	PROBLEM
Location:	Turners Hill Road
Summary:	Cyclists are guided to wait with the carriageway where insufficient space is available for passing traffic
Acc Type:	Vehicle to cyclist type collisions
<p>The B2802 Turners Hill Road is a two-way single carriageway road that is subject to a 30mph speed limit but observes 85th percentile speeds of 37mph with circa 10% of traffic comprised of large vehicles, according to data within the Audit Brief. The proposals include the provision of a shared footway cycleway along the western side of Turners Hill Road that terminates at a cyclist on/off-slip approximately 15 metres south of an existing controlled crossing. The scheme drawing illustrates that a cyclist ghost island right turn pocket is to be provided adjacent to the on-slip which commences abruptly without a taper and reduces the lane widths of 2.6 metres. The Audit Team have concerns that whilst a 2.65 metre lane width is adequate for cars and light goods vehicles, a large vehicle to include passenger service vehicles and heavy goods vehicles will be required to encroach the cyclist ghost island right turn pocket. The driver of a large vehicle may approach the ghost island right turn pocket and not appreciate that the through lanes are inadequate to accommodate their vehicle which could lead to a vehicle to cyclist type collision with a stationary cyclist waiting to turn right.</p>	
RECOMMENDATION:	
It is recommended that the proposed cyclist ghost island right turn lane is removed.	
Location Plan:	
	
A.5	TRAFFIC SIGNS, CARRIAGEWAY MARKINGS AND LIGHTING
<p><i>No Road Safety Concerns regarding TRAFFIC SIGNS, CARRIAGEWAY MARKINGS AND LIGHTING have been raised at this stage.</i></p>	

5.0 STAGE 1 ROAD SAFETY AUDIT TEAM STATEMENT

5.1 We certify that this Road Safety Audit has been carried out in accordance with GG119.

Audit Team Leader

Name: **Jamie Fenning** *BSc (Hons), MIHE, MCIHT, MSoRSA, NH RSA Certificate of Competency*

Signed: 

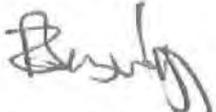
Position: Road Safety / Highway Engineer

Organisation: Fenley Road Safety Limited

Date: 22nd November 2024

Audit Team Member

Name: **Zane Beswick** *MCIHT, MSORSA*

Signed: 

Position: Road Safety / Highway Engineer

Organisation: Fenley Road Safety Limited

Date: 22nd November 2024

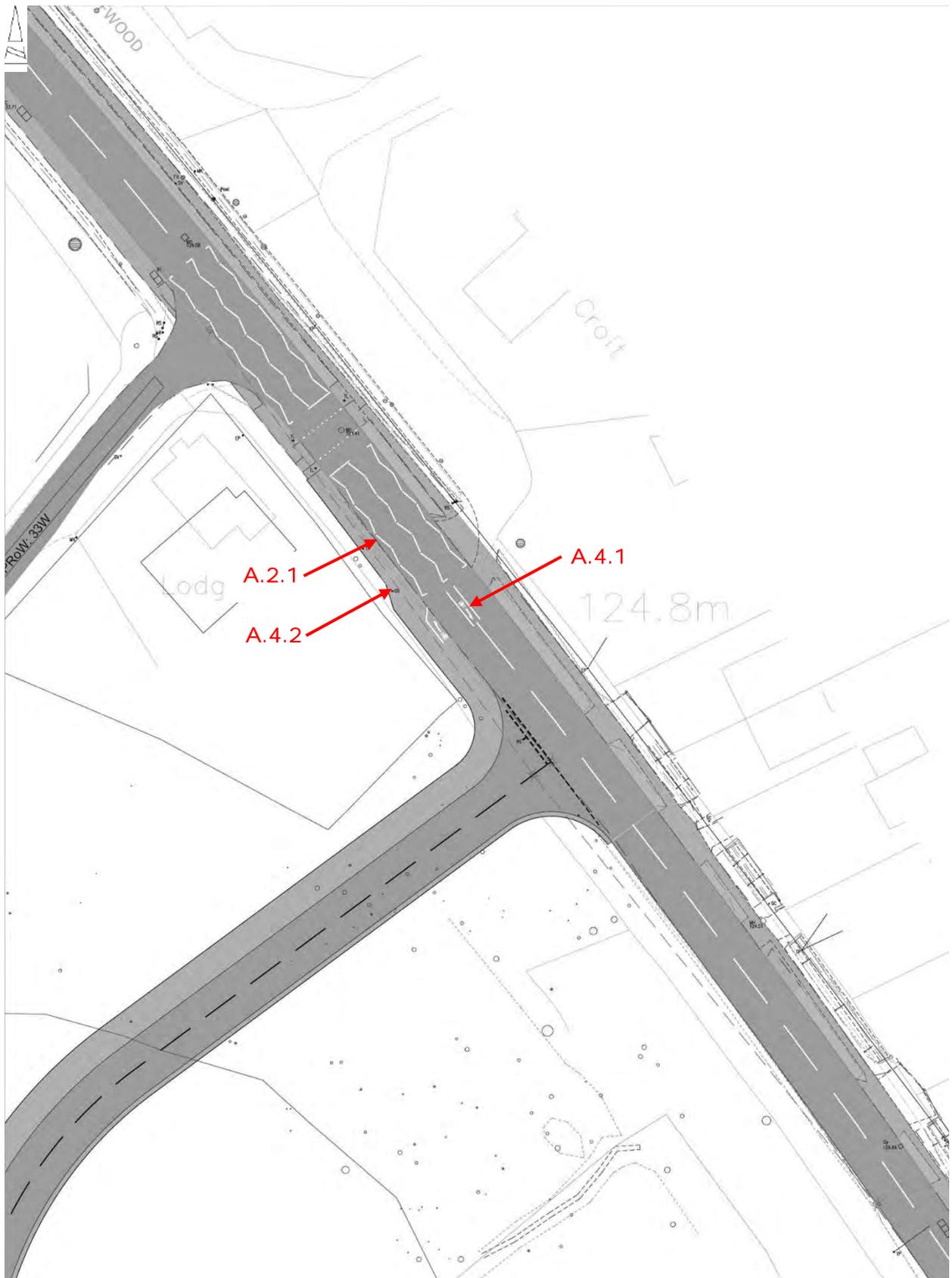
Appendix A1

Documents and Drawings provided for this Stage 1 Road Safety Audit

<u>Audit Stage</u>	<u>Doc. No.</u>	<u>Rev</u>	<u>Title</u>
Stage 1	ITB9155-058		Stage 1 Road Safety Audit Brief
	<u>Dwg No.</u>	<u>Rev</u>	<u>Title</u>
	ITB19155-GA-038	D	POTENTIAL CENTRAL SITE ACCESS JUNCTION - OPTION 1 / SITE ACCESS ARRANGEMENT - FOOTWAY ON ONE

Appendix A2

Item Location Plan



fenley

APPENDIX C. Designer's Responses

Technical Note: RSA GG119 Response –Southern Access

Project No: ITB9155
Project Title: Land west of Turners Hill Road
Title: Stage 1 Road Safety Audit – GG119 Response Format
Ref: MS/ITB9155-065
Date: 18 December 2024

SECTION 1 SUMMARY

1.1 Wates Developments are promoting a residential-led development in Crawley Down. The site is allocated for 350 dwellings within the Mid Sussex District Plan 2021-2039 (Policy DPA9). The site is being bought forward as two planning applications covering a northern and southern parcel and a SANG.

1.2 The parcels of land will be served by the following vehicular accesses:

Southern Parcel

- 1 New priority junction, opposite Vicarage Road (serving around 200 homes)
- 2 New priority junction, south of Huntsland (serving around 50 homes)

Northern Parcel

- 3 Extension of the new residential development at Wychwood Place with extension / realignment of Wychwood Place into site (serving around 150 homes)

1.3 This Stage 1 RSA relates to (1), a new priority junction, opposite Vicarage Road, and has been undertaken in accordance with the adopted WSCC Road Safety Audit Policy by an independent Auditor. The audit is summarised within this Technical Note in accordance with Appendix F of GG 119 Revision 2, as required by WSCC.

1.4 The audit was undertaken in 2022, based on an earlier version of the drawing (ITB9155-GA-029E). Drawing ITB9155-GA-029I is a minor update to that drawing which picks up detailed comments provided by WSCC's signals team, as well as the auditor's comments.

SECTION 2 ROAD SAFETY AUDIT RESPONSE

2.1 Project Details

Table F.1: Project Details

Report Title:	Stage 1 Road Safety Audit
Date:	18 December 2024
Document Reference and Revision:	22042-3
Prepared by:	Courzons Limited
On behalf of:	West Sussex County Council

2.2 Authorisation Sheet

Table F.2: Authorisation Sheet

Project:	Land West of Turners Hill Road
Report Title:	RSA Response Summary
Prepared by (Design Organisation)	
Name:	Mark Stead
Position:	Associate
Signed:	
Organisation:	i-Transport LLP
Date:	18 December 2024
Approved by (Overseeing Organisation)	
Name:	
Position:	
Signed:	
Organisation:	West Sussex County Council
Date:	

2.3 Key Personnel

Table F.3: Key Personnel

Overseeing Organisation:	West Sussex County Council (WSCC)
RSA Team:	Courzons Limited
Design Organisation:	i-Transport LLP

Road Safety Audit Decision Log

RSA Problem	RSA Recommendation	Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
<p>4.2.1 The swept path analysis of a RCV turning right out of the access identifies that the trailer of the RCW remains in the northbound opposing lane for an extended period of time upon having exited the access. It is unclear from the drawings provided if sufficient forward visibility between a northbound vehicle and the rear of the RCV, while it is in the opposing lane, is achievable. There is a risk a vehicle travelling northbound may not have sufficient clear forward visibility to the rear of the RCV while it is in the opposing lane, which could result in a vehicle failing to stop in time, leading to rear end / side impact collisions.</p>	<p>It is recommended that clear forward visibility to the rear of the RCV while it is in the opposing lane is achievable.</p>	<p>Accepted – Drawing ITB9155-GA-034B (included at the back of this note) demonstrates that there is sufficient clear forward visibility to the right turning RCV and drawing ITB9155-GA-031C (appended to the TA and at the back of this note) demonstrates that a refuse vehicle and large estate car can manoeuvre safely pass each other in all directions.</p>		
<p>4.2.1 As observed on-site, a cover is present within the proposed access at the location where a vehicle entering the priority access will be slowing and turning. The Audit Brief does not provide any details of utilities at this stage, however, a cover within the existing verge may not be sufficient to accommodate vehicular traffic or benefit from sufficient frictional properties, which could lead to failure / skidding and loss of control type collisions, particularly at locations where two-wheeled vehicles could be expected to undertake turns.</p>	<p>It is recommended that the service / utility cover is relocated and / or adjusted accordingly.</p>	<p>Accepted – The utility cover will be relocated to an appropriate location as identified in Drawing ITB9155-GA-029I. This will be considered further at detailed design stage.</p>		

RSA Problem	RSA Recommendation	Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
<p>4.3.1 The Audit Brief identifies visibility splays of 61.7 metres and 49.9 metres to the north and south on Turners Hill Road respectively. Observations show that the visibility splays to / from the proposed access extend across areas where vegetation and street furniture is present, to include a hedge and guard railing. Visibility from and to the proposed access is therefore restricted, which could lead to a vehicle attempting to exit when it is not safe to do so resulting in side / rear impact collisions.</p>	<p>It is recommended that sufficient visibility to / from the proposed access is achievable and that any obstructions, to include vegetation and street furniture, within the visibility splay envelopes are cleared, and maintained clear, to ensure adequate visibility is achievable.</p>	<p>Accepted – the guardrail will be replaced by visi rail and vegetation will be cut back to ensure pedestrian visibility splays are unobstructed. These changes are shown in Drawing ITB9155-GA-029I.</p>		
<p>4.3.2 The swept path analysis of the RCV illustrates the vehicle going straight across between the minor arms. Vehicles expected to visit the site on a regular basis are unlikely to negotiate straight across the junction and instead undertake a left turn out and wait in the Turners Hill Road carriageway prior to turning right into the opposite arm. It is unclear from the drawings provided if vehicles expected to visit the site on a regular basis, such as cars and delivery vehicles, can undertake this manoeuvre without the need to wait / overhang the opposing lane, which could result in sideswipe / front end collisions.</p>	<p>It is recommended that sufficient space is available to enable vehicles expected to visit the site on a regular basis to undertake this manoeuvre without the need to wait / overhang the opposing lane.</p>	<p>Accepted – Drawing ITB9155-GA-031C (appended to the TA and at the back of this note) has been updated to demonstrate that regular vehicles such as cars and delivery vans can negotiate the junction without waiting and overhanging.</p>		

RSA Problem	RSA Recommendation	Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
<p>4.3.3 The Audit Brief identifies a speed survey was undertaken that recorded 85th percentile northbound and southbound speeds of 33.33mph and 38.48mph respectively. It is understood that the visibility splays of 49.9 metres and 61.7 metres have been provided to the south (right) and north (left) in accordance with the Stopping Sight Distance (SSD) set out in Manual for Streets (MfS). The audit team have concerns that, due to the alignment of the Turners Hill Road carriageway to the south, the presence of the bridge parapet and the guard railing on to the western side of Turners Hill Road, approaching northbound traffic may not have clear visibility of a vehicle waiting to turn right into or having just turned left / right out of the proposed access. Restricted forward visibility to a priority access could lead to rear end and side impact collisions or heavy braking and loss of control.</p>	<p>It is recommended that suitable advance warning, such as 'Side Road Ahead' / 'Separated Junction Ahead', is provided south of the bridge over Worth Way for northbound vehicles travelling on Turners Hill Road on the approach to the proposed access.</p>	<p>Accepted – A 'Side Road Ahead' warning sign has been added to Drawing ITB9155-GA-029I.</p>		
<p>4.3.4 Following the potential implementation of the proposed scheme, should a queue of approximately two vehicles be observed, vehicles would be prevented from manoeuvring into the proposed access / Vicarage Road, which could lead to rear impact as well as sideswipe type collisions.</p>	<p>It is recommended that 'keep clear' markings are provided where necessary in both the northbound and southbound lanes to ensure queuing traffic does not block vehicles attempting to turn right.</p>	<p>Accepted – 'KEEP CLEAR' road markings have been added to Drawing ITB9155-GA-029I in both northbound and southbound lanes.</p>		

RSA Problem	RSA Recommendation	Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
<p>4.3.5 The Audit Brief identifies visibility splays of 38.3 metres on Vicarage Road and 61.7 metres and 49.9 metres to the north and south on Turners Hill Road respectively, however, no visibility splays have been shown for users at the crossing points on these arms. The Audit Team are unsure if suitable visibility is achievable from the crossing points, particularly on Vicarage Road where visibility appears restricted by the vegetation, bridge parapets and guard railing. Limited visibility from and to a crossing point could lead to a pedestrian / cyclist entering into the path of an approaching vehicle, resulting in a vehicle to pedestrian / cyclist collision or heavy vehicle braking and loss of control.</p>	<p>It is recommended that sufficient visibility to / from the crossing points is achievable and that any obstructions, to include vegetation and street furniture, within the visibility splay envelopes are cleared, and maintained clear, to ensure an appropriate level of visibility is achievable.</p>	<p>During subsequent discussion with WSCC, it was agreed to provide a signal-controlled crossing south of the junction, rather than a dropped kerb / tactile paving crossing. Pedestrians will therefore be able to stop oncoming traffic when they wish to cross. Drawing ITB9155-GA-029I shows that signal-controlled junction achieves forward visibility to at least one signal head in both directions in accordance with CD 123 paragraph 7.2, ensuring drivers are able to stop safely on sight of a red light.</p>		

RSA Problem	RSA Recommendation	Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
<p>4.3.6 A desire line will be present southbound to / from the closest bus stops, where a post box is also present on the western side of Turners Hill Road. While a proposed controlled crossing is illustrated to the south on Turners Hill Road, a lack of crossing facilities at the Turners Hill Road / Grange Road junction and at the bus stops could lead to pedestrians continuing via the narrow footway over the bridge and the grass verge on the western side of Turners Hill Road. If opposed by other users a pedestrian could enter the live carriageway where vehicles are manoeuvring, potentially into the path of vehicles, resulting in vehicle to pedestrian collisions.</p>	<p>It is recommended that measures are provided to discourage pedestrians from continuing southbound via the narrow footway over the bridge and grass verge on the western side of Turners Hill Road and that suitable facilities are provided at the Turners Hill Road / Grange Road junction and at the northbound bus stop to encourage pedestrians to navigate via the existing footway on the eastern side of Turners Hill Road.</p>	<p>Accepted – Barriers will be provided to the northern end of the bridge to discourage pedestrians from continuing southbound via the narrow verge over the bridge. Pedestrian crossings are provided across Grange Road and Turners Hill Road towards the existing bus stops as illustrated in Drawing ITB9155-GA-029I. In addition, a widened footway on the eastern side of Turners Hill Road is proposed as far as the southbound bus stop while a dropped kerb / tactile paving crossing will facilitate access to the northbound bus stop. This is presented in the Transport Assessment as drawing ITB9155-GA-056A.</p>		

