



SUNNICA ENERGY FARM

Preliminary Environmental Information Report

Appendix 13A: Transport Assessment

Sunnica Ltd

AUGUST 2020



Quality information

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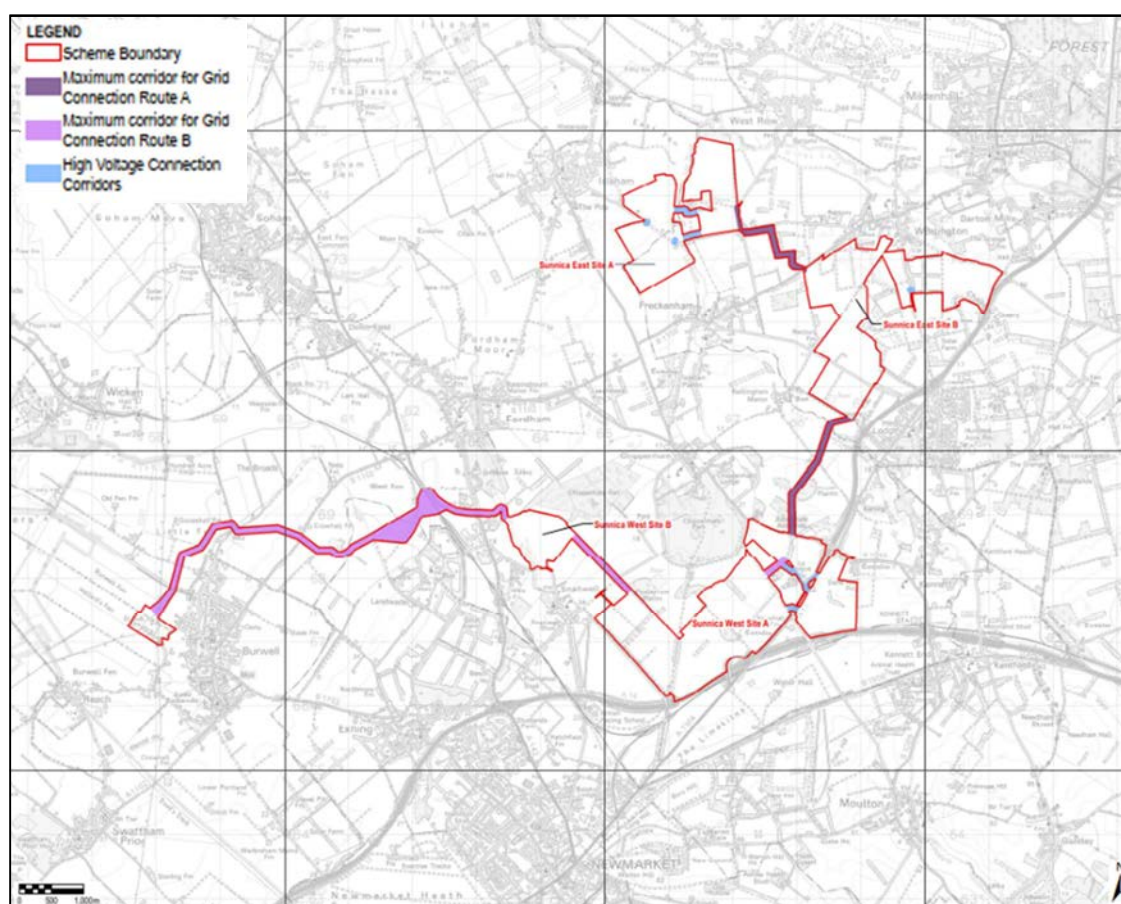
1. Introduction

1.1 AECOM has been appointed by Sunnica Limited to provide transport planning advice in support of the proposed Energy Farm comprising solar PV and battery storage (hereafter referred to as the 'Scheme') on land near Red Lodge, Suffolk (hereafter referred to as the 'Sunnica East Site A' and 'Sunnica East Site B') and Chippenham, Cambridgeshire (hereafter referred to as the 'Sunnica West Site A' and 'Sunnica West Site B'). The DCO Site is as follows:

- Sunnica East Site A and B (within the administrative area of Forest Heath District Council and Suffolk County Council) covering up to 530 hectares (ha) and located 2.5 kilometres (km) southwest of Mildenhall;
- Sunnica West Site A and B (within the administrative areas of East Cambridgeshire District Council / Cambridgeshire County Council) total up to 540ha and located 3 km north of Newmarket and 6.5km east of Burwell;
- Substation extension at Burwell; and
- The cable routing linking Sunnica East Site A and B and Sunnica West Site A and B with the substation extension provided at Burwell.

1.2 The location of the DCO Site are shown in **Figure 1-1** below.

Figure 1-1: Site Location



- 1.3 The DCO Site will connect to the National Grid system at Burwell, at an existing substation. This substation will be extended to allow energy generated by the development to enter the national grid.
- 1.4 Grid Connection Route A, approximately 6km in length will connect Sunnica East Site A and Sunnica East Site B with Sunnica West Site A. Grid Connection Route B, approximately 10km in length will connect Sunnica West Site A to Sunnica West Site B and to the Burwell National Grid Substation Extension.
- 1.5 The DCO Site qualifies as a Nationally Significant Infrastructure Project (NSIP) and will require a development consent order, due to its generating capacity. It is expected to be an Environmental Impact Assessment (EIA) development.
- 1.6 This document has been prepared in consultation with the Highway Authorities, Suffolk County Council (SCC), Cambridgeshire County Council (CCC), and Highways England (HE), with this Transport Assessment (TA) submitted as part of a DCO application for the Scheme.

Report Structure

- 1.7 Following this introduction this TA is structured as follows:
 - **Section 2: Policy Context** – sets out the relevant national, regional and local policies related to transport and the DCO Site;
 - **Section 3: Baseline Conditions** – outlines the local existing walking, cycling, public transport and highway routes. Relative link flows and junction turning movements are identified for 2019 base year and the 2023 future base year;
 - **Section 4: Development Proposals** – identifies the DCO Site proposals and access strategy for the different sites;
 - **Section 5: Trip Generation and Distribution** – summarises the methodology used to identify the trip generation forecasted and anticipated proposed distribution during the construction phase;
 - **Section 6: Development Impact** – assesses the impact of the DCO Site on the local highway network in the 2023 assessment year;
 - **Section 7: Mitigation** – discusses the need for mitigation measures as part of the DCO Site to minimise the impact of HGV deliveries and vehicle movements associated with the construction staff; and
 - **Section 7: Summary and Conclusion** – provides a summary of this TA and a conclusion on the impact of the proposals.

2. Policy

- 2.1 This section discusses the relevant policy documents in relation to the proposed DCO Site.

National Policy

Overarching National Policy Statement for Energy (2011)

- 2.2 The Overarching National Policy Statement (NPS) for Energy (Ref. 13-1) sets out the national policy for delivering energy infrastructure. It is a suite of documents issued by the Secretary of State for Energy and Climate that includes five technology specific NPSs.
- 2.3 Paragraph 5.13.3 states that a project that is anticipated to generate a significant traffic impact should be supported with an Environment Statement (ES) that includes a TA.
- 2.4 Paragraph 5.13.4 states that a Travel Plan (TP) should be prepared to mitigate any transport impacts, including how to improve access to the site by active and sustainable modes of travel. A TP has not been prepared as part of the PEIR. However, it is expected a TP will be produced as part of the DCO application.
- 2.5 Paragraph 5.13.5 states if additional transport infrastructure is proposed it should be discussed with network providers for the possibility of co-funding by Government for any third-party benefits.

National Planning Policy Framework (2019)

- 2.6 The National Planning Policy Framework (NPPF) sets out the Government's planning policies for England, providing a framework within which local people and councils can encourage development which reflects the needs and priorities of their communities.
- 2.7 A key principle of the NPPF is the presumption in favour of sustainable development that contributes to the economic, social, and environmental aspects of a community. The use of sustainable transport modes for the movement of goods and people is widely encouraged.
- 2.8 Chapter 9 sets out Promoting Sustainable Transport (paragraph 102 to 107). This chapter explains the variety of ways in which transport should be considered as part of the planning process. This includes setting out that transport issues should be considered from the earliest stages of the plan-making and development proposals.
- 2.9 Paragraph 104 states that planning policies should *'be prepared with the active involvement of local highways authorities, other transport infrastructure providers and operators and neighbouring councils, so that strategies and investments for supporting sustainable transport and development patterns are aligned'*.
- 2.10 Policies on assessing the transport impact of development proposals are identified in paragraphs 108 to 110. These refer to highway safety as well as capacity and congestion to make clearer that pedestrian and cycle movements should be prioritised, followed by access to high quality public transport, to reflect the importance of creating a well-designed place.
- 2.11 Paragraph 111 states that a development that generates a significant amount of movement should be supported by a Transport Statement (TS) or Transport Assessment (TA) and should be required to provide a Travel Plan (TP).

Planning Practice Guidance (2014)

- 2.12 In 2014, the Department for Communities and Local Government (DCLG) launched a website containing national planning practice guidance. The website contains guidance on a range of planning topics such as design, Local Plans, Neighbourhood Plans and Travel Plans / Transport Assessments. The section on 'Travel plans, transport assessments and statements in decision-taking' (ID 42 – <https://www.gov.uk/guidance/travel-plans-transport-assessments-and-statements>) provides advice on when a TA or TS is required and what they should contain.
- 2.13 Paragraph 014 states: *'the need for, scale, scope and level of detail required of a Transport Assessment or Statement should be established as early in the development management process as possible as this may therefore positively influence the overall nature or the detailed design of the development'*.
- 2.14 *'Key issues to consider at the start of preparing a Transport Assessment or Statement may include:*
- *The planning context of the development proposal;*
 - *Appropriate study parameters (i.e. area, scope and duration of study);*
 - *Assessment of public transport capacity, walking/cycling capacity and road network capacity;*
 - *Road trip generation and trip distribution methodologies and/ or assumptions about the development proposal;*
 - *Measures to promote sustainable travel;*
 - *Safety implications of development; and*
Mitigation measures (where applicable) – including scope and implementation strategy.'
- 2.15 Paragraph 015, which sets out what information should be included in TAs, states:
- *'Information about the proposed development, site layout, (particularly proposed transport access and layout across all modes of transport);*
 - *Information about neighbouring uses, amenity and character, existing functional classification of the nearby road network;*
 - *Data about existing public transport provision, including provision / frequency of services and proposed public transport changes;*
 - *A qualitative and quantitative description of the travel characteristics of the proposed development, including movements across all modes of transport that would result from the development and in the vicinity of the site;*
 - *An assessment of trips from all directly relevant committed development in the area (i.e. development that there is a reasonable degree of certainty will proceed within the next 3 years);*
 - *Data about current traffic flows on links and at junctions (including by different modes of transport and the volume and type of vehicles) within the study area and identification of critical links and junctions on the highways network;*
 - *An analysis of the injury accident records on the public highway in the vicinity of the site access for the most recent 3-year period, or 5-year period if the proposed site has been identified as within a high accident area;*
 - *An assessment of the likely associated environmental impacts of transport related to the development, particularly in relation to proximity to environmentally sensitive areas (such as air quality management areas or noise sensitive areas);*
 - *Measures to improve the accessibility of the location (such as provision/enhancement of nearby footpath and cycle path linkages) where these are necessary to make the development acceptable in planning terms;*
 - *A description of parking facilities in the area and the parking strategy of the development;*
 - *Ways of encouraging environmental sustainability by reducing the need to travel; and*
 - *Measures to mitigate the residual impacts of development (such as improvements to the public transport network, introducing walking and cycling facilities, physical improvements to existing roads.'*

Local Policy

- 2.16 The proposed development falls within the planning boundaries of both West Suffolk and East Cambridgeshire and therefore documents from both authorities form part of this policy review.
- 2.17 The West Suffolk Local Plan consists of the former Forest Heath and St Edmundsbury Local Plan documents, including the Forest Heath Local Development Framework (2010), and the Joint Development Management Policies Document (JDMPD) (2015). The adopted local plans covering the former Forest Heath and St Edmundsbury areas will continue to be applied until a new West Suffolk Local Plan is adopted, which is scheduled for mid-2023. Both the Forest Heath Core Strategy and JDMPD form part of this policy review.

Forest Heath Local Development Framework - Core Strategy Development Plan Document 2001-2026 (2010)

- 2.18 The Forest Heath Core Strategy was adopted in 2010 and sets out the overall strategic vision for the area up to 2026. The policies identified in the Core Strategy aim to guide and control the overall scale, type and location of new developments in the area.
- 2.19 The Core Strategy identifies a vision for Forest Heath and sets a number of objectives to achieve the vision, with the relevant transport related objectives identified below:
- Spatial Objective T3: *'support strategic transport improvements serving Forest Heath, especially the A14 and A11 road and rail corridors, in order to minimise the adverse impacts of traffic on communities, improve safety, improve public transport facilities and ensure the sustainable development of the area is not constrained'.*
- 2.20 The Core Strategy states that in certain circumstances developers will be expected to produce a TA as part of their planning application.
- 2.21 Within Policy CS 12 – Strategic Transport Improvements and Sustainable Transport, it seeks to minimise the impact of traffic on the environment. It also states it will support the delivery of improvements to the Fiveways Roundabout and to the Public Rights of Ways (PRoW) in the district.

The Joint Development Management Policies Document (2015)

- 2.22 The JDMPD was adopted in February 2015 and replaces many of the policies within Forest Heath and St Edmundsbury Local Plans. The JDMPD is used in the day-to-day planning decisions across both areas in line with the Council's adopted Core Strategy. The key policies are discussed below:
- Policy DM44: Rights of Way – states that *'development which would adversely affect the character of, or result in the loss of existing or proposed rights of way, will not be permitted unless alternative provision or diversions can be arranged which are at least as attractive, safe and convenient for public use'*;
 - Policy DM45: Transport Assessments and Travel Plans – identifies *'for major development and/or where a proposal is likely to have significant transport implications, the Council requires the applicant to submit the following documents alongside their planning applications: Transport Assessment and Travel Plan'*; and
 - Policy DM46: Parking Standards – seeks to reduce the over-reliance on the car and aims to promote more sustainable forms of travel where exceptions may be made in rural areas unless *'satisfactory evidence and justification is included along with a Transport Assessment and/or Travel Plan that demonstrates why an exception ought to be made given the nature and location of the specific development proposal'*.
- 2.23 Policy DM44 notes that developments should have a positive effect on the PRoW network and details if alternative rights of way are provided, as a result of the development, then it is encouraged that the improved pathways connect with settlements i.e. providing access routes to countryside and green infrastructure sites.

3. Baseline Conditions

Introduction

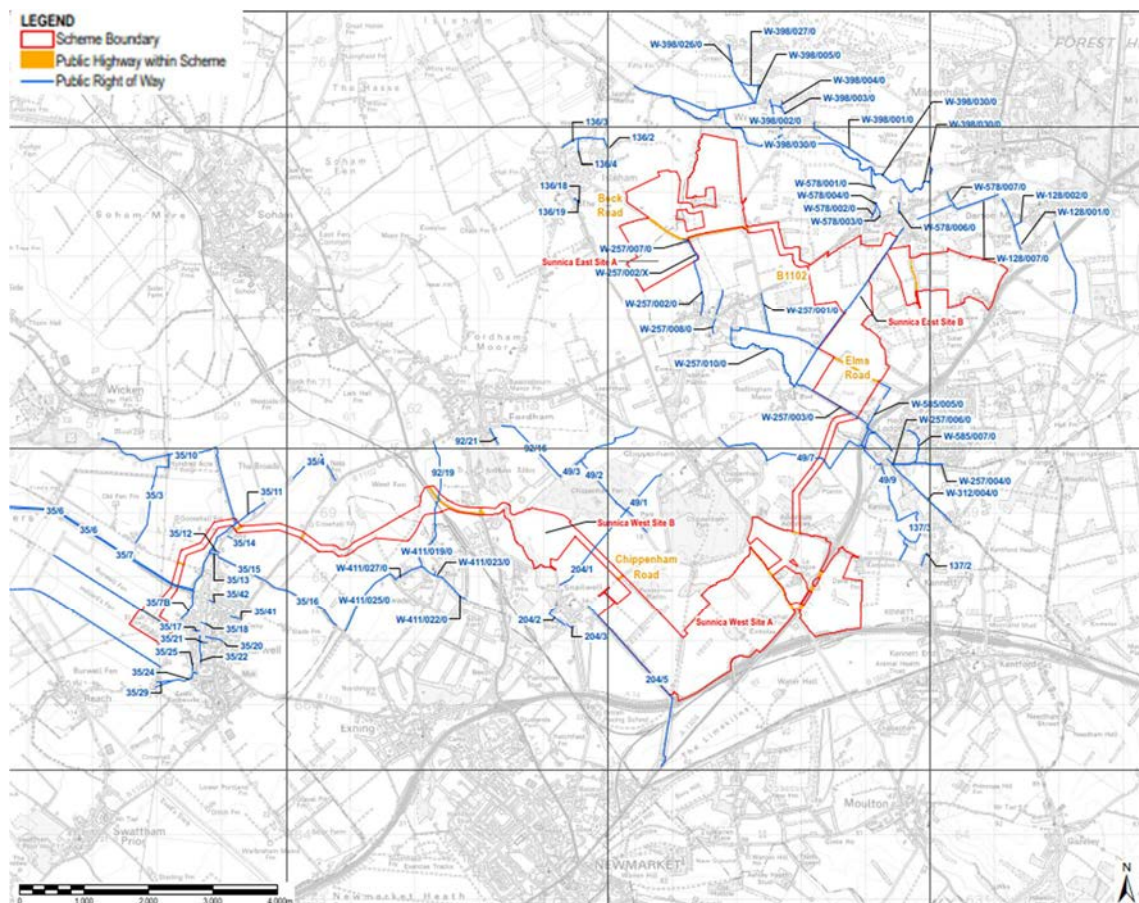
- 3.1 This section of the TA reviews the transport facilities and networks provided in the vicinity of the sites by foot, cycle, public transport and via the strategic and local highway network.
- 3.2 The Sunnica West Sites are located near Chippenham in Cambridgeshire and the Sunnica East Sites are located near Worlington and Freckenham in Suffolk. The sites are connected with cable routes and with the existing Burwell National Grid Substation located on Newnham Drive.

Existing Facilities

Walking & Cycling

- 3.3 The DCO Site is located in a rural area with limited footways and pedestrian and cycle facilities in the area. This is due to the rural nature of the surrounding local roads; however, these are lightly trafficked. There are several Public Right of Ways (PRoW) crossing and connecting the sites. The existing PRoW are illustrated in **Figure 3-1** below which is also provided as a higher resolution image in **Appendix A**.

Figure 3-1: Existing PRoW



- 3.4 Key PRoW relating to Sunnica East Site A and Site B include:

- Located to the north in Sunnica East Site A, PRoW (W-257/002/X) runs from Mortimer Lane in Freckenham to Beck Road and connects to PRoW (W-257/002/0) to the south and PRoW (257/007/0) to the north;
- Within Sunnica East Site B PRoW (W-257/010/0) which runs along agricultural field boundaries from south of Newmarket Road to Elms Road and continues south on Badlingham Road;
- Within Sunnica East Site B PRoW (W-257/001/0) which runs between Elms Road and Freckenham Road, connecting to PRoW (W-257/010/0);

- Within Sunnica East Site B, an unclassified road (U6006), which is a publicly accessible route, including for equestrians, extends northwards from Elms Road to Worlington; and
 - Not within the Sunnica East Site B boundary, PRoW (W257/003/0) provides a route between PRoW (W257/010/0) and Red Lodge over the A11 via a footbridge.
- 3.5 The Sunnica West Site A is connected with Newmarket and Snailwell via a PRoW (204/5) which runs between Bury Road (A1304) to the south and Chippenham Road to the north along the southwestern side of the site. The PRoW has a bridge over the railway and the A14. PRoW (204/1) crosses the land to the north-west of the Sunnica West Site A, which runs between Snailwell and Chippenham.
- 3.6 Six PRoW cross the cable route between Burwell and Sunnica West Site B. These include PRoW (35/6) and (35/7) which are located to the north-west of Burwell. PRoW (35/10) and (35/11) cross the cable routes to the north-east of Burwell and PRoW (92/19) crosses to the north of Landwade. An unnamed PRoW crosses the cable route in close proximity of the Burwell National Grid Substation to the north.
- 3.7 One PRoW (49/7) crosses the cable route between Sunnica West Site A and Sunnica East Site B which runs between Red Lodge and Chippenham.
- 3.8 To the west of Sunnica East Site the B1102 provides a footway for a section along the northern carriageway which is approximately 2m wide between North Street and East View. To the north, on Newmarket Road, footways are provided on both sides of the carriageway between the B1102 and The Paddocks.
- 3.9 There are no on or off-road cycling facilities in the vicinity of the Sites however the roads surrounding each Site are generally lightly trafficked and therefore could encourage cycling.

Public Transport

- 3.10 Figures showing the local bus and rail services and routes are provided in **Appendix B**.

Bus

- 3.11 The closest bus stops to the Sunnica West Sites are located in Snailwell on Newmarket Road, where a pair of bus stops are provided. These are approximately 600m to the west of Sunnica West Site A and 750m to the south of Sunnica West Site B. The bus stops are served infrequently by bus services 203/204, operated by Lord's Travel.
- 3.12 The nearest stops to Sunnica Site A are located over a 1km to the north east in Isleham. The bus stops are served infrequently by bus services 203/204, operated by Lord's Travel. The bus stop nearest to Sunnica East Site B is located on B1085 Turnpike Road in Red Lodge approximately 500m to the south-east. The bus stop is served by bus route 16/16A and is operated by Stephensons. To the north Worlington is served by the bus service 16/16A as well as bus services 357 and 956. A pair of bus stops are located in Freckenham to the west of Sunnica East Site B and are located at the junction of B1102/The Street. The bus stops are served by bus services 357 and 956 and is operated by Mulleys Coaches. **Table 3-1** provides a summary of bus frequencies serving bus stops closest to the DCO Site.

Table 3-1: Frequency of Local Bus Services

	Service	Route	Bus Stop	Off-Peak ¹ 06:00-08:00	AM Peak 08:00-09:00	Inter-peak ¹ 09:00-17:00	PM Peak 17:00-18:00	Off-Peak ¹ 18:00-20:00
Sunnica West A and B and Sunnica East A	203	Newmarket - Isleham	Snailwell, Newmarket Road	0	0	1	0	0
	204	Isleham - Newmarket	Snailwell, Newmarket Road	1	0	0	0	1
Sunnica East B	16/16A	Bury St Edmunds - Mildenhall - Newmarket	Red Lodge, Turnpike Road	2	1	1	2	1
	357	Bury St Edmunds - Red Lodge - Mildenhall	Freckenham, B1102 The Street	0	0	1	0	0
	956	Lakenheath - Mildenhall - Bury St Edmunds	Freckenham, B1102 The Street	1	0	1	0	0

¹Average number of buses per hour
Timetable recorded on 07/01/2020

National Rail

- 3.13 The two closest train stations are located in Kennett and Newmarket, and both stations are on the line between Ipswich and Cambridge.
- 3.14 Kennett railway station is located approximately 2km and 3km from the Sunnica West Sites and the Sunnica East Sites respectively. Newmarket railway station is located approximately 2km from Sunnica West Site B. Kennett railway station provides 12 car parking spaces and 20 cycle spaces. Newmarket station provides 11 car parking spaces with 1 for blue badge holders and 10 cycle spaces. Both railway stations are served by bus service 16/16A with bus stops located adjacent to the stations.
- 3.15 **Table 3-2** identifies the arrival times of trains at Kennett and Newmarket in the AM (06:00-09:00) and in the PM (17:00-20:00).

Table 3-2: Frequency of Train Service

Station	Destination	AM	PM
Kennett	Ipswich	06:00	17:07
		07:04	18:10
		07:43	18:38
	Cambridge	07:10	17:16 18:16 19:15
Newmarket	Ipswich	07:02	17:08
		08:05	18:08
			19:07
	Cambridge	06:09	17:17
		07:15	18:17
		07:52	19:17

Recorded: 07/01/2020

Source: Greater Anglia Timetable 7: Ipswich to Cambridge and Peterborough. Valid from 15 December 2019

Highway Network

Local Highway

- 3.16 Sunnica West Site A is adjacent to the A14 and A11 on the southern and eastern edge. To the north Chippenham Road connects to the A142 and Chippenham Park and is a single carriageway road. To the south-west of Sunnica West Site A, Newmarket Road / Snailwell Road runs in a north-south direction. On the Snailwell Road section there is a 3.9m height restriction located to the south of the A14 due to the railway line which passes over the road.
- 3.17 Sunnica West Site A is bound by La Hogue Road to the north-east and provides access to the La Hogue Farm Shop. It is linked to the A11 to the south and to the B1085 to the north. Sunnica West Site A is bounded by the A14 and A11 to the south and east respectively. Chippenham Road is located to the north-west of the Sunnica West Site A which is a single carriageway road with a 60mph speed limit.
- 3.18 Snailwell Road is located to the south of Sunnica West Site B. It is a single carriageway road with a 7.5t weight restriction on the bridge over the River Snail. The A142 Fordham Road runs in a north-south direction to the west of Sunnica West Site B, this is a wide single carriageway road with 60mph speed limit.
- 3.19 Newmarket Road connects B1102 and the A11, which runs in the north-east direction and is located to the south-west of Sunnica West Site B. It is a narrow single carriageway with a 60 mph speed limit.
- 3.20 Sunnica East Site A is located to the east of the B1104 and north of B1102. The site is located approximately 1km from Isleham. Beck Road runs through the centre of the western part of Sunnica East Site A which is a single carriageway road with 60mph speed limit. An unclassified road linking West Row with Freckenham provides the border to the east is a narrow single carriageway road with 60mph speed limit.
- 3.21 Sunnica East Site B is largely located to the south of the B1102 which runs to the west, with a small section located to the north of the B1102. Newmarket Road runs in a north-south direction to the east of Sunnica East Site B with a small section of Sunnica East Site B located to the east which is accessed from Golf Links Road.

- 3.22 Elms Road is partially located within Sunnica East Site B and bounds part of the site to the south. Elms Road runs in a broad northwest to southeast direction linking Church Lane in Freckenham with Elms Road and A11 near Red Lodge. The majority of Elms Road is a narrow single carriageway road, with a general width of approximately 5m or less, which is bound by hedgerows. National speed limit applies on this road. Between the Newmarket Road/Elms Road roundabout and approximately 180m to the west of the A11 northbound off-slip, Elms Road is a single lane carriageway (in each direction). There are signs informing that Elms Road is not suitable for heavy goods vehicles (HGV) located at the junction with the A11 northbound off-slip for vehicles and Elms Road/Church Lane in Freckenham.
- 3.23 The B1102 Freckenham Road and Mildenhall Road is partially located within the Sunnica East Site B, which is a single carriageway road and is subject to a 60mph speed limit outside of Worlington and Freckenham. A small section of the site is located to the east of Elms Road and is further bound by Golf Links Road to the north, the A11 to the east and agricultural land to the south.
- 3.24 A small section of Sunnica East Site B is located to the east of the B1085 Elms Road and is further bound by Golf Links Road to the north, the A11 to the east and agricultural land to the south.
- 3.25 Sunnica East Site A and Site B, and Sunnica West Site A and Site B will be connected by the cable route. The cable route crosses several roads including Weirs Drove, Burwell, the B1102 Ness Road, the A142 Fordham Road, Chippenham Road, the unclassified road, which bounds the Sunnica West Site A to the north-east, the B1085 (between the A11 and Chippenham) and Elms Road. The existing Burwell National Grid Substation is located on Newnham Drove, off Weirs Drove in Burwell.

Strategic Highway

- 3.26 The A11 and A14 form part of Strategic Road Network (SRN) and are in close proximity of the DCO Site. The A11 runs in a northeast-southwest direction between London and Norwich to the east of the Sites. The A11 is a dual carriageway with two lanes in each direction to the north of A14 Junction 38.
- 3.27 There are three junctions along the A11 between the A11/A14 J38 and Red Lodge. The junction closest to the A11/A14 J38 provides a northbound on-slip and off-slip to/from the A11 provides access to the La Hogue Road. The A11/B1085 junction has a northbound off-slip and a southbound on-slip. At Red Lodge, there is a two-lane northbound off-slip from the A11 that connects to Elms Road. The A11 northbound can be accessed via a slip road from the B1085/Newmarket Road Roundabout, whereas the A11 southbound off-slip and southbound on-slip are accessed via the Newmarket Road/Warren Road roundabout.
- 3.28 The A14 has three lanes in each direction to the south of Junction 38 along the Newmarket Bypass, with no hard shoulder and the national speed limit applies. The A14/A11 J38 provides connections between A14 eastbound to the A11 northbound and A11 southbound to the A14 westbound. To the south of Junction 38 the A11 becomes the A1304 providing a route into Newmarket.
- 3.29 To the west of the Sunnica West Sites, the A142 is a single carriageway that runs in the north-south direction where the national speed limit applies. The A14 and A142 meet at the Junction 37, which is a grade-separated junction permitting all movements between the A14 and A142 in the form of two staggered priority T-junctions.

Baseline Traffic Flows

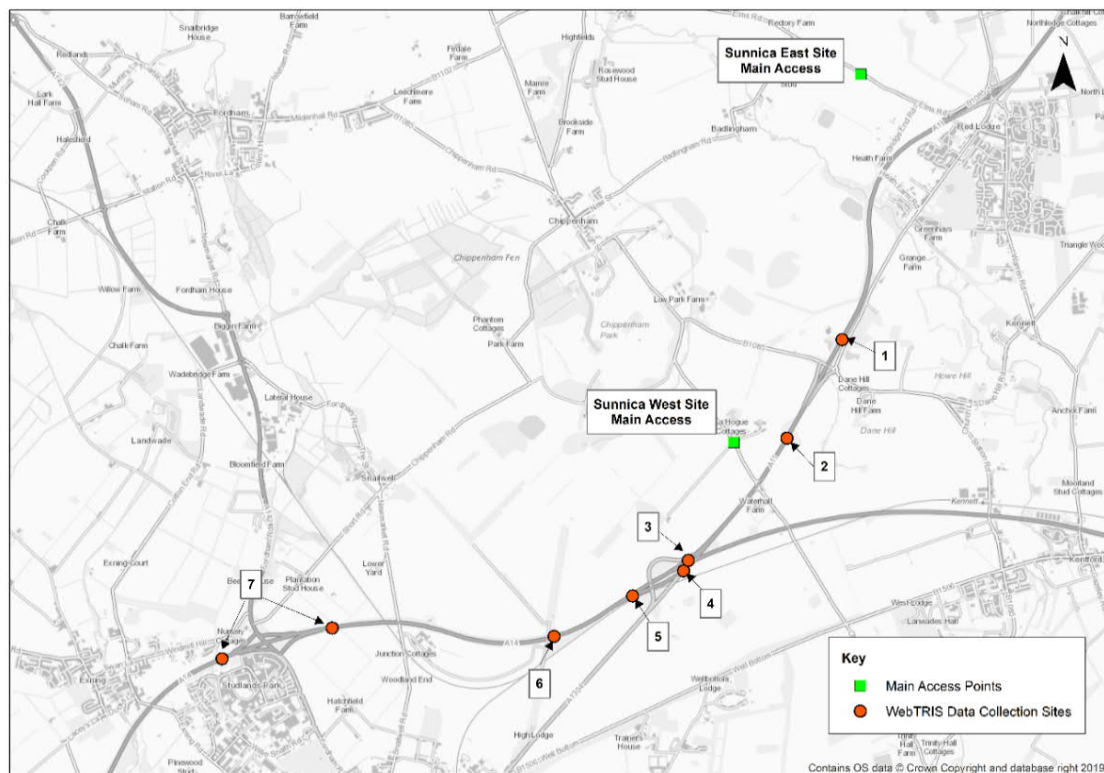
- 3.30 The following section outlines the 2019 and 2023 baseline traffic flows which are available for both the strategic and local highway networks in the vicinity of the DCO Site. As agreed with the Highway Authorities at scoping stage, it is not considered necessary to assess the opening year of the DCO Site or while the DCO Site is in operation given that it will generate very low levels of traffic with peak traffic movements occurring during the construction phase in 2023..
- 3.31 During construction the working hours for staff will be from 07:00 to 19:00, therefore it is anticipated that the peak hours for staff arrival will be between 06:00 to 07:00 and staff departure between 19:00 to 20:00. Therefore, 06:00 to 07:00 forms the development highway peak hour in the AM and 19:00 to 20:00 forms the development highway peak hour in the PM. As a result, the baseline traffic flows have been identified for these hours in addition to the highway peak hours.
- 3.32 Traffic data for the A11 and A14 has been obtained from the WebTRIS database for 2019 and traffic flows for the local highway network have been derived from the 'Forest Heath District Council Site Allocation Plan Cumulative Impact Study' document (August 2016).

- 3.33 The peak construction period is forecast to occur in 2023. Therefore, TEMPro 7.2 (Version 7.2, dataset 72) has been used to growth the 2019 baseline traffic flows to 2023 baseline traffic flows in order to consider background traffic growth. TEMPro is published by the Department for Transport (DfT) to generate growth factors to be applied to observed traffic flows to forecast future year traffic flows. The growth factors are based on various parameters to meet the need of the particular location and road type. Within TEMPro the National Trip End Model (NTEM) forecast the growth factors based on population and employment households by car ownership for minor, principal and trunk roads.
- 3.34 It was agreed at scoping stage, that the traffic flows identified within the Forest Heath District Council Site Allocation Cumulative Impact Study would be utilised rather than undertake new traffic counts as the timescale identified would not have allowed for new traffic surveys to be carried out. However, as time has passed, there may have been an opportunity to carry out new traffic counts especially at those locations where data sources are limited. The Coronavirus Pandemic has resulted in this not being possible as lockdown occurred within the UK prior to a neutral month occurring. Since the easing of lockdown, traffic flows have not returned to their normal level with many companies not returning offices and therefore peak hour flows are lower than those identified in the traffic counts carried out in 2016. Until such time as traffic levels in the AM and PM peak periods return to levels experienced pre-pandemic, historic data will have to be utilised with no new traffic surveys being carried out.
- 3.35 On this basis where possible within this Preliminary TA, data from historic sources has been utilised. Where there are gaps in the data such as in locations such as within Chippenham, professional judgement has been utilised based on data for the surrounding area. Traffic counts will be carried out where gaps in the data have been identified if traffic flows return to pre-lockdown levels and can be safely undertaken within the programme of the DCO.

2019 Strategic Highway Traffic Flows

- 3.36 The WebTRIS dataset was utilised to obtain 2019 traffic flows for those roads under control of Highways England, which includes the A11 and A14. **Figure 3-2** identifies the WebTRIS data locations utilised to obtain baseline traffic flows on the A11 and A14.

Figure 3-2: WebTRIS Data Collection Locations



- 3.37 Traffic flow data was extracted from WebTRIS for each site for September 2019 as this was the most recent complete month of data available for the highway peak hours of 08:00 to 09:00 and 17:00 to 18:00 and for the development peak hours of 06:00 to 07:00 and 19:00 to 20:00. Construction is forecast to occur Mondays to Friday, therefore the average Monday to Friday 12-hour traffic flows (07:00 to 19:00) have been obtained from WebTRIS.
- 3.38 The 2019 baseline traffic flows for the available strategic highway network in the vicinity of the DCO Site are outlined in Table 3-3.

Table 3-3: 2019 Baseline Traffic Flows – Strategic Highway (Monday to Friday Average)

Ref.	Location	06:00-07:00		08:00-09:00		17:00-18:00		19:00-20:00		12-Hours	
		NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB
1	A11 (North of B1085)	817	1,586	1,003	1,971	2,175	1,395	1,109	755	17,721	18,152
2	A11 (North of La Hogue Road)	878	1,725	1,117	2,228	2,459	1,489	1,229	805	19,664	19,661
3	A11 to A14 & A1304 Slip Road (J38)	N/A	1,581	N/A	1,860	N/A	1,243	N/A	676	N/A	16,981
4	A14 to A11 Slip Road (J38)	708	N/A	1,118	N/A	2,088	N/A	885	N/A	16,420	N/A
5	A14 (J38)	1,441	1,499	2,040	1,889	4,292	1,207	1,959	552	33,573	15,821
6	A14 (Between J37 and J38)	1,480	3,059	2,063	3,779	4,328	2,458	1,981	1,239	34,016	32,981
7	A14 J37	1,390	2,982	1,939	3,767	4,190	2,436	2,041	1,232	33,140	32,681

Source: WebTRIS (<http://webtris.highwaysengland.co.uk/>)

2019 Local Highway Traffic Flows

- 3.39 The approach outlined below to obtain the 2019 baseline traffic flows are based on that taken within the 'Forest Heath District Council Site Allocation Plan Cumulative Impact Study' document (August 2016), which was prepared by AECOM for the Forest Heath Local Plan assessment. For the Forest Heath Local Plan assessment traffic surveys were carried out at junctions across the Forest Heath District Council area on Tuesday 28th June 2016 between 07:00 hours and 10:00 hours and 16:00 hours and 19:00 hours.
- 3.40 To derive TEMPro growth rates for 2016-2019, the TEMPro growth factors have been adjusted using National Traffic Model (NTM) dataset to provide NTM-adjusted TEMPro growth factors. The alternative assumptions tool within TEMPro has been utilised to alter future growth between the base year of 2016 and the assessment year of 2019. Within the alternative assumptions tool, the increase in the number of households identified to be built between 2016 and 2019 has been altered to a zero as all residential trips are added manually.
- 3.41 The increase in jobs identified in TEMPro has been altered such that the growth in jobs between 2016 and 2019. Based on the Local Plan assessment, no jobs have been included in the 2016 to 2019 calculations. This has resulted in the following TEMPro growth factors being applied:
- 2016 to 2019
 - AM Peak 1.0133
 - PM Peak 1.0129
- 3.42 In addition to the application of the traffic growth factors, trips associated with residential developments which were included in the Forest Heath Local Plan assessment have been included within this assessment. To establish which developments are likely to have come forward by 2019, a review of the planning portal for Forest Heath District Council has been carried out. This established which of those sites included in the Forest Heath Local Plan assessment are likely to have been built by 2019.
- 3.43 The sites considered to have come forward in each of the assessment years are set out in **Table 3-4** below.

Table 3-4: Residential Sites Included in Background Traffic in 2019 and 2023

Location	Site	Number of Dwellings (2016-2019)	Number of Dwellings (2016-2023)
Brandon	Land at Fengate Drive	38	38
	Land at Warren Close	0	23
	Land off Gas House Drive	0	10
Mildenhall	Land West of Mildenhall	0	0
	Land at 54 Kingsway	23	23
	District Council Offices, College Heath Road	0	89
	Former Build's Yard, north of Worlington Road	9	9
	Land South of Worlington Road	78	78
	Land at Brickfeld Stud, Exning Road	0	0
Newmarket	Land at Black Bear Lane and Rowley Drive Junction	0	0
	Hatchfield Farm	0	400
	Grassland off Leaders Way and Sefton Way	0	0
	Former St Felix Middle School Site	0	0
	Land at Phillips Close	0	0
	Fordham Road, Southernwood	0	10
	Land at Jim Joel Court	21	21
	146a High Street	46	46
Red Lodge	Land off Turnpike Road and Coopers Yard	0	132
	Land East of Red Lodge North	0	0
	Land East of Red Lodge South	0	382
	Land North of Acorn Way	0	300
	Red Lodge Phase 4a	0	38
	Red Lodge Approach Site	125	125
Lakenheath	Rabbit Hill Covert	0	81
	Land off Briscoe Way	0	67
	Land West of Eriswell Road	0	140
	Land North of Station Road	0	375
	Former Matthews Nursery Site	13	12
	Land North of Burrow Drive and Briscoe Way	0	0
Beck Row	Land Adjacent to St Johns Street	60	60
	Land Adjacent to Smoke House Inn, Skeltons Drove	115	115
	Land Adjacent to the South of the caravan park, Aspal Lane	117	117
	Land east of Aspal Lane	5	5
	Land Adjacent to Beck Lodge Farm	24	24
	Land at Skeltons Drove	32	32
Exning	Land South of Burwell Road	0	205
	Land off the Drift / Burwell Road	0	102
Kentford	Land West of Herringswell Road	0	54
	Land to the rear of Kentford	34	34
	Meddler Stud, Bury Road, Kentford	0	63
West Row	Land East of Beeches Road	152	152
	Land North of Mildenhall Road	26	26
	Land Adjacent to Park Garden	7	7
Total Dwellings		925	3,396

- 3.44 The peak hours identified within the assessment for the Forest Heath Local Plan assessment are 08:00 to 09:00 and 16:45 to 17:45. As the construction traffic associated with the DCO Site is anticipated to occur outside of the highway peak hours, the Forest Heath Local Plan peak hour traffic flows have been converted to 06:00 to 07:00 and 19:00 to 20:00 traffic flows. This is a result of the WebTRIS strategic highway traffic flows being unavailable for 16:45 to 17:45, the traffic flows identified as part of the Forest Heath Local Plan assessment have been used as a representation for 17:00 to 18:00.
- 3.45 The WebTRIS average Monday to Friday traffic flows outlined in **Table 3-3** was applied to calculate conversion factors from 08:00-09:00 to 06:00-07:00 and 17:00-18:00 to 19:00-20:00 for each site and direction of travel. The average of these factors for each location was used to calculate the total conversion factors which are outlined in **Table 3-5**.

Table 3-5: Peak Hour Traffic Flow Conversion Factors

Time	Conversion Factors
08:00-09:00 to 06:00-07:00	0.77
17:00-1800 to 19:00-20:00	0.50

- 3.46 **Table 3-6** below outline the resultant 2019 baseline traffic flow for key links on the local highway network for the assessment hours.

Table 3-6: 2019 Peak Hour Local Baseline Traffic Flows (Vehicles)

Location	AM Peak (0600-0700)		PM Peak (1900-2000)	
	NB / EB	SB / WB	NB / EB	SB / WB
A11 SB On-Slip (Red Lodge)	N/A	269	N/A	102
A11 SB Off-Slip (Red Lodge)	N/A	164	N/A	118
A11 NB On-Slip (Red Lodge)	186	N/A	122	N/A
Warren Rd	318	188	139	217
Newmarket Rd	305	260	201	254
Elms Rd	35	123	29	149
B1085 (North of Dane Hill Rd Roundabout)	115	345	111	191
B1085 Dane Hill Rd	172	264	156	113
Turnpike Rd	214	121	77	146

- 3.47 The 2019 traffic flows for 06:00-07:00, 08:00-09:00, 17:00-18:00 and 19:00-20:00 that have been used for this assessment can found in **Appendix C**.

2023 Strategic Highway Traffic Flows

- 3.48 Based on the information provided by the applicant, the peak construction year of the DCO Site is forecast for 2023. TEMPro 7.2 (Version 7.2, dataset 72) has been used to identify suitable growth rates to factor the 2019 WebTRIS traffic flows to provide future year flows that consider potential growth in background traffic flows. The extent of the highway network falls within two geographical areas, East Cambridgeshire 007 and Forest Heath 006, with the road types identified as rural trunk roads as 'A' roads. The resultant growth rates for 2019 to 2023 are identified in **Table 3-7**.

Table 3-7: TEMPro Growth Factors

Area	Time Period	Growth Factor
East Cambridgeshire 007	Off-Peak 00:00-06:59 & 19:00-23:59	1.0791
Forest Heath 006	Off-Peak 00:00-06:59 & 19:00-23:59	1.0835
East Cambridgeshire 007	Average Weekday	1.0876
Forest Heath 006	Average Weekday	1.0949

- 3.49 The 2019 base flows have been factored by the TEMPro growth rates to obtain the 2023 base flows for the adjacent strategic highway network which are provided in **Table 3-8**.

Table 3-8: 2023 Baseline Traffic Flows for Strategic Highway Network (Vehicles)

Location	AM Peak Hour (06:00-07:00)		PM Peak Hour (19:00-20:00)		12-Hour (07:00-19:00)	
	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB
A11 (North of B1085)	885	1,718	1,201	818	19,402	19,874
A11 (North of La Hogue Road)	951	1,869	1,332	872	21,530	21,527
A11 to A14 & A1304 Slip Road (J38)	N/A	1,713	N/A	732	N/A	18,593
A14 to A11 Slip Road (J38)	767	N/A	959	N/A	17,978	N/A
A14 (J38)	1,561	1,624	2,123	599	36,760	17,322
A14 (Between J37 and J38)	1,604	3,314	2,146	1,343	37,244	36,111
A14 J37	1,500	3,218	2,203	1,330	36,043	35,544

2023 Local Highway Traffic Flows

- 3.50 Following the same approach as that undertaken in the Forest Heath Local Plan assessment, traffic growth factors have been derived from TEMPro for the employment and background growth whilst growth associated with residential developments has been added manually to the network using the same trips and distribution as the Local Plan assessment.
- 3.51 To derive TEMPro growth rates for 2023, the TEMPro growth factors has been adjusted using National Traffic Model (NTM) dataset to provide NTM-adjusted TEMPro growth factors. The alternative assumptions tool within TEMPro has been utilised to alter future growth between the base year of 2016 and the assessment year of 2023. Within the alternative assumptions tool, the increase in the number of households identified to be built between 2016 and 2023 has been altered to a 0 increase as all residential trips are added manually.
- 3.52 The increase in jobs identified in TEMPro has been altered such that the growth in jobs between 2016 and 2023 is based on the Local Plan assessment, 1,512 jobs have been included in the 2016 to 2023 calculations. This has resulted in the following TEMPro growth factors being applied:
- 2016 to 2023
 - AM Peak 1.0736
 - PM Peak 1.0740
- 3.53 In addition to the application of the traffic growth factors, trips associated with residential developments which were included in the Forest Heath Local Plan assessment have been included within this assessment. To establish which developments are likely to have come forward by 2023, a review of the planning portal for Forest Heath District Council has been carried out. This established which of those sites included in the Forest Heath Local Plan assessment are likely to have been built by 2023.
- 3.54 The sites considered to have come forward in each of the assessment years are set out in **Table 3-4**.
- 3.55 Using the conversion factors stated earlier in **Table 3-5** the 2023 Forest Heath Local Plan traffic flows have been converted from 08:00-09:00 traffic flows to 06:00-07:00 and 17:00-18:00 to 19:00-20:00 traffic flows.
- 3.56 **Table 3-9** summarises the 2023 baseline traffic flows for key links on the local highway network.

Table 3-9: 2023 Local Baseline Traffic Flows (Vehicles)

Location	AM Peak (0600-0700)		PM Peak (1900-2000)	
	NB / EB	SB / WB	NB / EB	SB / WB
A11 SB On-Slip (Red Lodge)	N/A	343	N/A	126
A11 SB Off-Slip (Red Lodge)	N/A	204	N/A	170
A11 NB On-Slip (Red Lodge)	300	N/A	158	N/A
Warren Rd	476	247	190	292
Newmarket Rd	426	296	242	296
Elms Rd	38	151	31	184
B1085 (North of Dane Hill Rd Roundabout)	128	394	119	249
B1085 Dane Hill Rd	278	312	195	163
Turnpike Rd	264	149	96	172

- 3.57 The 2023 traffic flows for 06:00-07:00, 08:00-09:00, 17:00-18:00 and 19:00-20:00 that have been used for this assessment can found in **Appendix C**.

Personal Injury Accident Data

- 3.58 Personal Injury Accident (PIA) data on the surrounding highway network has been obtained from SCC and CCC for the most recent five years (60 months) available, which included incidents that occurred between January 2014 and August 2019. Due to CCCs arrangement with the police, contributory factors are not available, however STATS 21 codes were provided for the data provided by SCC and therefore contributory factors could be determined. **Appendix D** identifies the locations of all the incidents recorded in this time period.
- 3.59 Ten incidents have been excluded from the analysis as the primary contributory factor was found to be driver intoxication and therefore unrelated to the safety conditions of the road. Excluding these incidents, there were a total were a total of 125 PIAs, of which 101 were classified as slight, 21 serious and three were classified as fatal as shown in **Table 3-10**.

Table 3-10: Summary of Location and Severity of Incidents

Location	Incident Severity				Annual Frequency			
	Slight	Serious	Fatal	Total	Slight	Serious	Fatal	Total
Junctions								
B1104 / B1102	2	1	0	3	0.4	0.2	0.0	0.6
B1085 / Unclassified Road	2	1	0	3	0.4	0.2	0.0	0.6
A11 Off-Slip/Elms Road	2	1	0	3	0.4	0.2	0.0	0.6
Warren Rd/Hundred Acre Way/Carnation Way	2	0	0	2	0.4	0.0	0.0	0.4
A142 Fordham Rd/A14 EB Off-Slip	5	1	0	6	1.0	0.2	0.0	1.2
A142 Fordham Rd/A14 WB off-slip	6	1	0	7	1.2	0.2	0.0	1.4
A142/Windmill Hill	1	1	0	2	0.2	0.2	0.0	0.4
Links								
Snailwell Road	4	0	0	4	0.8	0.0	0.0	0.8
B1102 Mildenhall Road	3	1	0	4	0.6	0.2	0.0	0.8
A11 NB between B1085 and Unclassified Road	0	2	0	2	0.0	0.4	0.0	0.4
Soham Road & Newmarket Road	3	1	0	4	0.6	0.2	0.0	0.8

Location	Incident Severity				Annual Frequency			
	Slight	Serious	Fatal	Total	Slight	Serious	Fatal	Total
A142 between Fordham Road and Newmarket Road	1	1	0	2	0.2	0.2	0.0	0.4
Isleham Road	4	0	0	4	0.8	0.0	0.0	0.8
A11 between B1085 and Red Lodge	2	0	0	2	0.4	0.0	0.0	0.4
Dane Hill Road	0	1	1	2	0.0	0.2	0.2	0.4
B1102 Carter Street	4	1	0	5	0.8	0.2	0.0	1.0
Chippenham Road	1	1	0	2	0.2	0.2	0.0	0.4
B1085 Turnpike Road	2	0	0	2	0.4	0.0	0.0	0.4
B1104 Station Road	3	0	0	3	0.6	0.0	0.0	0.6
A11 NB (South of Red Lodge)	6	1	0	7	1.2	0.2	0.0	1.4
A11 SB (South of Red Lodge)	1	1	0	2	0.2	0.2	0.0	0.4
A11 NB (North of Red Lodge)	2	0	0	2	0.4	0.0	0.0	0.4
A11 SB (North of Red Lodge)	1	0	0	1	0.2	0.0	0.0	0.2
B1085 Turnpike Road	2	0	0	2	0.4	0.0	0.0	0.4
B1102	0	1	1	2	0.0	0.2	0.2	0.4
A14 EB (East of J37)	4	1	0	5	0.8	0.2	0.0	1.0
A14 WB (East of J37)	4	0	0	4	0.8	0.0	0.0	0.8
A14 WB (West of J37)	0	1	0	1	0.0	0.2	0.0	0.2
A14 WB Off-Slip	0	0	0	0	0.0	0.0	0.0	0.0
A142 Fordham Rd (South of A14)	3	0	0	3	0.6	0.0	0.0	0.6
A142 Fordham Rd (North of A14)	3	1	0	4	0.6	0.2	0.0	0.8
A142 Fordham Rd between A14 slips	4	0	0	4	0.8	0.0	0.0	0.8
Miscellaneous	24	1	1	26	4.8	0.2	0.2	5.2
TOTAL	101	21	3	125	-	-	-	-

- 3.60 **Table 3-10** indicates that one fatal incident was recorded on Dane Hill Road, as the PIA data supplied by the police to CCC does not detail contributory factors, it is not possible to identify the cause of the fatal incident. One fatal incident was recorded on the B1102, the contributory factors included injudicious actions, driver error and behaviour or inexperience.
- 3.61 A total of seven incidents were recorded at the A142 Fordham Road / A14 WB-off slip junction, an average of 1.4 incidents per year, six of which were classified as slight and one as serious. and the A11 northbound (south of Red Lodge junction).
- 3.62 A total of seven incidents were recorded at the A11 northbound (south of Red Lodge junction), an average of 1.4 incidents per year, six of which were classified as slight and one as serious. There were no common contributory factors at these locations.
- 3.63 Based on the information available the PIA data provided did not show incidents frequently occurring at any particular location.
- 3.64 In addition, the data has been analysed to determine whether any modal trends exist in the incidents around the site, focusing in particular upon vulnerable road users; pedestrians, cyclists, motorcyclists, children and OAPs. The results of this analysis are discussed below and summarised in **Table 3-11**.

Table 3-11: Summary of PIAs involving Vulnerable Road Users by Location

Location	Pedestrians	Cyclists	Motorcyclists	OAPs	Children	Total
Junctions						
B1104 / B1102	0	0	0	0	0	0
B1085 / Unclassified Road	0	0	1	1	0	2
A11 Off-Slip/Elms Road	0	0	1	0	0	1
Warren Rd/Hundred Acre Way/Carnation Way	0	0	0	0	0	0
A142 Fordham Rd/A14 EB Off-Slip	0	0	0	4	1	5
A142 Fordham Rd/A14 WB off-slip	0	1	0	2	0	3
A142/Windmill Hill	0	0	0	1	0	1
Links						
Snailwell Road	0	0	0	0	0	0
B1102 Mildenhall Road	1	0	0	0	0	1
A11 NB between B1085 and Unclassified Road	2	0	1	1	0	4
Soham Road & Newmarket Road	0	0	1	0	0	1
A142 between Fordham Road and Newmarket Road	0	0	1	0	0	1
Isleham Road	0	0	1	0	0	1
A11 between B1085 and Red Lodge	1	0	0	0	1	2
Dane Hill Road	0	0	0	0	2	2
B1102 Carter Street	0	0	0	0	0	0
Chippenham Road	2	1	0	0	0	3
B1085 Turnpike Road	0	0	0	0	0	0
B1104 Station Road	0	0	0	0	0	0
A11 NB (South of Red Lodge)	0	0	0	1	0	1
A11 SB (South of Red Lodge)	0	0	0	1	0	1
A11 NB (North of Red Lodge)	0	0	0	1	0	1
A11 SB (North of Red Lodge)	0	0	0	0	0	0
B1085 Turnpike Road	1	0	0	1	1	3
B1102	0	1	0	2	0	3
A14 EB (East of Jct 37)	0	0	1	0	0	1
A14 WB (East of Jct 37)	0	0	0	0	0	0
A14 WB (West of Jct 37)	0	0	0	0	0	0
A14 WB Off-Slip	0	0	0	0	0	0
A142 Fordham Rd (South of A14)	0	0	0	1	0	1
A142 Fordham Rd (North of A14)	0	0	0	3	0	3

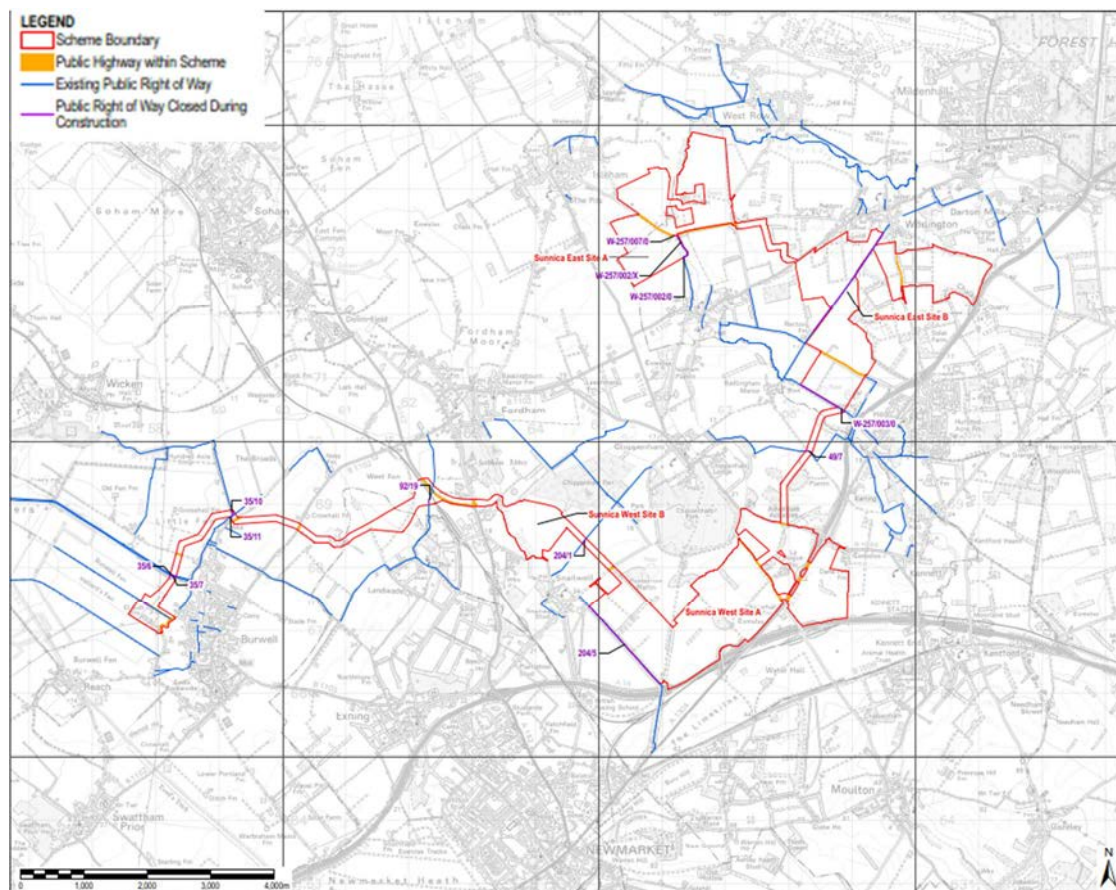
Location	Pedestrians	Cyclists	Motorcyclists	OAPs	Children	Total
A142 Fordham Rd between A14 slips	0	0	1	1	0	2
Miscellaneous	1	5	5	7	1	19
TOTAL	8	8	13	27	6	62

- 3.65 In total 62 vulnerable users were involved in the incidents, eight pedestrian, eight cycle, 13 motorcycles, 27 OAPs and six children. No incidents were recorded in the immediate vicinity of the Sunnica East Site A and B accesses or Sunnica West Site A and B accesses within the most recent five years of PIA data obtained.
- 3.66 Five vulnerable road users (four OAPs and one child) were recorded to be involved in incidents on the A142 Fordham Rd/A14 EB Off-Slip. Driver error or reaction was recorded as the main contributory factor for these incidents.
- 3.67 Based on the information available the PIA data provided did not show vulnerable users incidents occurring at any particular location.
- 3.68 Overall, with the data available the PIA analysis does not indicate a particular safety concern that needs to be considered as part of the DCO Site proposals.

4. Development Proposals

- 4.1 Sunnica Energy Farm is a new solar farm scheme proposal that would be delivered and connected to the national electricity transmission network. Sunnica will use ground mounted solar photovoltaic (PV) panel arrays to generate electricity energy from the sun and combine these with a Battery Energy Storage System (BESS).
- 4.2 Electricity will be generated at Sunnica West Site A and B, near Chippenham in Cambridgeshire and at Sunnica East Site A and B, near Worlington and Freckenham in Suffolk. Both locations will comprise of ground mounted solar PV panel arrays, supporting electrical infrastructure and, potentially, BESS.
- 4.3 Supporting electrical infrastructure will include an on-site substation and on-site cabling between the different electrical elements of the DCO Site. The generating equipment of the DCO Site will be fenced and be protected via security measures such as CCTV and lighting. Inside the fenced areas, in addition to the generating equipment will be, internal access tracks, landscaping and habitat management and drainage. It is not proposed for any area to be continuously lit.
- 4.4 The DCO Site will be connected to the existing Burwell National Grid Substation, most likely using 132kV cables buried underground. The cables will run between Sunnica East Site A and B and Sunnica West Site A (Grid Connection Route A), and then on from Sunnica West Site A, through Sunnica West Site B to the Burwell National Grid Substation (Grid Connection Route B).
- 4.5 Sunnica West will be accessed via the Chippenham junction of the A11, to the north of junction 38 of the A14. Sunnica East will be accessed via the A11 and B1085, utilising the existing access to Worlington Quarry. Access arrangements to each site are expected to remain consistent through construction, operation and any decommissioning activity.
- 4.6 It is likely that over the course of the construction period a number of PRoW will need to be temporarily closed or diverted. The temporary closure or diversion of the PRoWs will occur at different stages therefore each will be impacted on separately at differing stages of the construction. Given the timing and routing of the temporary closures are currently unknown, it has however been assumed for the purposes of assessment that the PRoW set out below will be closed for the duration of construction.
- **Sunnica East Site A and Site B**
 - W-257/007/0
 - W-257/002/X
 - W-257/002/0
 - W-257/001/0
 - W-257/010/0
 - W-257/003/0
 - **Sunnica West Site A and Site B**
 - 204/5
 - 204/1
 - **Cable Route A**
 - 49/7
 - **Cable Route B**
 - 92/19
 - 35/10
 - 35/11
 - 35/6
 - 35/7
 - Unnamed PRoW to the west of PRoW 35/7
- 4.7 The PRoW identified above are illustrated in **Figure 4-1** below which is also provided as a higher resolution image in **Appendix E**.

Figure 4-1: PRow Closed During Construction



4.8 **Figure 4-2** and **Figure 4-3** identifies the compound areas during the construction phase for Sunnica West and Sunnica East respectively, which are also provided as higher resolution images in **Appendix F**. It should be noted that the compound areas are subject to further detailed design and therefore the PRow's impacted upon at present are subject to change.

Figure 4-2: Sunnica West Compound Areas

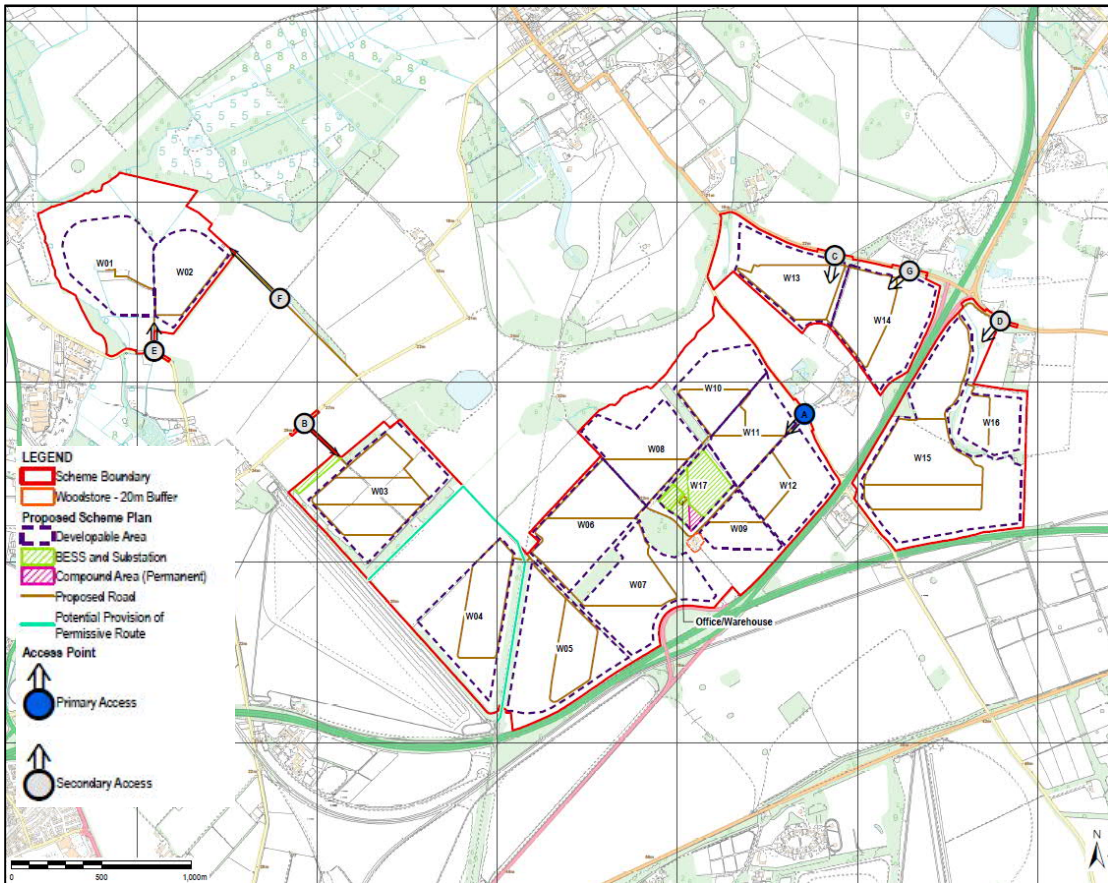
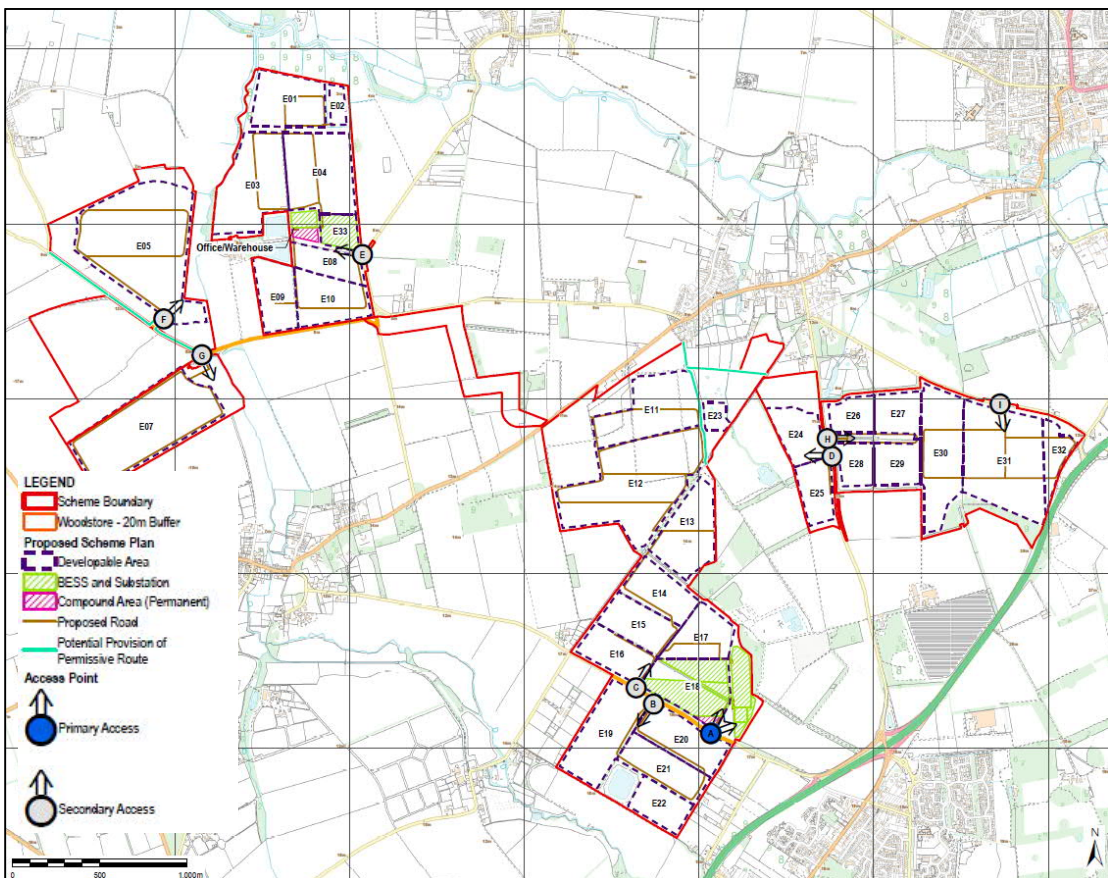


Figure 4-3: Sunnica East Compound Areas



5. Trip Generation and Distribution

- 5.1 Sunnica have identified that five full time staff are expected on site per day during the operation of the DCO Site. In addition to the five full time staff required on site each day, there is the potential for maintenance staff to be required on an ad hoc basis. This is not considered to have a material impact on the local highway network and has not been assessed further.
- 5.2 This section of the TA therefore identifies the approach taken to forecasting trip generation and distribution of HGVs and staff vehicles during the construction period of the DCO Site. The construction period, which covers some 24 months, is identified to generate higher HGV and staff numbers compared to the operation of the DCO Site or during decommissioning of the DCO Site. Therefore, as agreed at scoping stage no derivation of trips relating to the operation or decommissioning phases as included within this section or assessed within the preliminary TA.
- 5.3 The assessment of trip generation is based on the following key considerations and management measures being in place:
- Construction workers will arrive between 07:00 and 08:00 in the AM and departure between 19:00 and 20:00 in the PM, which are outside of the highway peak hours;
 - Two central car parks will be provided for staff, one in Sunnica East and one in Sunnica West;
 - Assessment of staff vehicles based on an average occupancy of 1.5 persons per vehicle;
 - Car sharing will be encouraged to increase the average staff vehicle occupancy and to reduce the number of staff cars travelling to the Site;
 - A mini-bus service will be provided to transport staff from the main two car parks to each compounds;
 - Internal roads will be used where possible to reduce the number of HGVs and mini-bus trips on the local highway network; and
 - An Outline Construction Traffic Management Plan is included with the PEIR.

Construction Period

- 5.4 The information provided by Sunnica included the forecast of the maximum monthly and daily number of HGVs, staff and vehicles associated with the staff for Sunnica East and Sunnica West throughout the construction phase as well as the construction of the four substations and the cable routes.
- 5.5 A summary of the information regarding HGVs and staff provided by Sunnica is provided in **Appendix G**.

HGVs

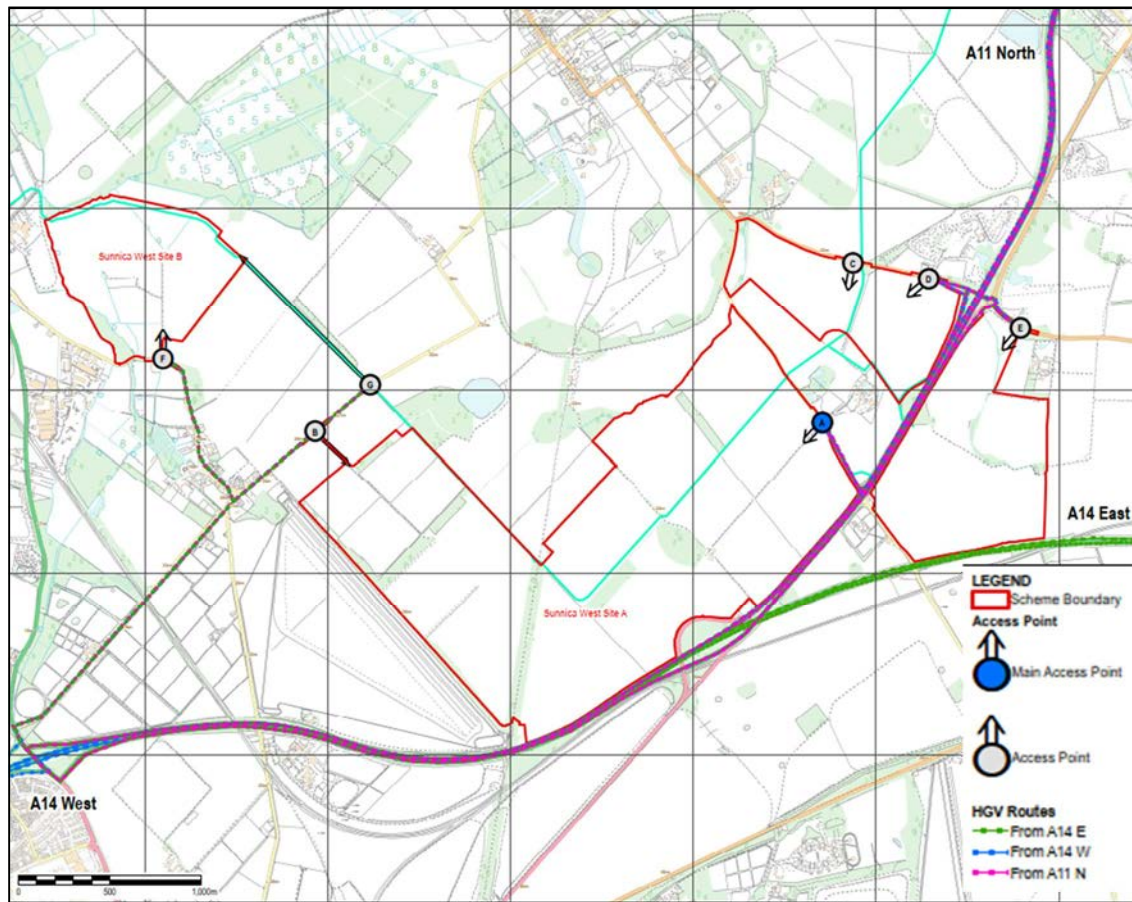
- 5.6 A summary is provided below for the Sunnica East Site, Sunnica West Sites, the substations and the cable routes. These routes have been considered following a review of the local road network and the CCC and SCC freight management plans.
- 5.7 An access strategy relating to the construction routes for HGVs was prepared by AECOM and is provided in **Appendix H**.

Sunnica West Site A & B

- 5.8 Based on the information provided by Sunnica, it is anticipated on average there will be 22 HGV deliveries (44 vehicle movements) per day to the Sunnica West Site during the construction phase. The peak HGV deliveries are forecast to occur in month three and four with 40 HGV deliveries per day (80 movements).
- 5.9 Assuming a 10 hour daily construction delivery window, with movements split equally across the hours (noting that there will be more arrivals at the start of the day and departures towards the end), it would be anticipated on a typical day for there to be less than three HGV movements per hour to the Sunnica West Site and four HGV movements per hour during peak periods of activity.
- 5.10 The main access to the Sunnica West Site A and B is proposed to be from La Hogue Road and to be in located close proximity to the A11/La Hogue Road/Norwich Road T-junction. To minimise the number of HGVs on the local network internal routes will be used where possible from the main access point. Where HGVs are unable to use internal routes, there are various secondary access points identified which include B1085 and Dane Hill Road as well as Chippenham Road to access Sunnica West Site B. Details relating to how this will be managed is set out in the CTMP.

- 5.11 **Figure 5-1** identifies the access points and routes for HGVs. It should be noted that the majority of the accesses identified on Figure 5-1 are currently utilised for field access by agricultural vehicles and therefore where possible existing access points have been reutilised rather than creating new access points.