RSA Problem	RSA Recommendation	Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
<p>Cyclists travelling between the northeast / centre of Crawley Down and the Worth Way footpath and bridleway, are likely to utilise the dropped kerbs associated with the proposed crossing on Vicarage Road, travel along the footway and utilise the proposed crossing on Turners Hill Road, within the vicinity of the entrance / exit to Worth Way. There is a concern the existing footway and the proposed uncontrolled crossings are insufficient to accommodate both cyclists and pedestrians that can be expected to utilise them. An inadequate width footway and uncontrolled crossings could lead to cyclist to pedestrian collisions or pedestrians / cyclists attempting to enter / exit the footway where full height kerbs are present, which could destabilise a cyclist, leading to a fall and personal injury or potentially vehicle to cyclist collisions and pedestrian trips and falls or potentially vehicle to pedestrian collisions.</p>	<p>It is recommended that dedicated cycle on and off-slips, with associated give way markings, are provided where appropriate, that the footway is suitable to accommodate pedestrians and cyclists, that the proposed uncontrolled pedestrian crossing on Turners Hill Road is also suitable to accommodate pedestrians and cyclists and that advance hazard warning paving, are provided.</p>	<p>Cycling is on-road currently (as denoted by signage instructing cyclists to dismount where the Worth Way cycleway meets Turners Hill Road) and it is envisioned for it to remain so. Road markings and dropped kerbs will be provided on approach to the access road to bring the cyclists off carriageway and enable them to join the off road 3.0m wide shared footway and cycleway (at widened 4m section of cycle way) This connects with Worth Way (on foot). This also benefits the cyclists from both Turners Hill to the north joining Worth Way. This is illustrated in Drawing ITB9155-GA-029I.</p>		

2.4 Design Organisation and Overseeing Organisation Statements

Table F.5: Design Organisation Statement

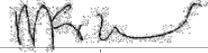
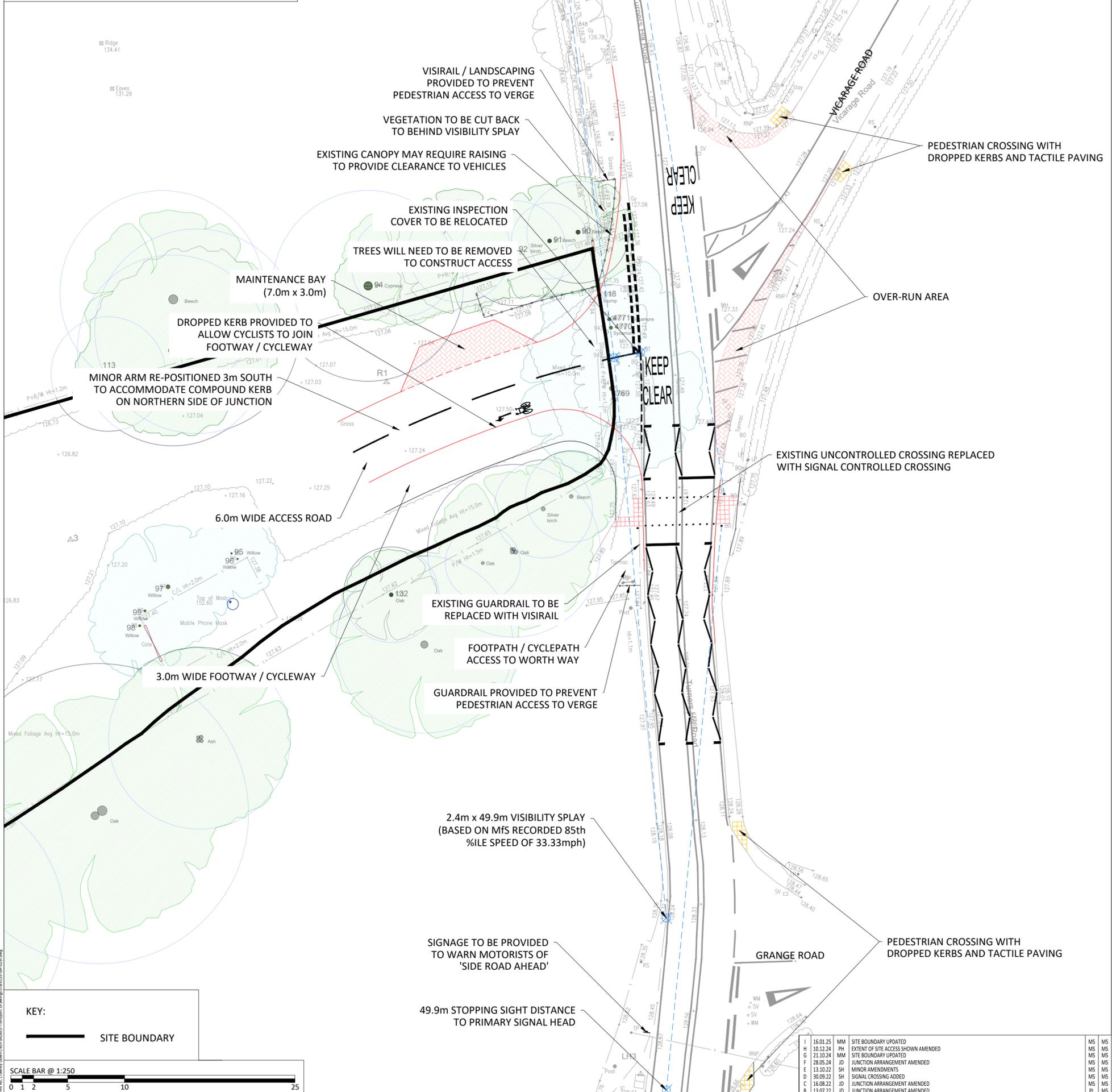
<p>On behalf of the design organisation I certify that:</p> <p>1) The RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the Overseeing Organisation.</p>	
Name:	Mark Stead
Signed:	
Position:	Associate
Organisation:	i-Transport LLP
Date:	18-12-2024

Table F.6: Overseeing Organisation Statement

<p>On behalf of the Overseeing Organisation I certify that:</p> <p>1) The RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the design organisation; and</p> <p>2) The agreed RSA actions will be progressed.</p>	
Name:	
Signed:	
Position:	
Organisation:	West Sussex County Council
Date:	



Large Refuse Vehicle (4 axle)	11.347m
Overall Length	2.500m
Overall Width	3.751m
Min Body Height	0.300m
Track Width	2.500m
Lock to lock time	6.00s
Wall to Wall Turning Radius	11.330m



KEY:

— SITE BOUNDARY

SCALE BAR @ 1:250

0 1 2 5 10 25

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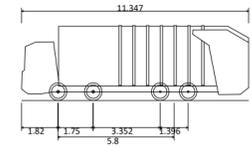
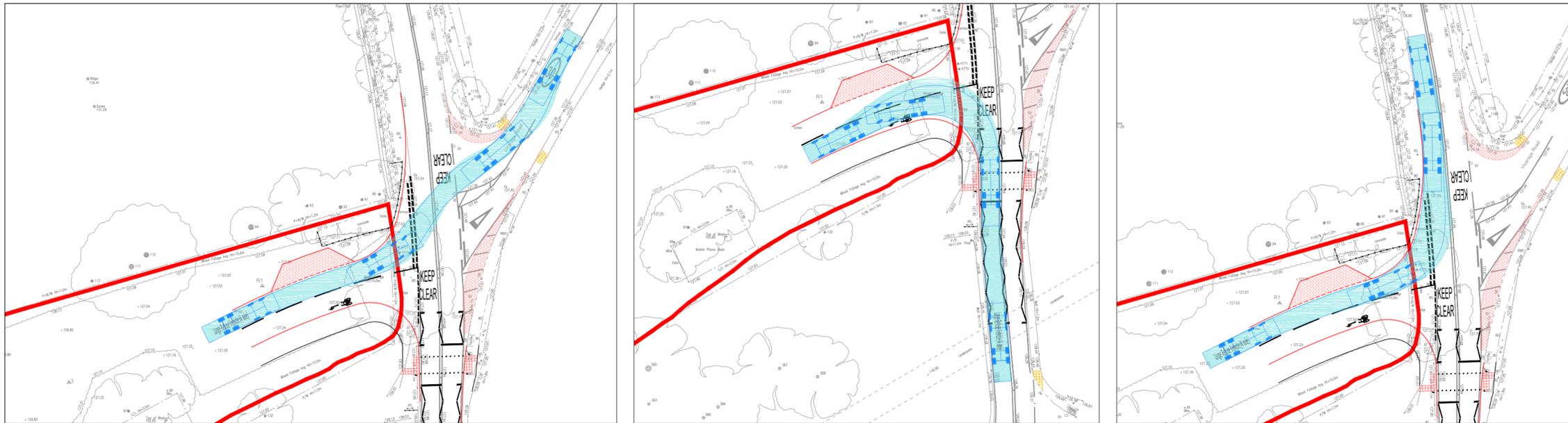
i-Transport

The Square, Basing View, Basingstoke, Hampshire, RG21 4EB
Tel: 01256 637940
www.i-transport.co.uk

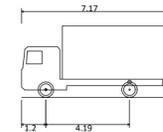
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TITLE:	PROPOSED SOUTHERN SITE ACCESS PRIORITY JUNCTION
PROJECT:	WYCHWOOD, TURNERS HILL ROAD, CRAWLEY DOWN

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G	21.10.24	MM	SITE BOUNDARY UPDATED	MS	MS
F	28.05.24	JD	JUNCTION ARRANGEMENT AMENDED	MS	MS
E	13.10.22	SH	MINOR AMENDMENTS	MS	MS
D	30.09.22	SH	SIGNAL CROSSING ADDED	MS	MS
C	16.08.22	JD	JUNCTION ARRANGEMENT AMENDED	MS	MS
B	13.07.22	JD	JUNCTION ARRANGEMENT AMENDED	MS	MS

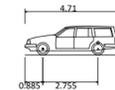
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JD	MS	JCB			
PROJECT No:	SCALE @ A2:	DATE:			
ITB9155	1:500	15.06.22			
DRAWING No:	ITB9155-GA-029				REV:
					I



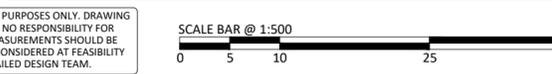
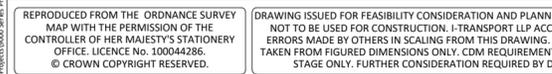
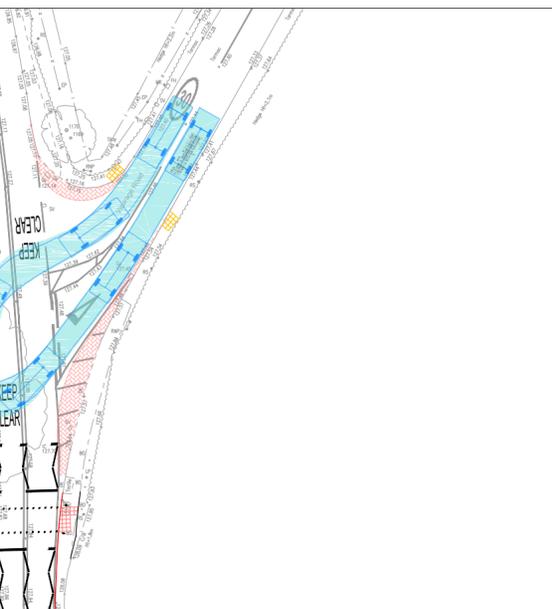
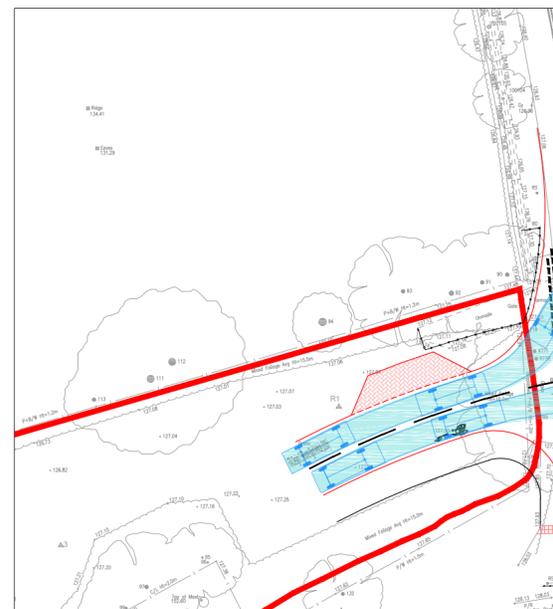
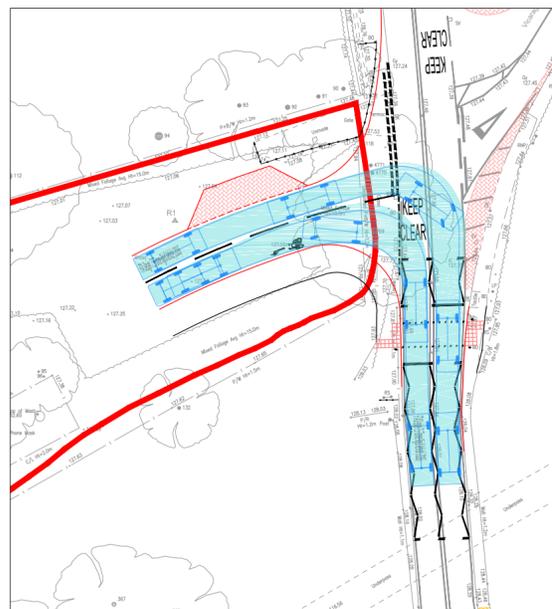
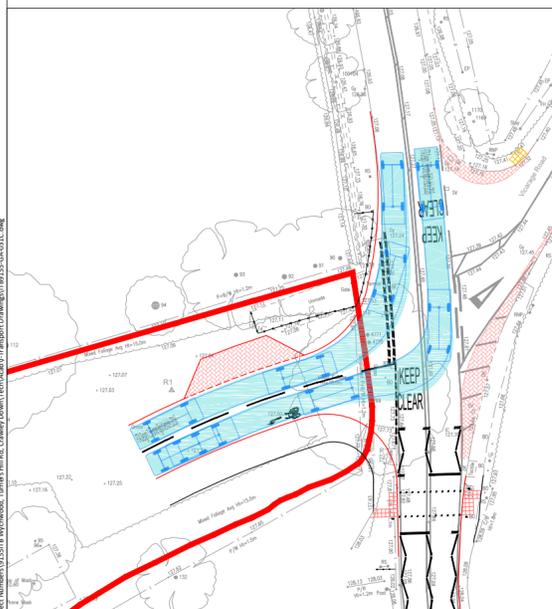
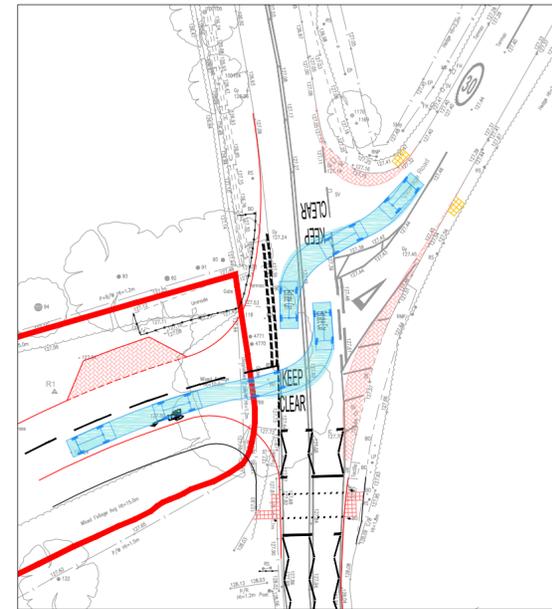
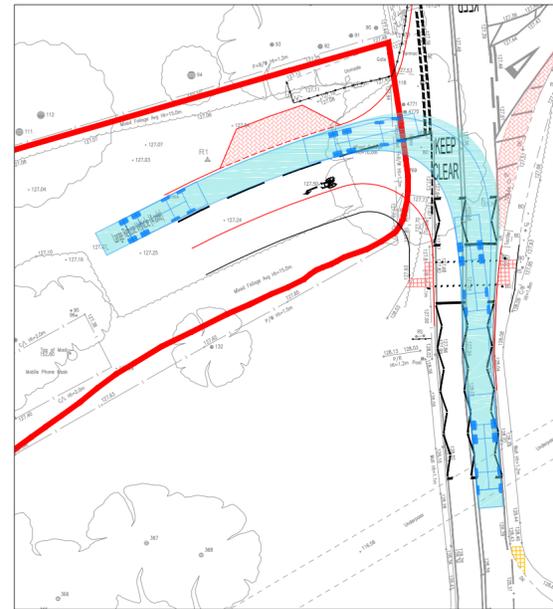
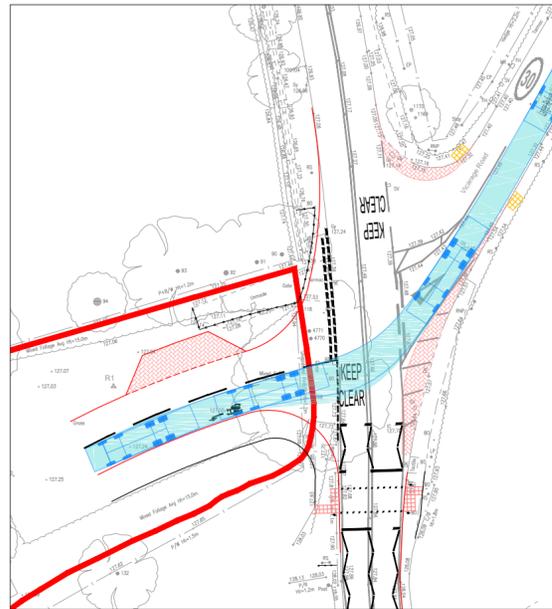
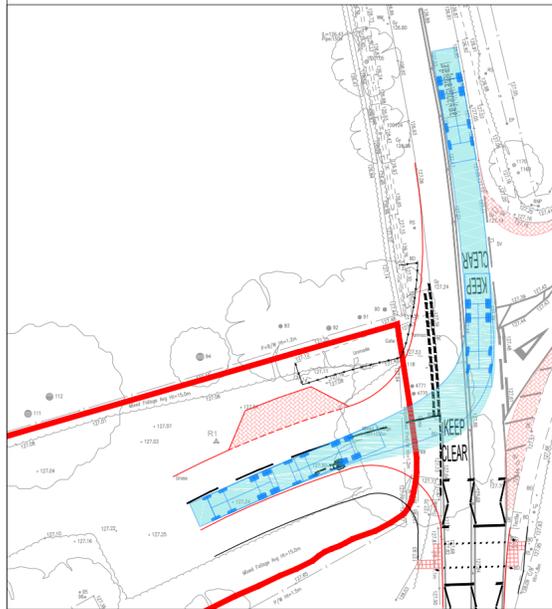
Large Refuse Vehicle (4 axle)
 Overall Length 11.347m
 Overall Width 2.500m
 Overall Body Height 3.751m
 Min Body Ground Clearance 0.304m
 Track Width 2.500m
 Lock to lock time 6.00s
 Wall to Wall Turning Radius 11.330m