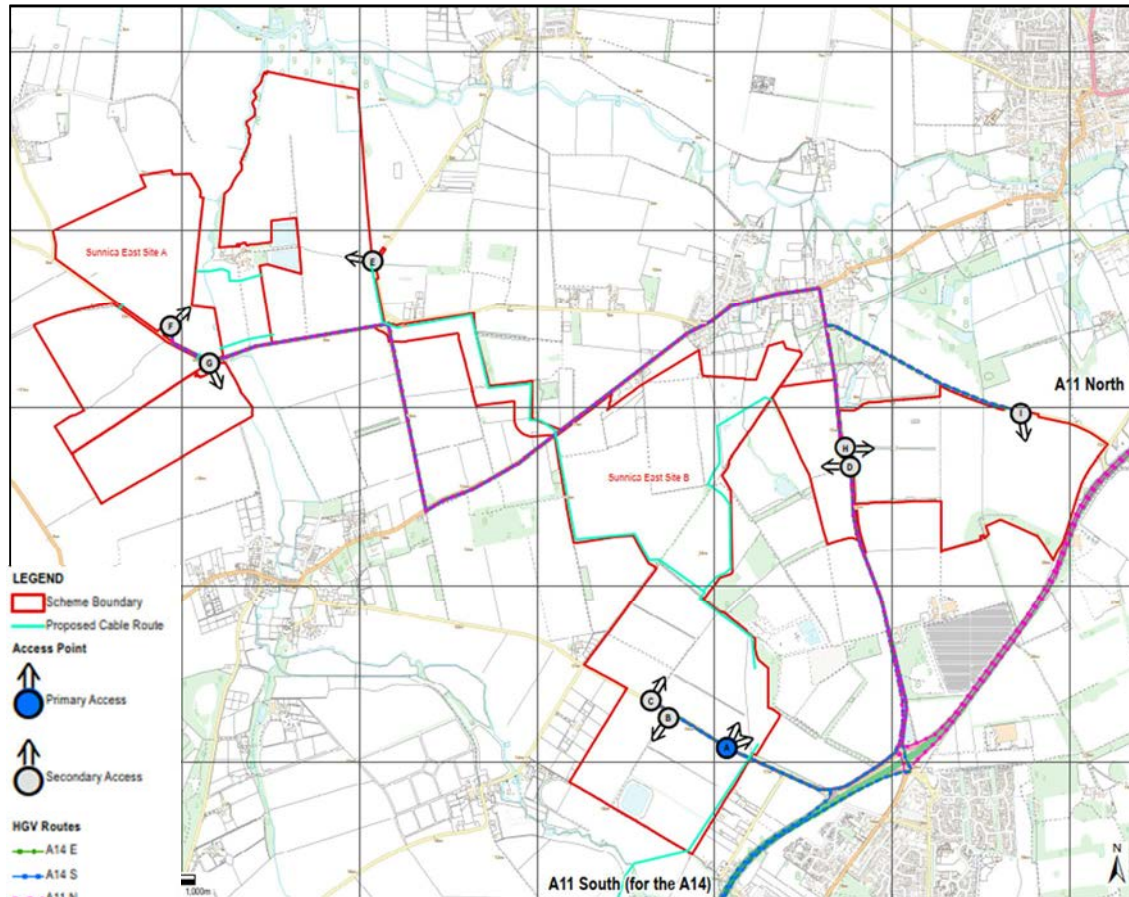
Figure 5-1: Sunnica West Access Points and HGV Routes



Sunnica East Site A and B

- 5.12 Based on the information provided by Sunnica, it is anticipated that on average there will be 22 HGV deliveries (44 vehicle movements) per day to the Sunnica East Site during the construction phase. The peak HGV deliveries are forecast to occur in month three and four with 40 HGV deliveries per day (80 movements).
- 5.13 Assuming a 10 hour typical construction delivery window, with movements split equally across the hours (noting that there will be more arrivals at the start of the day and departures towards the end), it would be anticipated on a typical day for there to be less than three HGV movements in an hour to the Sunnica East Site and four HGV movements in an hour during peak periods of activity.
- 5.14 The main access to the Sunnica East Site A and B is proposed to be from Elms Road and to be in located close proximity to the A11 northbound off-slip/Elms Road T-junction. To minimise the number of HGVs on the local network internal routes will be used where possible from the main access point. Where HGVs are unable to use internal routes, there are various secondary access points which include from Golf Links Road, Newmarket Road and Beck Road. Details relating to how this will be managed is set out in the CTMP.
- 5.15 **Figure 5-2** identifies the access points and routes for HGVs. It should be noted that the majority of the accesses identified on Figure 5-1 are currently utilised for field access by agricultural vehicles and therefore where possible existing access points have been reutilised rather than creating new access points.

Figure 5-2: Sunnica East Access Points and HGV Routes



Substations

- 5.16 Based on the information provided by the applicant the four substations are forecast to require two to three HGV deliveries per day per substation. This results in 8-12 HGV deliveries (16-24 vehicle movements) per day during the first 15 months of the construction period. The Burwell substation is an existing substation located to the northwest of the main village on Newnham Drove and an extension is proposed in the adjacent field to the west.

Cable Routes

- 5.17 Based on the information provided by the applicant the cable routes are forecast to require four HGV deliveries (eight vehicle movements) per day during the first 15 months of the construction period.

Other HGVs

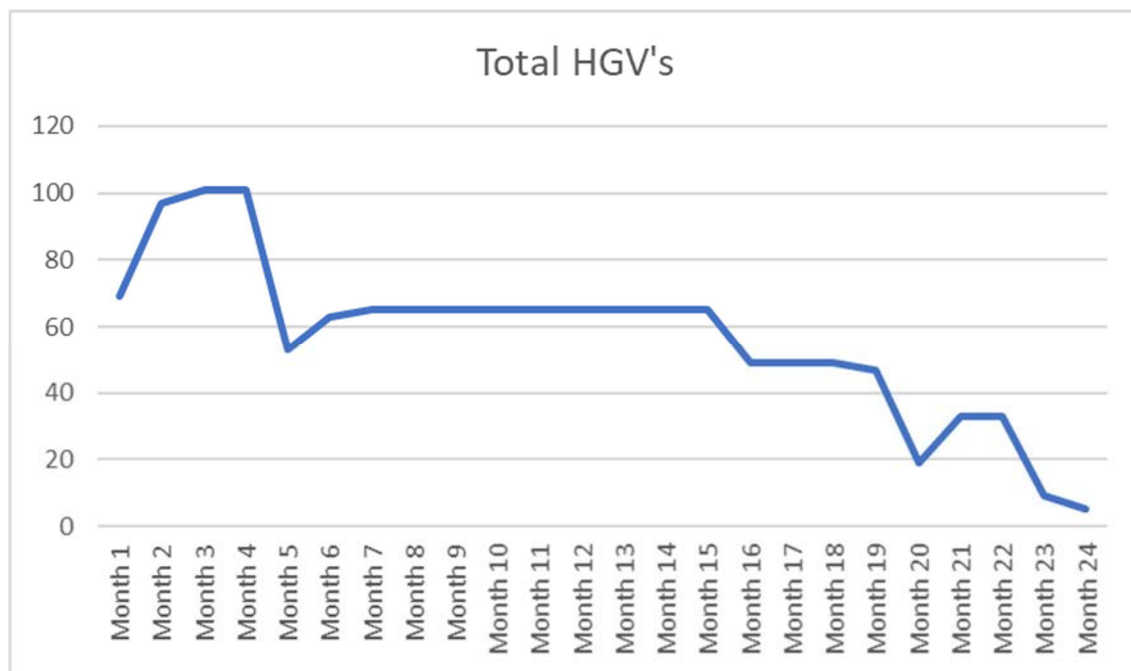
- 5.18 Based on information provided by Sunnica, an additional 2220 HGVs are required across the 24-month construction period for fuel and water delivery and waste and sewage collection. This results in five HGVs per day (10 vehicle movements) on the basis of an average of 20 working days per month. It is assumed that the five HGVs travelling to the site would travel outside of the AM and PM peak periods as per the requirements of the CTMP and would therefore have little impact on the road network.

Total Construction Vehicles

- 5.19 Based on the information provided by Sunnica regarding the construction phasing of the Sunnica West Sites and Sunnica East Sites and for the substations and cable routes, it is forecast there would be a maximum of 101 HGV deliveries per day. During the first 15 months whilst the cable routes are under construction, an average of 71 HGV deliveries per day are anticipated across the DCO Site. Once the cable routes have been constructed, an average of 33 HGV deliveries per day are forecast across the DCO Site for the remaining construction period.

5.20 **Figure 5-3** identifies forecast total number of HGV deliveries per day across the construction period.

Figure 5-3: Forecast Total HGVs Deliveries per Day during the Construction Period



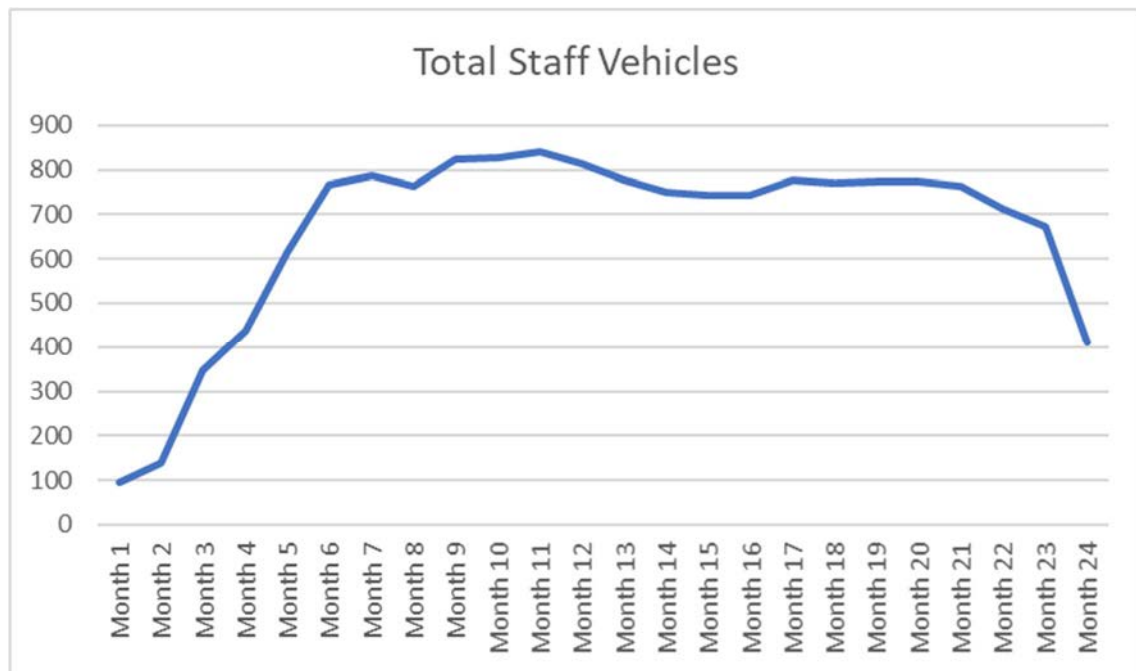
Construction Staff and Vehicles

Trip Generation

- 5.21 Information relating to staff numbers during the construction period has been provided by Sunnica relating to the Sunnica West Sites and Sunnica East Sites and relating to the substations and cable routes. The construction of the substation and cable routes are forecast to occur within the first 15 months of the construction period. Staff relating to the substations and cable routes will be required to enter the main access to Sunnica West Site A or Sunnica East Site B.
- 5.22 The peak number of staff required for the Sunnica West Sites is forecast to occur in month 11 with 610 staff per day. The peak number of staff required for the Sunnica East Sites is forecast to occur in months 9 to 11 with 650 staff per day. Therefore, the peak number of staff across the DCO Site is forecast to occur in month 11 of the construction period with 1,260 staff per day. Across the entire construction period the average number of staff required for the Sunnica West Sites is forecast to be 494 staff and 500 staff for the Sunnica East Sites, resulting in an average of 994 staff per day across the DCO Site.
- 5.23 Due to the rural location of the DCO Site, it is anticipated that the majority of staff will drive or be a vehicle passenger to / from the site. For the purpose of this assessment, it is assumed that the staff vehicles will have an average vehicle occupancy of 1.5 persons. The average vehicle occupancy has been identified from previous AECOM experience in Suffolk. A CTMP will be implemented throughout the construction period which will set out measures to encourage and ensure that car sharing amongst staff is adhered to so that the average vehicle occupancy does not reduce below 1.5 persons per vehicle.
- 5.24 Therefore, the peak number of vehicles associated with the staff for the Sunnica West Sites is forecast to be 407. The peak number of vehicles associated with the staff for the Sunnica East Site is forecast to be 434. Therefore, 841 vehicles per day is forecast to be the peak number of vehicles associated with the DCO Site. The average number of vehicles associated with the staff for the Sunnica West Sites is forecast to be 330 and 334 for the Sunnica East Site resulting in an average of 664 vehicles per day.
- 5.25 As stated in Section 3, the working hours are anticipated to be 07:00 to 19:00, therefore it is forecast that the construction staff will travel to the site between 06:00 and 07:00 and depart between 19:00 and 20:00.

5.26 **Figure 5-4** identifies forecast total number of HGV deliveries per day across the construction period.

Figure 5-4: Forecast Total Staff Vehicles per Day during the Construction Period



5.27 The CTMP will include measures encouraging staff to utilise sustainable modes of transport for journeys to and from the site where possible and to encourage a greater number of staff to car share thus increasing the vehicle occupancy rate as well as reducing the impact on the network.

Trip Distribution and Assignment

5.28 The location of the staff residences is unknown at this point with Sunnica anticipating that staff will be sourced within a 30km radius of the DCO Site. Geographical Information Software (GIS) was used to determine which Middle Super Output Areas (MSOA) located within a 30km radius of the DCO Site. The 2011 Census population data was extracted for the selected MSOA's and have been converted into proportions based on the total population within the 30km radius.

5.29 The staff traffic forecast to be generated by the construction of the Scheme has been distributed using the proportions of the population located within each MSOA within 30km identified in the 2011 Census data.

5.30 Through discussions with Sunnica, a Parking Strategy has been developed to minimise the potential impact of the vehicle trips associated with the staff, in particular in the surrounding villages. Car parking compounds had been identified at each of the main access points and secondary access points to the Sunnica West Sites and Sunnica East Sites. Following initial discussions and following further consideration of the potential impact this could cause on the local highway network an alternative approach was developed. As a result, two evenly split car parking areas are provided, one within Sunnica West Site A and the other in Sunnica East Site B. This was considered a more appropriate approach as it would enable the parking areas to be located as close as possible to the Strategic Road Network therefore reduce the number of trips which would be travelling on the local road network. This approach seeks to minimise the potential impact of staff trips on the local road network.

5.31 Staff will be required to park their vehicles at one of the two centralised car parking zones, either in Sunnica West Site A or Sunnica East Site B, with a mini-bus service provided to transport staff to the areas which cannot be accessed internally. Therefore, route planning software has been used to determine the likely routes that will be taken by staff to and from both the Sunnica West Site main access and the Sunnica East Site main access from / to each MSOA. Details relating to the Parking Strategy and the measures to be implemented are set out in the CTMP.

5.32 The resultant trip distribution of staff vehicles for Sunnica West and Sunnica West can be found in **Table 5.1** and **Table 5.2** respectively.

Table 5.1: Sunnica West Distribution

Route	Percentage
La Hogue Road Distribution	
La Hogue Road South (Northbound)	48%
La Hogue Road North (Southbound)	52%
Total	100%
La Hogue Road South	
A11-A14-A11 (Northbound)	10%
A14-A11 (Eastbound)	32%
B1061 (Northbound)	6%
Total	48%
La Hogue Road North	
A11 (Southbound)	13%
A14 (Westbound) Kentford	16%
A142 (Southbound)	10%
A1123 (Eastbound)	5%
B1085 (Northbound)	2%
B1104 (Southbound)	5%
Total	52%

Table 5.2: Sunnica East Distribution

Route	Percentage
Elms Road Distribution	
Elms Road South (Northbound)	81%
Elms Road North (Southbound)	19%
Total	100%
Elms Road South	
A11-A14-A11 (Northbound)	12%
A11 (Southbound)	15%
A14 (Westbound) Kentford	15%
A14-A11 (Eastbound)	32%
B1063 (Northbound)	2%
B1061 (Northbound)	4%
Total	81%
Elms Road North	
A142 (Southbound)	10%
B1104 (Southbound)	4%
A1123 (Eastbound)	5%
Total	19%

- 5.33 This distribution has been applied to the staff vehicle forecast and the resultant flow diagrams illustrating the trip distribution of the staff vehicles can be found in **Appendix I**.

6. Development Impact

- 6.1 This section assesses the impact of the HGV and construction staff vehicles that is forecast to be generated during the peak construction phase of the DCO Site on the existing strategic and local highway networks.
- 6.2 As agreed at scoping stage with the highway authorities, it is not considered necessary to consider the opening year of the DCO Site or while the DCO Site is in operation given that it will generate very low levels of traffic with peak traffic movements occurring during the construction phase. Neither has it been considered necessary to assess the impacts associated with the decommissioning phase.
- 6.3 On this basis, the the peak construction year of 2023 has been assessed for the highway peak hour and development peak hour in the AM (06:00 to 07:00) and PM (19:00 to 20:00) as well as over the daily (12-hour between 07:00 to 19:00) traffic flows.
- 6.4 Further to this, it should be noted that traffic associated with the development will be restricted by the measures identified within the CTMP such that they do not arrive or depart within the standard road network peak hours of 08:00 to 09:00 and 17:00 to 18:00.
- 6.5 It is acknowledged that the possible temporary closure of PRow over the course of the construction period will impact on those using them. It should however be noted that these PRow are recreational routes with generally low pedestrian flows related to leisure uses and while these might be closed this would be temporary in nature, therefore no assessment of the impact has been carried out with the Preliminary Transport Assessment.

Construction Vehicles (HGVs)

2023 Strategic Highway Impact

- 6.6 Due to the size of the Sunnica East and West Sites, secondary accesses may be required should travel within the Site not be possible. Travel within the site would reduce the amount of traffic on the Strategic Road Network outside of the peak periods, however the provision of multiple secondary access points will allow the impact to be spread across the area diluting the impact. The main Sunnica East HGV access is proposed from Elms Road, which runs in a northwest-southeast direction linking Freckenham and the A11 near Red Lodge. The main Sunnica HGV access is proposed from La Hogue Road which runs in a north-west-south-east direction linking to the B1085 to the north and Moulton to the south.
- 6.7 As discussed previously, the HGVs will follow the routes outlined in the Access Strategy which forms an appendix of the Framework CTMP.

Information provided by the applicant in relation to the forecast construction vehicles is summarised in Table 6-1. **Table 6-1: Summary of Forecast HGVs**

	Months																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Sunnica East	24	38	40	40	16	21	22	22	22	22	22	22	22	22	22	22	22	22	21	7	14	14	2	0
Sunnica West	24	38	40	40	16	21	22	22	22	22	22	22	22	22	22	22	22	22	21	7	14	14	2	0
Substations	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0	0	0	0	0	0	0	0	0
Cable Routes	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	0	0	0	0	0	0	0	0	0
Other	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Total	69	97	101	101	53	63	65	65	65	65	65	65	65	65	65	49	49	49	47	19	33	33	9	5
Average	71															33								

- 6.8 Table 6-1 identifies a maximum of 101 HGV deliveries per day. Therefore, the assessment of the peak construction months represents the worst case scenario.

- 6.9 **Table 6-2** outlines the potential impact that the forecast 101 HGVs per day in month three and month four of the construction would have on the strategic network in 2023. Due to the current uncertainties in the split of the shipment's arrival points into the UK, the HGVs have been evenly split between the Sunnica East Site and Sunnica West Site main access points. Therefore, the proportion of HGV deliveries using the determined delivery routes cannot be determined at this time and the 101 HGVs per day have been evenly distributed between the A11 North, A14 East and A14 West using the HGV inbound and outbound routes to each site outlined in the Access Strategy. The percentage change identified in the table below indicates the forecast impact on each link within the strategic highway network.

Table 6-2: 2023 Construction HGVs – Maximum Percentage Impact on the Strategic Highway Network – 12 Hours (07:00-19:00)

Location	2023 Base (HGVs)		Construction HGVs ¹		2023 % Impact	
	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB
A11 (North of B1085)	2,235	2,429	51	51	2%	2%
A11 (North of La Hogue Road)	3,006	2,355	84	101	3%	4%
A11 to A14 & A1304 Slip Road (J38)	N/A	2,384	N/A	101	N/A	4%
A14 to A11 Slip Road (J38)	4,157	N/A	101	N/A	2%	N/A
A14 (J38)	6,301	4,095	135	135	2%	3%
A14 (Between J37 and J38)	6,682	6,485	135	135	2%	2%
A14 J37	6,848	5,858	34	135	0%	2%
A14 east of Junction 38	*	*	34	34	*	*
A11 north of Red Lodge	*	*	34	34	*	*

¹ The HGV numbers have been rounded up and therefore the totals may not add up.

*No suitable traffic data available and is discussed below

- 6.10 In a single direction, **Table 6-2** indicates that the HGVs are forecast to have the greatest impact on the A11 southbound (north of La Hogue) would result in a 4% increase in HGVs. Therefore, the HGVs associated with the construction of the DCO Site are not considered likely to have a significant impact on the strategic highway network during this period.
- 6.11 The A14 east of Junction 38 and the A11 north of Red Lodge are also key strategic routes for HGV deliveries, however, no suitable data is available on WebTRIS for these locations. It is forecast that 34 HGVs will travel on the A11 north of Red Lodge in each direction and 34 HGVs are forecast to travel on the A14 east of Junction 38 in each direction per day. Traffic at the points on the A11 and A14 identified in **Table 6-2**, is not considered to result in a significant impact and therefore on this basis, the impact further along the A11 and A14 is also not considered to be significant.
- 6.12 In addition, the HGV deliveries will be managed to minimise the deliveries made within the highway peak hours to reduce the impact of the HGVs on the strategic highway network during these hours.
- 6.13 On the basis of that set out in the preceding paragraphs it is not considered necessary to undertake junction capacity assessments given the small increase in vehicular trips associated with the HGV traffic and that the trips would, through the measures contained within the CTMP, occur outside of the standard road network peak hours of 08:00 to 09:00 and 17:00 to 18:00.

2023 Local Highway Impact

- 6.14 As stated in paragraph 6.4, it is forecast that approximately 101 HGV deliveries will be made in month three and month four to the DCO Site per day. Assuming these are split across a 10-hour delivery period during the working hours this would result in approximately 10 additional HGVs on the local highway network per hour.
- 6.15 As previously identified in Section 5, the average HGV deliveries during the first 15 months, where the substations and cable routes are constructed, is an average of 71 HGVs, resulting in an average of seven HGV deliveries per hour. After the completion of the substations and cable routes the average of 33 HGV deliveries, resulting in an average of circa three HGV deliveries per hour.
- 6.16 Therefore, the assessment of the peak construction months represents a reasonable worst case scenario as this includes the construction of Sunnica East, Sunnica West, Cable Routes and Substations occur at the same time resulting in the highest forecast HGV trip generation.
- 6.17 To reduce the impact of the HGVs it is anticipated that the HGV deliveries will be managed to minimise those that occur within the highway peak hours in the AM and PM. However, the impact of the additional HGVs on the local highway network has been assessed for the highway peak hours, given the available baseline traffic data, as this represents the hours which would have the greatest impact in terms of operation of junctions and links and it is considered to be a reasonable worst case.
- 6.18 No HGV traffic data was available for the local highway network. The following analysis is based on the total number of vehicles within the base traffic flows forecast for the selected links in 2023. This has been extrapolated from the 'Forest Heath Site Allocation Plan Cumulative Assessment' Report.
- 6.19 **Table 6-3** outlines the impact the 10 additional HGVs would have on the local highway network in 2023 during the AM highway peak hour at the A11/Newmarket Road/Warren Road Dumbbell Roundabouts and the B1085 Dane Hill/Turnpike Road Roundabout. These junctions have been identified as they are the closest to the Site with traffic data from available sources and are likely to be used junctions used to access the Site. This assumes a reasonable worst case scenario of all the forecasted HGVs using each of the local highway routes during the highway peak hour as. This is a reasonable worst case because it is not anticipated that HGVs will be arriving or departing from the sites during the development peak hours and routing controls would be in place both of which would be controlled through compliance with the CTMP. Therefore, the percentage change identified in the table below indicates the forecast maximum impact on each link within the local highway network.

Table 6-3: 2023 Construction – HGV Maximum Percentage Impact on Local Highway Network – AM Highway Peak Hour

Location	2023 Base (Total Vehicles)		Base + Construction HGVs		2023 % Impact	
	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB
A11/Newmarket Road/Warren Road Dumbbell Roundabouts						
A11 SB On-Slip (Red Lodge)	N/A	445	N/A	455	N/A	2%
A11 SB Off-Slip (Red Lodge)	N/A	264	N/A	274	N/A	4%
A11 NB On-Slip (Red Lodge)	388	N/A	398	N/A	3%	N/A
Warren Rd	617	320	627	330	2%	3%
Newmarket Rd	553	384	563	394	2%	3%
B1085 Dane Hill/Turnpike Road Roundabout						
B1085 (North of Dane Hill Rd Roundabout)	166	511	60	206	6%	2%
B1085 Dane Hill Rd	361	405	176	521	6%	2%
Turnpike Rd	342	193	371	415	3%	2%

- 6.20 The A11/Warren Road/Newmarket Road Dumbbell Roundabouts are forecast to have up to a 4% increase in flow in the AM highway peak hour. This assumes all HGVs use this route however, in reality, this is unlikely to occur as HGV deliveries are also required at the Sunnica West site and would access via a different route. The 'Forest Heath Site Allocation Plan Cumulative Impact Study' indicates that the A11/Newmarket Road/Warren Road Dumbbell Roundabouts are forecast to operate within capacity at between 40% to 50% in 2031 in the AM highway peak hour. Therefore, it is considered that these roundabouts have enough residual capacity to operate well within capacity with the additional 10 HGVs per hour generated by the construction of the Scheme. The additional 10 HGVs per hour equates to approximately one additional HGV every six minutes over the 2023 baseline.
- 6.21 **Table 6-3** indicates that the B1085 and B1085 Dane Hill Road are forecast to have the greatest increase in traffic flows with a 6% increase in total trips. This assumes all HGVs use this route however, in reality, this is unlikely to occur as HGV deliveries are also required at the Sunnica East site and would access via a different route. Therefore, it is not considered the additional HGVs would have a significant impact on the operation of the roundabout given the low total number of additional vehicles forecast at this roundabout and therefore no mitigation is considered necessary. .
- 6.22 **Table 6-4** outlines the potential impact that the 10 additional HGVs will have on the local network in 2023 during the PM highway peak hour at the A11/Newmarket Road/Warren Road Dumbbell Roundabouts and the B1085 Dane Hill/Turnpike Road Roundabout.
- 6.23 As set out in the Access Strategy the HGV deliveries will be required to use the A11 to travel to the main accesses of the Sites and will therefore not have an impact on any of the local villages near the DCO Site such as Chippenham or Red Lodge during the AM highway peak hour therefore reducing the impact of the development traffic on the local road network.
- 6.24 On the basis of that set out in the preceding paragraphs it is not considered necessary to undertake junction capacity assessments given the small increase in vehicular trips associated with the HGV traffic and that the trips would, through the measures contained within the CTMP, occur outside of the standard road network peak hours of 08:00 to 09:00 and 17:00 to 18:00.

Table 6-4: 2023 Construction – HGV Maximum Percentage Impact on Local Highway Network – PM Highway Peak Hour

Location	2023 Base (Total Vehicles)		Base + Construction HGVs		2023 % Impact	
	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB
A11/Newmarket Road/Warren Road Dumbbell Roundabouts						
A11 SB On-Slip (Red Lodge)	N/A	255	N/A	265	N/A	4%
A11 SB Off-Slip (Red Lodge)	N/A	342	N/A	352	N/A	3%
A11 NB On-Slip (Red Lodge)	319	N/A	329	N/A	3%	N/A
Warren Rd	382	589	392	599	3%	2%
Newmarket Rd	488	597	498	607	2%	2%
B1085 Dane Hill/Turnpike Road Roundabout						
B1085 (North of Dane Hill Rd Roundabout)	241	502	251	512	4%	2%
B1085 Dane Hill Rd	392	329	402	339	3%	3%
Turnpike Rd	194	347	204	357	5%	3%

- 6.25 The A11/Warren Road/Newmarket Road Dumbbell Roundabouts are forecast to have up to a 4% increase in flow in the PM highway peak hour. The 'Forest Heath Site Allocation Plan Cumulative Impact Study' indicates that the A11/Newmarket Road/Warren Road roundabouts are forecast to operate within capacity at between 40% to 50% in 2031 in the PM highway peak hour. Therefore, it is considered that the junctions have enough residual capacity to operate well within capacity with the additional HGVs during the hour. The additional 10 HGVs per hour equates to approximately one additional HGV every six minutes.

- 6.26 **Table 6-4** indicates that Turnpike Road is forecast to have the greatest increase in traffic flows with a 5% increase. However, due to the low 2023 base flows a small number of additional HGVs on the network results in a large percentage increase. Therefore, it is not considered the additional HGVs would have a significant impact on the operation of the roundabouts.
- 6.27 As set out in the Access Strategy the HGV deliveries will be required to use the A11 to travel to the main accesses of the Sites and will therefore not have an impact on any of the local villages near the DCO Site such as Chippenham or Red Lodge during the PM highway peak hour therefore reducing the impact of the development traffic on the local road network. .

Staff Vehicles

- 6.28 The trip distribution and assignment outlined in section 5 has been used to distribute the vehicles associated with staff (construction workers) across the local and strategic highway network to assess the impact along with the peak number of vehicles forecast associated with the staff.

2023 Strategic Highway Impact

- 6.29 **Table 6-5** outlines the percentage impact that the staff vehicles associated with the staff is forecast to have on the strategic highway network in the AM development peak hour in 2023.

Table 6-5: 2023 Staff Traffic (Staff Vehicles) Impact on Strategic Highway Network – AM Development Peak Hour (06:00-07:00)

Location	2023 Base (Total Vehicles)		Staff Vehicles		2023 % Impact	
	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB
A11 (North of B1085)	885	1,718	210	0	24%	0%
A11 (North of La Hogue Road)	951	1,869	210	0	22%	0%
A11 to A14 & A1304 Slip Road (J38)	N/A	1,713	N/A	0	N/A	0%
A14 to A11 Slip Road (J38)	767	N/A	364	N/A	47%	N/A
A14 (J38)	1,561	1,624	364	0	23%	0%
A14 (Between J37 and J38)	1,604	3,314	364	0	23%	0%
A14 J37	1,500	3,218	364	0	24%	0%
A14 east of Junction 38	*	*	406	0	*	*
A11 north of Red Lodge	*	*	0	120	*	*

¹ The HGV numbers have been rounded up and therefore the totals may not add up.

*No suitable traffic data available and is discussed below

- 6.30 The table above indicates that the A14 to A11 slip road at Junction 38 is forecast to experience the greatest percentage increase in traffic flow in the AM peak hour of 47% (364 vehicles). This equates to a combined base plus development flow of 1,131 vehicles during the development peak hour. In comparison during the AM highway peak hour (07:00 to 08:00) the traffic flow northbound along the A14 to A11 slip road at Junction 38 is approximately 1,216 vehicles which would result in 85 less vehicles in the development peak hour compared to the highway peak hour.
- 6.31 The A14 east of Junction 38 and the A11 north of Red Lodge are also key strategic routes for the staff, however, no suitable data is available on WebTRIS for these locations. It is forecast that 120 staff vehicles will travel on the A11 north of Red Lodge southbound in the AM development peak hour. It is forecast 406 staff vehicles to travel eastbound on the A14 east of Junction 38 in the AM development peak hour. Traffic at the points on the A11 and A14 identified in Table 6-5, is not considered to result in a significant impact and therefore on this basis, the impact further along the A11 and A14 is also not considered to be significant.

6.32 **Table 6-6** outlines the percentage impact that the staff vehicles associated with the staff is forecast to have on the strategic highway network in the PM peak hour in 2023.

Table 6-6: 2023 Staff Traffic (Staff Vehicles) Impact on Strategic Highway Network – PM Development Peak Hour (19:00-20:00)

Location	2023 Base (Total Vehicles)		Staff Vehicles		2023 % Impact	
	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB
A11 (North of B1085)	1,201	818	0	210	0%	26%
A11 (North of La Hogue Road)	1,332	872	0	406	0%	47%
A11 to A14 & A1304 Slip Road (J38)	N/A	732	N/A	416	N/A	57%
A14 to A11 Slip Road (J38)	959	N/A	0	N/A	0%	N/A
A14 (J38)	2,123	599	0	364	0%	61%
A14 (Between J37 and J38)	2,146	1,343	0	364	0%	27%
A14 J37	2,203	1,330	0	364	0%	27%
A14 east of Junction 38	*	*	0	416	*	*
A11 north of Red Lodge	*	*	173	0	*	*

¹ The HGV numbers have been rounded up and therefore the totals may not add up.

*No suitable traffic data available and is discussed below

- 6.33 Junction 38 of the A14 is forecast to experience a 61% (364 vehicles) increase in traffic flows southbound in the PM peak hour during the peak period of construction. This equates to approximately six additional vehicles per minute. In comparison during the PM highway peak hour the traffic flow along the A14 southbound at Junction 38 is approximately 1,314 vehicles. Therefore, during the development peak hour it is forecast that there will be approximately 351 less vehicles compared to the highway peak hour. As a result, it is considered that the A14 southbound at Junction 38 would operate better than the highway PM peak hour.
- 6.34 The A14 east of Junction 38 and the A11 north of Red Lodge are also key strategic routes for the staff, however, no suitable data is available on WebTRIS for these locations. It is forecast that 173 staff vehicles will travel on the A11 north of Red Lodge northbound in the PM development peak hour. It is forecast 416 staff vehicles to travel westbound on the A14 east of Junction 38 in the PM development peak hour. Traffic at the points on the A11 and A14 identified in Table 6-6, is not considered to result in a significant impact and therefore on this basis, the impact further along the A11 and A14 is also not considered to be significant.

- 6.35 **Table 6-6** indicates that the A11 to A14 & A1304 slip road at Junction 38 is forecast to experience a 57% (416 vehicles) increase in traffic flow in the PM peak hour. This equates to approximately seven additional vehicles per minute. In comparison during the PM highway peak hour the traffic flow along the A11 to A14 & A1304 slip road at Junction 38 is approximately 1,243 vehicles. Therefore, during the development peak hour it is forecast that there will be approximately 95 less vehicles than is forecast on the slip road in the highway peak hour. As a result, it is considered that the A11 to A14 & A1304 slip road at junction 38 would operate better than during the highway PM peak.
- 6.36 The A11 southbound (north of La Hogue Road) is forecast to experience a 47% (406 vehicles) increase in traffic flows in the PM peak hour during the peak construction period. In comparison during the PM highway peak the traffic flow along the A11 southbound (north of La Hogue Road) is approximately 1,621 vehicles. Therefore, during the development peak hour it is forecast that there will be approximately 342 less vehicles than is forecast in the highway peak hour. As a result, it is considered that the A11 southbound (north of La Hogue Road) would operate better than in the PM highway peak.
- 6.37 Overall, it should be noted that while the percentage impact appears to be high with the additional staff vehicles it should be noted that this is based on lower traffic flows compared to the strategic highway peak hour.

2023 Local Highway Impact

- 6.38 **Table 6-7** outlines the percentage impact that the staff vehicles traffic associated with the staff is forecast to have on the local highway network in the AM peak hour in 2023.

Table 6-7: 2023 Staff Traffic (Staff Vehicles) Impact on Local Highway Network – AM Development Peak Hour (06:00-07:00)

Location	2023 Base (Total Vehicles)		Staff Vehicles		2023 % Impact	
	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB
A11/Newmarket Road/Warren Road Dumbbell Roundabouts						
A11 SB On-Slip (Red Lodge)	N/A	343	N/A	0	N/A	0%
A11 SB Off-Slip (Red Lodge)	N/A	204	N/A	120	N/A	59%
A11 NB On-Slip (Red Lodge)	300	N/A	0	N/A	0%	N/A
Warren Rd	476	247	74	0	16%	0%
Newmarket Rd (Bridge)	426	296	141	0	33%	0%
B1085 Dane Hill/Turnpike Road Roundabout						
B1085 (North of Dane Hill Rd Roundabout)	128	394	128	0	100%	0%
B1085 Dane Hill Rd	278	312	74	0	27%	0%
Turnpike Rd	264	149	53	0	20%	0%

- 6.39 It is forecast that an additional 120 staff vehicles will use the A11 southbound off-slip (Red Lodge) to travel to the Sunnica East and Sunnica West Site. This results in a 59% increase in traffic along this link, which equates to approximately two additional vehicles per minute. In total it is forecast there would be approximately 324 vehicles on the A11 southbound off-slip at Red Lodge during the development AM peak hour. The 'Forest Heath Site Allocation Plan Cumulative Impact Study' indicates that the links at the A11 / Newmarket Road / Warren Road roundabouts are forecast to operate within capacity at between 40% to 50% in 2031 in the AM highway peak hour. Therefore, it is considered that these roundabouts have enough residual capacity to operate efficiently with the additional 120 vehicles in 2023 between 06:00 and 07:00.
- 6.40 **Table 6-7** indicates that as a result of the staff using the B1085 northbound (north of Dane Hill Road) travel to the Sunnica West Site, the link is forecast to experience a 100% (128 vehicles) increase in traffic flow in the AM peak hour. This equates to approximately two additional vehicles per minute. In total it is forecast there would be 256 vehicles on the B1085 northbound (north of Dane Hill Road) during the development AM peak hour. No junction modelling was undertaken in the 'Forest Heath Site Allocation Plan Cumulative Impact Study' as no issues were raised concerning junction capacity in the AM highway peak hour. Therefore, it is not considered there would be a capacity issue at this junction in 2023 between 06:00 to 07:00 with the additional vehicles associated with the construction staff.
- 6.41 Through Chippenham, along the B1085 Chippenham Road, in the development AM peak hour the DCO Site is forecast to generate 83 staff vehicles travelling southbound, this equates to approximately 14 vehicles every 10 minutes. This level of additional vehicles is not considered to be a significant impact on the operation of the link between 06:00 and 07:00 and due to the expected low number of existing vehicles on this section of the highway network during this time.
- 6.42 Overall, it should be noted that while the percentage impact appears to be high with the additional staff vehicles it should be considered that this is based on lower traffic flows compared to the local highway peak hour in the AM.
- 6.43 **Table 6-8** outlines the percentage impact that the staff vehicles are forecast to have on the local highway network in the PM development peak hour in 2023.

Table 6-8: 2023 Staff Traffic (Staff Vehicles) Impact on Local Highway Network – PM Development Peak Hour (19:00-20:00)

Location	2023 Base (Total Vehicles)		Staff Vehicles		2023 % Impact	
	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB
A11/Newmarket Road/Warren Road Dumbbell Roundabouts						
A11 SB On-Slip (Red Lodge)	N/A	126	N/A	210	N/A	166%
A11 SB Off-Slip (Red Lodge)	N/A	170	N/A	0	N/A	0%
A11 NB On-Slip (Red Lodge)	158	N/A	67	N/A	42%	N/A
Warren Rd	190	292	0	74	0%	26%
Newmarket Rd	242	296	0	284	0%	96%
B1085 Dane Hill/Turnpike Road Roundabout						
B1085 (North of Dane Hill Rd Roundabout)	119	249	0	271	0%	109%
B1085 Dane Hill Rd	195	163	0	74	0%	46%
Turnpike Rd	96	172	0	0	0%	0%

- 6.44 It is forecast that an additional 210 staff vehicles will use the A11 southbound on-slip (Red Lodge) to travel from the Sunnica East Site. This results in a 166% increase in traffic along this link, which equates to approximately three to four additional vehicles per minute. It is forecast there would be approximately 326 vehicles within the development PM peak hour. During the PM highway peak hour, the traffic flow on the A11 southbound on-slip (Red Lodge) is forecast to be approximately 255 vehicles. Therefore, an additional 81 vehicles are forecast on the A11 southbound on-slip (Red Lodge) during the development PM peak hour compared to the PM highway peak hour without the DCO Site. This equates to between three to four vehicles per minute and is not considered to be significant in terms of the operation of this link.
- 6.45 It is forecast that during the development PM peak hour southbound traffic flows on Newmarket Road are forecast to increase by 96% (284 vehicles) due to staff travelling to the A11 southbound and Warren Road to travel south or access the A14. Despite the percentage increase, this equates to approximately five additional vehicles per minute and is not considered to be significant. It should also be noted that this occurs in the development peak hour and not the highway peak hour when background traffic flows are at their highest and is therefore not considered to be significant in terms of the operation of this link.
- 6.46 The 'Forest Heath Site Allocation Plan Cumulative Impact Study' indicates that the A11/Newmarket Road/Warren Road Dumbbell Roundabouts are forecast to operate within capacity at between 40% to 50% in 2031 in the PM highway peak hour. Therefore, it is considered that the Dumbbell Roundabouts have enough residual capacity to operate efficiently with the additional vehicles.
- 6.47 **Table 6-8** indicates that as a result of the staff using the B1085 southbound (north of Dane Hill Road) to travel from the Sunnica West Site, this link is forecast to experience an 109% (271 vehicles) increase in traffic flow in the PM development peak hour. This equates to approximately 13 additional vehicles per minute. During the PM highway peak hour, the 2023 base traffic flow is 502 vehicles on B1085 southbound (north of Dane Hill Road), which is 121 vehicles less than in the 2023 development PM peak hour. No junction modelling was undertaken in the 'Forest Heath Site Allocation Plan Cumulative Impact Study' as no issues were raised concerning junction capacity in the PM highway peak hour. Therefore, it is not considered there would be a capacity issue at this junction in the 2023 development peak hour considering that the flows are forecast to be lower than the highway peak hour without the DCO Site.
- 6.48 Through Chippenham, in the development PM peak hour (19:00 to 20:00) the DCO Site is forecast to generate 83 staff vehicles travelling northbound, this equates to approximately 14 vehicles every 10 minutes. This level of additional vehicles is not considered to be a significant impact on the operation of the link between 19:00 to 20:00 and also due to the expected low baseline traffic flows within this hour. It should also be noted that this occurs in the development peak hour and not the highway peak hour when background traffic flows are at their highest and is therefore not considered to be significant in terms of the operation of this link.

- 6.49 Overall, it should be noted that while the percentage impact appears to be high with the additional staff vehicles it should be considered that this is based on lower traffic flows compared to the local highway peak hour in the PM. As the additional staff vehicles are outside of the highway peak hour, where the baseline traffic flows are lower than the highway peak hour, this results in a higher percentage impact than if the vehicles were added within the highway peak hour. Even though some of the percentage increases in vehicles may be considered to be high (e.g. A11 southbound on-slip), as this occurs outside of the highway peak hour the increase in vehicles is therefore not considered to be significant in terms of the operation of the links discussed above in this section.

7. Embedded Mitigation

- 7.1 This section of the TA discusses mitigation measures embedded within the Scheme and measures to be implemented to minimise the impact of the HGV movements and vehicles associated with the construction staff.

HGVs

- 7.2 To reduce the potential impact of the HGV deliveries, as set out in the CTMP, the arrival and departure times will be managed to minimise the number of HGVs travelling to the site during the highway peak hours. In addition, the HGVs can be delayed in the PM to avoid being released from the site during the highway peak hour. The HGV deliveries will be routed onto the strategic road network (A11 / A14) to travel to / from the site, more detail on the routes can be found in the Access Strategy in **Appendix H**.

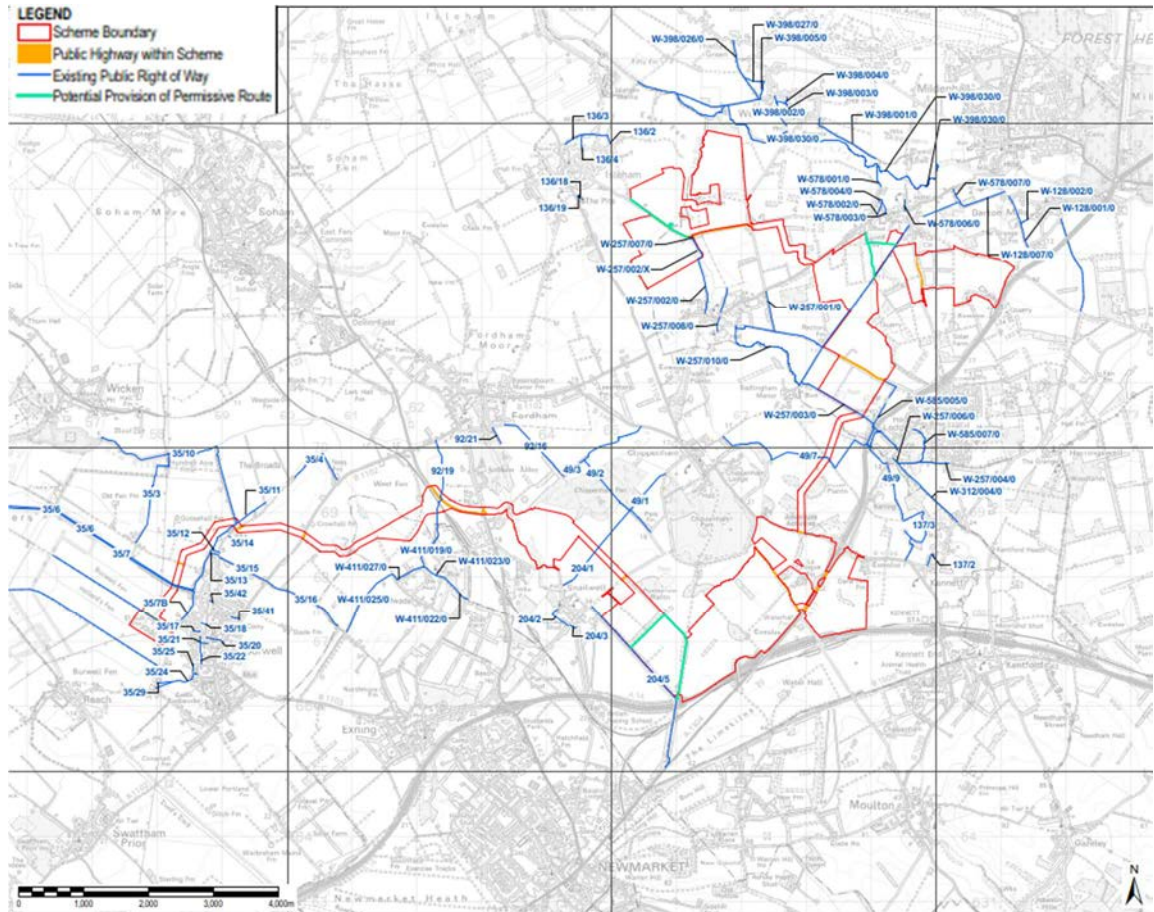
Staff Vehicles

- 7.3 To reduce the potential impact of vehicles associated with the staff, as set out in the CTMP, the applicant will implement measures to maximise the numbers of staff that lift share with colleagues to reduce the number of vehicles travelling to/from the Site each day. Staff will also be encouraged to use the strategic road network in the vicinity of the Site such as the A11, A14 and A142 to travel to/from the Site where appropriate to minimise the amount of construction traffic using local roads through the nearby villages, in line with the routes identified in the access strategy for the HGVs.
- 7.4 The parking strategy seeks to minimise the potential impact of the vehicle trips associated with the staff, in particular in the surrounding villages. Two evenly split car parking areas are proposed, one within Sunnica West Site A and the other in Sunnica East Site B, which are accessed as follows:
- Sunnica West Site A – to be accessed off an unclassified road which links to the A11 as well as a number of unclassified roads within the rural area to west of the A11; and
 - Sunnica East Site B – to be accessed off the B1085, which heads north from its junction with the A11 near to Red Lodge. The access is to be located adjacent to an existing access to an existing solar energy farm located adjacent to the A11.
- 7.5 During arrival of staff at both sites the car parking areas will be managed to ensure the efficient arrival of staff and assignment of the car parking spaces where vehicles will be routed to the most appropriate location based on their arrival time. The car parking management will ensure staff entering the car parking areas are undertaken in a timely and safe manner. Given the working patterns identified it is not expected there will be the requirements for car parking management outside of the hour preceding the staff start time, which is identified as 07:00. As a result, it is anticipated a one-way system will be in place within the two car parks with a single point will provide the entry/egress onto the local highway network. Appropriate signage, internally and externally, will identify the entry and egress routes for vehicles for the two car parking areas.
- 7.6 A car parking permit system is proposed to be implemented across the two car parking areas. Before commencing work on site, staff will be allocated to one of the two car parking areas which will be based on their starting location for their travel to the Site. This takes into consideration if staff are starting their journey from a different location to their home. The intention of the car parking permit system is to encourage staff to use the strategic road network in the vicinity of the Site such as the A11 and A14. This will assist in minimising the number of vehicle trips which could occur on the local roads, in particular through Fordham, Chippenham, Worlington and Red Lodge. Where possible, staffs primary working location in the Sunnica East Site and Sunnica West Site will be the same as their parking permit location.
- 7.7 A mini-bus service will be used to transport staff around the site making use of internal routes where possible. Where the mini-bus is unable to use internal routes, the local highway network will be used to transport staff to the other site compounds. Considering the start/finish time of staff, any mini bus service trips on the local highway network are expected to occur outside of the peak highway hours. Given the use of a mini bus service the departure of staff is expected to be staggered outside of the highway peak hours and will be dictated on when staff return to the main two car parking areas.

Public Rights of Way

7.8 After construction during the operation phase, there are three potential routes that may be provided in the surrounding area, which are identified in **Figure 7-1** and provided as a higher resolution image in **Appendix J**. The provision of a permissive route is proposed along Beck Road, one connecting PRoW W-257/010/0 and the B1102 Freckenham Road. A route is also proposed as an alternative route of the PRoW 204/5 where it starts and ends.

Figure 7-1: Potential Routes



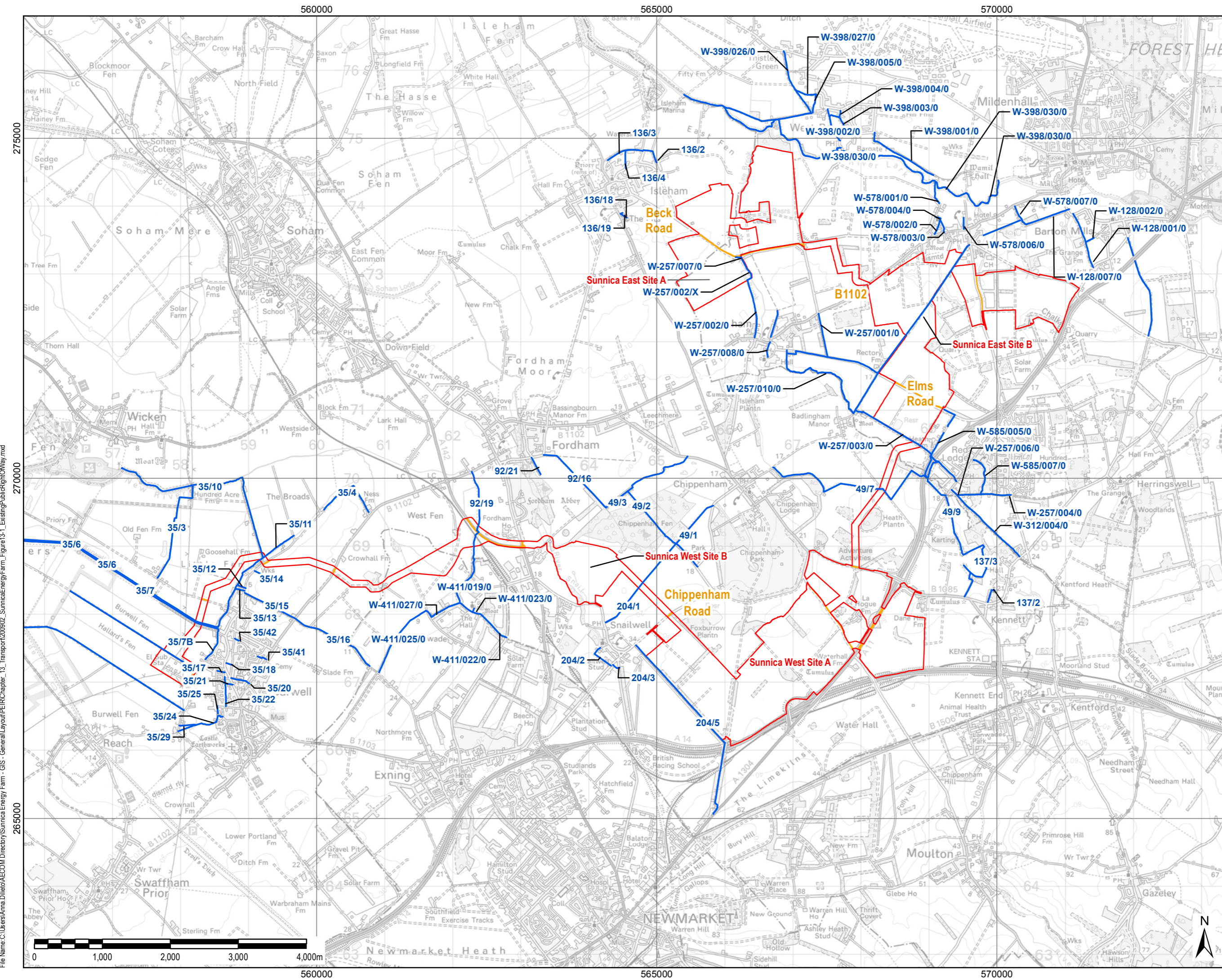
8. Summary and Conclusion

- 8.1 AECOM has been appointed by Sunnica Limited to provide transport planning advice in support of the proposed Energy Farm comprising solar PV and battery storage on land near Red Lodge, Suffolk (Sunnica East Site A and Site B) and Chippenham, Cambridgeshire (Sunnica West Site A and Site B). The Sites will connect to the National Grid system at Burwell, at an existing substation, which will be extended to allow energy generated by the development to enter the national grid. The DCO Site will have an electrical generating capacity of up to 500MW that would be delivered to the national electricity transmission network.
- 8.2 The DCO Site is located in a rural area with limited footways and pedestrian and cycle facilities in the area. This is due to the rural nature of the surrounding local roads however, these are lightly trafficked. There are several Public Right of Ways (PRoW) crossing and connecting the sites.
- 8.3 The closest bus stops to the Sunnica West Site are located in Snailwell on Newmarket Road, where a pair of bus stops are provided. These are approximately 600m to the west of Sunnica West Site A. The bus stop nearest to the Sunnica East Site is located on B1085 Turnpike Road in Red Lodge approximately 500m to the south-east of Sunnica East Site B. Kennett railway station is located, approximately 2 and 3 km from Sunnica West Site and Sunnica East Site respectively and Newmarket railway station is located approximately 2km from the Sunnica West Site B.
- 8.4 Sunnica West will be accessed via the Chippenham junction of the A11, to the north of junction 38 of the A14. Sunnica East will be accessed via the A11 and B1085, utilising the existing access to Worlington Quarry. Access arrangements to each site are expected to remain consistent through construction, operation and any decommissioning activity.
- 8.5 The A11 and A14 form part of Strategic Road Network and are in close proximity of both the Sunnica West and East sites. The A11 runs in a northeast-southwest direction between London and Norwich to the east of the Sites. The A11 is a dual carriageway with two lanes in each direction to the north of A14 Junction 38.
- 8.6 Personal Injury Accident data on the surrounding highway network has been analysed which indicated no incidents frequently occurring at any particular location or involving vulnerable users. The analysis did not indicate a particular safety concern that needs to be considered as part of the DCO Site proposals.
- 8.7 Traffic data for the A11 and A14 has been obtained from the WebTRIS database for 2019 and traffic flows for the local highway network have been derived from the 'Forest Heath District Council Site Allocation Plan Cumulative Impact Study' document (August 2016). The peak construction period is forecast to occur in 2023 with TEMPro 7.2 used to grow the 2019 baseline traffic flows to 2023 baseline traffic flows.
- 8.8 Sunnica identified five full time staff are expected on site per day during the operation of the DCO Site. In addition to the five full time staff required on site each day, there is the potential for maintenance staff to be required on an ad hoc basis. This is not considered to have a material impact on the local highway network.
- 8.9 Data has been provided by Sunnica on the nature of the construction of the DCO Site and in relation to the construction of the four substations and cable routes. It is forecast there would be a maximum of 101 HGV deliveries per day. During the first 15 months whilst the cable routes are under construction, an average of 71 HGV deliveries per day are anticipated across the DCO Site. Once the cable routes have been constructed, an average of 33 HGV deliveries per day are forecast across the DCO Site for the remaining construction period.
- 8.10 The proportion of HGV deliveries using the determined delivery routes cannot be determined at this time and the 101 HGVs per day have been evenly distributed between the A11 North, A14 East and A14 West using the HGV inbound and outbound routes to each site outlined in the Access Strategy. The HGVs are forecast to have the greatest impact on the A11 southbound (north of La Hogue) would result in a 4% increase in HGVs. Therefore, the HGVs associated with the construction of the DCO Site are not considered to have a significant impact on the strategic highway network during this period.

- 8.11 It is assumed the HGVs are split across a 10-hour delivery period during the working hours this would result in approximately 10 additional HGVs on the local highway network per hour. The A11/Warren Road/Newmarket Road Dumbbell Roundabouts are forecast to have up to a 4% increase in flow in the AM and PM highway peak hours. The 'Forest Heath Site Allocation Plan Cumulative Impact Study' indicates that the A11/Newmarket Road/Warren Road Dumbbell Roundabouts are forecast to operate within capacity at between 40% to 50% in 2031 in the AM and PM highway peak hours. Therefore, it is considered that the roundabouts have enough residual capacity to operate well within capacity with the additional 10 HGVs per hour.
- 8.12 As set out in the Access Strategy, the HGV deliveries will be required to use the A11 to travel to the main accesses of the Sites and will therefore not have an impact on any of the local villages near the DCO Site such as Chippenham or Red Lodge during the peak hours. To reduce the potential impact of the HGV deliveries, the arrival and departure times will be managed to minimise the number of HGVs travelling to the site during the highway peak hours. In addition, the HGVs can be delayed in the PM to avoid being released from the site during the highway peak hour.
- 8.13 The peak number of staff required for the Sunnica West Sites is forecast to occur in month 11 with 610 staff per day. The peak number of staff required for the Sunnica East Sites is forecast to occur in months 9 to 11 with 650 staff per day. The peak number of staff across the DCO Site is forecast to occur in month 11 of the construction period with 1,260 staff per day. Across the entire construction period the average number of staff required for the Sunnica West Sites is forecast to be 494 staff and 500 staff for the Sunnica East Sites, resulting in an average of 994 staff per day across the DCO Site.
- 8.14 Due to the rural location of the DCO Site, it is anticipated that the majority of staff will drive or be a vehicle passenger to/from the site. The peak number of vehicles associated with the staff for the Sunnica West Sites is forecast to be 407. The peak number of vehicles associated with the staff for the Sunnica East Sites is forecast to be 434 with a total of 841 vehicles per day forecast as the peak number of vehicles associated with the DCO Site. The average number of vehicles associated with the staff for the Sunnica West Sites is forecast to be 330 and 334 for the Sunnica East Sites resulting in an average of 664 vehicles per day.
- 8.15 During construction the working hours for staff will be from 07:00 to 19:00, therefore it is anticipated that the peak hours for staff arrival will be between 06:00 to 07:00 and staff departure between 19:00 to 20:00. Therefore, 06:00 to 07:00 forms the development highway peak hour in the AM and 19:00 to 20:00 forms the development highway peak hour in the PM. As a result, the staff vehicle trips during the construction period are not forecast to have an impact during the highway peak hours. The increase in staff vehicles are not forecast to increase the total number of vehicles in the development peak hours to above the traffic flows forecast within the highway peak hours.
- 8.16 The parking strategy has been developed to minimise the potential impact of the vehicle trips associated with the staff, in particular in the surrounding villages with two evenly split car parking areas provided, one within Sunnica West Site A and the other in Sunnica East Site B. Staff will be required to park their vehicles at one of the two centralised car parking zones with a mini-bus service provided to transport staff to the areas which cannot be accessed internally.
- 8.17 To reduce the potential impact of vehicles associated with the staff, they will be encouraged to lift share with colleagues to reduce the number of vehicles travelling to/from the Site each day. Staff will also be encouraged to use the strategic road network in the vicinity of the Site such as the A11, A14 and A142 to travel to/from the Site where appropriate to minimise the number of vehicles through the nearby villages.
- 8.18 During arrival of staff at both sites the car parking areas will be managed to ensure the efficient arrival of staff and assignment of the car parking spaces where vehicles will be routed to the most appropriate location based on their arrival time. The car parking management will ensure staff entering the car parking areas are undertaken in a timely and safe manner. Appropriate signage, internally and externally, will identify the entry and egress routes for vehicles for the two car parking areas. A car parking permit system is proposed to be implemented across the two car parking areas. Before commencing work on site, staff will be allocated to one of the two car parking areas which will be based on their starting location for their travel to the Site. This takes into consideration if staff are starting their journey from a different location to their home.
- 8.19 After construction during the operation phase, there are three potential permissive routes that may be provided in the surrounding area, which includes a permissive route is proposed along Beck Road, one connecting PRoW W-257/010/0 and the B1102 Freckenham Road. A permissive route is also proposed as an alternative route of the PRoW 204/5 where it starts and ends.

8.20 In conclusion, the analysis undertaken as part of this Transport Assessment indicates the proposed DCO Site is not considered to have a significant impact on the highway network when considering the mitigation measures and the access strategy identified for HGVs and staff.

Appendix A – Existing Public Rights of Way



THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- ▭ Scheme Boundary
- ▭ Public Highway within Scheme
- ▭ Public Right of Way

NOTE:
Public highways run through the Sunnica East Site, which are not part of the site boundary. These have been digitised based on the 1:1250 scale OS Mastermap.

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Purpose of Issue
PEIR

Client
SUNNICA LTD



**FIGURE 13-1
PUBLIC RIGHT OF WAY
AND ROADS WITHIN THE
SCHEME**

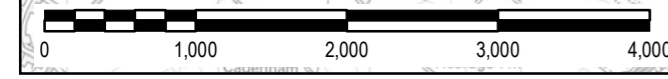
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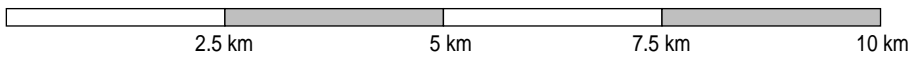
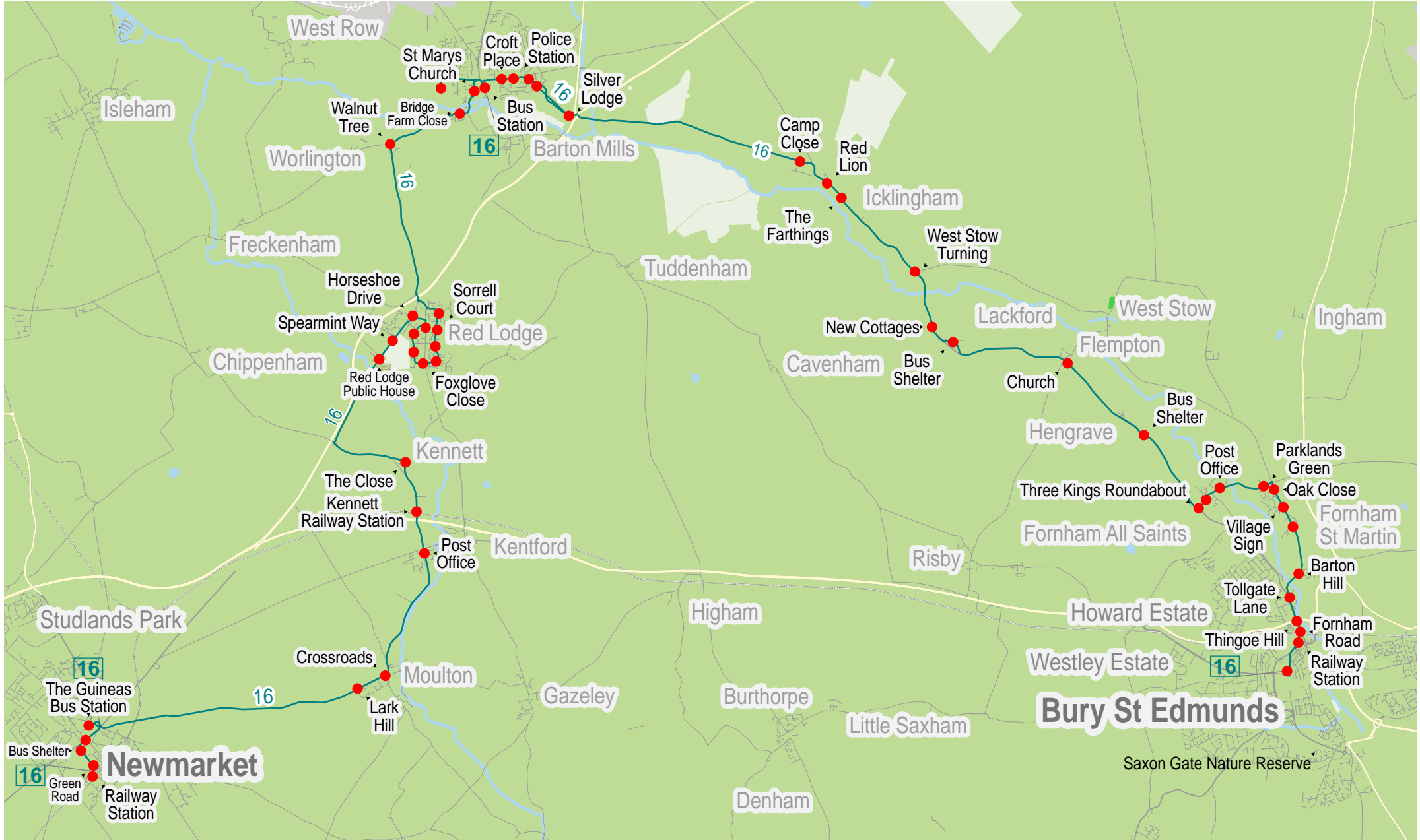
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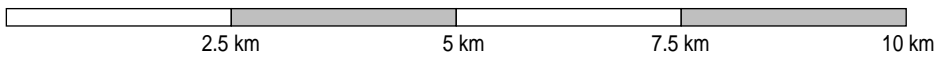
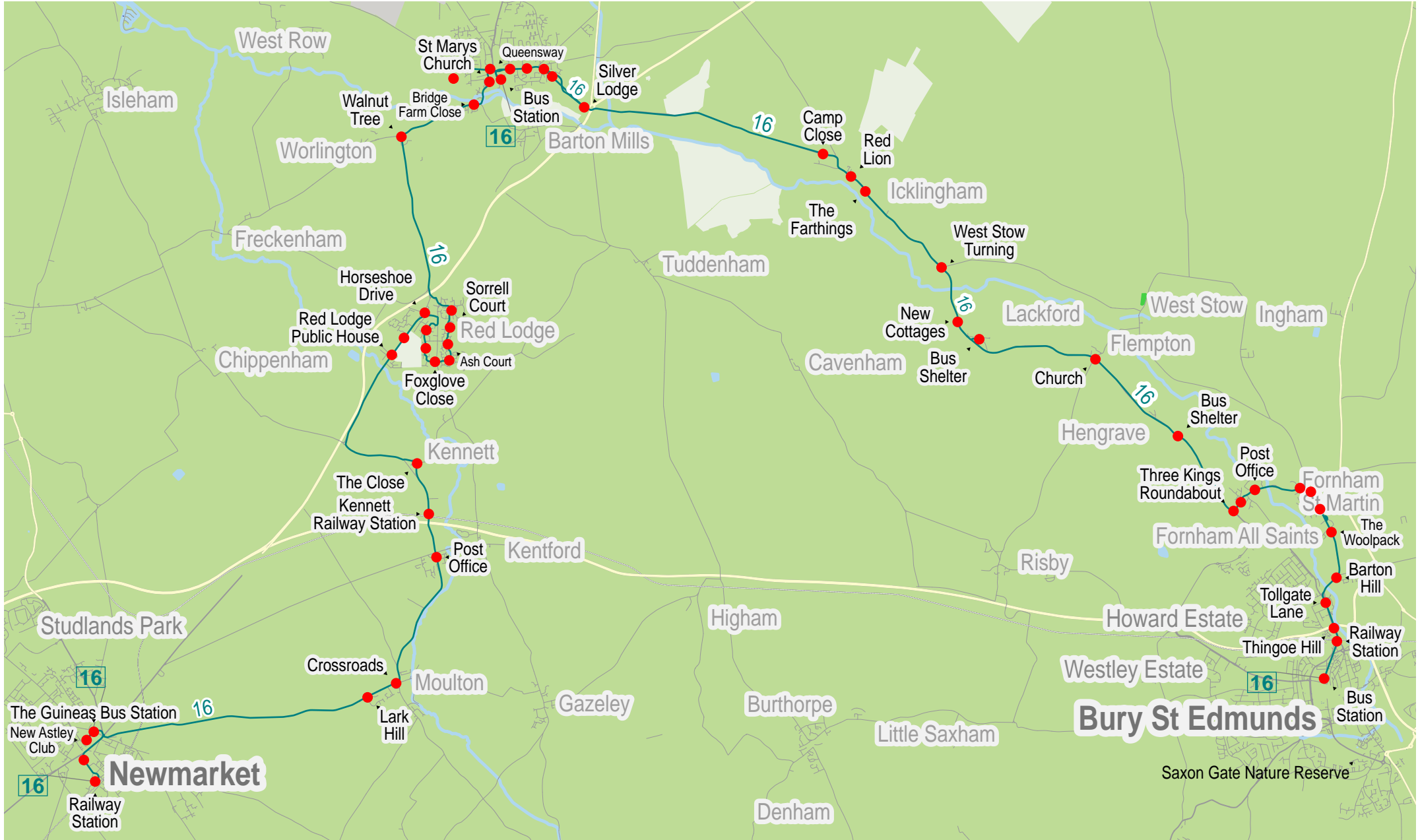


Appendix B Bus and Train Timetable

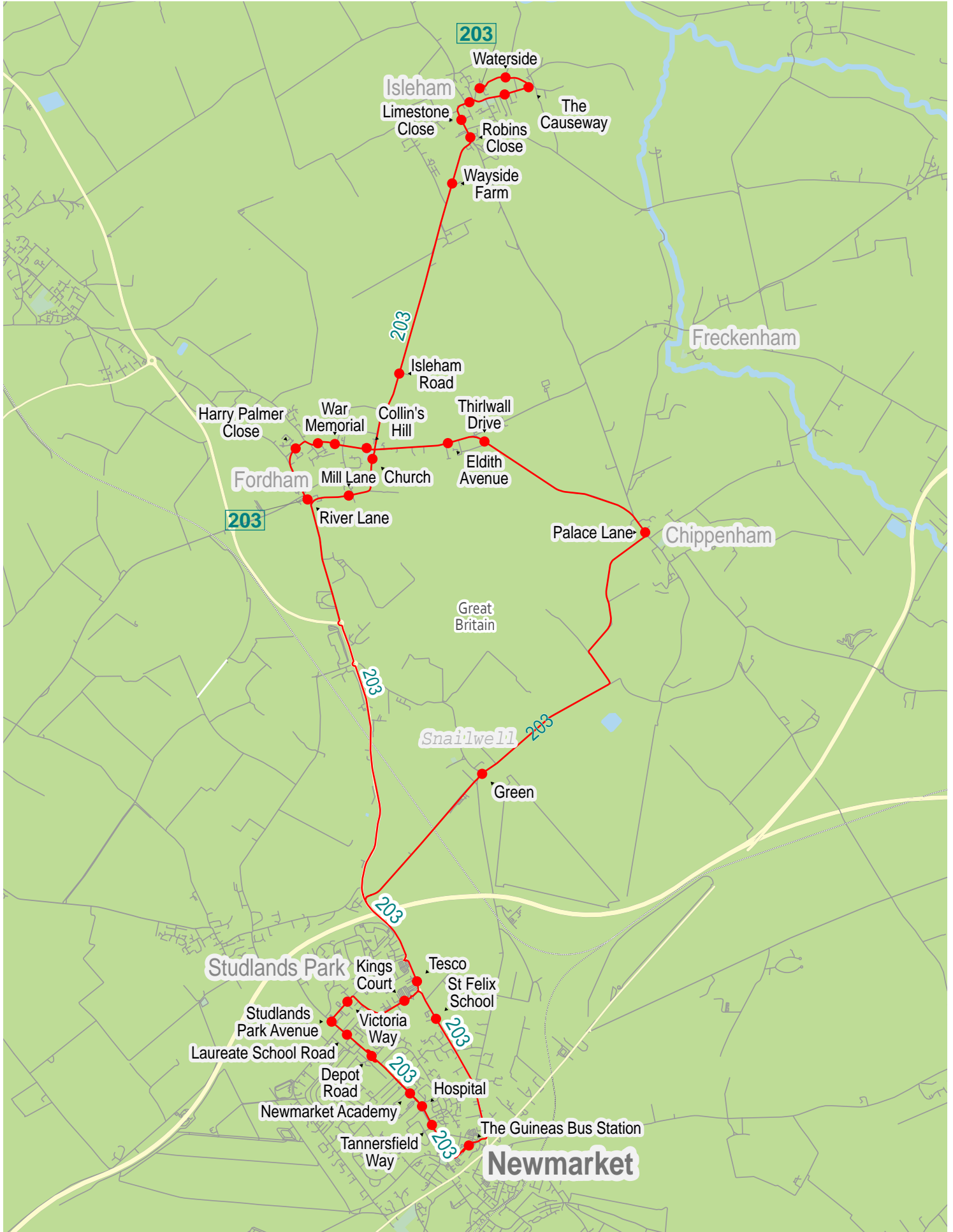
Route map for Stepsons of Essex service 16 (outbound)



Route map for Stepsons of Essex service 16 (inbound)