FTA Design 7.5 Tonne Rigid Vehicle (2016)
 Overall Length 7.170m
 Overall Width 3.300m
 Overall Body Height 3.580m
 Min Body Ground Clearance 0.375m
 Track Width 2.120m
 Lock to lock time 3.00s
 Kerb to Kerb Turning Radius 7.000m



Estate Car
 Overall Length 4.710m
 Overall Width 1.804m
 Overall Body Height 1.442m
 Min Body Ground Clearance 0.207m
 Max Track Width 1.756m
 Lock to lock time 4.00s
 Kerb to Kerb Turning Radius 5.950m



REV	DATE	BY	DESCRIPTION	CHK	APP
C	18.12.24	JD	ACCESS ARRANGEMENT UPDATED	MS	MS
B	18.08.22	JD	ACCESS ARRANGEMENT UPDATED	MS	MS
A	05.08.22	JD	ACCESS ARRANGEMENT UPDATED	MS	MS

STATUS: FOR INFORMATION



The Square, Basing View,
 Basingstoke, Hampshire, RG21 4EB
 Tel: 01256 637940
 www.i-transport.co.uk

TITLE: SWEEP PATH ANALYSIS - REFUSE VEHICLE & ESTATE CAR

PROJECT: WYCHWOOD, TURNERS HILL ROAD, CRAWLEY DOWN

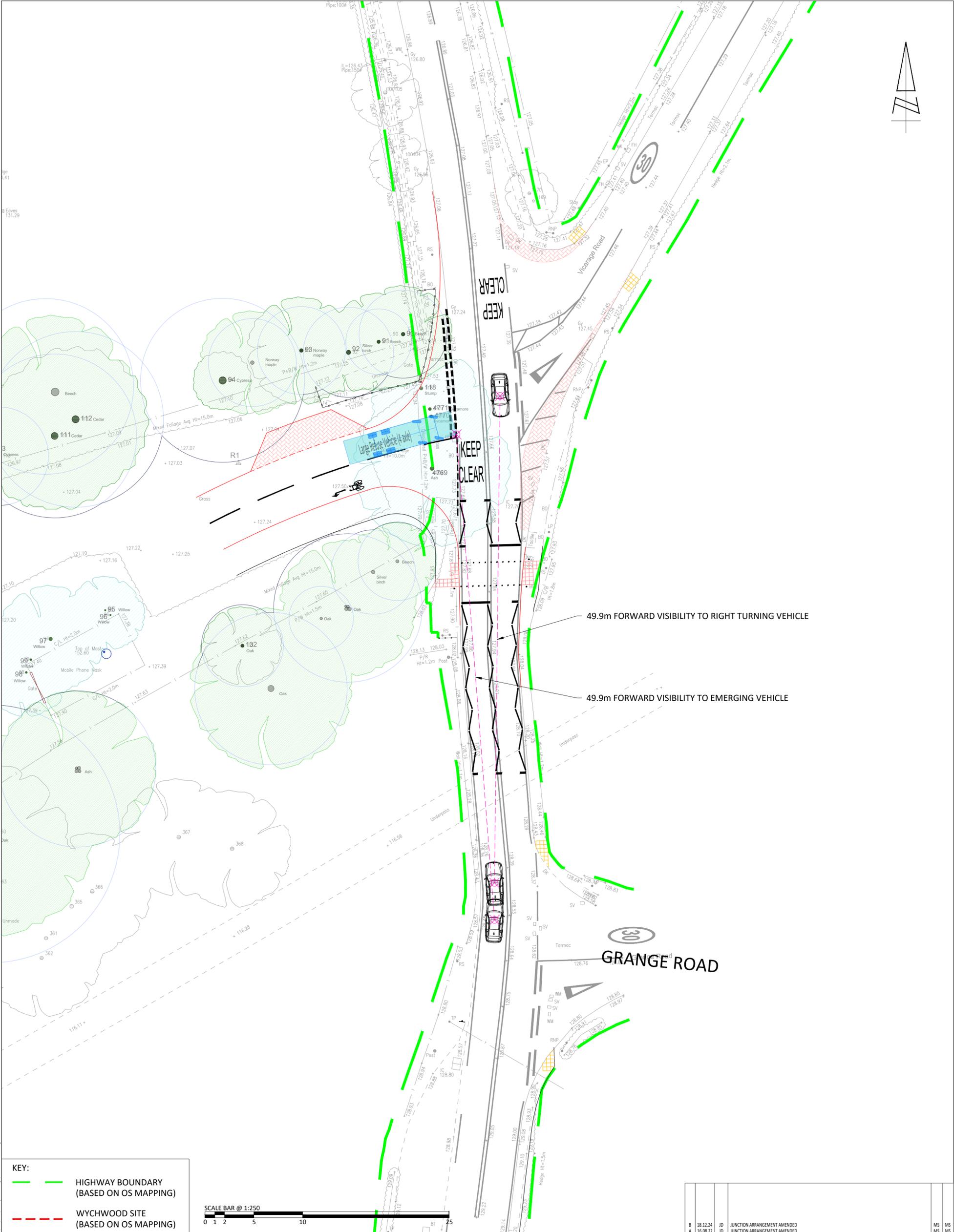
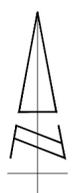
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DRAWN:	CHECKED:	APPROVED:
JD	PL	MS
PROJECT No: ITB9155	SCALE @ A2: 1:500	DATE: 13.07.22
DRAWING No: ITB9155-GA-031		
REV: C		

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KEY:

- HIGHWAY BOUNDARY (BASED ON OS MAPPING)
- - - WYCHWOOD SITE (BASED ON OS MAPPING)



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i-Transport

The Square, Basing View, Basingstoke, Hampshire, RG21 4EB
 Tel: 01256 637940
 www.i-transport.co.uk

CLIENT: WATES DEVELOPMENTS

TITLE: FORWARD VISIBILITY TO TURNING VEHICLE

PROJECT: WYCHWOOD, TURNERS HILL ROAD, CRAWLEY DOWN

REV	DATE	BY	DESCRIPTION	CHK	APP
B	18.12.24	JD	JUNCTION ARRANGEMENT AMENDED	MS	MS
A	16.08.22	JD	JUNCTION ARRANGEMENT AMENDED	MS	MS

STATUS: FOR INFORMATION

DRAWN: JD	CHECKED: PL	APPROVED: MS
PROJECT No: ITB9155	SCALE @ A2: 1:250	DATE: 08.08.22
DRAWING No: ITB9155-GA-034		REV: B

Technical Note: RSA GG119 Response – Central Access

Project No: ITB9155
Project Title: Land west of Turners Hill Road
Title: Stage 1 Road Safety Audit – GG119 Response Format
Ref: MS/ITB9155-064
Date: 18 December 2024

SECTION 1 SUMMARY

1.1 Wates Developments are promoting a residential-led development in Crawley Down. The site is allocated for 350 dwellings within the Mid Sussex District Plan 2021-2039 (Policy DPA9). The site is being bought forward as two planning applications covering a northern and southern parcel and a SANG.

1.2 The parcels of land will be served by the following vehicular accesses:

Southern Parcel

- 1 New priority junction, opposite Vicarage Road (serving around 200 homes)
- 2 New priority junction, south of Huntsland (serving around 50 homes)

Northern Parcel

- 3 Extension of the new residential development at Wychwood Place with extension / realignment of Wychwood Place into site (serving around 150 homes)

1.3 This Stage 1 RSA relates to (2), a new priority junction, south of Huntsland, and has been undertaken in accordance with the adopted WSCC Road Safety Audit Policy by an independent Auditor. The audit is summarised within this Technical Note in accordance with Appendix F of GG 119 Revision 2, as required by WSCC.

SECTION 2 ROAD SAFETY AUDIT RESPONSE

2.1 Project Details

Table F.1: Project Details

Report Title:	Stage 1 Road Safety Audit
Date:	18 December 2024
Document Reference and Revision:	RSA-24-150-0
Prepared by:	Fenley Road Safety Limited
On behalf of:	West Sussex County Council

2.2 Authorisation Sheet

Table F.2: Authorisation Sheet

Project:	Land West of Turners Hill Road
Report Title:	RSA Response Summary
Prepared by (Design Organisation)	
Name:	Mark Stead
Position:	Associate
Signed:	
Organisation:	i-Transport LLP
Date:	18 December 2024
Approved by (Overseeing Organisation)	
Name:	
Position:	
Signed:	
Organisation:	West Sussex County Council
Date:	

2.3 Key Personnel

Table F.3: Key Personnel

Overseeing Organisation:	West Sussex County Council (WSCC)
RSA Team:	Fenley Road Safety Limited
Design Organisation:	i-Transport LLP

Road Safety Audit Decision Log

RSA Problem	RSA Recommendation	Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
<p>A.2.1 The B2802 Turners Hill Road in Crawley Down benefits from a network of road gullies together with the section of verge abutting the carriageway, cater for surface water. The proposals include the provision of a priority access off the western side of the carriageway as well as a section of footway to link to the existing footway network to the north. Whilst the proposals should not have an adverse impact on the existing contours of the carriageway, the provision of kerbing alongside the proposed footway, will prevent the drainage of surface water through the soft verge. The Audit Team have concerns that the proposals could therefore result in excessive surface water ponding which may lead to loss of control type collisions.</p>	<p>It is recommended that surface water is sufficiently drained from the carriageway.</p>	<p>Accepted – drainage features and measures will be addressed at the detailed S278 design.</p>		

RSA Problem	RSA Recommendation	Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
<p>A.2.2 The B2028 Turners Hill Road accommodates both telegraph / electric poles and signs within the verges both sides of the carriageway. The proposals include the provision of a footway along the western side of the carriageway where both signage and telegraph / electric poles are present. It is understood that the Audit Brief identifies that signage and utilities are to be assessed through the detail design stage and it is clear that the sign will be relocated due to it being situated in the middle of the access, nevertheless, the Audit Team have concerns that the existing telegraph / electric pole will reduce the width of the footway and could result in the need for a user to suddenly enter the carriageway which could lead to a vehicle to pedestrian type collisions.</p>	<p>It is recommended that items of street furniture are relocated.</p>	<p>Accepted – Drawing ITB9155-GA-038G demonstrates that the telegraph pole will be relocated to the back of the footway where there is sufficient space to do so. The revised drawing aids this relocation because it shows a footway rather than cycleway in this location.</p>		

RSA Problem	RSA Recommendation	Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
<p>A.4.1 The B2028 Turners Hill Road is a two-way single carriageway road that is subject to a 30mph speed limit but observes 85th percentile speeds of 37mph with circa 10% large vehicle content, according to data within the Audit Brief. The proposals include the provision of a shared footway cycleway along the western side of Turners Hill Road that terminates at a cyclist on/off-slip approximately 15 metres south of an existing controlled crossing. The scheme drawing illustrates that a cyclist ghost island right turn lane is to be provided adjacent to the on-slip which commences abruptly without a taper and reduces the lane widths of 2.6 metres. The Audit Team have concerns that whilst a 2.65 metre lane width is adequate for cars and light goods vehicles, a large vehicle to include passenger service vehicles and heavy goods vehicles will be required to encroach the cyclist ghost island right turn lane. The driver of a large vehicle may approach the ghost island right turn lane and not appreciate that the through lanes are inadequate to accommodate their vehicle which could lead to a vehicle to cyclist type collision with a stationary cyclist within the carriageway.</p>	<p>It is recommended that the proposed cyclist ghost island right turn lane is removed.</p>	<p>Accepted – see drawing ITB9155-GA-038G. Cyclists arriving at the site will use the same access as vehicles, whilst those exiting will now be directed to join the carriageway on approach to the site access junction at the point that the 3m footway / cycleway transitions to a 2m footway.</p>		

2.4 Design Organisation and Overseeing Organisation Statements

Table F.5: Design Organisation Statement

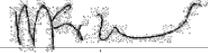
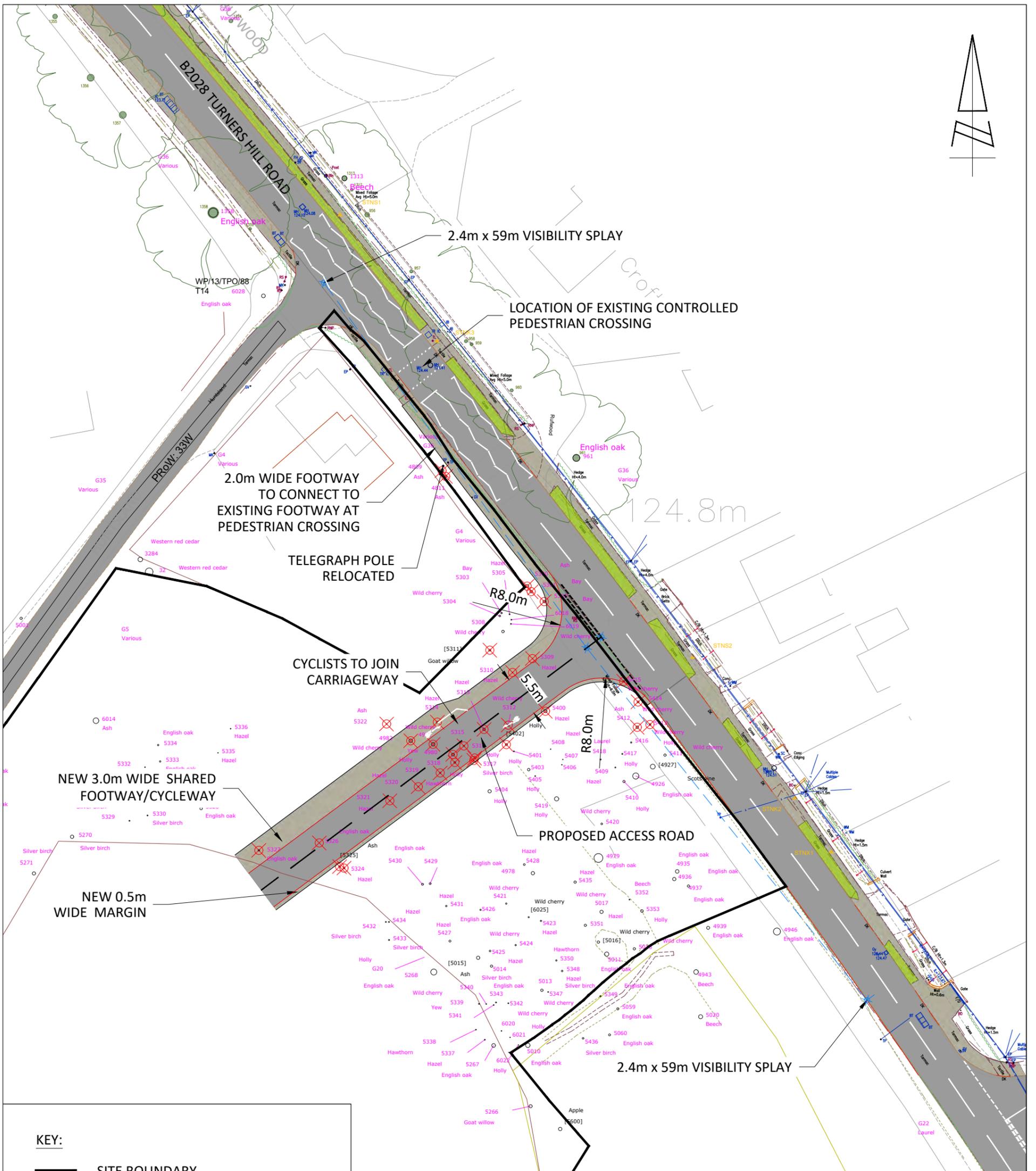
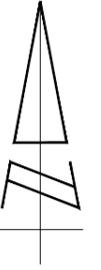
<p>On behalf of the design organisation, I certify that:</p> <p>1) The RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the Overseeing Organisation.</p>	
Name:	Mark Stead
Signed:	
Position:	Associate
Organisation:	i-Transport LLP
Date:	18-12-2024

Table F.6: Overseeing Organisation Statement

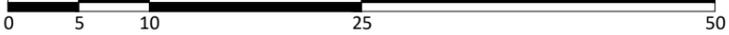
<p>On behalf of the Overseeing Organisation, I certify that:</p> <p>1) The RSA actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the design organisation; and</p> <p>2) The agreed RSA actions will be progressed.</p>	
Name:	
Signed:	
Position:	
Organisation:	West Sussex County Council
Date:	



KEY:

- SITE BOUNDARY
- TREES TO BE REMOVED

SCALE BAR @ 1:500



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CLIENT:

WATES DEVELOPMENTS

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F	10.12.24	PH	EXTENT OF ACCESS AMENDED	MS	MS
E	29.11.24	SH	RSA COMMENTS INCORPORATED	MS	MS
D	21.10.24	MM	SITE BOUNDARY UPDATED	MS	MS
C	29.08.24	JB	FOOTWAY AMENDS	LJ	MS
B	13.02.24	MM	TREE SURVEY UPDATED	MS	MS
A	23.01.24	PH	TOPO UPDATED	MS	MS

STATUS: **DRAFT**

SCALE @ A3: 1:500	CHECKED: MS	APPROVED: JCB
FILE REF: ITB9155	DRAWN: PH	DATE: 29.08.23
DRAWING No: ITB9155-GA-038		PROJECT No: ITB9155
		REV: G



The Square, Basing View,
Basingstoke, Hampshire, RG21 4EB

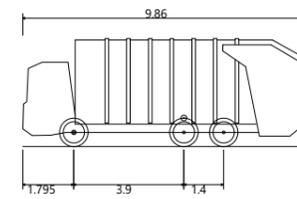
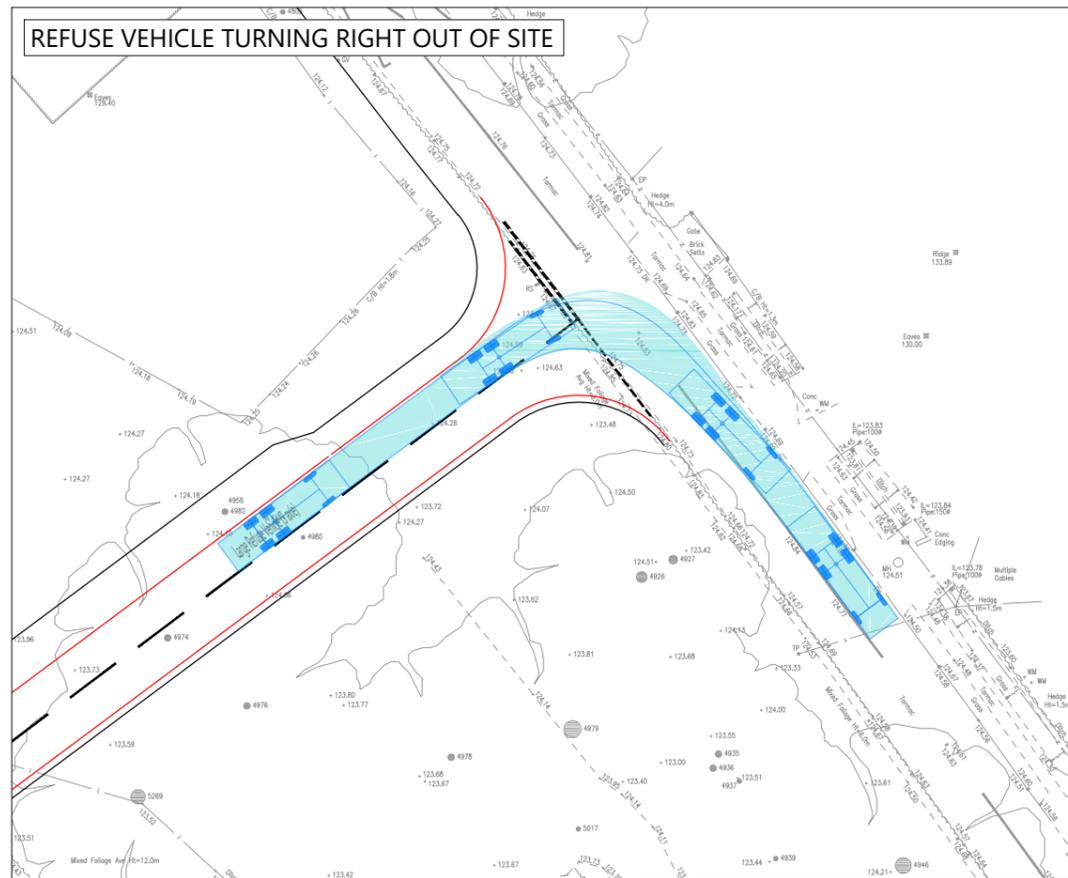
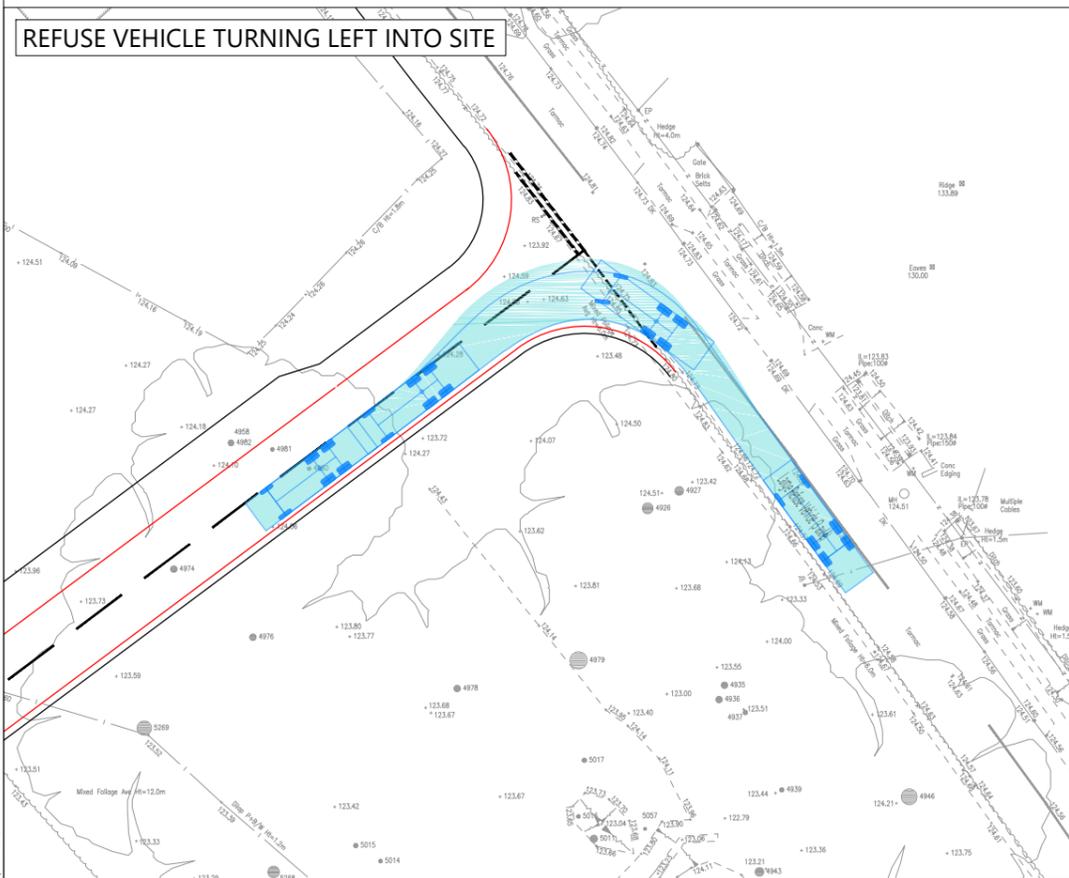
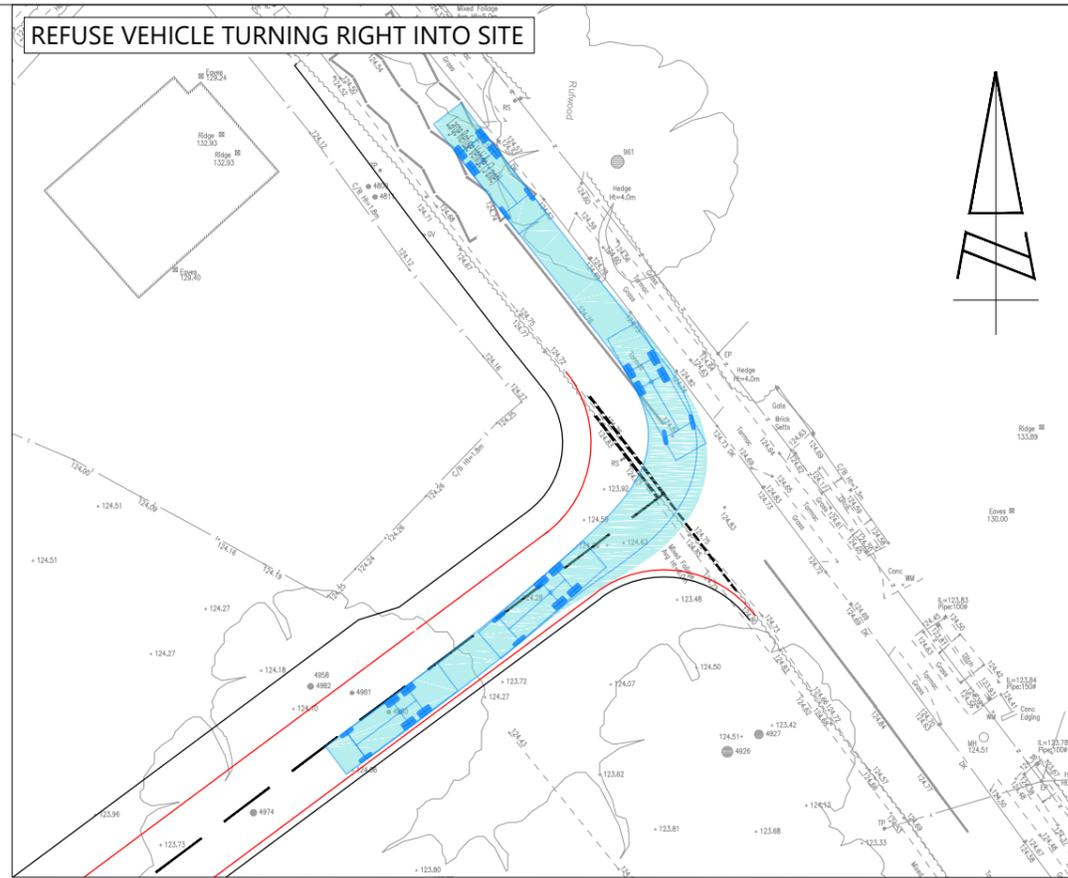
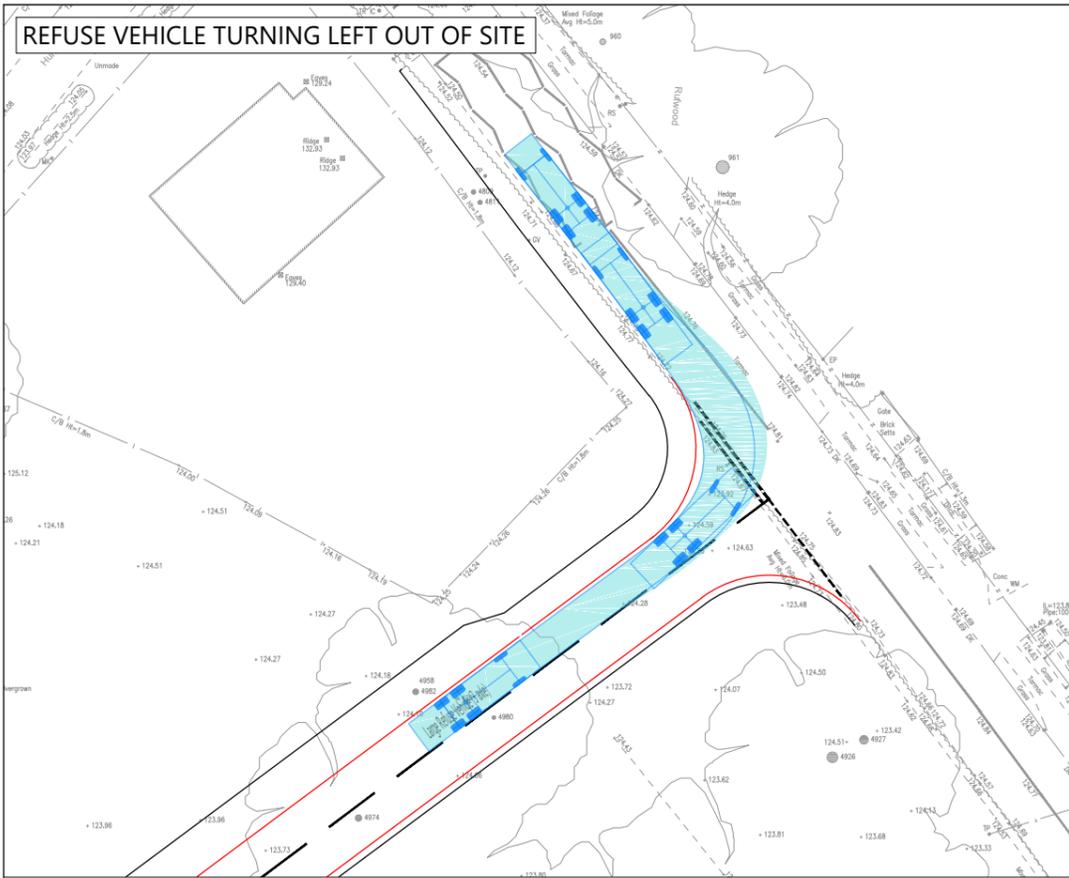
Tel: 01256 637940

www.i-transport.co.uk

TITLE:
PROPOSED CENTRAL SITE ACCESS PRIORITY JUNCTION

PROJECT:
LAND WEST OF TURNERS HILL ROAD, CRAWLEY DOWN

APPENDIX D. Swept Path Analysis at Accesses



Large Refuse Vehicle (3 axle)
 Overall Length 9.860m
 Overall Width 2.450m
 Overall Body Height 3.814m
 Min Body Ground Clearance 0.366m
 Track Width 2.450m
 Lock to lock time 4.00s
 Kerb to Kerb Turning Radius 9.500m