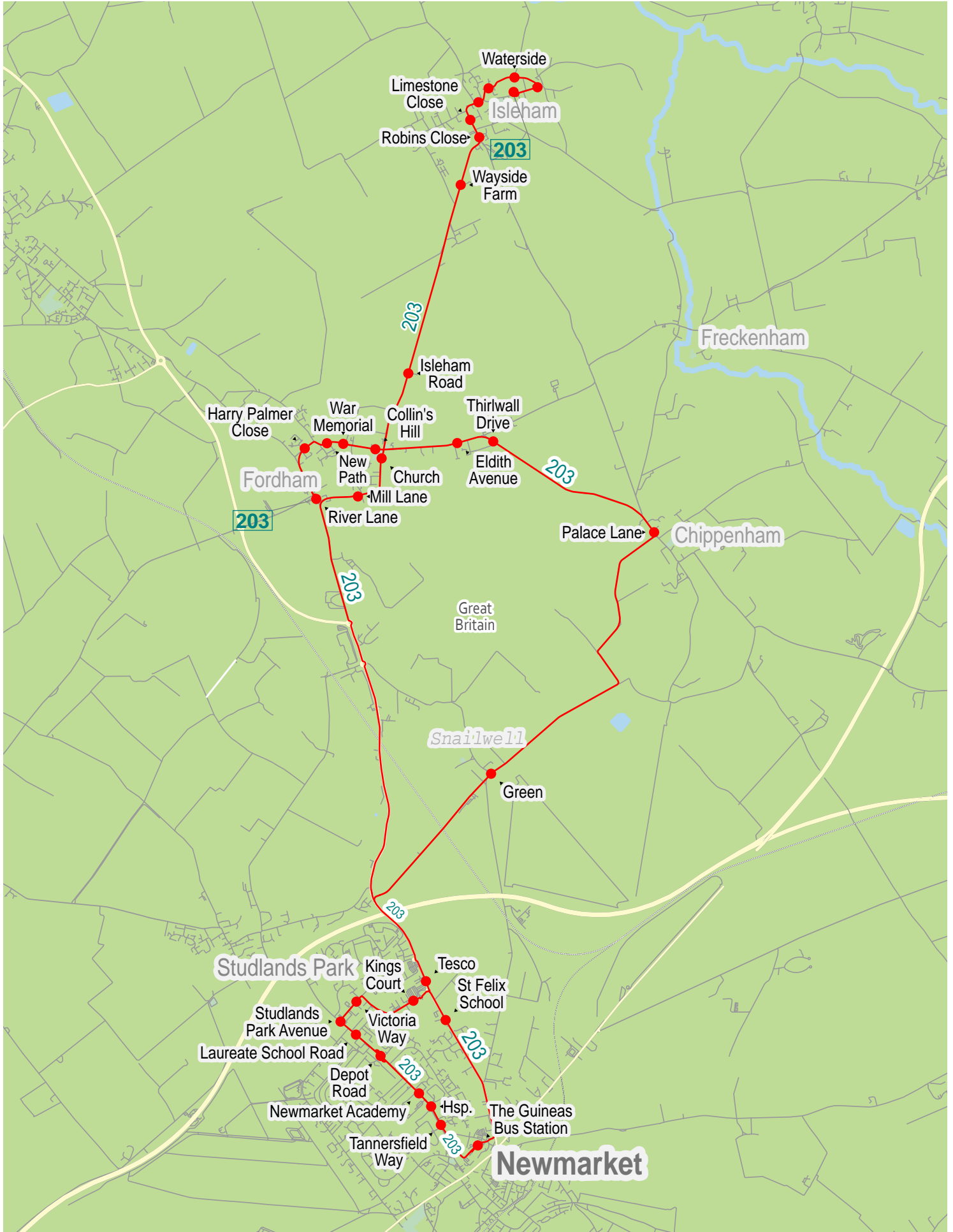


Route map for Lords Travel service 203 (outbound)



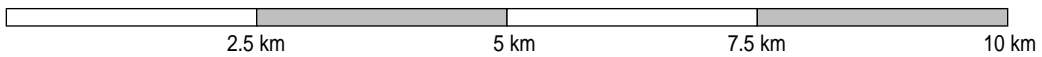
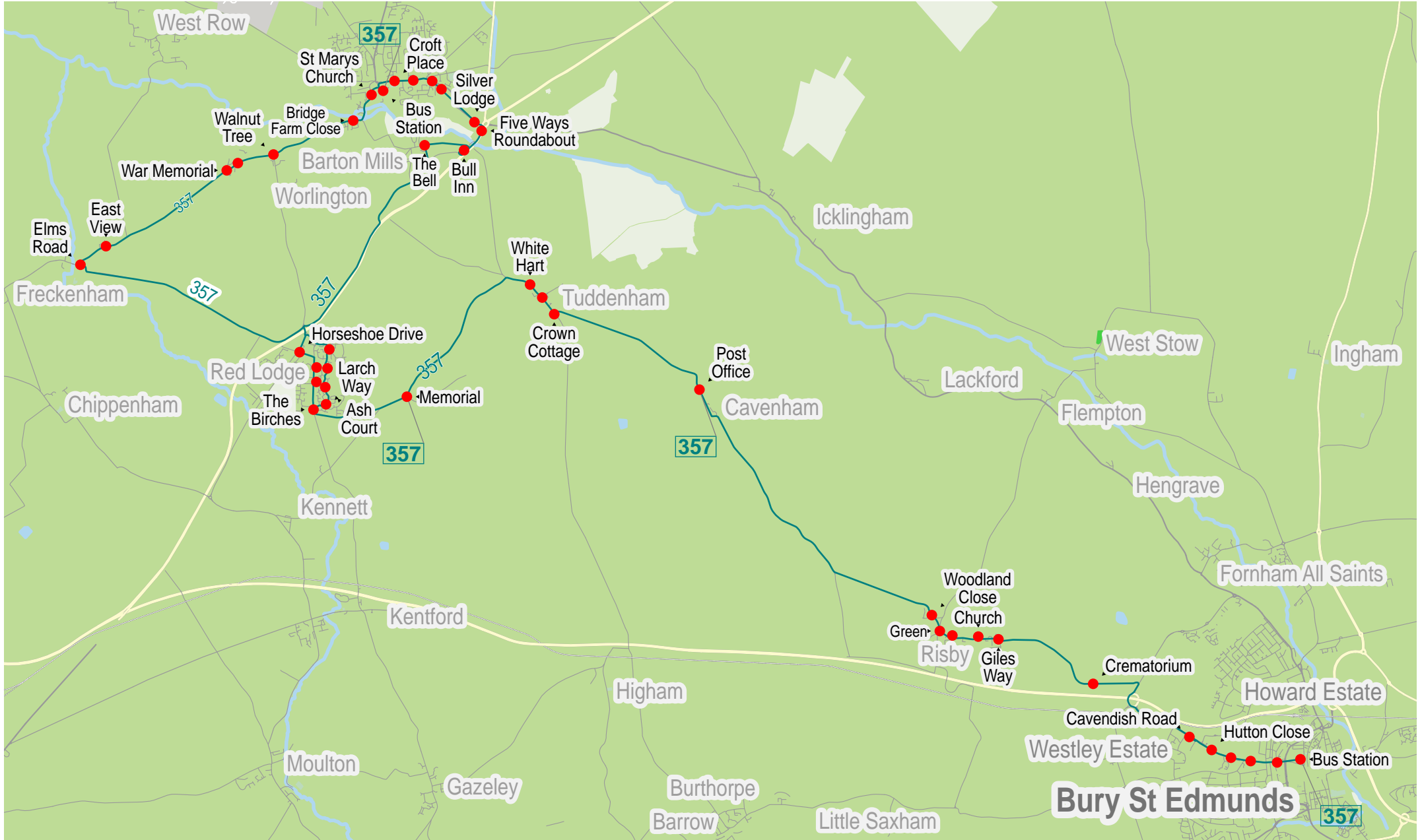
1.5 km 3 km 4.5 km 6 km

Route map for Lords Travel service 203 (inbound)

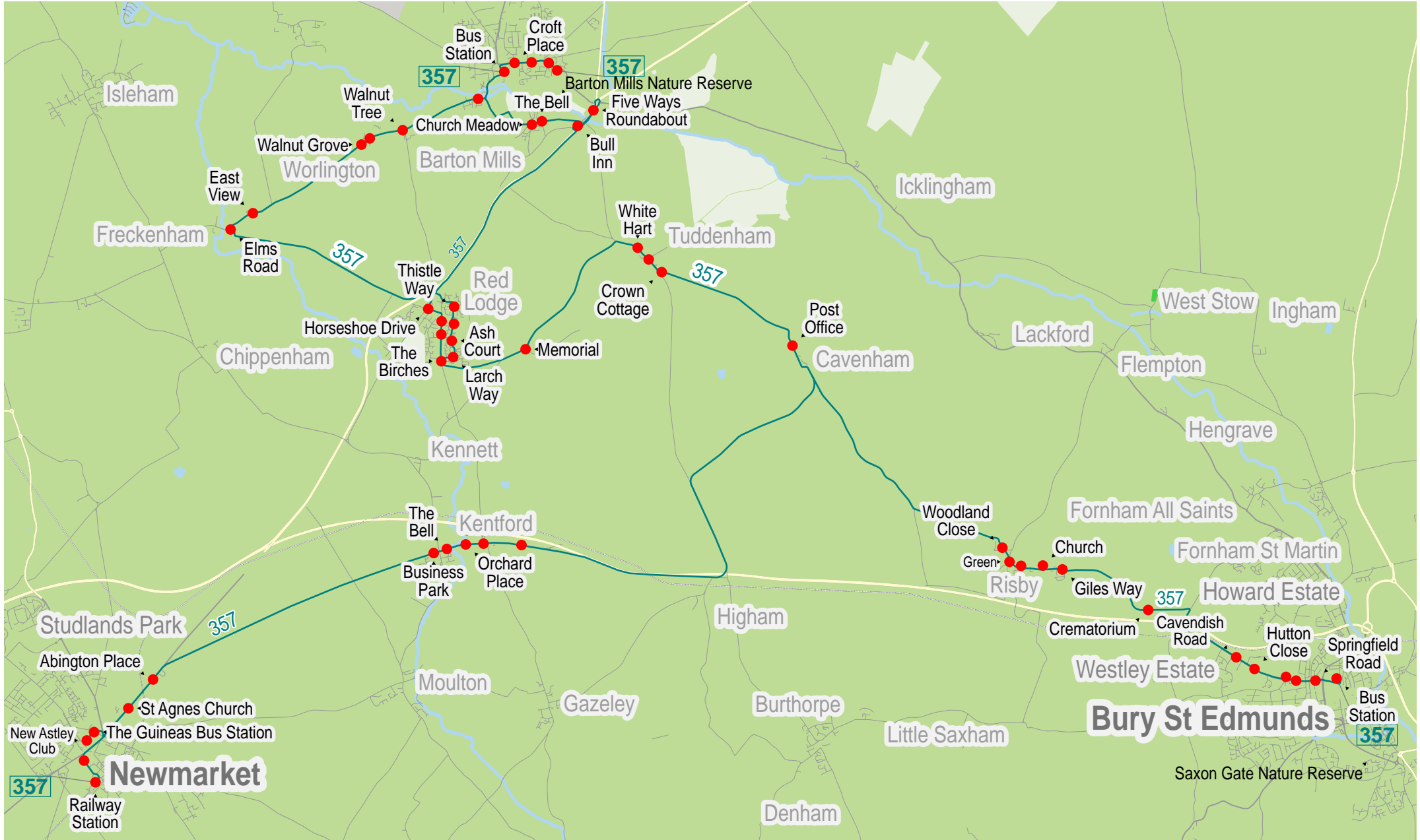


1.5 km 3 km 4.5 km 6 km

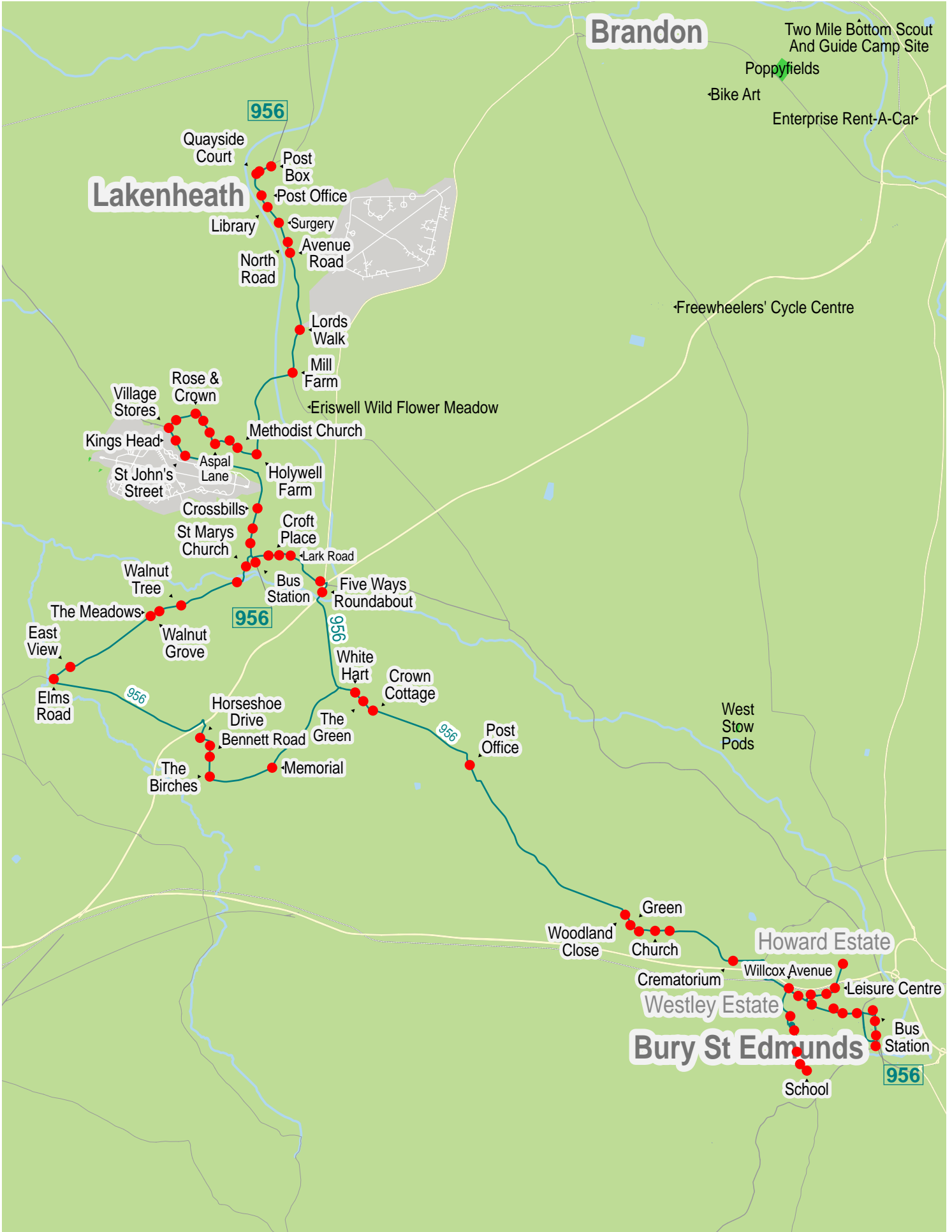
Route map for Mulleys Motorways service 357 (outbound)



Route map for Mulleys Motorways service 357 (inbound)

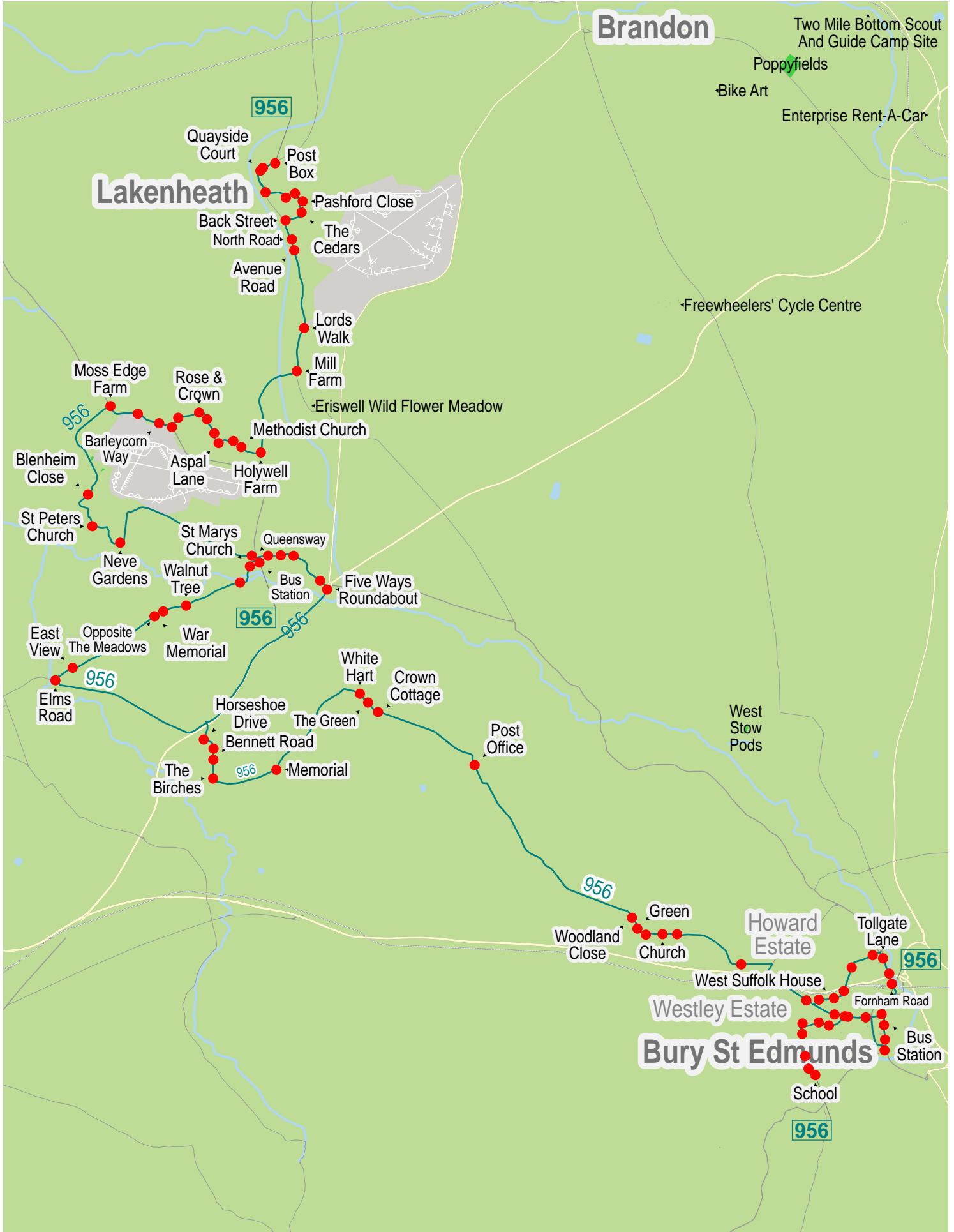


Route map for Mulleys Motorways service 956 (outbound)



2.5 km 5 km 7.5 km 10 km

Route map for Mulleys Motorways service 956 (inbound)



Timetable

7

*Ipswich to
Cambridge
and
Peterborough.*

Valid from 15 December 2019

greateranglia






Generic notes and symbols

Bold Times in bold are direct services operated by Greater Anglia

Italic Times in italics are connecting train services with one change of train.
Other connections may be available with further changes

0640 For the comfort and safety of all passengers, only folded cycles can be accommodated during busy times. Trains that these conditions apply to are highlighted throughout this timetable

-  PlusBus operates from this station
-  Connections with Ferry services
-  Interchange with London Underground

- a** Arrival time
- b** Change at Manningtree and Ipswich
- c** Change at Ipswich
- d** Departure time
- e** Change at Ipswich and Manningtree

All services are operated by Greater Anglia unless otherwise shown below:

Ipswich to Cambridge and Peterborough

Mondays to Fridays

London Liverpool St	⊕ d				0625	0700c	0755	0830	0900	1000	1100	1102	
Colchester	d	0540		0615	0723	0751c	0847	0923	0947	1047	1123	1148	
Harwich Int.	⊕ d	0529			0657b	0750	0833b		0933b	1033b		1133b	
Manningtree	d	0549		0623	0731	0759	0855	0931	0955	1055	1131	1156	
Ipswich	⊕ d	0510	0600	0616	0654	0803	0821	0920	1001	1020	1120	1201	1220
Needham Market	d	0520		0625	0703		0829	0929		1029	1129		1229
Stowmarket	d	0526	0612	0631	0709	0816	0835	0938	1013	1035	1135	1213	1235
Elmswell	d	0535		0639	0717		0844	0946		1043	1143		1243
Thurston	d	0541		0645	0723		0850	0952		1049	1149		1249
Bury St Edmunds	a	0548	0628	0651	0729	0832	0856	0958	1029	1055	1155	1230	1255
Bury St Edmunds	d	0549	0629	0654	0733	0833	0858	1000	1030	1057	1157	1231	1257
Kennett	d	0600		0704	0743			1010			1207		
Newmarket	d	0609		0715	0752		0918	1020		1118	1219		1318
Dullingham	d	0614		0720	0800		0923			1123			1323
Cambridge	⊕ a	0633		0740	0819		0942	1042		1141	1241		1341
Ely	⊕ a		0656			0859			1058				1258
Ely	d		0657			0859			1058				1258
Manea	d		0708			0910			1109				1309
March	d		0715			0918			1117				1317
Whittlesea	d		0727			0929			1128				1328
Peterborough	⊕ a		0738			0940			1139				1339

London Liverpool St	⊕ d	1200	1230	1300	1400	1430	1500	1600	1630	1700	1750	1832	1902
Colchester	d	1247	1323	1347	1447	1523	1547	1647	1717	1727	1843	1930	1948
Harwich Int.	⊕ d	1233b		1333b	1433b		1533b	1633b		1658b	1831b	1908b	1933b
Manningtree	d	1255	1331	1355	1455	1531	1555	1655	1713	1735	1852	1938	1956
Ipswich	⊕ d	1320	1358	1420	1520	1600	1620	1720	1741	1817	1913	2001	2021
Needham Market	d	1329		1429	1529		1629	1729	1751	1826	1922		2030
Stowmarket	d	1335	1411	1435	1535	1612	1635	1735	1758	1832	1928	2013	2036
Elmswell	d	1343		1443	1543		1643	1743	1807	1840	1936		2045
Thurston	d	1349		1449	1549		1649	1749	1814	1846	1942		2051
Bury St Edmunds	a	1355	1427	1455	1555	1629	1655	1755	1820	1852	1948	2029	2057
Bury St Edmunds	d	1357	1429	1457	1557	1629	1657	1757	1827	1857	1957	2030	2058
Kennett	d	1407			1607		1707	1810	1838		2007		
Newmarket	d	1419		1518	1619		1719	1819		1918	2019		2118
Dullingham	d			1523						1923			2124
Cambridge	⊕ a	1441		1541	1641		1742	1841		1941	2042		2142
Ely	⊕ a		1458			1658			1856				2059
Ely	d		1458			1658			1858				2101
Manea	d		1509			1709			1909				2110
March	d		1517			1717			1917				2119
Whittlesea	d		1528			1728			1928				2130
Peterborough	⊕ a		1539			1739			1939				2140

London Liverpool St	⊕ d	2000	2100
Colchester	d	2047	2147
Harwich Int.	⊕ d	2033b	2138c
Manningtree	d	2055	2156
Ipswich	⊕ d	2117	2219
Needham Market	d	2127	2229
Stowmarket	d	2133	2235
Elmswell	d	2142	2244
Thurston	d	2148	2250
Bury St Edmunds	a	2155	2257
Bury St Edmunds	d	2156	
Kennett	d	2207	
Newmarket	d	2220	
Dullingham	d	2225	
Cambridge	⊕ a	2242	
Ely	⊕ a		
Ely	d		
Manea	d		
March	d		
Whittlesea	d		
Peterborough	⊕ a		

Ipswich to Cambridge and Peterborough

Saturdays

London Liverpool St	⊕ d			0534	0630	0700c	0800	0830	0900	1000	1100	1102	
Colchester	d	0540		0640	0723	0747c	0847	0923	0947	1047	1122	1148	
Harwich Int.	⊕ d			0633b	0750	0833b		0933b	1033b		1133b		
Manningtree	d	0549		0648	0731	0755	0855	0931	0955	1055	1131	1156	
Ipswich	⊕ d	0510	0600	0616	0720	0800	0821	0920	0958	1020	1120	1201	1220
Needham Market	d	0520		0625	0729		0829	0929		1029	1129		1229
Stowmarket	d	0526	0612	0631	0735	0812	0835	0935	1011	1035	1135	1213	1235
Elmswell	d	0535		0639	0743		0844	0943		1043	1143		1243
Thurston	d	0541		0645	0749		0850	0949		1049	1149		1249
Bury St Edmunds	a	0548	0628	0652	0755	0828	0856	0955	1027	1055	1155	1230	1255
Bury St Edmunds	d	0549	0629	0654	0757	0829	0857	0957	1029	1057	1157	1231	1257
Kennett	d	0600		0706	0807			1007			1208		
Newmarket	d	0609		0716	0819		0918	1019		1118	1219		1318
Dullingham	d	0614		0721	0824		0923			1123			1323
Cambridge	⊕ a	0632		0740	0840		0940	1040		1140	1240		1340
Ely	⊕ a		0657			0858			1058			1258	
Ely	d		0658			0858			1058			1258	
Manea	d		0709			0909			1109			1309	
March	d		0717			0917			1117			1317	
Whittlesea	d		0728			0928			1128			1328	
Peterborough	⊕ a		0739			0939			1139			1339	

London Liverpool St	⊕ d	1200	1230	1300	1400	1430	1500	1600	1630	1700	1800	1900	1902
Colchester	d	1247	1323	1347	1447	1523	1547	1647	1723	1747	1847	1922	1948
Harwich Int.	⊕ d	1233b		1333b	1433b		1533b	1633b		1733b	1833b		1933b
Manningtree	d	1255	1331	1355	1455	1531	1555	1655	1731	1755	1855	1931	1956
Ipswich	⊕ d	1320	1358	1420	1520	1558	1620	1720	1758	1820	1920	2001	2020
Needham Market	d	1329		1429	1529		1629	1729		1829	1929		2029
Stowmarket	d	1335	1411	1435	1535	1611	1635	1735	1811	1835	1935	2013	2035
Elmswell	d	1343		1443	1543		1643	1743		1843	1943		2043
Thurston	d	1349		1449	1549		1649	1749		1849	1949		2049
Bury St Edmunds	a	1355	1427	1455	1555	1627	1655	1755	1827	1855	1955	2030	2055
Bury St Edmunds	d	1357	1429	1457	1557	1629	1657	1757	1829	1857	1957	2031	2057
Kennett	d	1407			1607		1709	1807			2007		
Newmarket	d	1419		1518	1619		1719	1819		1918	2019		2118
Dullingham	d			1523						1923			2123
Cambridge	⊕ a	1440		1540	1640		1740	1840		1940	2040		2140
Ely	⊕ a		1458			1658			1858			2058	
Ely	d		1458			1658			1858			2058	
Manea	d		1509			1709			1909			2109	
March	d		1517			1717			1917			2117	
Whittlesea	d		1528			1728			1928			2128	
Peterborough	⊕ a		1539			1739			1939			2139	

London Liverpool St	⊕ d	2000	2100
Colchester	d	2047	2148
Harwich Int.	⊕ d	2033b	2138c
Manningtree	d	2055	2156
Ipswich	⊕ d	2117	2219
Needham Market	d	2127	2229
Stowmarket	d	2133	2235
Elmswell	d	2142	2244
Thurston	d	2148	2250
Bury St Edmunds	a	2155	2257
Bury St Edmunds	d	2156	
Kennett	d	2207	
Newmarket	d	2219	
Dullingham	d	2225	
Cambridge	⊕ a	2242	
Ely	⊕ a		
Ely	d		
Manea	d		
March	d		
Whittlesea	d		
Peterborough	⊕ a		

Ipswich to Cambridge and Peterborough

Sundays

London Liverpool St	⊕ d			0827		0930	1030	1100	1130	1230		1330	
Colchester	⊕ d	0730	0813	0932		1020	1120	1147	1220	1320		1420	
Harwich Int.	⊕ d	0720b	0850	0858b		0958b	1058b		1158b	1258b		1358b	
Manningtree	d	0738	0821	0940		1029	1129		1229	1329		1429	
Ipswich	⊕ d	0734	0820	0920	0955	1020	1120	1155	1220	1320	1355	1420	1520
Needham Market	d	0744	0829	0929		1029	1129		1229	1329		1429	1529
Stowmarket	d	0749	0835	0935	1007	1035	1135	1207	1235	1335	1407	1435	1535
Elmswell	d	0758	0844	0944		1044	1144		1244	1344		1444	1544
Thurston	d	0804	0850	0950		1050	1150		1250	1350		1450	1550
Bury St Edmunds	a	0811	0857	0957	1024	1057	1157	1224	1257	1357	1424	1457	1557
Bury St Edmunds	d	0811	0858	0957	1025	1058	1157	1225	1258	1357	1425	1458	1557
Kennett	d	0822		1008			1208			1408			1608
Newmarket	d	0831	0917	1017		1117	1217		1317	1417		1517	1617
Dullingham	d	0836		1022			1222			1422			1622
Cambridge	⊕ a	0854	0940	1040		1140	1240		1340	1440		1540	1640
Ely	⊕ a				1052			1252			1452		
Ely	⊕ d				1052			1252			1452		
Manea	d												
March	d				1109			1309			1509		
Whittlesea	d				1120			1320			1520		
Peterborough	⊕ a				1131			1331			1531		

London Liverpool St	⊕ d	1430		1530	1630		1800	1930
Colchester	⊕ d	1520		1620	1720		1847	2020
Harwich Int.	⊕ d	1458b		1558b	1658b		1758b	1958b
Manningtree	d	1529		1629	1729		1829	2029
Ipswich	⊕ d	1555	1620	1720	1755	1820	1920	2105
Needham Market	d		1629	1729		1829	1929	2114
Stowmarket	d	1607	1635	1735	1807	1835	1935	2120
Elmswell	d		1644	1744		1844	1944	2129
Thurston	d		1650	1750		1850	1950	2135
Bury St Edmunds	a	1624	1657	1757	1824	1857	1957	2142
Bury St Edmunds	d	1625	1658	1757	1825	1858	1957	2142
Kennett	d			1808			2008	2153
Newmarket	d		1717	1817		1917	2017	2201
Dullingham	d			1822			2022	2206
Cambridge	⊕ a		1740	1840		1940	2040	2225
Ely	⊕ a	1652			1852			
Ely	⊕ d	1652			1852			
Manea	d							
March	d	1709			1909			
Whittlesea	d	1720			1920			
Peterborough	⊕ a	1731			1931			

Peterborough and Cambridge to Ipswich

Mondays to Fridays

Peterborough		d			0749			0950		1150				
Whittlesea		d			0757			0958		1158				
March		d			0808			1009		1209				
Manea		d			0816			1017		1217				
Ely		a			0829			1031		1231				
Ely		d			0830			1032		1232				
Cambridge		d	0642	0744		0847	0947		1047	1147	1247			
Dullingham		d		0800			1004			1203				
Newmarket		d	0702	0805		0907	1009		1107	1208	1307			
Kennett		d	0710			0915			1115		1315			
Bury St Edmunds		a	0721	0823	0856	0926	1027	1058	1126	1226	1258	1326		
Bury St Edmunds		d	0531	0622	0724	0824	0856	0926	1027	1058	1126	1226	1258	1326
Thurston		d	0537	0628	0730	0830		0932	1033		1132	1232		1332
Elmswell		d	0543	0634	0736	0836		0938	1039		1138	1238		1338
Stowmarket		d	0551	0642	0745	0845	0912	0948	1048	1114	1147	1247	1314	1347
Needham Market		d	0556	0647	0750	0850		0953	1053		1152	1252		1352
Ipswich		a	0607	0658	0801	0903	0926	1004	1103	1128	1202	1302	1328	1402
Manningtree		a	<i>0623</i>	<i>0717</i>	<i>0835</i>	<i>0919</i>	<i>1002</i>	<i>1019</i>	<i>1119</i>	<i>1152</i>	<i>1219</i>	<i>1319</i>	<i>1352</i>	<i>1419</i>
Harwich Int.			<i>0726</i>	<i>0741e</i>	<i>0917e</i>	<i>1017e</i>		<i>1117e</i>		<i>1218e</i>	<i>1317e</i>		<i>1417e</i>	<i>1517e</i>
Colchester		a	<i>0633</i>	<i>0728</i>	<i>0845</i>	<i>0928</i>	<i>1002</i>	<i>1028</i>	<i>1128</i>	<i>1202</i>	<i>1228</i>	<i>1328</i>	<i>1402</i>	<i>1428</i>
London Liverpool St		a	<i>0727</i>	<i>0824</i>	<i>0924</i>	<i>1021</i>	<i>1030</i>	<i>1119</i>	<i>1219</i>	<i>1255</i>	<i>1319</i>	<i>1419</i>	<i>1455</i>	<i>1519</i>

Peterborough		d	1350			1550			1750		1950			
Whittlesea		d	1358			1558			1758		1958			
March		d	1409			1609			1809		2009			
Manea		d	1417			1617			1817		2017			
Ely		a	1431			1631			1831		2031			
Ely		d	1432			1632			1831		2031			
Cambridge		d	1347		1447	1547		1647	1747		1847	1947	2047	
Dullingham		d	1403			1603		1703	1803		2003			
Newmarket		d	1408		1507	1608		1708	1808		1907	2008	2107	
Kennett		d			1515			1716	1816		1915		2115	
Bury St Edmunds		a	1426	1458	1526	1626	1658	1727	1827	1857	1926	2026	2058	2126
Bury St Edmunds		d	1426	1458	1526	1626	1658	1728	1828	1858	1926	2026	2058	2126
Thurston		d	1432		1532	1632		1734	1834		1932	2032		2132
Elmswell		d	1438		1538	1638		1740	1840		1938	2038		2138
Stowmarket		d	1447	1514	1547	1647	1714	1748	1848	1914	1947	2047	2114	2147
Needham Market		d	1452		1552	1652		1753	1853		1952	2052		2152
Ipswich		a	1502	1528	1604	1702	1728	1803	1903	1928	2004	2102	2128	2202
Manningtree		a	<i>1519</i>	<i>1552</i>	<i>1619</i>	<i>1719</i>	<i>1750</i>	<i>1832</i>	<i>1919</i>	<i>1944</i>	<i>2020</i>	<i>2119</i>	<i>2137</i>	<i>2233</i>
Harwich Int.			<i>1617e</i>	<i>1641e</i>	<i>1741e</i>	<i>1815e</i>	<i>1852e</i>	<i>1952e</i>	<i>2017e</i>	<i>2055e</i>	<i>2129</i>	<i>2217e</i>	<i>2317e</i>	
Colchester		a	<i>1528</i>	<i>1602</i>	<i>1628</i>	<i>1728</i>	<i>1800</i>	<i>1828</i>	<i>1928</i>	<i>1954</i>	<i>2029</i>	<i>2128c</i>	2151	<i>2242</i>
London Liverpool St		a	<i>1617</i>	<i>1657</i>	<i>1719</i>	<i>1821</i>	<i>1830</i>	<i>1917</i>	<i>2020</i>	<i>2055</i>	<i>2119</i>	<i>2219c</i>	<i>2255</i>	<i>2348</i>

Peterborough		d	2145		
Whittlesea		d	2153		
March		d	2204		
Manea		d	2212		
Ely		a	2225		
Ely		d	2226		
Cambridge		d	2147	2247	
Dullingham		d	2203	2303	
Newmarket		d	2208	2308	
Kennett		d	2316		
Bury St Edmunds		a	2226	2252	2327
Bury St Edmunds		d	2226	2252	2328
Thurston		d	2232	2334	
Elmswell		d	2238	2340	
Stowmarket		d	2247	2308	2348
Needham Market		d	2252	2353	
Ipswich		a	2302	2321	0004
Manningtree		a	2331		
Harwich Int.			2353		
Colchester		a	2342		
London Liverpool St		a			

Peterborough and Cambridge to Ipswich

Saturdays

Peterborough		d					0750					0950					1150
Whittlesea		d					0758					0958					1158
March		d					0809					1009					1209
Manea		d					0817					1017					1217
Ely		a					0831					1031					1231
Ely		d					0832					1032					1232
Cambridge		d	0642	0747			0847	0947			1047	1147			1247	1347	
Dullingham		d			0803			1003			1203			1403			
Newmarket		d	0702	0808			0907	1008			1107	1208			1307	1408	
Kennett		d	0710				0915				1115				1315		
Bury St Edmunds		a	0723	0825	0858	0926	1025	1058	1126	1225	1258	1326	1425				
Bury St Edmunds		d	0623	0723	0826	0858	0926	1026	1058	1126	1226	1258	1326	1426			
Thurston		d	0629	0730	0832			0932	1032			1132	1232	1332	1432		
Elmswell		d	0636	0736	0838			0938	1038			1138	1238	1338	1438		
Stowmarket		d	0646	0745	0847	0914	0947	1047	1114	1147	1247	1314	1347	1447			
Needham Market		d	0651	0750	0852			0952	1052			1152	1252	1352	1452		
Ipswich		a	0702	0802	0902	0928	1002	1102	1128	1202	1302	1328	1402	1502			
Manningtree		a	<i>0719</i>	<i>0819</i>	<i>0919</i>	<i>1003</i>	<i>1019</i>	<i>1119</i>	<i>1152</i>	<i>1219</i>	<i>1319</i>	<i>1352</i>	<i>1419</i>	<i>1519</i>			
Harwich Int.			<i>0817e</i>	<i>0917e</i>	<i>1017e</i>			<i>1118e</i>			<i>1218e</i>	<i>1317e</i>	<i>1417e</i>	<i>1517e</i>			
Colchester		a	<i>0728</i>	<i>0828</i>	<i>0928</i>	<i>1002</i>	<i>1028</i>	<i>1128</i>	<i>1202</i>	<i>1228</i>	<i>1328</i>	<i>1402</i>	<i>1428</i>	<i>1528</i>			
London Liverpool St		a	<i>0819</i>	<i>0919</i>	<i>1019</i>	<i>1030</i>	<i>1119</i>	<i>1219</i>	<i>1255</i>	<i>1319</i>	<i>1419</i>	<i>1455</i>	<i>1519</i>	<i>1619</i>			