REV	DATE	BY	DESCRIPTION	CHK	APD
A	18.12.24	JD	ACCESS UPDATED / VEHICLE TRACKS UPDATED	MS	MS

STATUS: FOR INFORMATION



Grove House, Lutyens Close, Chineham Basingstoke, Hampshire, RG24 8AG
 Tel: 01256 338640
 www.i-transport.co.uk

TITLE: SWEEP PATH ANALYSIS - REFUSE VEHICLE

PROJECT: LAND WEST OF TURNERS HILL ROAD, CRAWLEY DOWN

CLIENT: WATES DEVELOPMENTS

DRAWN: JD CHECKED: MS APPROVED: MS

SCALE @ A3: 1:500 DATE: 13.02.19

PROJECT No: ITB9155

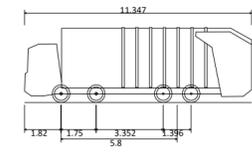
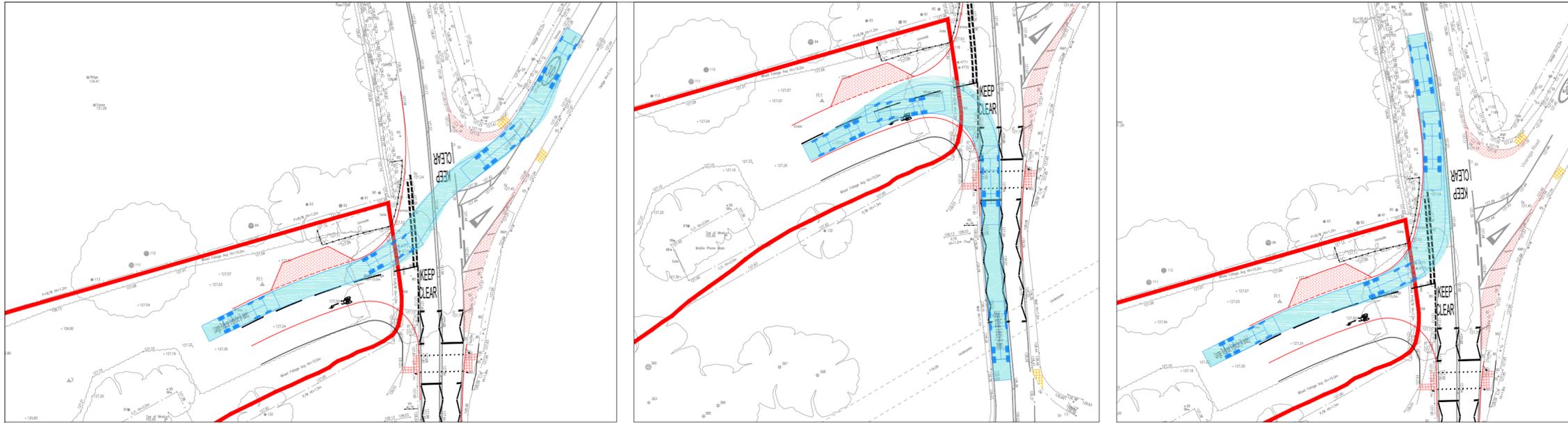
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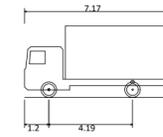
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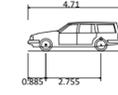
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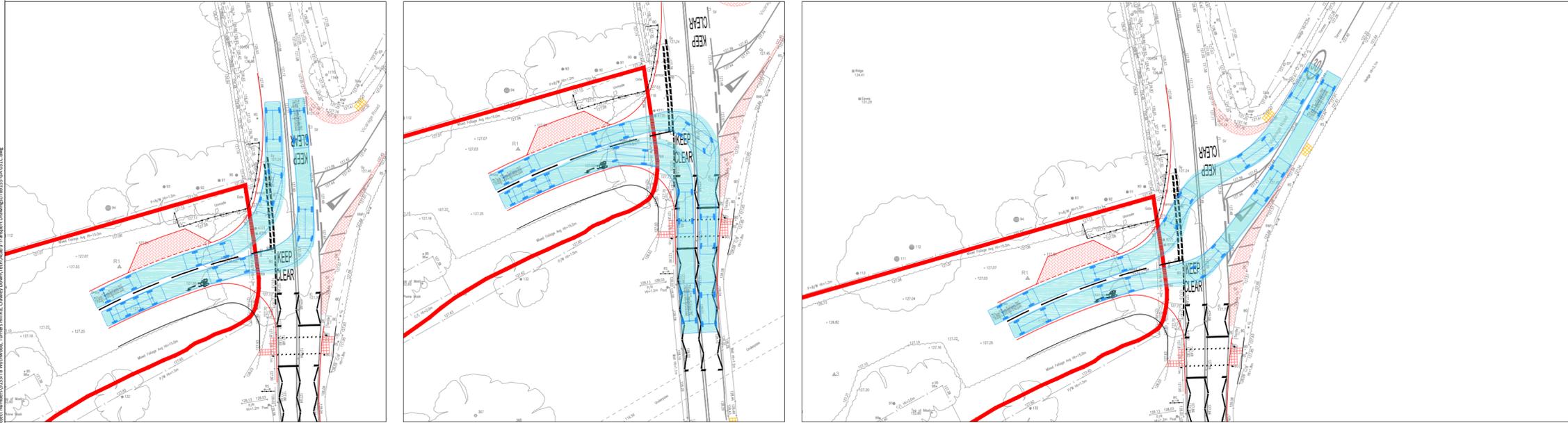
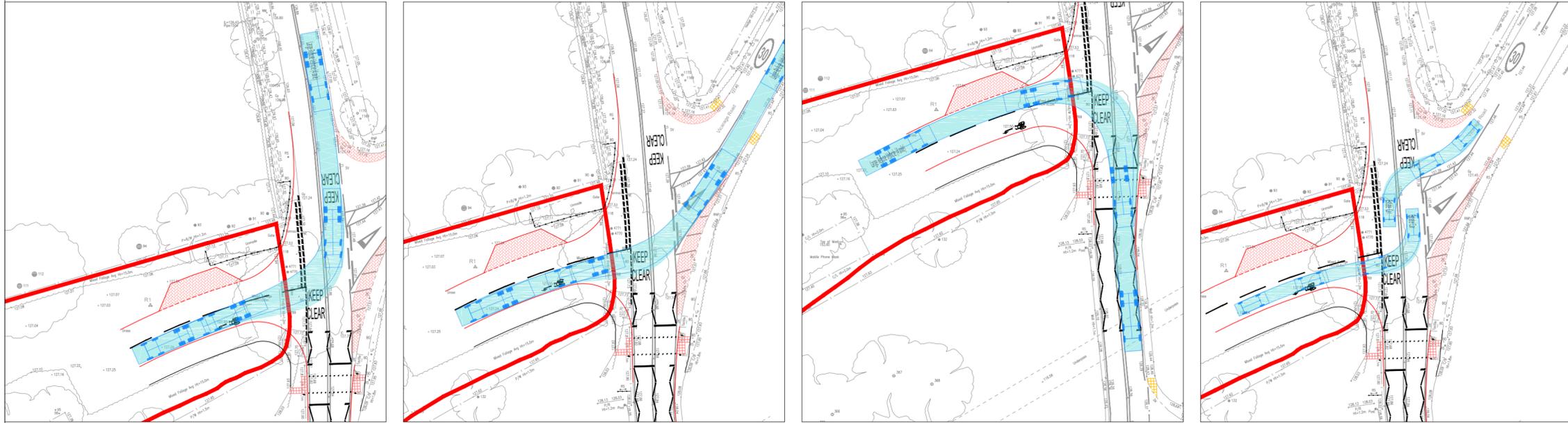
Large Refuse Vehicle (4 axle)
 Overall Length 11.347m
 Overall Width 2.500m
 Overall Body Height 3.751m
 Min Body Ground Clearance 0.304m
 Track Width 2.500m
 Lock to lock time 6.00s
 Wall to Wall Turning Radius 11.330m



FTA Design 7.5 Tonne Rigid Vehicle (2016)
 Overall Length 7.170m
 Overall Width 3.300m
 Overall Body Height 3.580m
 Min Body Ground Clearance 0.375m
 Track Width 2.120m
 Lock to lock time 3.00s
 Kerb to Kerb Turning Radius 7.000m



Estate Car
 Overall Length 4.710m
 Overall Width 1.804m
 Overall Body Height 1.442m
 Min Body Ground Clearance 0.207m
 Max Track Width 1.756m
 Lock to lock time 4.00s
 Kerb to Kerb Turning Radius 5.950m



C	18.12.24	JD	ACCESS ARRANGEMENT UPDATED	MS	MS
B	18.08.22	JD	ACCESS ARRANGEMENT UPDATED	MS	MS
A	05.08.22	JD	ACCESS ARRANGEMENT UPDATED	MS	MS
REV	DATE	BY	DESCRIPTION	CHK	APP

STATUS: FOR INFORMATION



The Square, Basing View,
 Basingstoke, Hampshire, RG21 4EB
 Tel: 01256 637940
 www.i-transport.co.uk

TITLE: SWEEP PATH ANALYSIS - REFUSE VEHICLE & ESTATE CAR

PROJECT: WYCHWOOD, TURNERS HILL ROAD, CRAWLEY DOWN

CLIENT: WATES DEVELOPMENTS

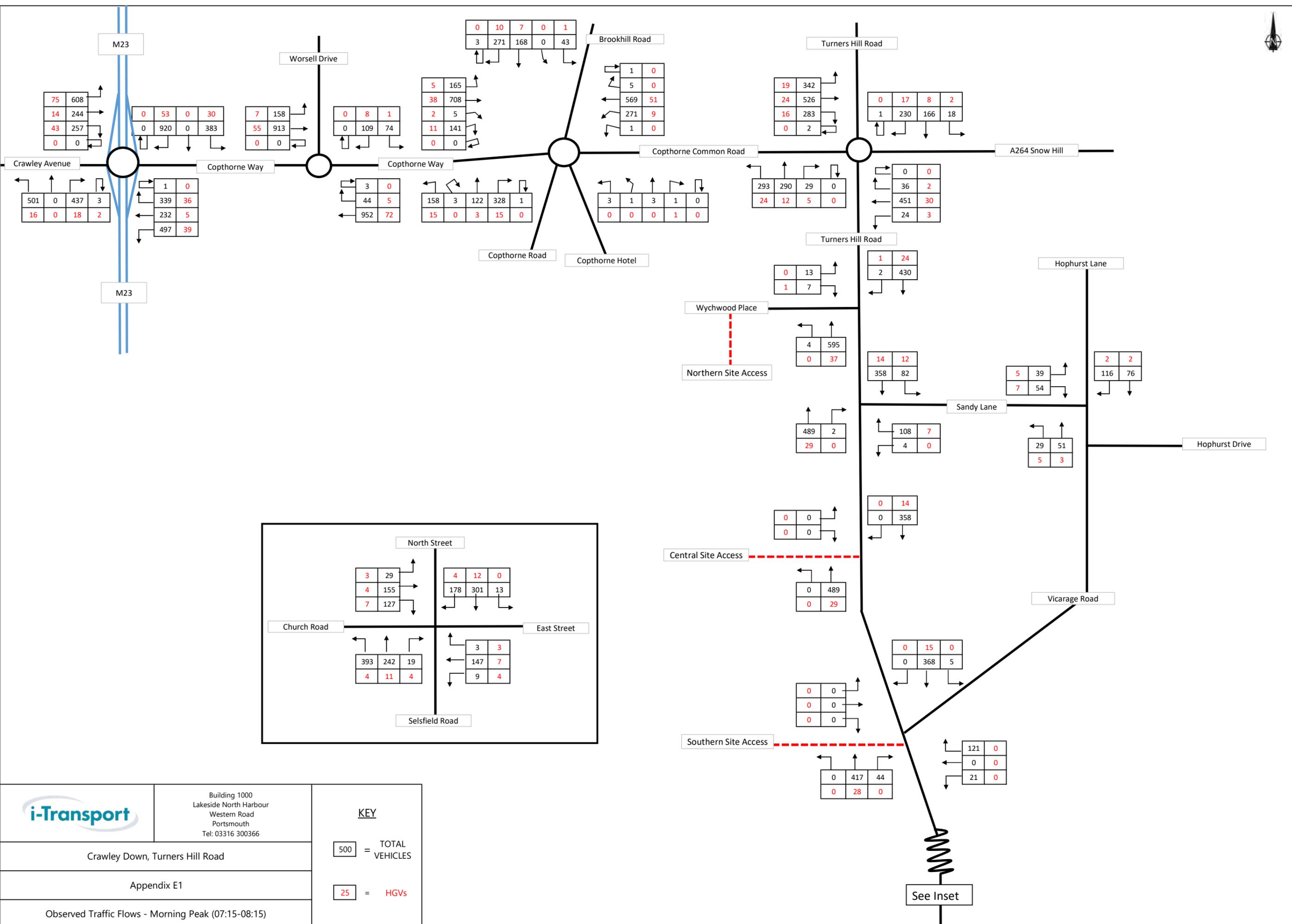
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APPENDIX E. Traffic Flow Diagrams

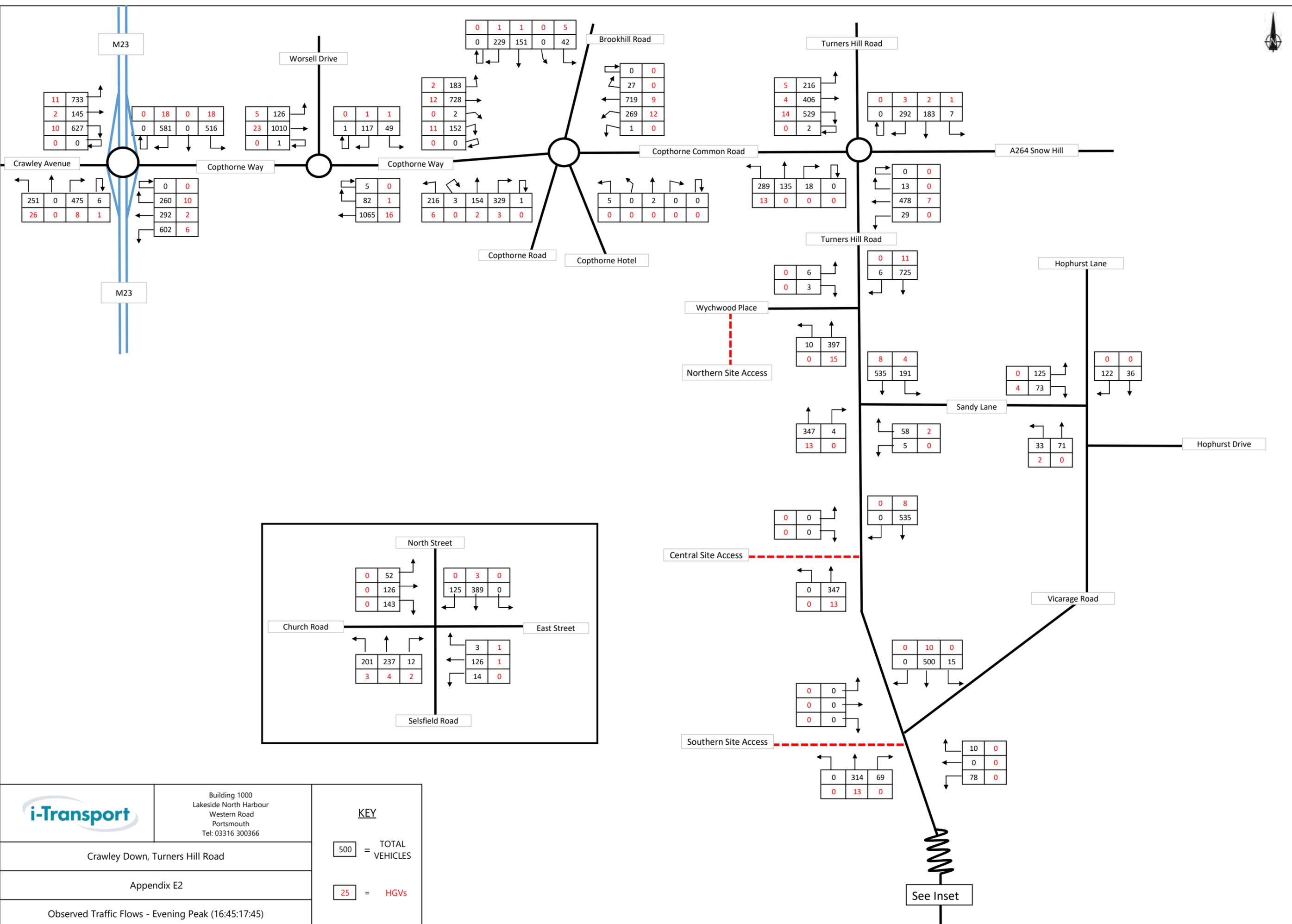


Building 1000
Lakeside North Harbour
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Portsmouth
Tel: 03316 300366

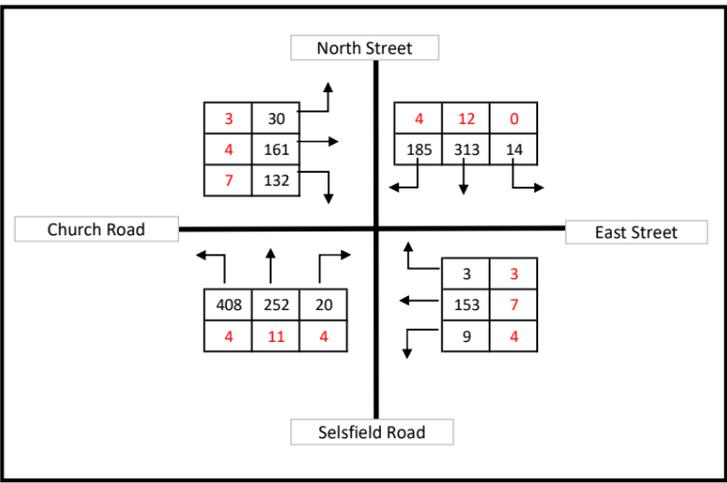
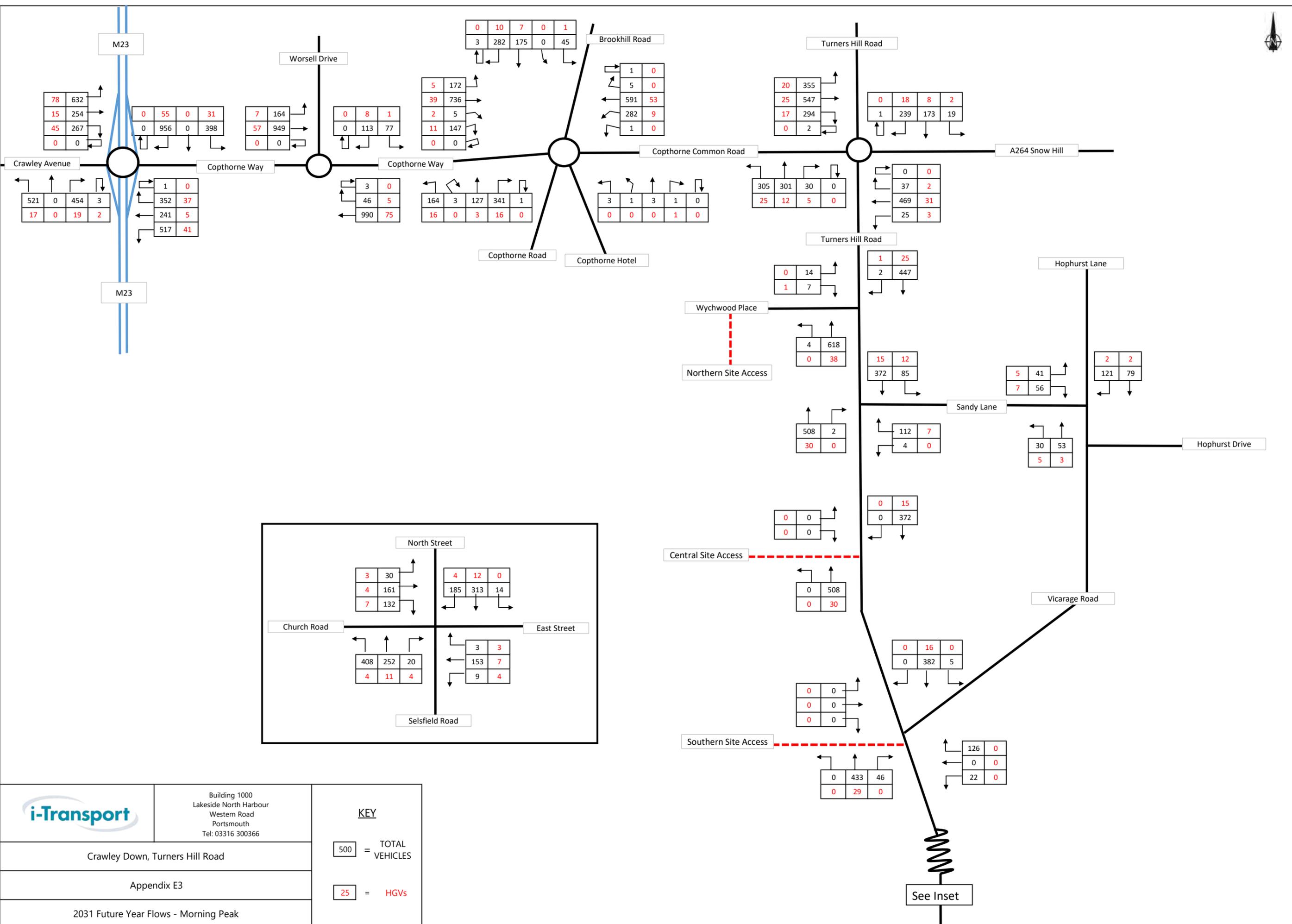
Crawley Down, Turners Hill Road

Appendix E1

Observed Traffic Flows - Morning Peak (07:15-08:15)

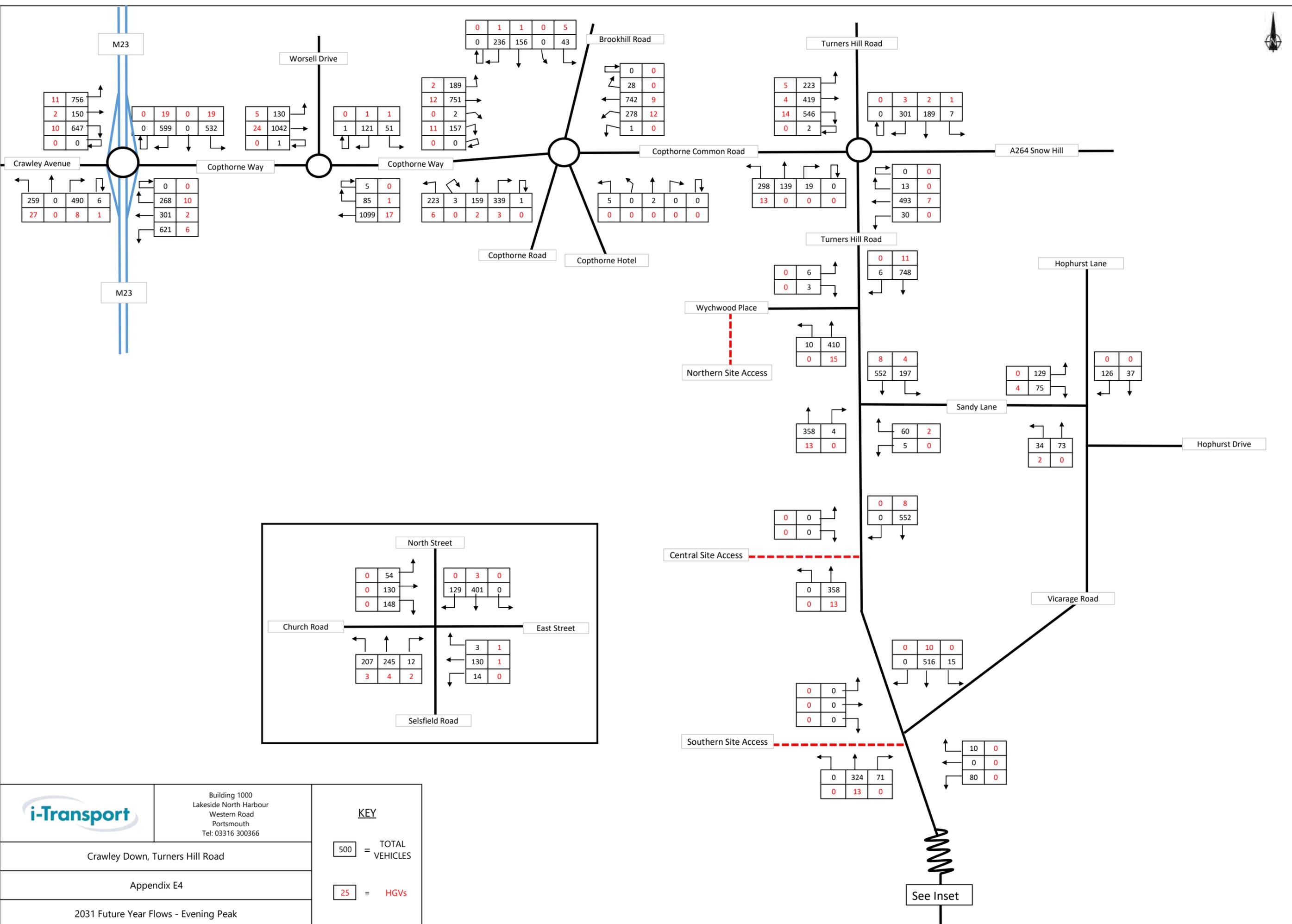


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	Appendix E2	
Observed Traffic Flows - Evening Peak (16:45:17:45)		

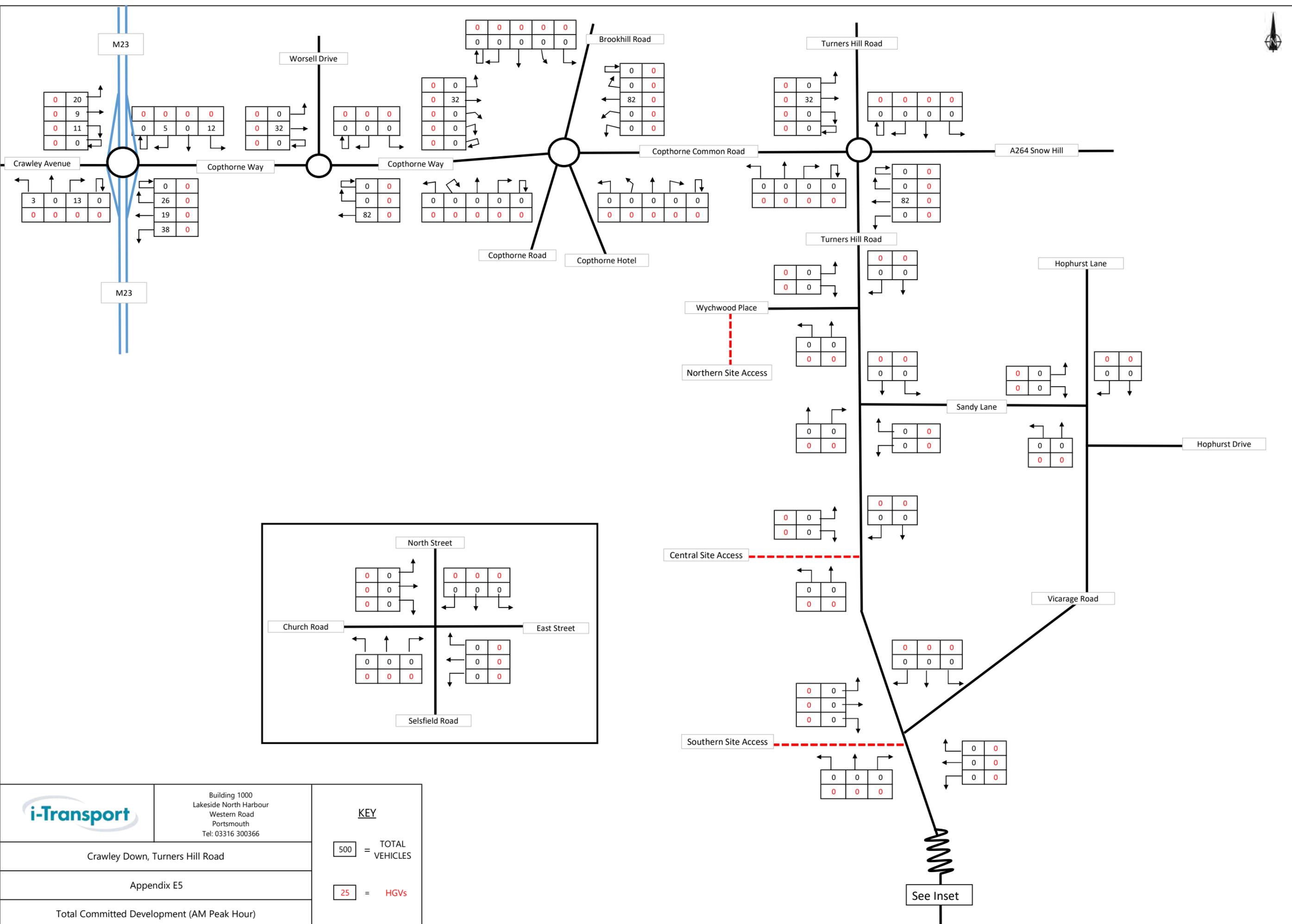


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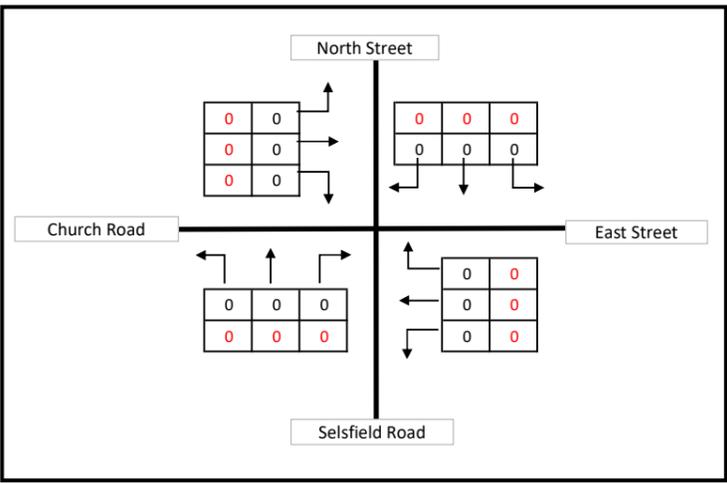
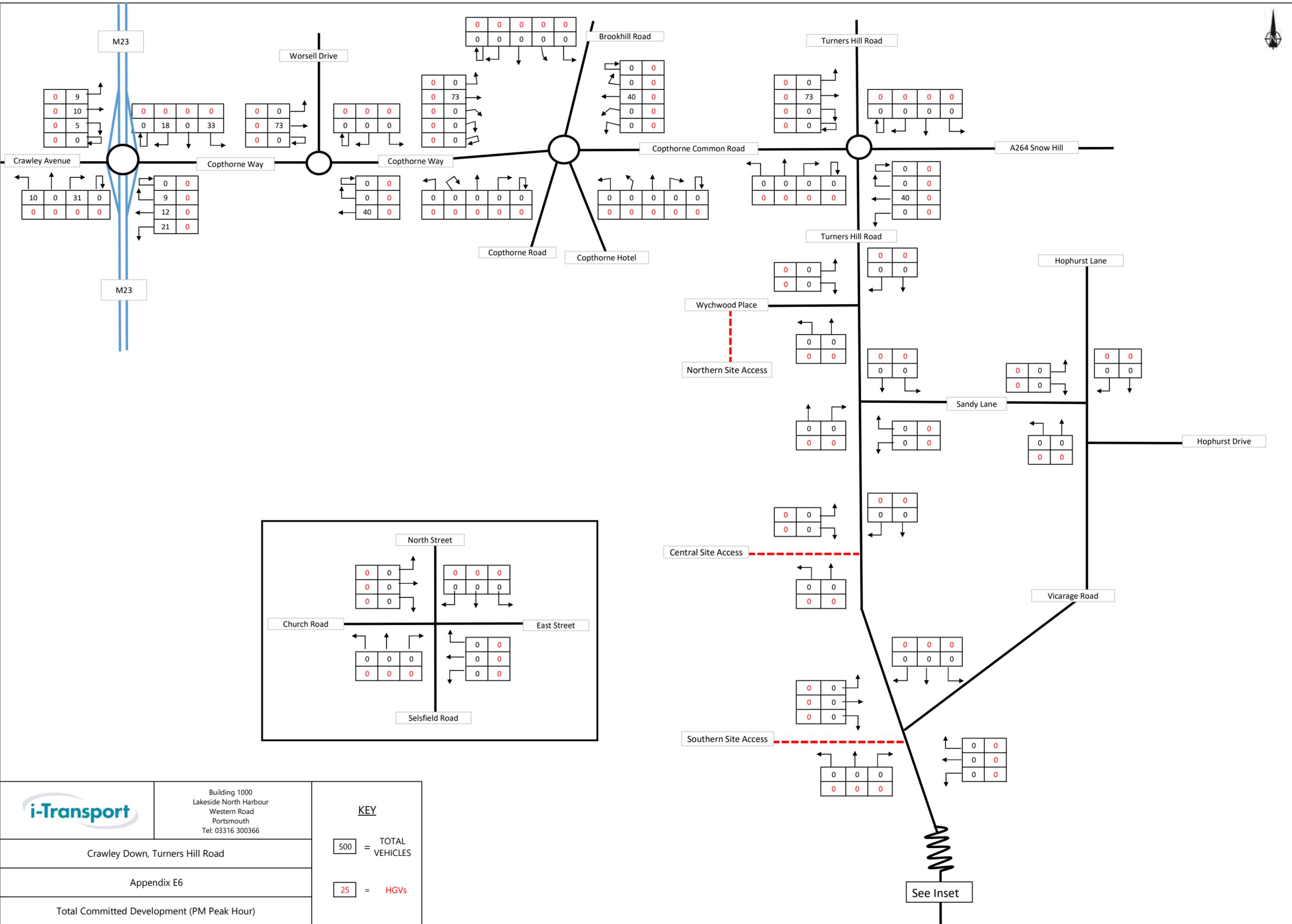
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Crawley Down, Turners Hill Road		
Appendix E3		
2031 Future Year Flows - Morning Peak		