Peterborough		d					1350					1550					1750					1950
Whittlesea		d					1358					1558					1758					1958
March		d					1409					1609					1809					2009
Manea		d					1417					1617					1817					2017
Ely		a					1431					1631					1831					2032
Ely		d					1432					1632					1832					2032
Cambridge		d	1447	1547			1647	1747			1847	1947			2047	2147						
Dullingham		d			1603			1703	1803			2003			2203							
Newmarket		d	1507	1608			1708	1808			1907	2008			2107	2208						
Kennett		d	1515				1716				1915				2115							
Bury St Edmunds		a	1458	1526	1625	1658	1727	1827	1858	1926	2025	2058	2126	2225								
Bury St Edmunds		d	1458	1526	1626	1658	1728	1828	1858	1926	2026	2058	2126	2226								
Thurston		d			1532	1632			1734	1834			1932	2032	2132	2232						
Elmswell		d			1538	1638			1740	1840			1938	2038	2138	2238						
Stowmarket		d	1514	1547	1647	1714	1749	1849	1914	1947	2046	2114	2147	2246								
Needham Market		d			1552	1652			1754	1854			1952	2051	2152	2251						
Ipswich		a	1529	1602	1702	1728	1803	1903	1928	2002	2101	2128	2202	2303								
Manningtree		a	<i>1552</i>	<i>1619</i>	<i>1719</i>	<i>1803</i>	<i>1852</i>	<i>1919</i>	<i>1952</i>	<i>2019</i>	<i>2119</i>	<i>2137</i>	<i>2233</i>	<i>2325</i>								
Harwich Int.			<i>1617e</i>	<i>1717e</i>	<i>1817e</i>			<i>1917e</i>			<i>2018e</i>	<i>2117e</i>	<i>2129</i>	<i>2317e</i>								
Colchester		a	<i>1602</i>	<i>1628</i>	<i>1728</i>	<i>1802</i>	<i>1828</i>	<i>1928</i>	<i>2002</i>	<i>2029</i>	<i>2128c</i>	2148	<i>2242</i>	<i>2335</i>								
London Liverpool St		a	<i>1655</i>	<i>1719</i>	<i>1819</i>	<i>1830</i>	<i>1919</i>	<i>2019</i>	<i>2055</i>	<i>2117</i>	<i>2217c</i>	<i>2255</i>	<i>2345</i>									

Peterborough		d	2147
Whittlesea		d	2155
March		d	2206
Manea		d	2214
Ely		a	2227
Ely		d	2228
Cambridge		d	2247
Dullingham		d	2303
Newmarket		d	2308
Kennett		d	2316
Bury St Edmunds		a	2254 2329
Bury St Edmunds		d	2254 2329
Thurston		d	2335
Elmswell		d	2342
Stowmarket		d	2310 2351
Needham Market		d	2356
Ipswich		a	2323 0008
Manningtree		a	2331
Harwich Int.			a 2353
Colchester		a	2342
London Liverpool St		a	

Peterborough and Cambridge to Ipswich

Sundays

Peterborough		d					1147		1350		1547			
Whittlesea		d					1155		1358		1555			
March		d					1206		1409		1606			
Manea		d												
Ely		a					1225		1431		1625			
Ely		d					1228		1432		1628			
Cambridge		d	0900	0946	1045	1146		1246	1346	1445	1546	1645		
Dullingham		d	0922		1101			1302		1501		1701		
Newmarket		d	0927	1006	1106	1206		1307	1406	1506	1606	1706		
Kennett		d	0936		1114			1315		1514		1714		
Bury St Edmunds		a	0947	1023	1125	1223	1254	1326	1423	1458	1525	1623	1654	1725
Bury St Edmunds		d	0947	1026	1126	1226	1255	1327	1426	1458	1526	1626	1655	1726
Thurston		d	0953	1032	1132	1232		1333	1432		1532	1632		1732
Elmswell		d	0959	1038	1138	1238		1339	1438		1538	1638		1738
Stowmarket		d	1008	1047	1147	1247	1311	1348	1447	1514	1547	1647	1711	1747
Needham Market		d	1013	1052	1152	1252		1353	1452		1552	1652		1752
Ipswich		a	1024	1102	1202	1302	1325	1402	1502	1527	1602	1702	1725	1802
Manningtree		a	1052	1119	1219	1319	1352	1419	1519	1552	1620	1720	1752	1819
Harwich Int.		a		1143e	1243e	1343e		1443e	1543e		1643e	1743e		1843e
Colchester		a	1102	1129	1229	1329	1402	1429	1529	1602	1622	1722	1802	1829
London Liverpool St		a	1155	1237	1337	1437	1455	1537	1637	1655	1712	1812	1855	1937

Peterborough		d					1745		1947
Whittlesea		d					1753		1955
March		d					1804		2006
Manea		d							
Ely		a					1823		2025
Ely		d					1829		2028
Cambridge		d	1746		1845	1946		2046	2252
Dullingham		d			1901			2102	2308
Newmarket		d	1806		1906	2006		2107	2313
Kennett		d			1914			2115	2321
Bury St Edmunds		a	1823	1855	1925	2023	2055	2126	2332
Bury St Edmunds		d	1826	1855	1926	2025	2055	2127	2333
Thurston		d	1832		1932	2031		2133	2339
Elmswell		d	1838		1938	2037		2139	2345
Stowmarket		d	1847	1911	1947	2046	2111	2148	2355
Needham Market		d	1852		1952	2051		2153	2359
Ipswich		a	1902	1925	2002	2103	2125	2202	0010
Manningtree		a	1919	1934	2019	2119	2134	2219	
Harwich Int.		a	1943e		2043e	2129	2243e		
Colchester		a	1929	1944	2029	2129	2144	2229	
London Liverpool St		a	2037	2055	2137	2237	2255	2337	

Useful Contacts



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and Cross Country to Birmingham

Peterborough

services to
Northern England
and Scotland

Kings Lynn

Downham Market

Norwich

North Walsham

Great Yarmouth

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Bury St. Edmunds

March

Ely

Reedham

Acle

Lowestoft

Cambridge

Newmarket

Stowmarket

Beccles

Woodbridge

Audley End

Stansted Airport

Ipswich

Harwich International

Thameslink, Southern
and Great Northern
services to King's Cross

Bishop's Stortford

Mistley

Harwich Town

Hertford East

Ware

Colchester

Manningtree

Thorpe-le-Soken

Walton-on-the-Naze

West Anglia Train Timetables

Mainline & Southend Train Timetables

Hertford East

Ware

Harlow Town

Colchester

Manningtree

Thorpe-le-Soken

Walton-on-the-Naze

Ware

Broxbourne

Sudbury

Colchester Town

Clacton-on-Sea

Enfield Town

Waltham Cross

Braintree

Marks Tey

Witham

Seven Sisters

Tottenham Hale

Braintree

Chelmsford

Southminster

Hackney Downs

Walthamstow Central

Chingford

Shenfield

Witham

Wickford

Southminster

Burnham-on-Crouch

South Woodham Ferrers

Rayleigh

Southend Airport

Southend Victoria

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Stratford

DLR

Walthamstow Central

Chingford

Shenfield

Witham

Wickford

Southminster

Burnham-on-Crouch

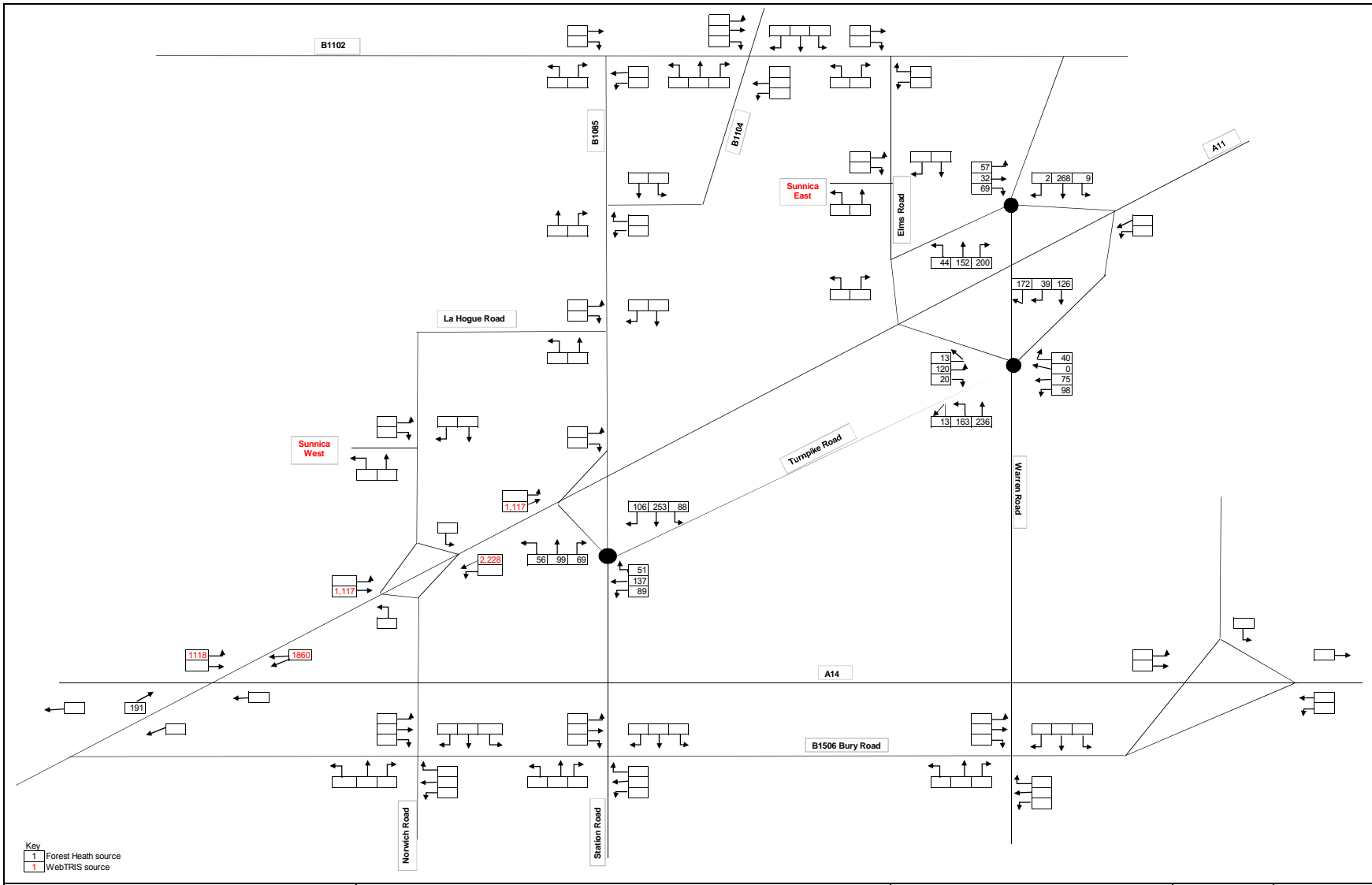
South Woodham Ferrers

Rayleigh

Southend Airport

Southend Victoria

Appendix C – 2019 and 2023 Baseline Traffic Flows



Client: Sunnica Limited

Project: Sunnica Solar Farm

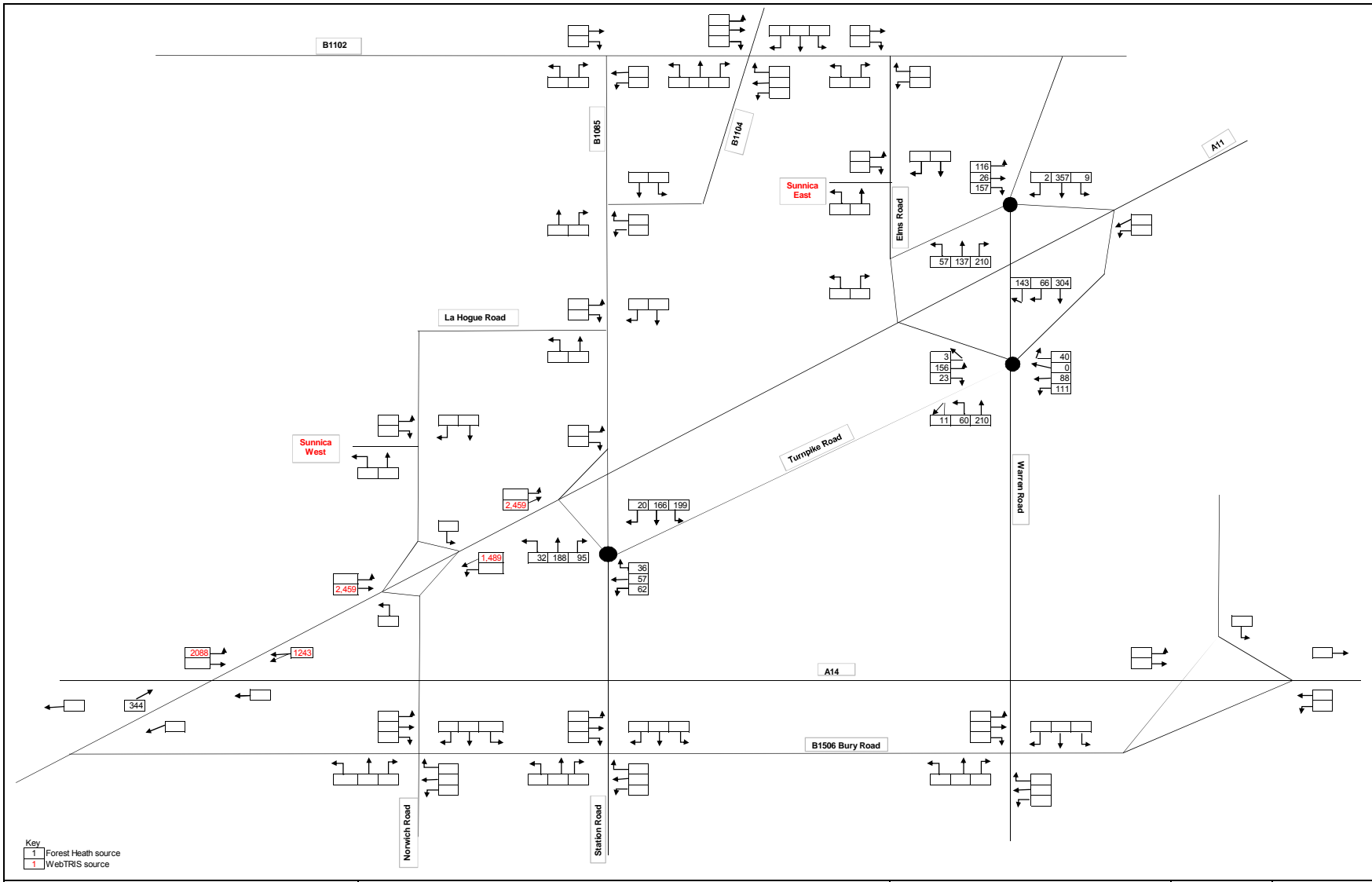
2019 Traffic Flows AM Highway Peak Hour

AECOM

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St Albans, Herts AL1 3ER

Tel: +44 (0)1727 535000
www.aecom.com

Design	LVH	Calcs	LVH
Checked	CC	App'd	
Date	Jan 2020	Scale	Not to Scale
Drawing		Rev	
FIGURE C1			



Client: Sunnica Limited

Project: Sunnica Solar Farm

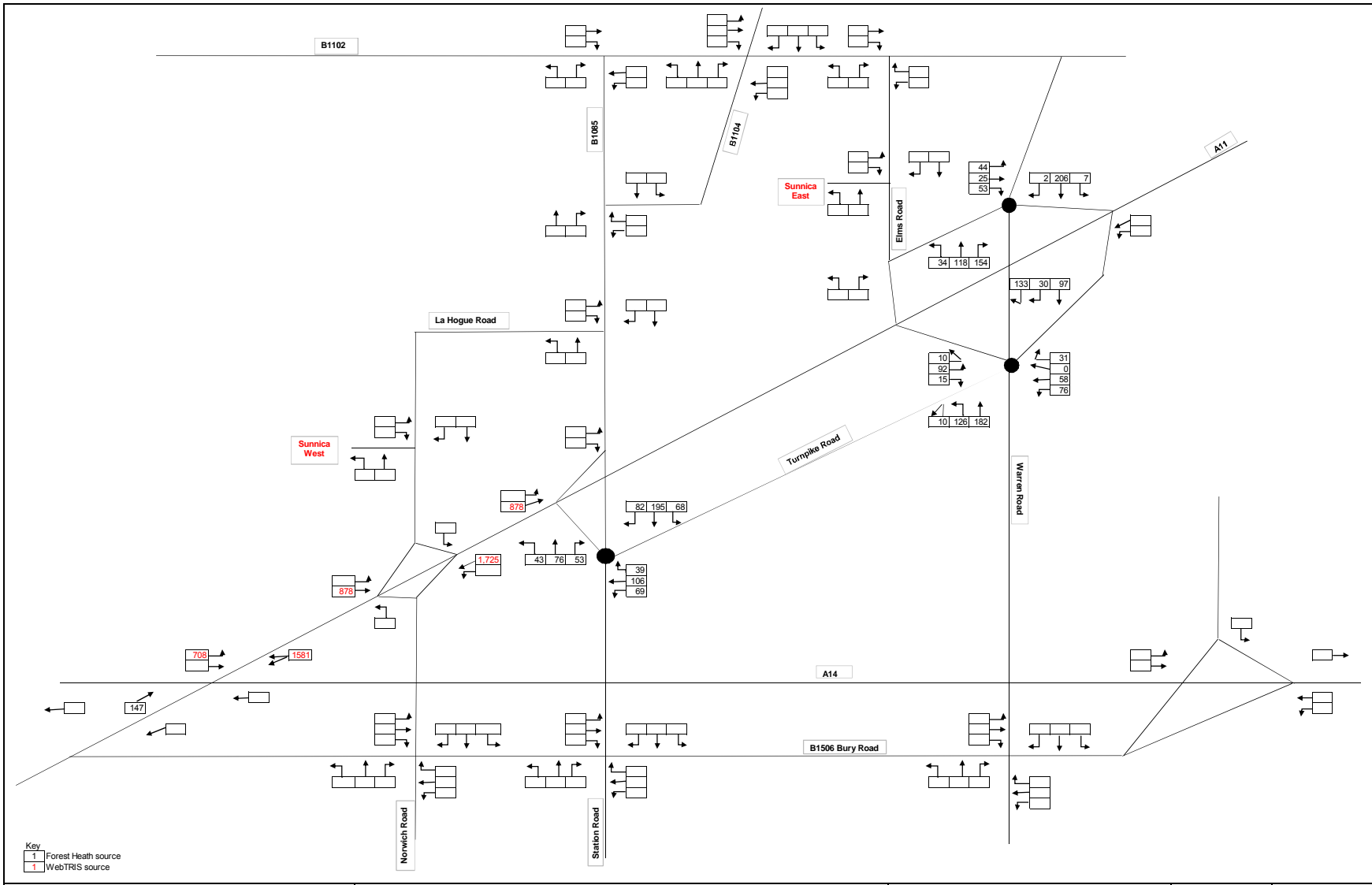
2019 Traffic Flows PM Highway Peak Hour

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Design	LVH	Calcs	LVH
Checked	CC	App'd	
Date	Jan 2020	Scale	Not to Scale
Drawing	FIGURE C2		Rev



Client: Sunnica Limited

Project: Sunnica Solar Farm

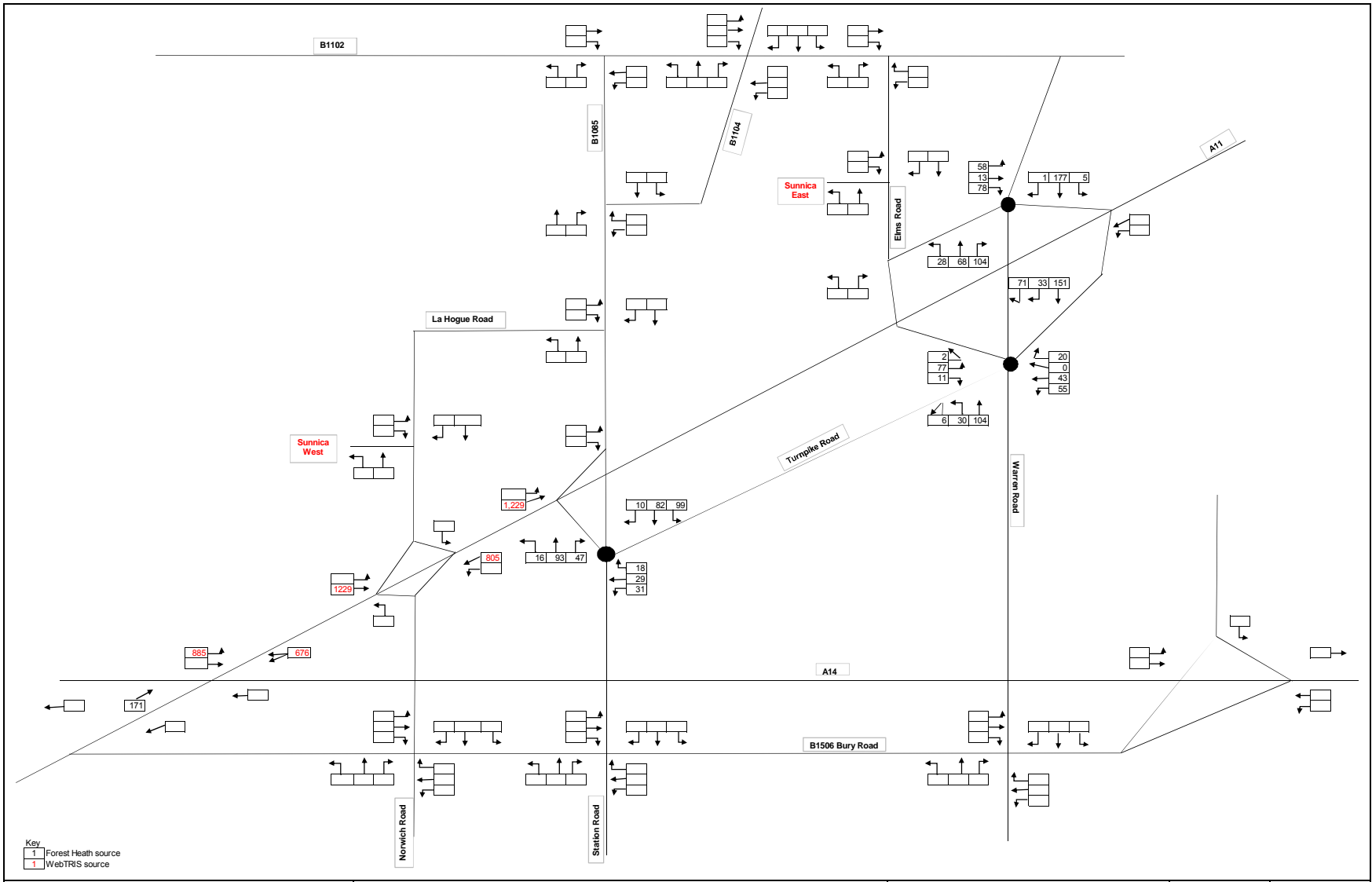
2019 Traffic Flows AM Development Peak Hour

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Design	LVH	Calcs	LVH
Checked	CC	App'd	
Date	Jan 2020	Scale	Not to Scale
Drawing	FIGURE C3		Rev



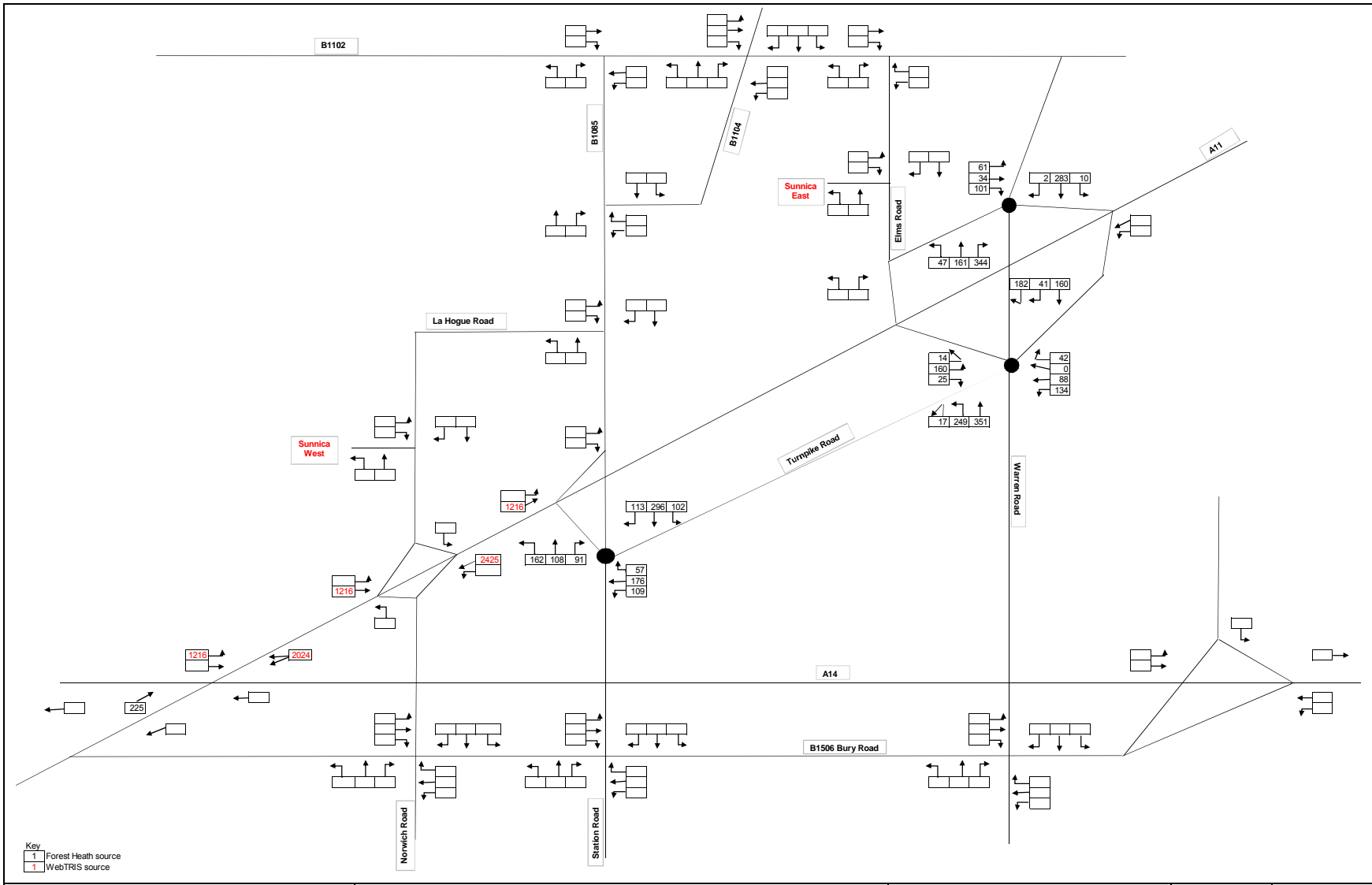
Key
 T Forest Heath source
 T WebTRIS source

Client: Sunnica Limited
 Project: Sunnica Solar Farm

2019 Traffic Flows PM Development Peak Hour

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 AECOM House
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Design	LVH	Calcs	LVH
Checked	CC	App'd	
Date	Jan 2020	Scale	Not to Scale
Drawing	FIGURE C4		Rev



Key
 T Forest Heath source
 T WebTRIS source

Client:
 Sunnica Limited

Project:
 Sunnica Solar Farm

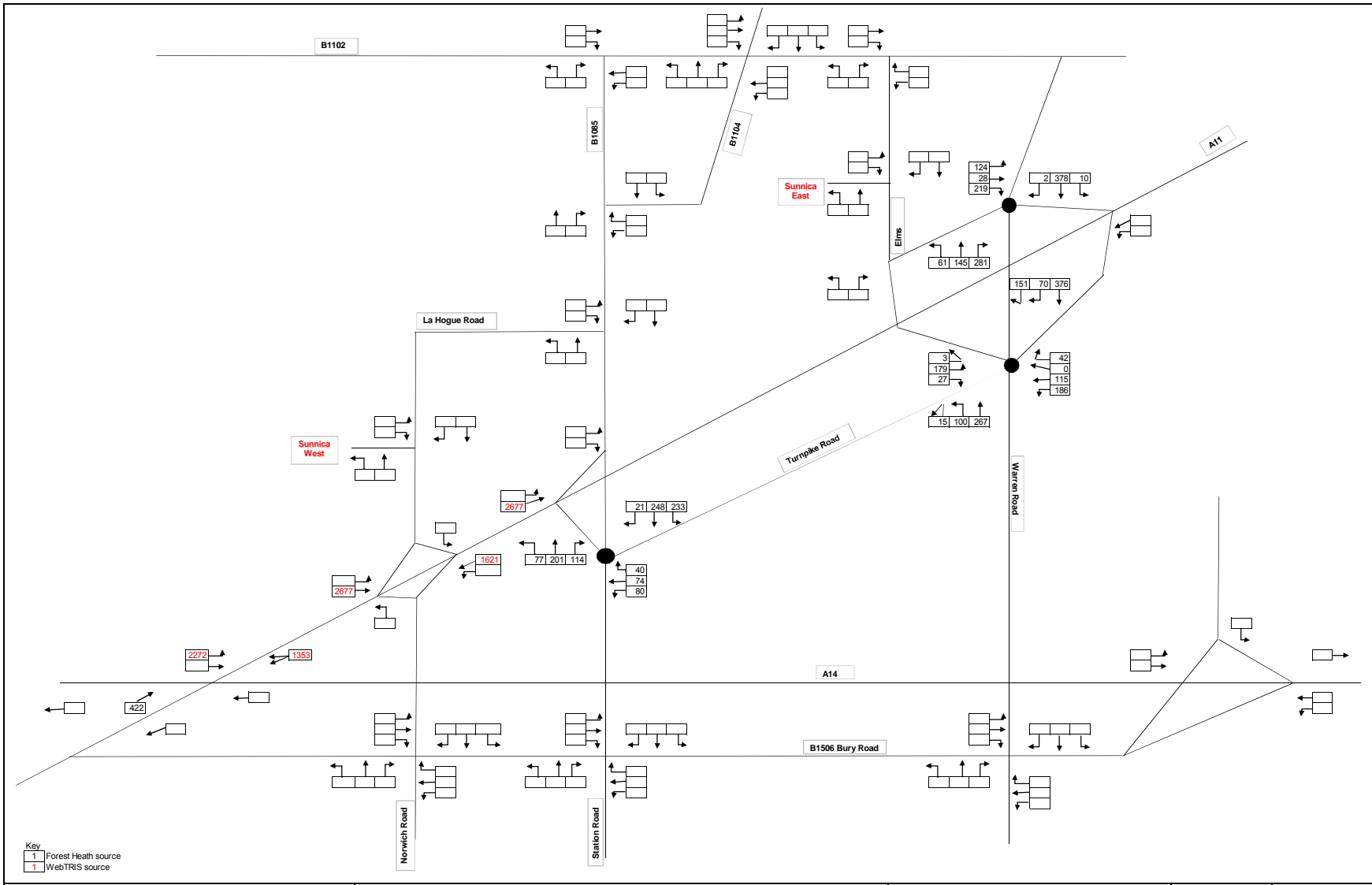
2023 Traffic Flows AM Highway Peak Hour

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Checked	CC	App'd	
Date	Jan 2020	Scale	Not to Scale
Drawing	FIGURE C5		Rev



Client:
Sunnica Limited

Project:
Sunnica Solar Farm

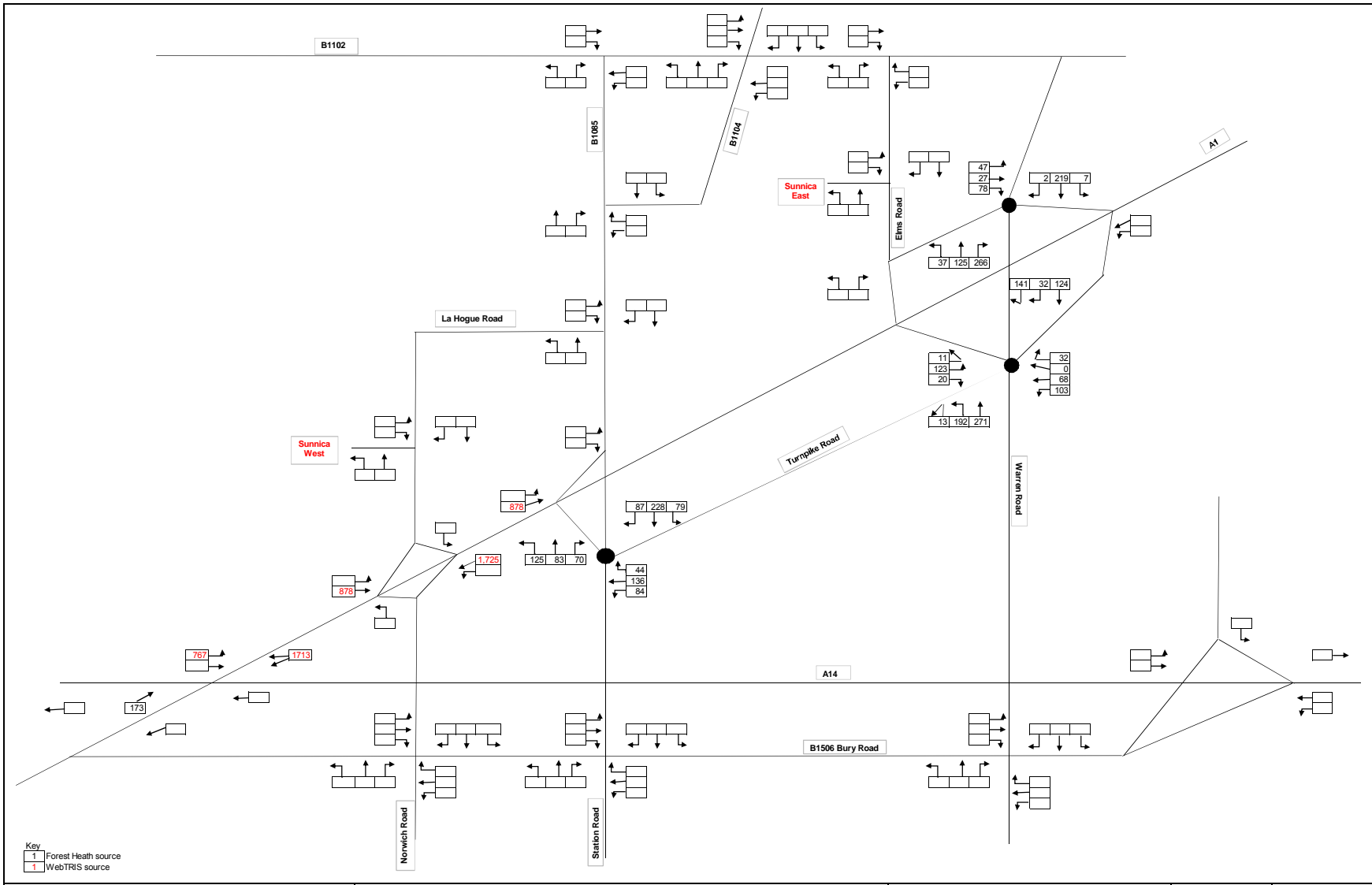
2023 Traffic Flows PM Highway Peak Hour

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Design	LVH	Calcs	LVH
Checked	CC	App'd	
Date	Jan 2020	Scale	Not to Scale
Drawing	FIGURE C6		Rev



Key
 1 Forest Heath source
 1 WebTRIS source

Client:
 Sunnica Limited

Project:
 Sunnica Solar Farm

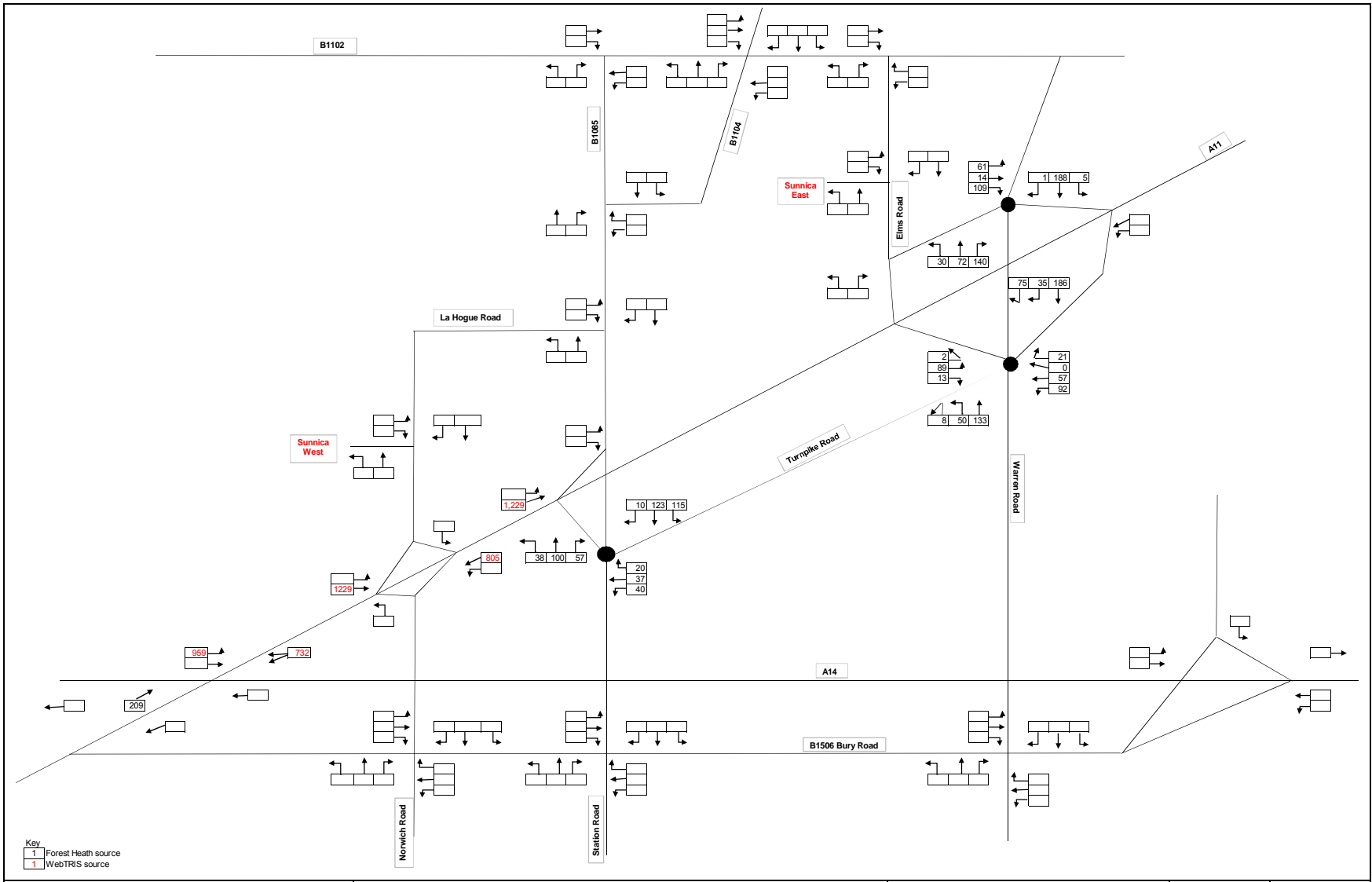
2023 Traffic Flows AM Development Peak Hour

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Design	LVH	Calcs	LVH
Checked	CC	App'd	
Date	Jan 2020	Scale	Not to Scale
Drawing	FIGURE C7		Rev



Client:
Sunnica Limited

Project:
Sunnica Solar Farm

2023 Traffic Flows PM Development Peak Hour

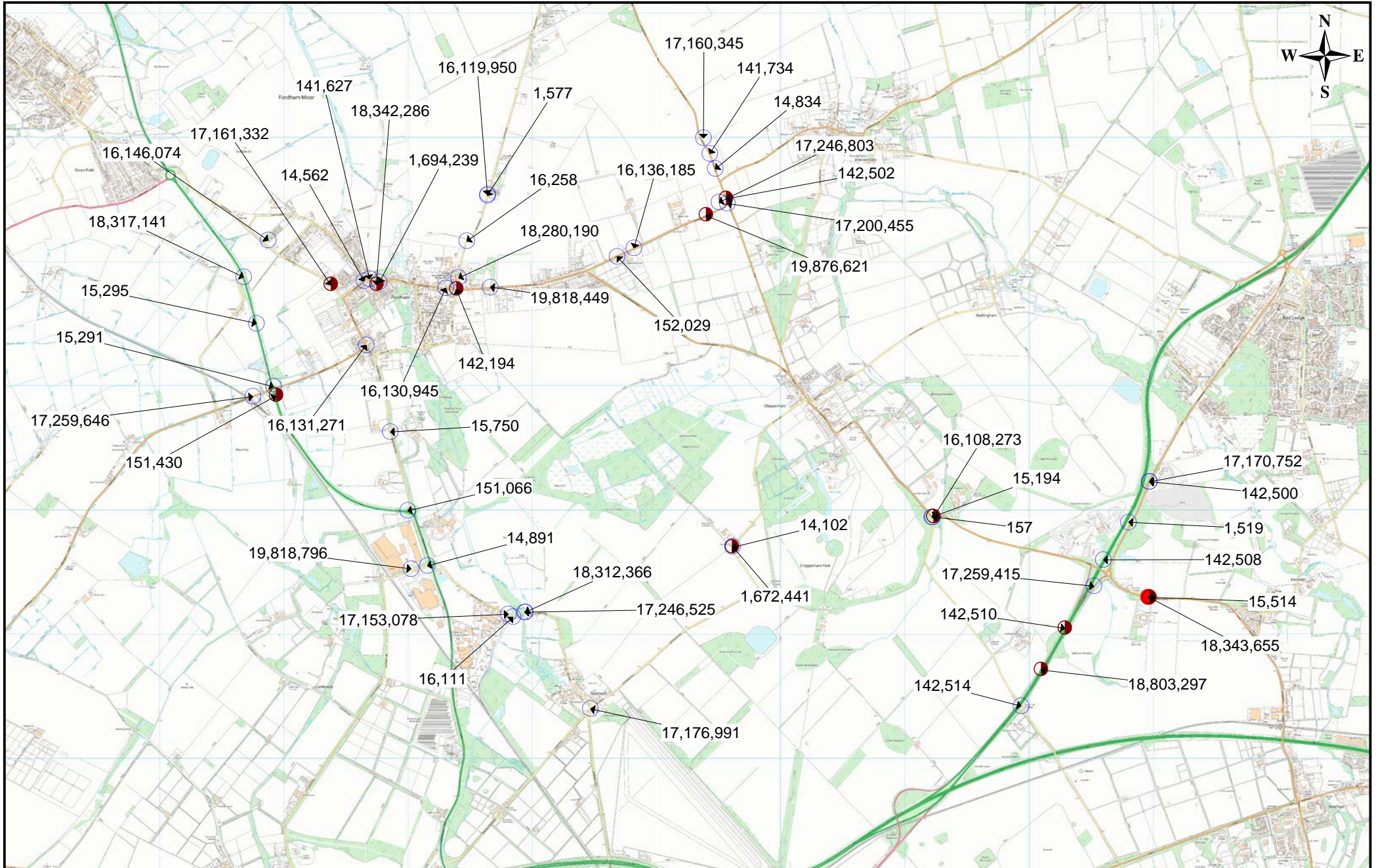
AECOM

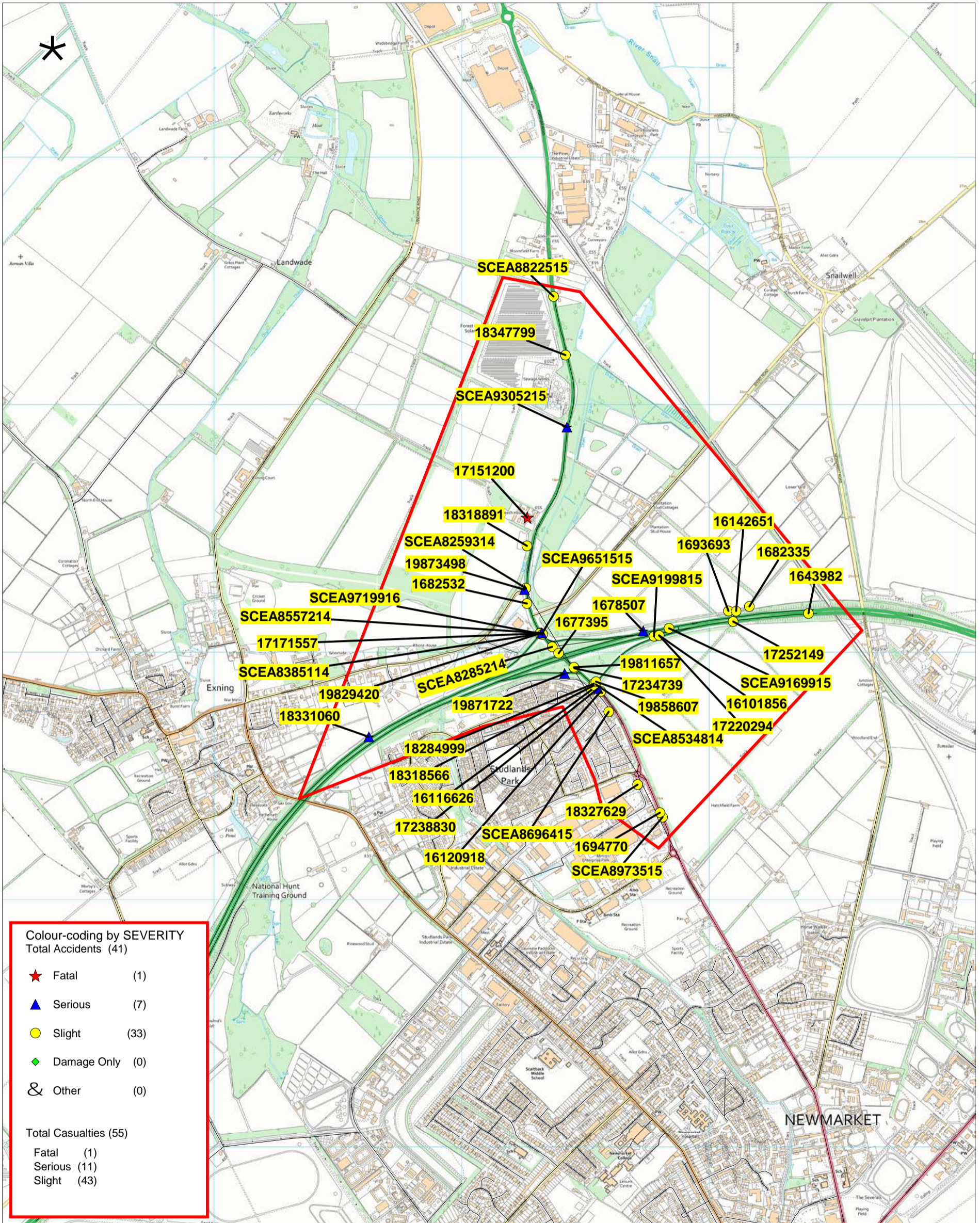
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Design	LVH	Calcs	LVH
Checked	CC	App'd	
Date	Jan 2020	Scale	Not to Scale
Drawing		Rev	
FIGURE C8			

Appendix D – Personal Injury Accident Data





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CCallaway_Newmarket_010814-010819_Location Plan
Selected Range of Accidents between dates 01/08/2014 and 01/08/2019

SCALE	1 : 15770
DATE	09/12/2019
DRAWING No.	
DRAWN BY	

TRAFFMAP
AccsMap - Accident Analysis System

Accidents between dates 01/08/2014 and 01/08/2019 (60) months

Selection:

Notes:

Police Ref.	Date	Cas.	Sev.	P2W	Cycs	Peds	Ch	OAPs	Vis.	Manv.	Road Cond.	Time	Location
SCEA8259314	03/08/2014	1	Slight	0	0	0	0	0	Light	No turn	Dry	1130	A142 AT JUNCTION WITH WINDMILL HILL NEWMARKET
SCEA8285214	14/08/2014	1	Slight	0	0	0	0	0	Light	Right	Wet/Damp	1620	A142 FILTER LANE TO TURN RIGHT ONTO A14 EASTBOUND ONSLIP NEWMARKET
SCEA8385114	21/09/2014	1	Slight	0	0	0	0	0	Light	Right	Dry	1435	FORDHAM ROAD SLIP ROAD FROM A14 NEWMARKET
SCEA8534814	09/11/2014	1	Slight	0	0	0	0	0	Light	Left	Wet/Damp	0945	A142 J/WITH A14 NEWMARKET
SCEA8557214	21/11/2014	1	Slight	0	0	0	0	1	Light	No turn	Dry	1350	FORDHAM ROAD J/WITH A14 NEWMARKET
SCEA8696415	07/01/2015	1	Slight	0	0	0	0	0	Dark	No turn	Wet/Damp	1645	NIMBUS WAY NEWMARKET
SCEA8822515	18/02/2015	1	Slight	0	0	0	0	1	Light	Right	Dry	1107	FORDHAM ROAD NEWMARKET
SCEA8973515	21/04/2015	2	Slight	0	0	0	0	1	Light	Right	Dry	0900	FORDHAM ROAD NEWMARKET
SCEA9305215	09/05/2015	1	Serious	0	0	0	0	0	Dark	No turn	Wet/Damp	2230	EXNING, A142 FORDHAM ROAD APPROX 680MTRS NORTH OF WINDMILL HILL
SCEA9169915	28/06/2015	1	Slight	0	0	0	0	0	Light	No turn	Wet/Damp	1154	EXNING, A14 EASTBOUND APPROX 200MTRS EAST OF A142 ON SLIP
SCEA9199815	13/07/2015	2	Slight	0	0	0	0	1	Dark	No turn	Dry	0400	NEWMARKET, A14 WESTBOUND J/W OFF SLIP TO A142
SCEA9651515	24/12/2015	1	Slight	0	0	0	0	0	Light	Right	Wet/Damp	1245	EXNING, A142 J/W A14 OFFSLIP EAST BOUND
SCEA9719916	06/01/2016	1	Slight	0	0	0	0	0	Light	Right	Dry	1335	EXNING, A142 J/W A14 EAST BOUND OFF SLIP
1643982	28/01/2016	1	Slight	0	0	0	0	0	Dark	No turn	Dry	0652	
1677395	30/05/2016	1	Slight	0	0	0	0	0	Light	No turn	Dry	0900	
1678507	02/06/2016	1	Serious	1	0	0	0	0	Light	No turn	Dry	1720	
1682532	10/06/2016	1	Slight	0	0	0	0	0	Dark	No turn	Dry	2220	
1682335	10/06/2016	1	Slight	0	0	0	0	0	Light	No turn	Dry	0420	
1693693	14/07/2016	1	Slight	0	0	0	0	0	Light	No turn	Dry	0830	
1694770	29/07/2016	1	Slight	0	0	0	0	0	Light	No turn	Dry	1720	
16101856	31/08/2016	1	Slight	0	0	0	0	0	Light	No turn	Dry	0738	
16116626	28/09/2016	2	Slight	0	0	0	0	0	Light	Right	Dry	0755	
16120918	07/10/2016	1	Slight	0	1	0	0	0	Light	Left	Dry	0920	
16142651	12/12/2016	1	Slight	0	0	0	0	0	Light	No turn	Dry	0715	
17151200	26/01/2017	1	Fatal	0	1	0	0	0	Dark	No turn	Wet/Damp	0645	
17171557	29/03/2017	2	Slight	0	0	0	0	2	Light	No turn	Dry	1535	
17220294	27/08/2017	2	Slight	0	0	0	0	0	Light	No turn	Dry	1245	12/00 A14
17234739	16/10/2017	1	Slight	1	0	0	0	0	Dark	Right	Dry	1805	FORDHAM ROAD A142 AT JN WITH SLIP ROAD WEST BOUND A14
17238830	04/11/2017	2	Serious	0	0	0	0	2	Light	Left	Wet/Damp	1600	NEWMARKET BYPASS A14 AT JN WITH FORDHAM ROAD A142
17252149	06/12/2017	1	Slight	0	0	0	0	0	Light	No turn	Dry	0815	KENTFORD A14 NEAR JN WITH KENTFORD ROAD A142
18284999	28/03/2018	1	Slight	0	0	0	0	0	Light	No turn	Wet/Damp	0625	FORDHAM ROAD A142 AT JN WITH EASTBOUND OFF SLIP A14
18318566	19/07/2018	1	Slight	0	0	0	0	0	Light	No turn	Dry	1728	FORDHAM ROAD A142
18318891	19/07/2018	1	Slight	1	0	0	0	0	Light	No turn	Dry	0835	BLOOMFIELD FARM A142
18327629	13/08/2018	1	Slight	0	0	0	0	0	Light	No turn	Wet/Damp	1250	FORDHAM ROAD A142 NEAR JN WITH STUDLANDS PARK AVENUE
18331060	11/09/2018	1	Serious	0	0	0	0	0	Light	No turn	Dry	1127	
18347799	07/11/2018	1	Slight	0	0	0	0	1	Light	No turn	Wet/Damp	1430	FORDHAM ROAD A142
19811657	07/01/2019	3	Slight	0	0	0	0	1	Light	No turn	Dry	1206	(A142) FORDHAM ROAD
19829420	26/03/2019	3	Serious	0	0	0	1	1	Light	Right	Dry	1727	FORDHAM ROAD (A142) AT JUNCTION WITH A14
19858607	15/06/2019	1	Slight	0	0	0	0	0	Light	No turn	Dry	0332	A14 NEAR JUNCTION WITH (A142)
19871722	08/07/2019	1	Serious	0	0	0	0	0	Dark	No turn	Dry	0130	FORDHAM ROAD (A142)
19873498	12/07/2019	5	Serious	0	0	0	0	1	Light	Right	Dry	0702	FORDHAM ROAD AT JUNCTION WITH WINDMILL HILL
Column Totals		55		3	2	0	1	13					
No. of Accidents				3	2	0	1	11					

Total number of accidents listed: 41

Accidents between dates 01/08/2014 and 01/08/2019 (60) months

Selection: Notes:

Police Ref.	Acc Class	Date	Time	Grid References	Fti	Ser	Sit	L.M.D	Light	Weather	Surface	Types
SCEA8259314	Slight	03/08/2014	1130	563259	266258	0	0	0	0	1 302V1A 405V1A 406V1A	0 0 0 Light	Fine without high winds Dry 9 9
SCEA8285214	Slight	14/08/2014	1620	563365	266021	0	0	0	0	1 410V1B 402V1B 999V1A	0 0 0 Light	Fine without high winds Wet/Damp 19 9
SCEA8385114	Slight	21/09/2014	1435	563318	266074	0	0	0	0	1 405V1A 406V1A	0 0 0 Light	Fine without high winds Dry 9 9
SCEA8534814	Slight	09/11/2014	0945	563541	265869	0	0	0	0	1 307V1A 401V1A 602V1A 601V1A	0 0 0 Light	Fine without high winds Wet/Damp 9 19
SCEA8557214	Slight	21/11/2014	1350	563317	266077	0	0	0	0	1 405V1A	0 0 0 Light	Fine without high winds Dry 9 21
SCEA8696415	Slight	07/01/2015	1645	563593	265759	0	0	0	0	1 510V1A 409V1A 109V1A	0 0 0 Dark	Fine without high winds Wet/Damp 9 9
SCEA8822515	Slight	18/02/2015	1107	563370	267437	0	0	0	0	1 706V1A 404V2A	0 0 0 Light	Fine without high winds Dry 20 9
SCEA8973515	Slight	21/04/2015	0900	563811	265333	0	0	0	0	2 405V1A 406V1B 408V1B 510V1B 602V1B 403V1B	0 0 0 Light	Fine without high winds Dry 9 9 9 9
SCEA9305215	Serious	09/05/2015	2230	563424	266909	0	1	0	0	0 405V001A	0 0 0 Dark	Raining without high winds Wet/Damp 9 21
SCEA9169915	Slight	28/06/2015	1154	563837	266096	0	0	0	0	1 405V001A	0 0 0 Light	Raining without high winds Wet/Damp 9 9
SCEA9199815	Slight	13/07/2015	0400	563776	266064	0	0	0	0	2 405V001A	0 0 0 Dark	Fine without high winds Dry 21 21
SCEA9651515	Slight	24/12/2015	1245	563322	266072	0	0	0	0	1 405V001A 406V001A	0 0 0 Light	Raining with high winds Wet/Damp 9 9
SCEA9719916	Slight	06/01/2016	1335	563326	266072	0	0	0	0	1 405V002A 406V002A	0 0 0 Light	Fine without high winds Dry 9 9
1643982	Slight	28/01/2016	0652	564400	266156	0	0	0	0	1 405V1A	0 0 0 Dark	Other Dry 21 9
1677395	Slight	30/05/2016	0900	563391	265995	0	0	0	0	1 405V1A 602V1A 605V1B	0 0 0 Light	Fine without high winds Dry 9 9
1678507	Serious	02/06/2016	1720	563733	266085	0	1	0	0	0 408V1A 406V1A	0 0 0 Light	Other Dry 5
1682532	Slight	10/06/2016	2220	563263	266196	0	0	0	0	1 403V1A 409V1A	0 0 0 Dark	Fine without high winds Dry 9 9
1682335	Slight	10/06/2016	0420	564161	266184	0	0	0	0	1 602V1A	0 0 0 Light	Fine without high winds Dry 9 9
1693693	Slight	14/07/2016	0830	564077	266166	0	0	0	0	1	0 0 0 Light	Fine without high winds Dry 98 9
1694770	Slight	29/07/2016	1720	563800	265351	0	0	0	0	1 406V1A 308V1B	0 0 0 Light	Fine without high winds Dry 9 9 9
16101856	Slight	31/08/2016	0738	563797	266067	0	0	0	0	1 408V2A 308V1B	0 0 0 Light	Fine without high winds Dry 9 9
16116626	Slight	28/09/2016	0755	563524	265847	0	0	0	0	2 405V1A 606V1A	0 0 0 Light	Fine without high winds Dry 9 9 21
16120918	Slight	07/10/2016	0920	563561	265841	0	0	0	0	1 203V2A	0 0 0 Light	Fine without high winds Dry 9 1
16142651	Slight	12/12/2016	0715	564108	266165	0	0	0	0	1	0 0 0 Light	Fine without high winds Dry 98 9
17151200	Fatal	26/01/2017	0645	563264	266544	1	0	0	0	0 507V2A 506V2A	0 0 0 Dark	Fine without high winds Wet/Damp 21 1
17171557	Slight	29/03/2017	1535	563315	266075	0	0	0	0	2 302V1A 405V1A 403V1A 602V1A 606V1A	0 0 0 Light	Fine without high winds Dry 98 9
17220294	Slight	27/08/2017	1245	563797	266067	0	0	0	0	2 505V2B	0 0 0 Light	Fine without high winds Dry 9 9 9
17234739	Slight	16/10/2017	1805	563454	265934	0	0	0	0	1 406V1A 408V2A 410V2A	0 0 0 Dark	Fine without high winds Dry 9 3
17238830	Serious	04/11/2017	1600	563550	265853	0	2	0	0	0 403V1A 410V1A	0 0 0 Light	Raining without high winds Wet/Damp 9 98 98
17252149	Slight	06/12/2017	0815	564096	266123	0	0	0	0	1 602V1A	0 0 0 Light	Unknown Dry 98 9
18284999	Slight	28/03/2018	0625	563533	265872	0	0	0	0	1 405V1A 406V1A 403V1A	0 0 0 Light	Raining without high winds Wet/Damp 9 9
18318566	Slight	19/07/2018	1728	563533	265865	0	0	0	0	1 406V1A 508V1B	0 0 0 Light	Fine without high winds Dry 9 9 9
18318891	Slight	19/07/2018	0835	563263	266429	0	0	0	0	1 602V2A 406V1B	0 0 0 Light	Unknown Dry 9 4
18327629	Slight	13/08/2018	1250	563710	265464	0	0	0	0	1 308V1A 406V1A 103V1A	0 0 0 Light	Raining without high winds Wet/Damp 9 9
18331060	Serious	11/09/2018	1127	562624	265657	0	1	0	0	0 503V1A	0 0 0 Light	Fine without high winds Dry 9 98
18347799	Slight	07/11/2018	1430	563418	267200	0	0	0	0	1 306V1B 307V1B 408V1A 409V1A 602V1B	0 0 0 Light	Raining without high winds Wet/Damp 20 9 9 9
19811657	Slight	07/01/2019	1206	563452	265938	0	0	0	0	3 602V1A 406V1A 402V1A	0 0 0 Light	Fine without high winds Dry 9 21 9
19829420	Serious	26/03/2019	1727	563322	266077	0	3	0	0	0 405V1A 404V2A	0 0 0 Light	Fine without high winds Dry 9 9 9
19858607	Slight	15/06/2019	0332	563542	265880	0	0	0	0	1 602V1A 503V1A 306V1A	0 0 0 Light	Fine without high winds Dry 9 98
19871722	Serious	08/07/2019	0130	563415	265913	0	1	0	0	0 501V1A 502V1A	0 0 0 Dark	Fine without high winds Dry 9
19873498	Serious	12/07/2019	0702	563253	266252	0	2	0	0	3 405V1A 406V1B 403V1B 602V1B	0 0 0 Light	Fine without high winds Dry 9 9
Column Totals	Slight :	33		1	11	43	Light :	33	Dry :			30
		7						8				11
	Serious :						Dark :		Wet :			
	Fatal :	1										

Total number of accidents listed: 41



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SCALE	1 : 31530
DATE	10/12/2019
DRAWING No.	
DRAWN BY	



CCallaway_Redlodge_010814-010819_Location Plan
Selected Range of Accidents between dates 01/08/2014 and 01/08/2019

Accidents between dates 01/08/2014 and 01/08/2019 (60) months

Selection:

Notes:

Police Ref.	Date	Cas.	Sev.	P2W	Cyes	Peds	Ch	OAPs	Vis.	Manv.	Road Cond.	Time	Location
SCEA8389914	21/09/2014	1	Slight	1	0	0	0	0	Light	No turn	Dry	1208	THE STREET J/WITH CHIPPENHAM ROAD FRECKENHAM
SCEA8422214	04/10/2014	2	Slight	0	0	0	1	0	Light	Right	Dry	0924	RUSSET DRIVE J/WITH HUNDRED ACRE WAY RED LODGE
SCEA8497814	26/10/2014	1	Serious	0	0	0	0	0	Dark	No turn	Dry	2325	A11 J/WITH B1085 RED LODGE
SCEA8537014	07/11/2014	1	Slight	0	0	1	0	0	Light	No turn	Wet/Damp	1530	MISTLETOE CLOSE RED LODGE
SCEA8542914	13/11/2014	1	Slight	0	0	0	0	0	Dark	No turn	Dry	1700	A11 NEWMARKET
SCEA8671015	23/12/2014	1	Slight	0	0	0	0	0	Dark	No turn	Dry	1730	A11 N/B RED LODGE
SCEA9000615	26/04/2015	5	Serious	0	0	0	0	0	Light	No turn	Wet/Damp	0624	A11 S/B RED LODGE
SCEA9183415	21/06/2015	1	Slight	1	0	0	0	0	Light	Right	Dry	1730	RED LODGE, WARREN ROAD J/W BOUNDARY ROAD
SCEA9204815	17/07/2015	4	Fatal	0	0	0	0	2	Light	No turn	Dry	2013	FRECKENHAM ROAD WORLINGTON
SCEA9285815	15/08/2015	3	Serious	0	0	0	0	0	Light	No turn	Dry	1830	RED LODGE, HUNDRED ACRE WAY BEND OUTSIDE NUMBER 88
SCEA9348215	07/09/2015	1	Slight	0	0	0	0	0	Dark	No turn	Dry	0516	RED LODGE, HEATHERSET WAY OUTSIDE NUMBER 28
SCEA9397215	24/09/2015	1	Slight	0	0	0	0	0	Dark	No turn	Dry	2038	WORLINGTON, A11 APPROX 200MTRS NORTH EAST OF OFF SLIP TO RED LODGE IN SOUTH BOUND C/WAY
SCEA9607115	06/12/2015	1	Slight	0	0	0	0	0	Dark	No turn	Dry	0339	RED LODGE, A11 NORTH BOUND C/WAY APPROX 430MTRS SOUTH OF OFF SLIP TO RED LODGE
SCEA9713216	19/01/2016	1	Slight	0	0	1	1	0	Dark	No turn	Wet/Damp	0700	RED LODGE, B1085 TURNPIKE ROAD APPROX 60MTRS SOUTH WEST OF HEATH FARM ROAD
1652960	19/02/2016	3	Slight	0	0	0	0	3	Light	No turn	Dry	1112	
1665943	18/04/2016	2	Slight	0	0	0	0	0	Light	No turn	Dry	1150	
1693881	01/08/2016	1	Slight	0	1	0	0	0	Light	Right	Dry	1545	
16120544	06/10/2016	1	Slight	0	0	0	0	0	Light	No turn	Dry	1540	
16129283	29/10/2016	1	Slight	0	0	0	0	0	Dark	No turn	Dry	1920	
16139600	30/11/2016	1	Slight	0	0	0	0	0	Light	No turn	Wet/Damp	1100	
17161525	09/02/2017	1	Slight	0	0	0	0	0	Dark	No turn	Wet/Damp	1909	
17198035	12/06/2017	0	Slight	0	0	0	0	0	Light	Right	Dry	2135	
17211805	23/06/2017	1	Serious	1	0	0	0	0	Light	No turn	Dry	2005	NEWMARKET ROAD B1085 AT JN WITH RED LODGE BYPASS A11
17201024	24/06/2017	5	Slight	0	0	0	0	0	Light	No turn	Dry	1245	
17198762	05/07/2017	2	Slight	1	0	0	0	1	Dark	No turn	Dry	2055	
17218048	10/09/2017	2	Serious	0	0	0	0	1	Light	No turn	Dry	1445	06/0 SOUTHBOUND A11
17226714	10/09/2017	2	Slight	0	0	0	0	1	Light	No turn	Dry	1445	A11
17241322	06/11/2017	1	Slight	0	1	0	0	1	Light	No turn	Dry	1330	B1102
18266863	23/01/2018	1	Slight	0	0	0	0	0	Light	No turn	Dry	1740	BARTON HILLS A11
18287069	10/04/2018	1	Slight	0	0	0	0	1	Light	No turn	Dry	1305	1243 A14 AT JN WITH A11
18306002	11/06/2018	1	Slight	1	0	0	0	0	Light	No turn	Dry	1400	ELMS ROAD AT JN WITH BADLINGHAM ROAD
18318653	27/07/2018	1	Slight	0	0	0	0	1	Light	No turn	Wet/Damp	0820	B1085 AT JN WITH HUNDRED ACRE WAY
18335228	17/09/2018	1	Slight	0	0	0	0	1	Light	No turn	Dry	1249	
18337455	10/10/2018	1	Serious	0	1	0	0	0	Light	No turn	Dry	1045	THE STREET B1102
18346933	06/11/2018	1	Slight	0	0	0	0	0	Light	Right	Wet/Damp	1610	
18352952	01/12/2018	1	Slight	0	0	0	0	0	Dark	No turn	Wet/Damp	1852	A11 AT JN WITH HERRINGWELL ROAD
18353914	07/12/2018	1	Slight	0	0	0	0	0	Dark	No turn	Dry	1815	CARNATION WAY, RED LODGE AT JN WITH WARREN ROAD
19839155	11/04/2019	1	Slight	0	0	0	0	0	Light	No turn	Dry	1919	THE STREET (B1102) - 30 METRES FROM JUNCTION WITH THE MEADOWS
19835463	19/04/2019	2	Slight	0	0	0	0	0	Light	No turn	Dry	1408	A11 NEAR JUNCTION WITH A11
19839996	04/05/2019	1	Slight	0	0	0	0	0	Dark	No turn	Dry	0224	TURNPIKE ROAD (B1085) - 48 METRES FROM JUNCTION WITH UNCLASSIFIED ROAD
19856128	10/06/2019	4	Slight	0	0	0	0	1	Light	No turn	Wet/Damp	1311	NEWMARKET ROAD (A11)
19862285	26/07/2019	1	Serious	1	0	0	0	0	Light	No turn	Dry	0702	B1085 AT JUNCTION WITH ELMS ROAD
Column Totals		66		6	3	2	2	13					
No. of Accidents				6	3	2	2	10					

Total number of accidents listed: 42

Accidents between dates 01/08/2014 and 01/08/2019 (60) months

Selection: Notes:

Police Ref.	Acc Class	Date	Time	Grid References	Fu	Ser	Slt	L M D	Light	Weather	Surface	Types		
SCEA8389914	Slight	21/09/2014	1208	566452			272054	0	0	1 405V1A	0 0 0 Light	Fine without high winds	Dry	9 5
SCEA8422214	Slight	04/10/2014	0924	570427			270784	0	0	2 405V2A 602V2A 406V2B 403V2A	0 0 0 Light	Fine without high winds	Dry	9 9
SCEA8497814	Serious	26/10/2014	2325	569522			270706	0	1	0 409V1A 109V1A	0 0 0 Dark	Fine without high winds	Dry	9
SCEA8537014	Slight	07/11/2014	1530	570246			270029	0	0	1 405V1B 802C1B	5 2 9 Light	Raining without high winds	Wet/Damp	9
SCEA8542914	Slight	13/11/2014	1700	569652			270778	0	0	1 410V1A 605V1A	0 0 0 Dark	Fine without high winds	Dry	9 90
SCEA8671015	Slight	23/12/2014	1730	569232			270507	0	0	1 501V1A	0 0 0 Dark	Fine with high winds	Dry	9
SCEA9000615	Serious	26/04/2015	0624	569009			270154	0	4	1 501V1A 502V1A 509V1B	0 0 0 Light	Fine without high winds	Wet/Damp	9
SCEA9183415	Slight	21/06/2015	1730	570207			270618	0	0	1 703V001A 703V002A 405V001A	0 0 0 Light	Fine without high winds	Dry	9 3
SCEA9204815	Fatal	17/07/2015	2013	568447			273105	4	0	0 602V1A 306V1A 409V1A 410V1A 601V1B	0 0 0 Light	Fine without high winds	Dry	9 9
SCEA9285815	Serious	15/08/2015	1830	570423			270034	0	2	1 307V001A 502V001A 602V001A 701V001A 703V001A	0 0 0 Light	Fine without high winds	Dry	9 9
SCEA9348215	Slight	07/09/2015	0516	570063			270471	0	0	1 306V001A 409V001A 405V001B	0 0 0 Dark	Fine without high winds	Dry	9 9
SCEA9397215	Slight	24/09/2015	2038	570343			271241	0	0	1 602V001A 601V001A	0 0 0 Dark	Fine without high winds	Dry	9 9
SCEA9607115	Slight	06/12/2015	0339	569232			270514	0	0	1 306V001A 503V001A	0 0 0 Dark	Fine without high winds	Dry	9
SCEA9713216	Slight	19/01/2016	0700	569375			269902	0	0	1 802C001A 808C001A	5 1 8 Dark	Fine without high winds	Wet/Damp	9
1652960	Slight	19/02/2016	1112	567353			272418	0	0	3 706V1A 104V1A 101V1A	0 0 0 Light	Fine without high winds	Dry	9 9
1665943	Slight	18/04/2016	1150	570200			269867	0	0	2	0 0 0 Light	Unknown	Dry	9 9
1693881	Slight	01/08/2016	1545	570239			270823	0	0	1 602V2B	0 0 0 Light	Fine without high winds	Dry	9 1
16120544	Slight	06/10/2016	1540	570401			270595	0	0	1 405V2A 406V2B	0 0 0 Light	Unknown	Dry	9 9
16129283	Slight	29/10/2016	1920	569540			273740	0	0	1 306V1B 307V1B 409V1B 410V1B 501V1B 502V1B	0 0 0 Dark	Other	Dry	9 9
16139600	Slight	30/11/2016	1100	569448			270673	0	0	1 406V1A 706V1B 103V1B	0 0 0 Light	Fine without high winds	Wet/Damp	98 9
17161525	Slight	09/02/2017	1909	570886			272027	0	0	1 103V1B 703V1B 707V1B	0 0 0 Dark	Snowing without high winds	Wet/Damp	98 9
17198035	Slight	12/06/2017	2135	570192			269868	0	0	1 306V1B 410V1B	0 0 0 Light	Fine without high winds	Dry	9
17211805	Serious	23/06/2017	2005	570091			270950	0	1	0 501V1A 306V1B 403V1B	0 0 0 Light	Fine without high winds	Dry	5
17201024	Slight	24/06/2017	1245	569232			270507	0	0	5 403V1A 605V1A 603V1B	0 0 0 Light	Fine without high winds	Dry	9
17198762	Slight	05/07/2017	2055	569135			270409	0	0	2 410V1A 405V1A 501V1A 602V1A 306V1A	0 0 0 Dark	Fine without high winds	Dry	5 9
17218048	Serious	10/09/2017	1445	569242			270498	0	1	1 405V1A 403V1A	0 0 0 Light	Fine without high winds	Dry	9 9 98
17226714	Slight	10/09/2017	1445	569242			270498	0	0	2	0 0 0 Light	Fine without high winds	Dry	9
17241322	Slight	06/11/2017	1330	568943			273467	0	0	1 602V2A 601V2A 501V2B 502V2B 205V2B 204V2B	0 0 0 Light	Fine without high winds	Dry	9 1
18266863	Slight	23/01/2018	1740	569242			270498	0	0	1 605V1A	0 0 0 Light	Fine without high winds	Dry	9
18287069	Slight	10/04/2018	1305	569870			271089	0	0	1 405V1A	0 0 0 Light	Fine without high winds	Dry	9
18306002	Slight	11/06/2018	1400	568249			271548	0	0	1 405V1A 406V1B 306V2B	0 0 0 Light	Fine without high winds	Dry	9 5
18318653	Slight	27/07/2018	0820	569388			269920	0	0	1 503V1A	0 0 0 Light	Raining without high winds	Wet/Damp	9
18335228	Slight	17/09/2018	1249	566700			272002	0	0	1 405V1A	0 0 0 Light	Fine without high winds	Dry	9 19
18337455	Serious	10/10/2018	1045	569341			273647	0	1	0 405V1A 504V1B	0 0 0 Light	Fine without high winds	Dry	9 1
18346933	Slight	06/11/2018	1610	569670			270840	0	0	1 405V1A 406V1A	0 0 0 Light	Fine without high winds	Wet/Damp	9 9
18352952	Slight	01/12/2018	1852	569664			270839	0	0	1 308V1A 901V2A 605V3B	0 0 0 Dark	Fine without high winds	Wet/Damp	9 9 9
18353914	Slight	07/12/2018	1815	570197			269891	0	0	1 501V1A 602V1B	0 0 0 Dark	Fine without high winds	Dry	19 9
19839155	Slight	11/04/2019	1919	569023			273523	0	0	1 602V1B 501V1B 308V1B	0 0 0 Light	Fine without high winds	Dry	9 9
19835463	Slight	19/04/2019	1408	569744			270828	0	0	2 308V1A 408V1A 410V1B 409V1B	0 0 0 Light	Fine without high winds	Dry	9 9
19839996	Slight	04/05/2019	0224	569822			270517	0	0	1 501V1A	0 0 0 Dark	Fine without high winds	Dry	9 9
19856128	Slight	10/06/2019	1311	571020			272362	0	0	4 707V1A 708V1A 103V1A	0 0 0 Light	Raining without high winds	Wet/Damp	9 9
19862285	Serious	26/07/2019	0702	569663			270841	0	1	0 403V1B 405V1B 406V1A 710V1A 706V1A	0 0 0 Light	Fine without high winds	Dry	98 97
Column Totals	Slight :	34			4		11	51	Light :	29	Dry :	33		
		7								13		9		
	Serious :								Dark :		Wet :			
	Fatal :	1												

Total number of accidents listed: 42

Appendix E – Public Rights of Way Closed During Construction

56000

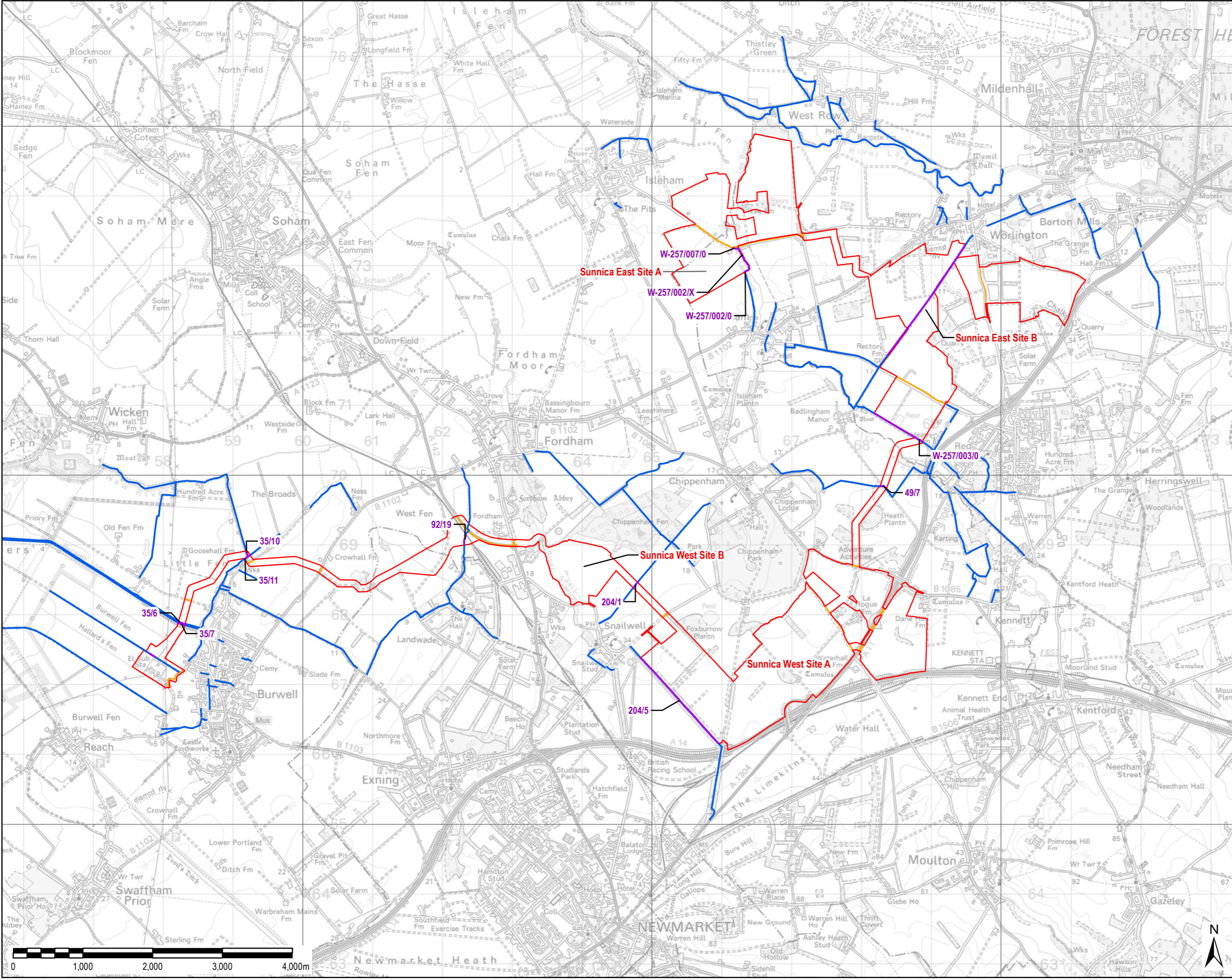
56500

57000

275000

270000

265000



THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

LEGEND

- Scheme Boundary
- Public Highway within Scheme
- Existing Public Right of Way
- Public Right of Way Closed During Construction

NOTE:
Public highways run through the Sunnica East Site, which are not part of the site boundary. These have been digitised based on the 1:1250 scale OS Mastermap.