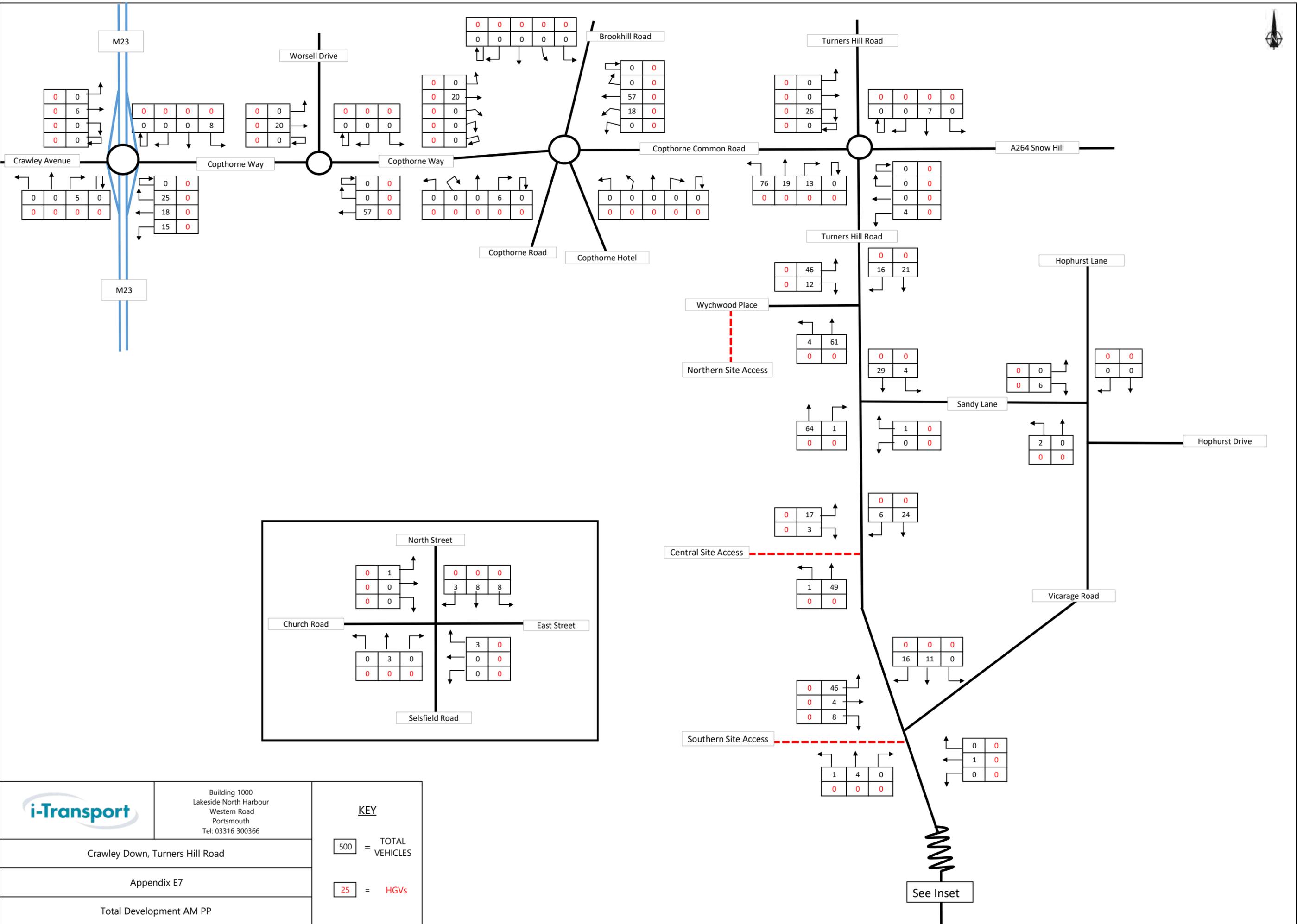
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Crawley Down, Turners Hill Road		
Appendix E4		
2031 Future Year Flows - Evening Peak		

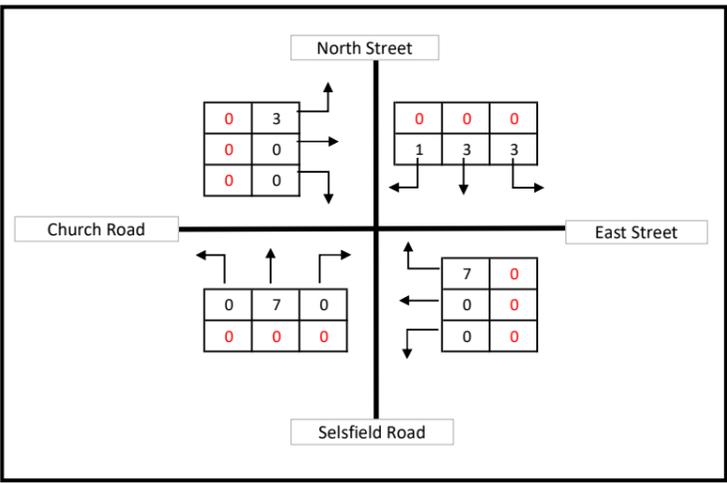
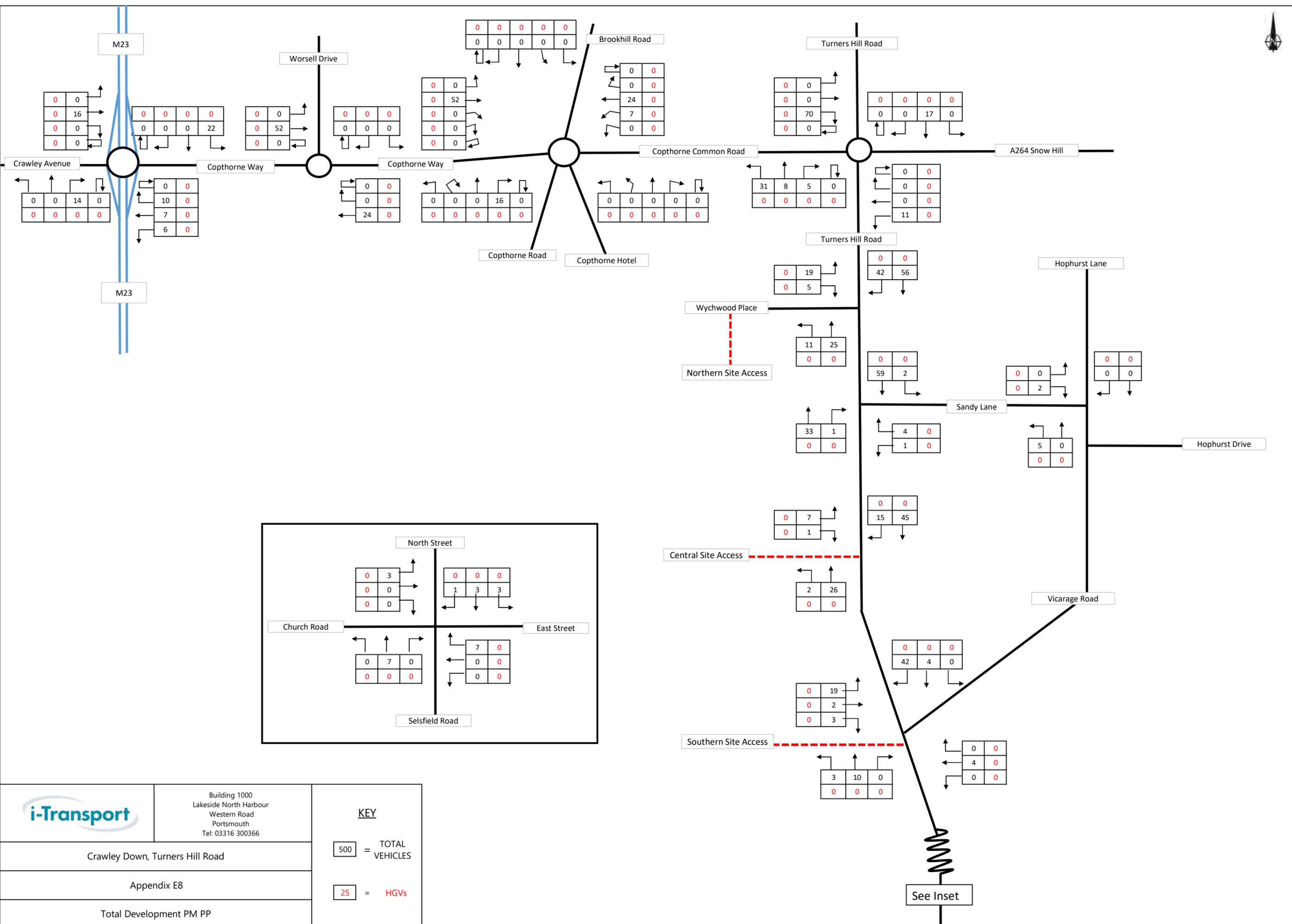


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Crawley Down, Turners Hill Road		
Appendix E5		
Total Committed Development (AM Peak Hour)		

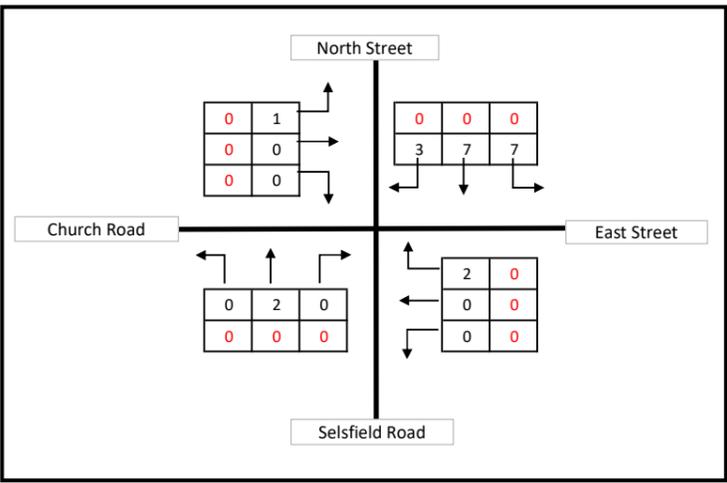
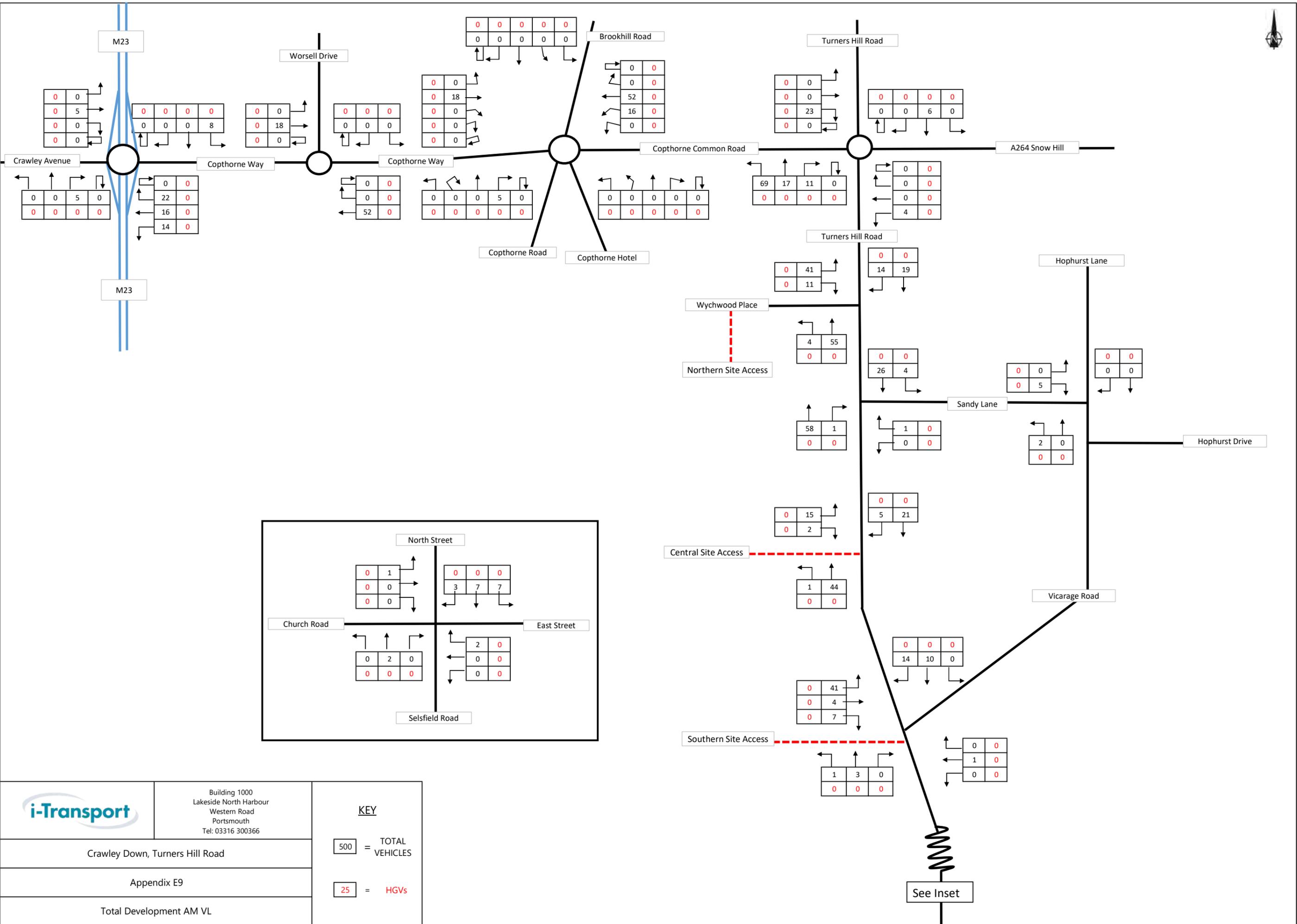


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Crawley Down, Turners Hill Road		
Appendix E6		
Total Committed Development (PM Peak Hour)		