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Purpose of Issue
PEIR

Client
SUNNICA LTD



Drawing Title
**FIGURE 13-2
PUBLIC RIGHTS OF WAY
CLOSED DURING
CONSTRUCTION**

Drawn AD	Checked SPR	Approved NC	Date 02/09/2020
AECOM Internal Project No. 60589004		Scale @ A3 1:50,000	

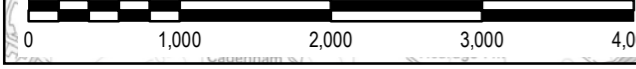
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Appendix F – Sunnica East and Sunnica West Compounds

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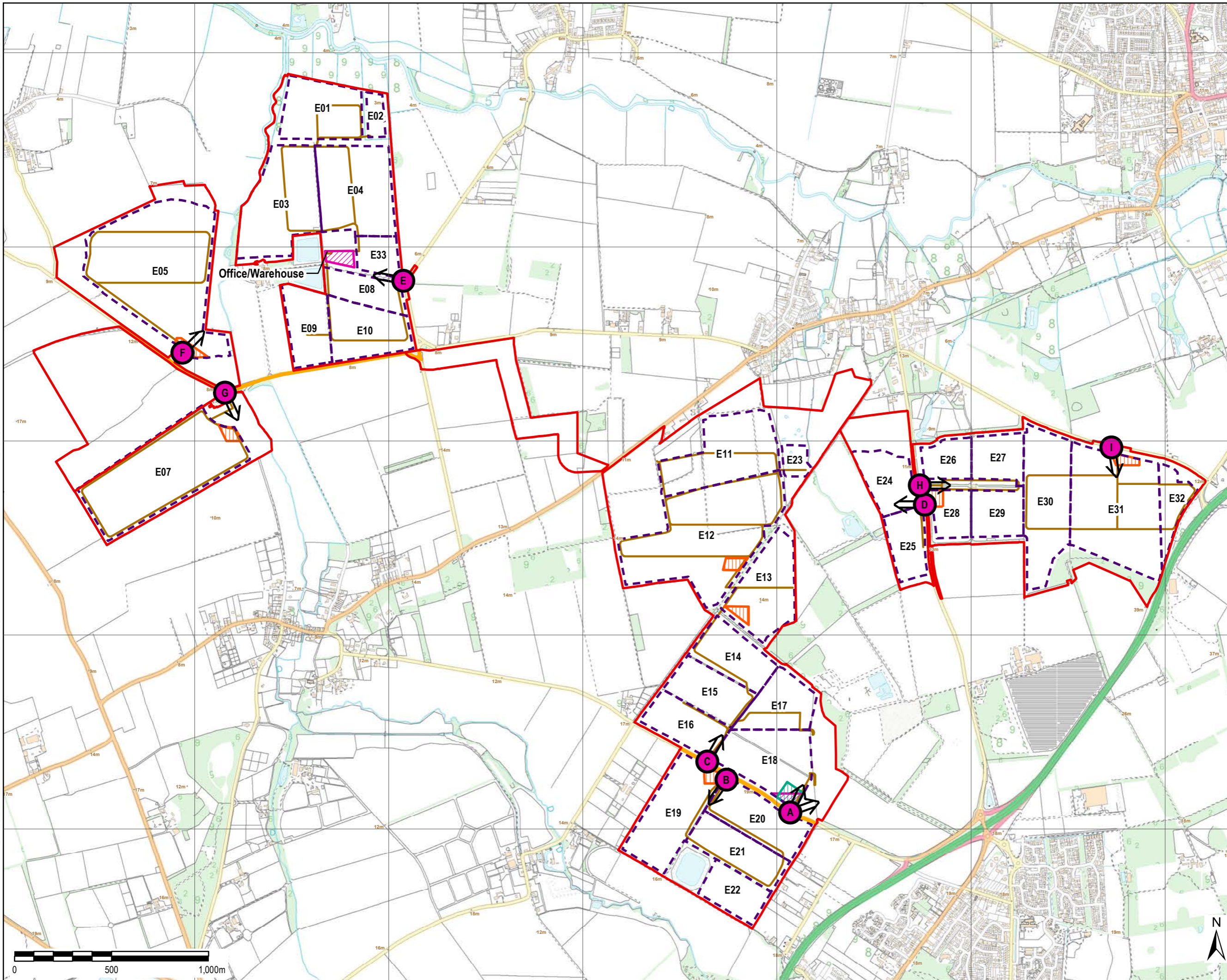
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LEGEND

-  Scheme Boundary
-  Public Highway within Scheme
- Proposed Scheme Plan**
-  Developable Area
-  Compound Area (Permanent)
-  Compound Area for Construction (Temporary)
-  Temporary Construction Parking Area
-  Proposed Road
- Access Point**
-  Construction and Operation Access



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Purpose of Issue
TRANSPORT ASSESSMENT

Client
SUNNICA LTD



Drawing Title
**FIGURE 09
 SUNNICA EAST A AND B
 CONSTRUCTION COMPOUNDS
 AND ACCESS**

Drawn AD	Checked DW	Approved NC	Date 09/09/2020
AECOM Internal Project No. 60589004		Scale @ A3 1:18,000	

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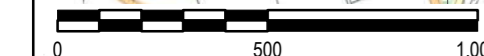
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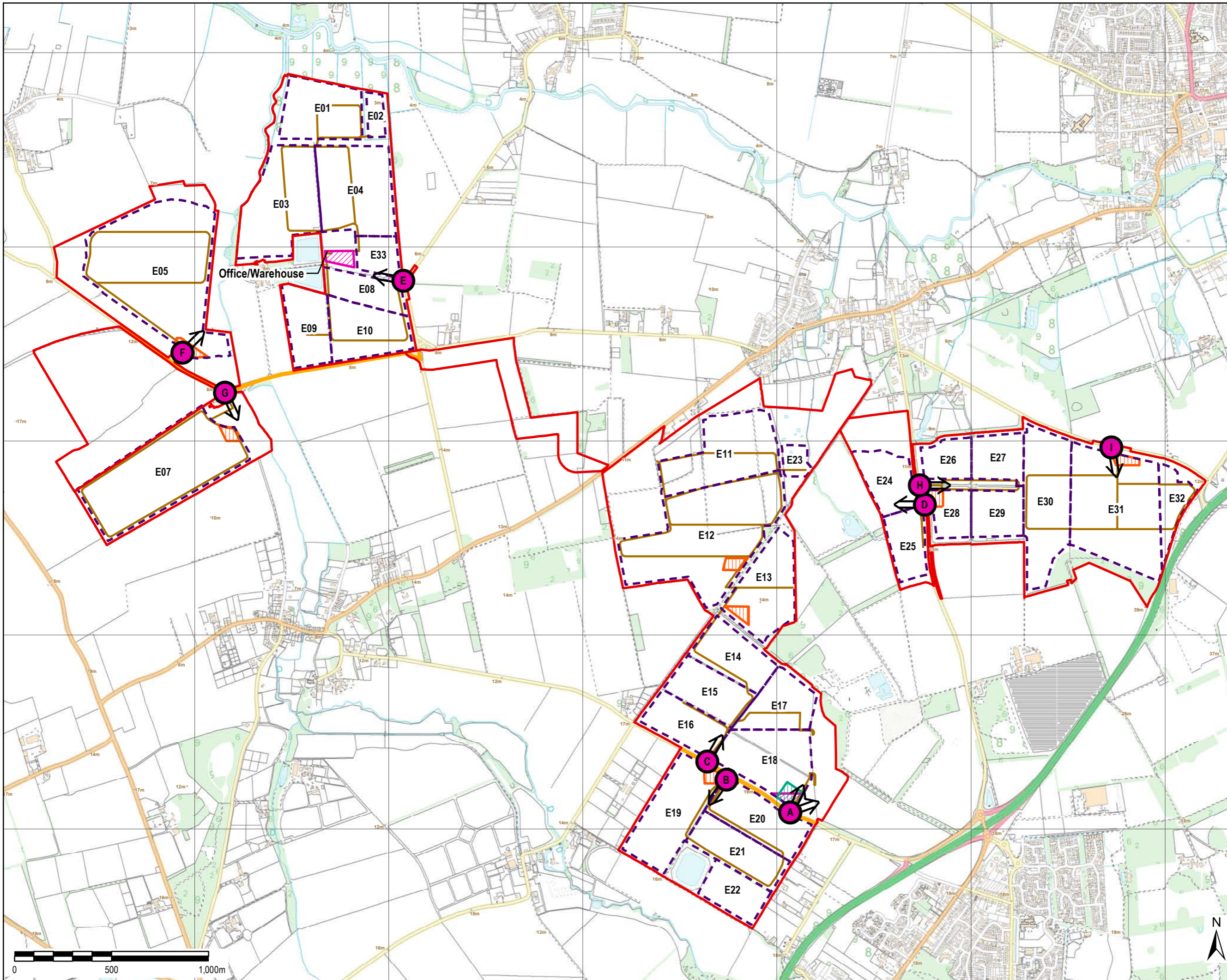
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LEGEND

-  Scheme Boundary
-  Public Highway within Scheme
- Proposed Scheme Plan**
-  Developable Area
-  Compound Area (Permanent)
-  Compound Area for Construction (Temporary)
-  Temporary Construction Parking Area
-  Proposed Road
- Access Point**
-  Construction and Operation Access



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Purpose of Issue
TRANSPORT ASSESSMENT

Client
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Drawing Title
**FIGURE 09
SUNNICA EAST A AND B
CONSTRUCTION COMPOUNDS
AND ACCESS**

Drawn AD	Checked DW	Approved NC	Date 09/09/2020
AECOM Internal Project No. 60589004		Scale @ A3 1:18,000	

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Appendix G – Information from Sunnica on HGVs and Staff

Sunnica East Site - Total Construction Worker Numbers

Concept	Average staff members per "concept"	Average Staff members per day/ month 1	Average Staff members per day/ month 2	Average Staff members per day/ month 3	Average Staff members per day/ month 4	Average Staff members per day/ month 5	Average Staff members per day/ month 6	Average Staff members per day/ month 7	Average Staff members per day/ month 8	Average Staff members per day/ month 9	Average Staff members per day/ month 10	Average Staff members per day/ month 11	Average Staff members per day/ month 12	Average Staff members per day/ month 13	Average Staff members per day/ month 14	Average Staff members per day/ month 15	Average Staff members per day/ month 16	Average Staff members per day/ month 17	Average Staff members per day/ month 18	Average Staff members per day/ month 19	Average Staff members per day/ month 20	Average Staff members per day/ month 21	Average Staff members per day/ month 22	Average Staff members per day/ month 23	Average Staff members per day/ month 24
Adequation sites	64	32	0	0	16	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Civil Works	1370	0	30	55	55	65	65	55	75	90	80	80	60	60	60	70	70	60	60	60	60	50	50	30	30
Structure	4830	0	0	60	100	220	230	230	230	270	260	280	270	280	230	230	230	230	230	230	230	210	210	100	100
Panels	1790	0	0	0	0	0	80	80	80	100	90	90	115	115	95	95	105	105	105	105	105	105	85	85	60
Electrical Works	2005	0	0	65	80	80	100	100	90	100	120	90	90	90	90	90	90	100	100	100	100	90	90	60	60
CCTV	190	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	20	20	20	25	30	25	15	15
Internal Substations	1010	0	30	30	30	40	40	40	40	40	50	50	50	50	50	50	50	50	50	50	50	50	50	50	20
Total Staff per day (Average)		32	60	210	281	405	515	521	515	600	600	600	585	585	575	525	555	565	555	570	575	560	505	480	285
Total Staff per month (Average)		640	1200	4200	5620	8100	10300	10420	10300	12000	12000	12000	11700	11700	11500	10500	11100	11300	11100	11400	11500	11200	10100	9600	5700

Sunnica West Site - Total Construction Worker Numbers

Concept	Average staff members per "concept"	Average Staff members per day/ month 1	Average Staff members per day/ month 2	Average Staff members per day/ month 3	Average Staff members per day/ month 4	Average Staff members per day/ month 5	Average Staff members per day/ month 6	Average Staff members per day/ month 7	Average Staff members per day/ month 8	Average Staff members per day/ month 9	Average Staff members per day/ month 10	Average Staff members per day/ month 11	Average Staff members per day/ month 12	Average Staff members per day/ month 13	Average Staff members per day/ month 14	Average Staff members per day/ month 15	Average Staff members per day/ month 16	Average Staff members per day/ month 17	Average Staff members per day/ month 18	Average Staff members per day/ month 19	Average Staff members per day/ month 20	Average Staff members per day/ month 21	Average Staff members per day/ month 22	Average Staff members per day/ month 23	Average Staff members per day/ month 24
Adequation sites	64	32	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Civil Works	1389	0	30	70	70	70	70	60	54	50	50	50	70	70	80	75	75	65	70	65	65	30	30	30	30
Structure	4860	0	0	60	100	240	240	240	260	260	280	250	200	180	210	220	270	250	260	260	260	240	240	100	100
Panels	1800	0	0	0	0	110	110	110	90	90	100	80	80	80	80	80	90	110	110	100	100	100	100	90	90
Electrical Works	2049	0	0	65	90	90	90	90	90	100	100	94	90	90	100	110	100	110	90	90	100	100	100	70	70
CCTV	190	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	25	25	25	25	15	20	20	20	
Internal Substations	1055	0	35	35	35	35	45	50	50	60	60	60	60	50	50	50	50	50	40	40	40	40	40	20	20
Total Staff per day (Average)		32	65	230	295	435	555	576	550	554	560	580	554	496	470	510	560	600	600	590	585	565	530	330	330
Total Staff per month (Average)		640	1300	4600	5900	8700	11100	11520	11000	11080	11200	11600	11080	9920	9400	10200	11200	12000	12000	11800	11700	11700	11300	10600	6600

Total HGV Deliveries for Both Sites

Concept	Total HGV's per "concept"	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Month 13	Month 14	Month 15	Month 16	Month 17	Month 18	Month 19	Month 20	Month 21	Month 22	Month 23	Month 24	
Adequation sites	1890	473	473	473	473																					
Civil Works	4936		247	247	247	247	247	247	247	247	247	247	247	247	247	247	247	247	247	247			247	247		
Structure	715			43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43						
Panels	1406					94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94					
Electrical Works	180			9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	
Equipment	239							20	20	20	20	20	20	20	20	20	20	20	20	20	20					
CCTV	8															2	2	2	2	2	2	2	2	2	2	
Internal Substations	458		21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	
Total HGV's per Month		473	741	793	793	320	414	434	434	434	434	434	434	434	434	434	436	436	436	416	126	279	279	21	0	
Total HGV's per Day		24	38	40	40	16	21	22	22	22	22	22	22	22	22	22	22	22	22	21	7	14	14	2	0	

Appendix H – Access Strategy

Access Strategy – Sunnica Energy Farm

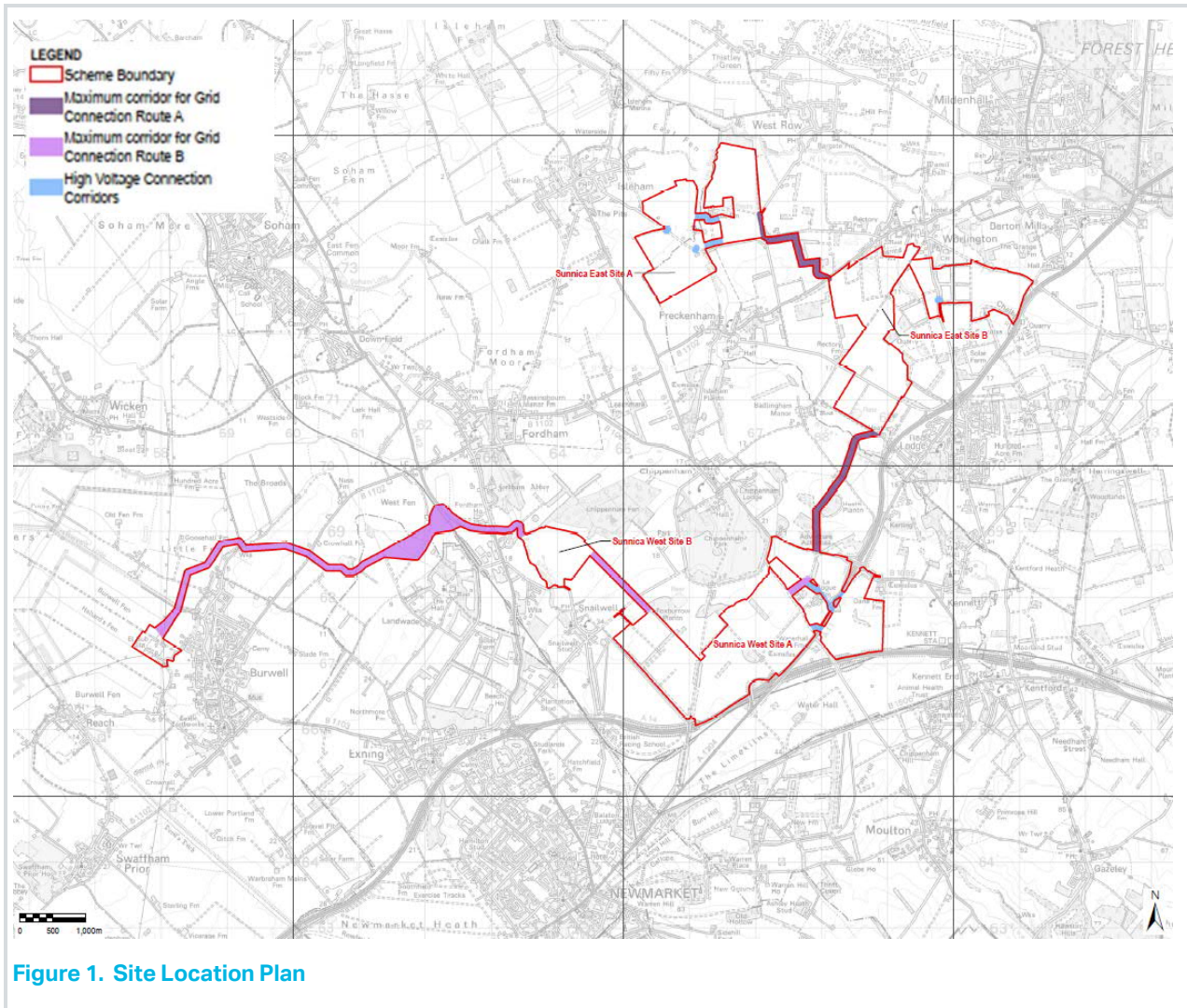
Client name Sunnica Limited	Project name Sunnica Energy Farm	Date 3 rd September 2020	Prepared by Theodore Jones
Checked by Caroline Brooks	Approved by Nicholas Anderson	Reference No. SEF-SCPG-TRSP-ACCESS	

Revision History

Revision	Revision date	Details	Authorised	Name	Position
1	18/7/19	For Issue	NA	N. Anderson	Regional Director
2	31/7/19	Update regarding Internal Comments	NA	N. Anderson	Regional Director
3	12/09/19	Update following Red Line Boundary Changes	NA	N. Anderson	Regional Director
4	27/09/19	Update following Red Line Boundary Changes	NA	N. Anderson	Regional Director
5	12/10/19	Update following Red Line Boundary Changes	NA	N. Anderson	Regional Director
6	25/11/19	Update following Red Line Boundary Changes	NA	N. Anderson	Regional Director
7	06/07/20	Update following Red Line Boundary Changes	NA	N. Anderson	Regional Director
8	17/08/20	Update regarding Internal Comments	NA	N. Anderson	Regional Director
9	03/09/20	Update following Red Line Boundary Changes	NA	N. Anderson	Regional Director

1.0 Introduction

- 1.1 AECOM has been appointed by Sunnica Limited to provide transport planning advice in support of the proposals to provide an Energy Farm (powered by solar energy) (hereafter referred to as 'the Development Consent Order (DCO) Site') on land near Red Lodge, Suffolk and Chippenham, Cambridgeshire. The location of the DCO Site is shown on **Figure 1** below. These sites are connected via a cable route corridor, which comprises Grid Connection Route A, between the Sunnica East Site B and Sunnica West Site A, and Grid Connection Route B, between the Sunnica West Site A and the Burwell National Grid Substation Extension.
- 1.2 This document, which has been prepared for the consideration of the Highway Authorities, Suffolk County Council (SCC), Cambridgeshire County Council (CCC) and Highways England (HE), outlines the proposed Access Strategy for the Sunnica Energy Farm.
- 1.3 It sets out the access proposals and construction routes for consideration and implementation during both the construction and operational phases of the DCO Site. The proposed Access Strategy includes the Sunnica East Site (A and B), Sunnica West Site (A and B), cable route corridors for Grid Connection Routes A and B and the Burwell National Grid Substation Extension.



2.0 Vehicular Access

2.1 Vehicular accesses have been identified using information provided by the client, a review of the local road network, and the CCC and SCC freight management plans. The possible access points for construction vehicles are set out below.

Sunnica East Site A and Site B

- 2.2 Due to the size of the Sunnica East Site A and Site B, a number of accesses may be required should travel within the site not be possible.
- 2.3 The main access to the Sunnica East Site B is proposed to be from Elms Road, which runs in a broad northwest to southeast direction linking Church Lane in Freckenham with the B1085 Elms Road and A11 near Red Lodge. Elms Road is a narrow single carriageway road which is bound by hedgerows. Where possible, hedgerows will need to be cut back to assist with any wide loads.
- 2.4 This access would be adjacent to the edge of an existing wooded area and opposite an existing access provided to the land to south. It would also provide access for any Adnormal Indivisible Loads (AILs) required to serve this site. It is not recommended that any AILs travel further than this access due to the width of the carriageway and the inability of any other vehicles to pass. Any movement of AILs will need to be made within the site to reach other areas. The main access is marked as (a) on **Figure 2** below.

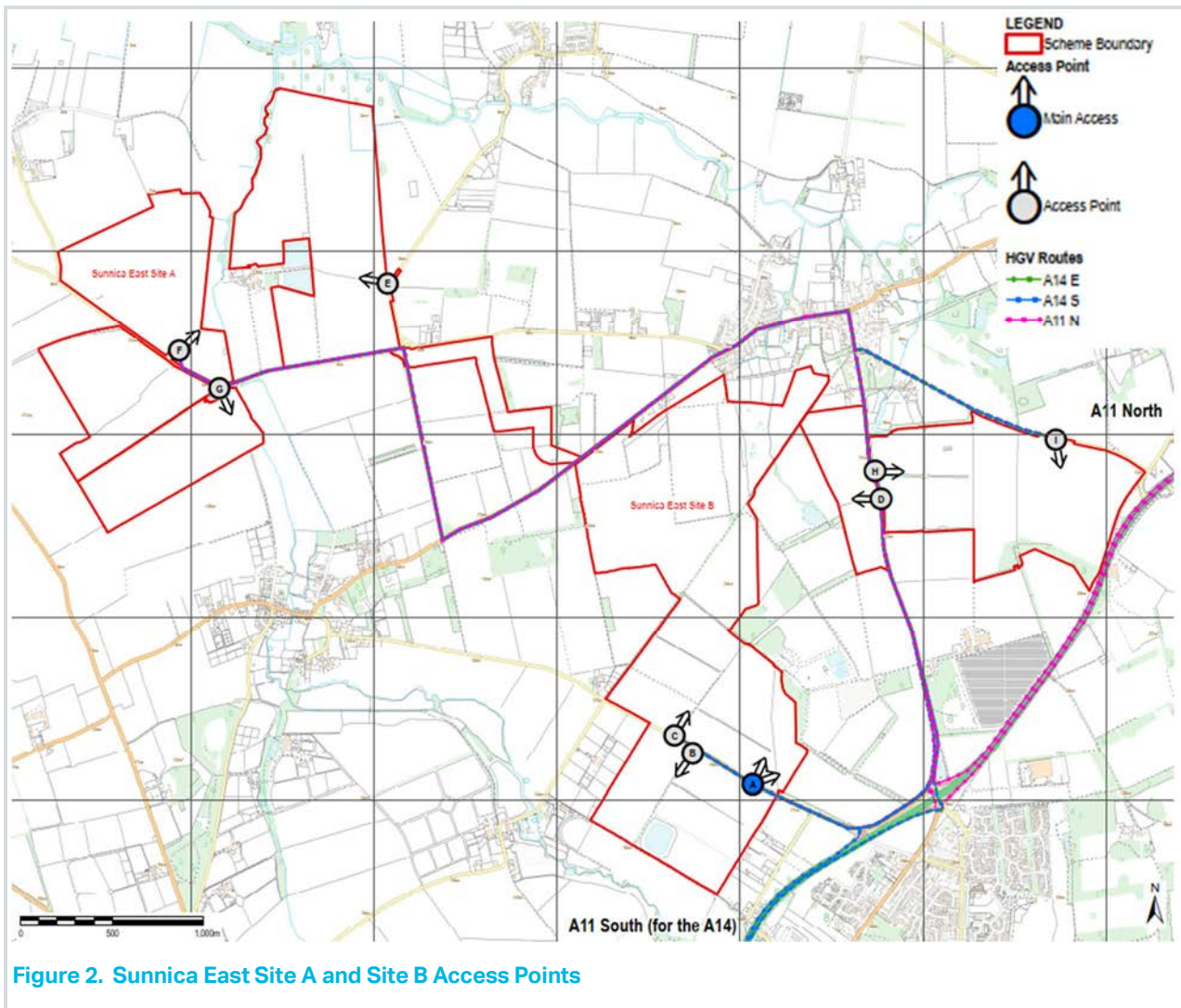


Figure 2. Sunnica East Site A and Site B Access Points

2.5 Although much of the Sunnica East Site B could be accessed from the access off Elms Road, there are parts of the site as well as Sunnica East Site B which would need to be accessed from other roads. Therefore, secondary points of access are likely to be required from other accesses on Elms Road northwest of the main access, Newmarket Road and Isleham Road. These accesses are also shown on **Figure 2** and described in further detail below.

- Land located to the south of Elms Road
 - Access could be provided from Elms Road on the southern side of the carriageway, approximately 550 metres east of the junction with Badlingham Road (*b*). There is an existing gated access to the agriculture land at this location which could be utilised. Elms Road is approximately five metres wide along the frontage of the site and therefore passing places are recommended to ensure HGVs can pass.
- Land located to the north of Elms Road
 - Access could be provided from Elms Road on the northern side of the carriageway, approximately 110 metres north-west of the proposed access to the land to the south (*c*). There is an existing gated access to the agriculture land which could be utilised. Elms Road is approximately five metres wide along the frontage of the site and therefore passing places are recommended to ensure HGVs can pass.
- Land located to the west of Newmarket Road
 - Access could be provided from Newmarket Road on the western side of the carriageway, approximately 800 metres south of the junction with Golf Links Road (*d*). There is an existing access to this area which could be utilised.

- Land located to the north of Beck Road
 - Access could be provided 350 metres north of the Isleham Road / Beck Road junction (e). There is an existing access to the area which can be utilised.
 - Access could be provided from Beck Road approximately 1,300 metres west of its junction with Isleham Road (f). There is an existing access to the area to the north which can be utilised.
- Land located to the south of Beck Road
 - Access could be provided from Beck Road approximately 1,000 metres west of its junction with Isleham Road (g). There is an existing access to this area which could be utilised.
- Land located to the east of Newmarket Road and west of the A11
 - Access could be provided from Newmarket Road on the eastern side of the carriageway, approximately 700 metres south of the junction with Golf Links Road (h). The benefits of an access in this location are good visibility and little impact on existing vegetation whilst also being within a reasonable distance of the B1085 / A11 junction such that construction vehicles would not need to travel through residential areas such as Worlington or utilise the A11 junction with Golf Links Road which does not provide any slip road facility.
 - Access could be provided from Golf Links Road on the southern side of the carriageway, approximately 1.2km east of the junction with Newmarket Road (i). There is an existing access to this area which could be utilised.

Sunnica West Site A and Sunnica West Site B

2.6 Similar to the Sunnica East Site, a number of access may be required should travel within the Sunnica West Site A or Sunnica West Site B not be possible.

Sunnica West Site A

2.7 The main vehicular access to the Sunnica West Site A is proposed to be provided from an existing access off the unclassified road which bounds the site to the north as shown on **Figure 3** below (a). The existing access into the site located off the unclassified road which links with the B1085 and the A11 could be utilised as the main access. This access is located opposite the access to the La Hogue Farm Shop and Café.

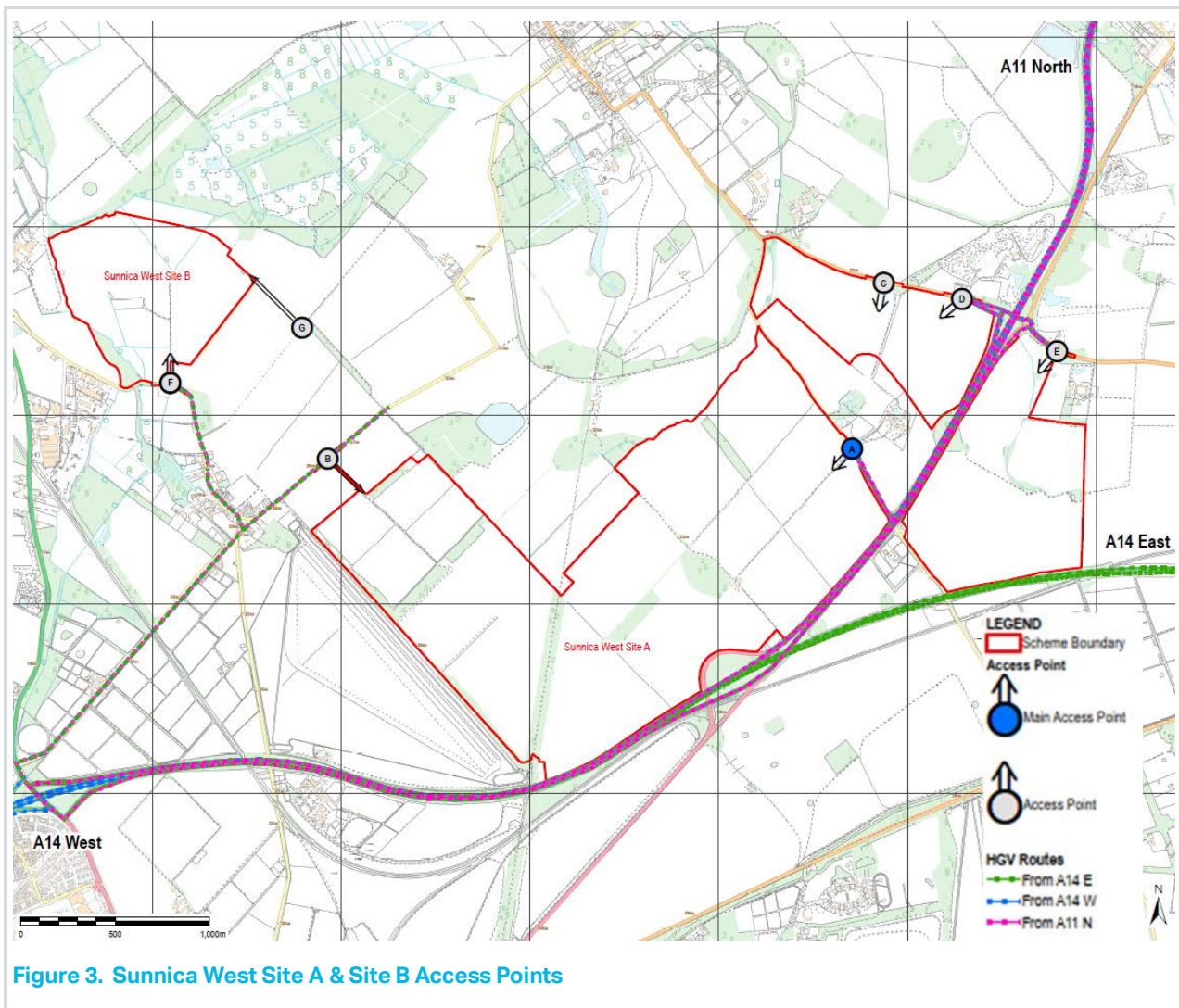


Figure 3. Sunnica West Site A & Site B Access Points

- 2.8 The unclassified road connects with the B1085 at a priority junction some 1,300 metres to the north-west whilst the connection with the A11 is made some 450 metres to the east. The junction with the A11 is provided in the form of a left-in, left-out on and off slip road arrangement.
- 2.9 The unclassified road measures approximately six metres at the points nearest the junctions with the B1085 and A11, with the intervening section measuring approximately four metres. The length of carriageway measuring four metres runs for approximately 1,100 metres including at the point of the site access. Over the course of this length, the road gently winds through the area and therefore forward visibility at times can be an issue. A number of passing places could be provided to assist vehicles travelling to and from the A11.
- 2.10 Although the majority of the Sunnica West Site A could be accessed from the access off the unclassified road, there are parts of the site which would need to be accessed from other roads. Therefore, secondary points of access are likely to be required from farm tracks, Chippenham Road and Dane