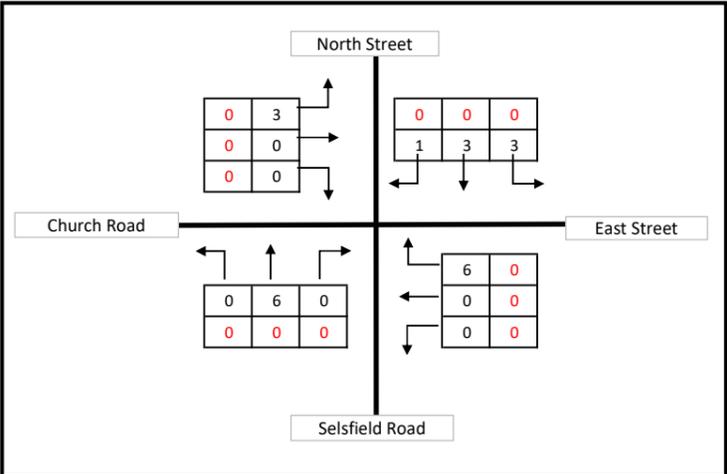
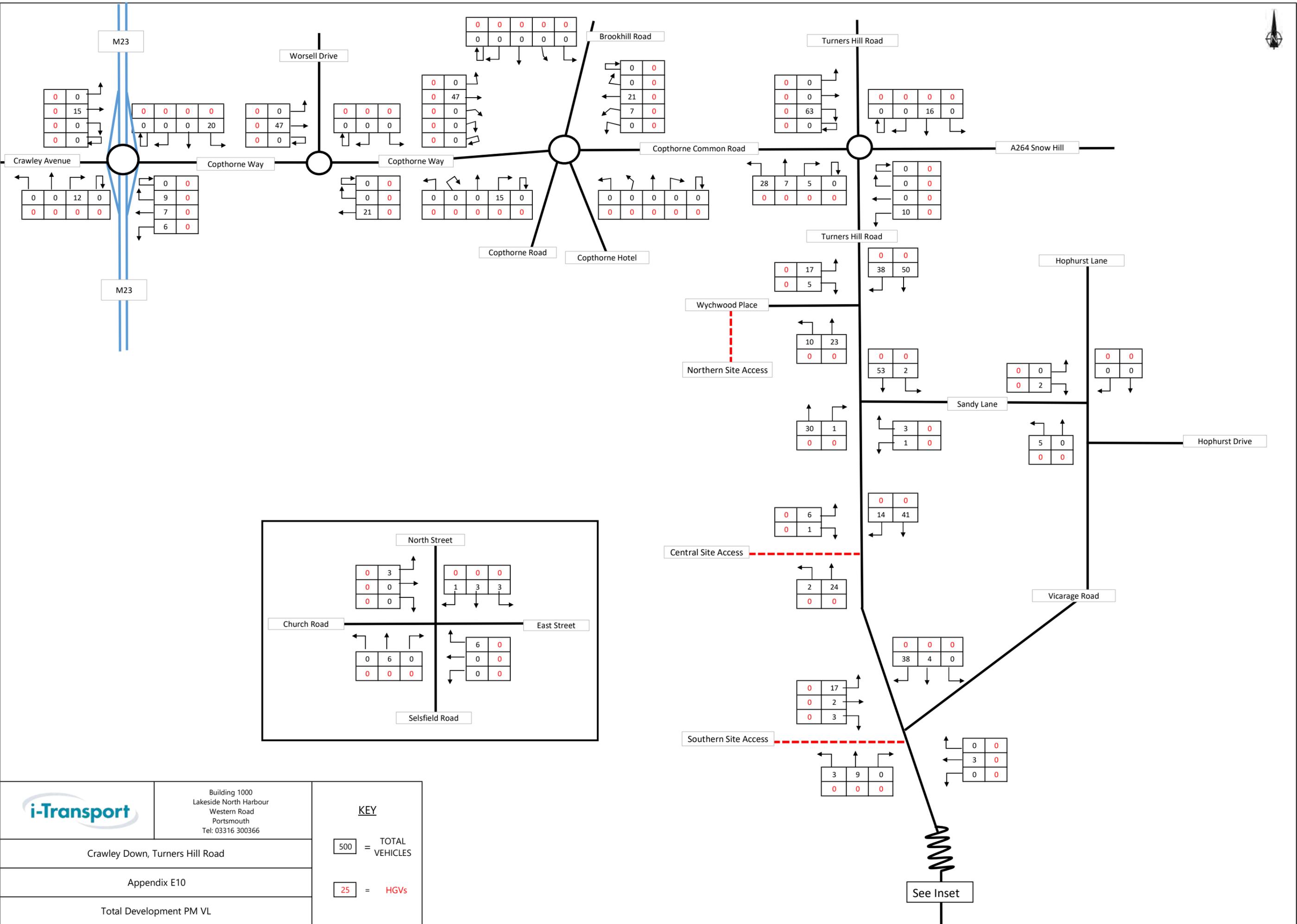


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Crawley Down, Turners Hill Road		
Appendix E8		
Total Development PM PP		



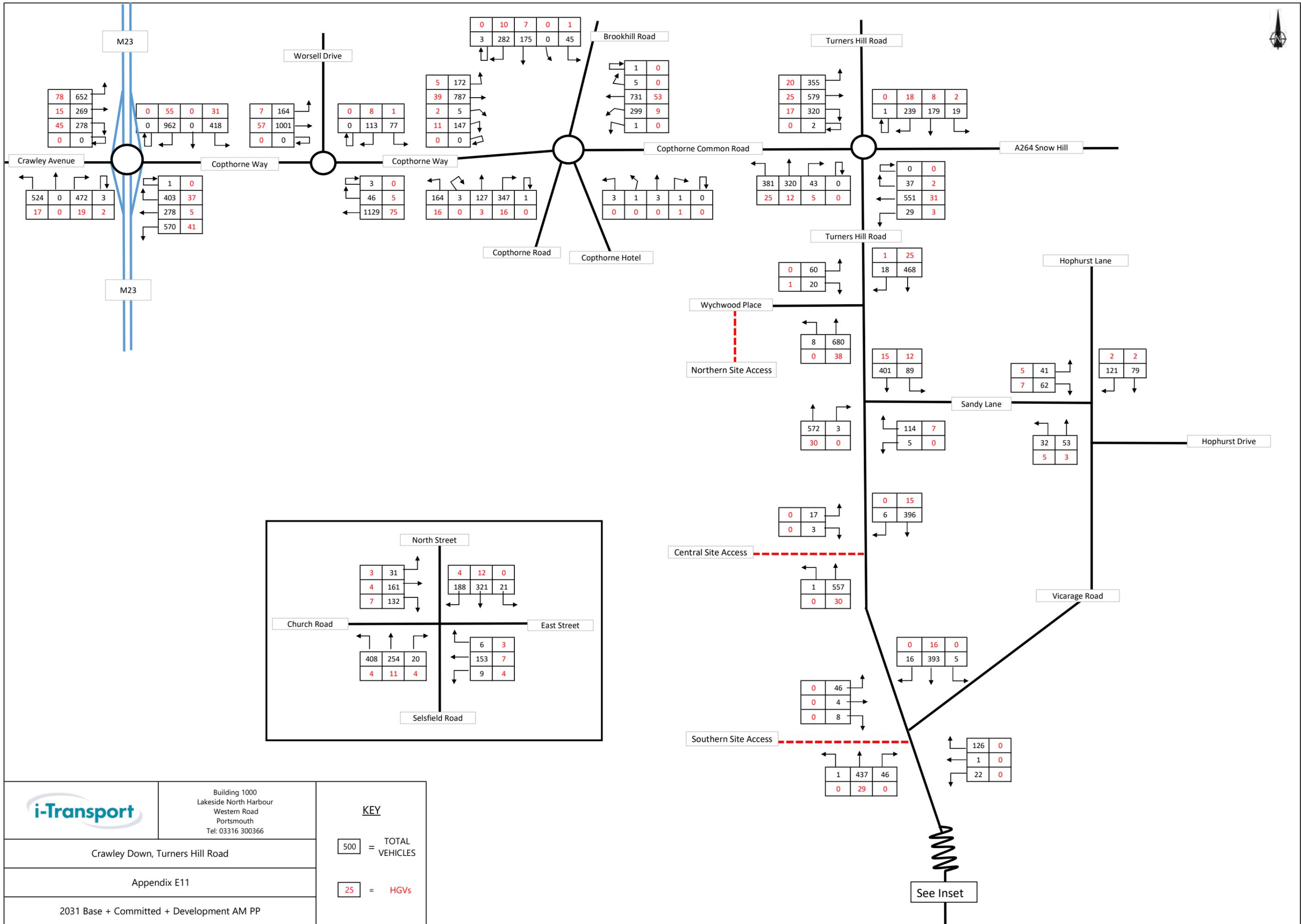
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	Appendix E9	
Total Development AM VL		

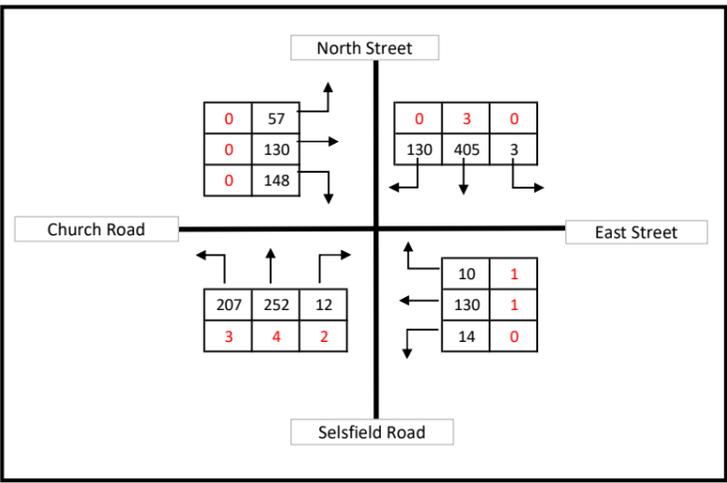
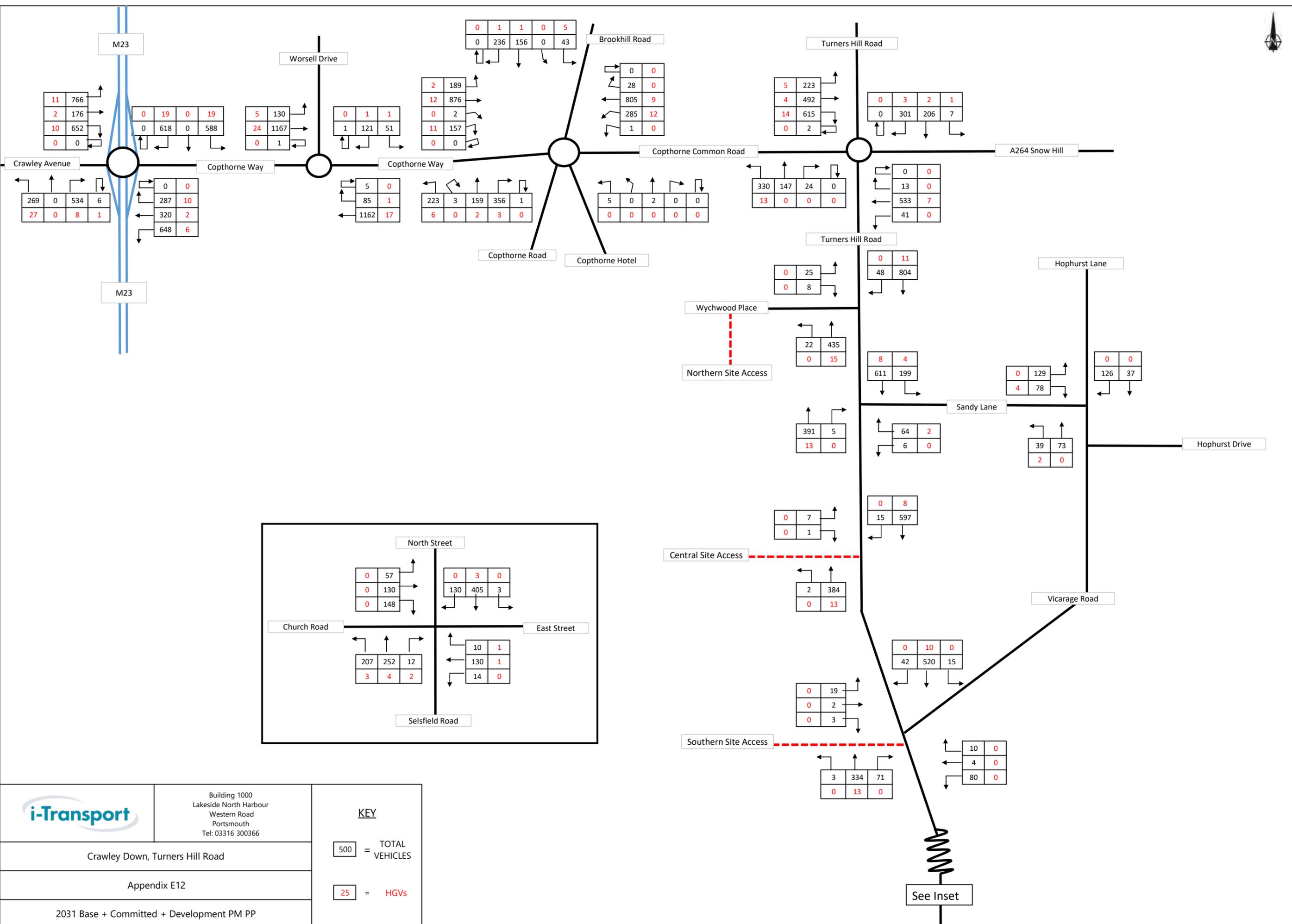


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Crawley Down, Turners Hill Road		
Appendix E10		
Total Development PM VL		

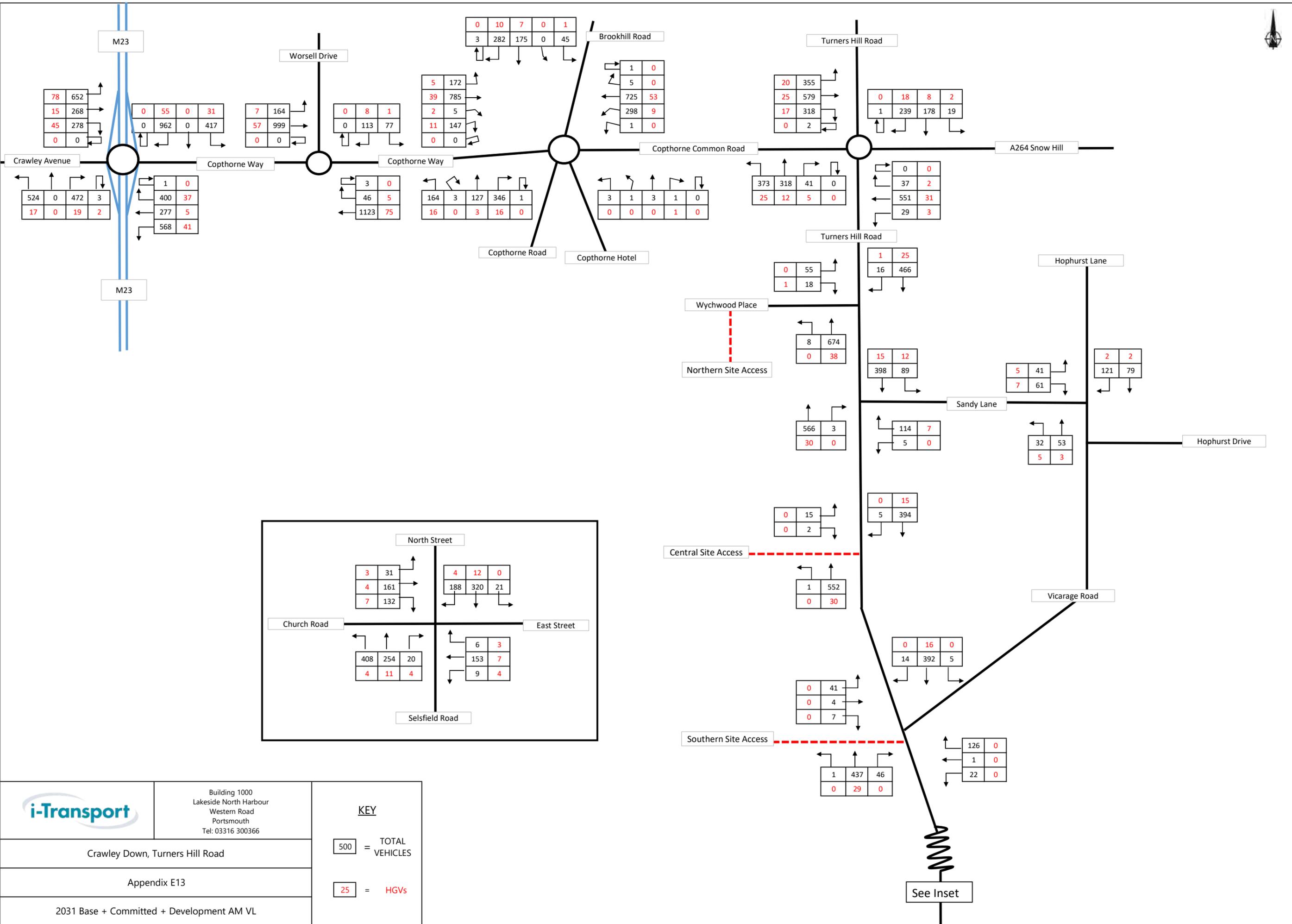
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	Building 1000 Lakeside North Harbour Western Road Portsmouth Tel: 03316 300366	
Crawley Down, Turners Hill Road		
Appendix E11		
2031 Base + Committed + Development AM PP		



	Building 1000 Lakeside North Harbour Western Road Portsmouth Tel: 03316 300366	<p>KEY</p> <p>$\begin{bmatrix} 500 \end{bmatrix}$ = TOTAL VEHICLES</p> <p>$\begin{bmatrix} 25 \end{bmatrix}$ = HGVs</p>
Crawley Down, Turners Hill Road		
Appendix E12		
2031 Base + Committed + Development PM PP		



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	Crawley Down, Turners Hill Road	
	Appendix E13	
2031 Base + Committed + Development AM VL		

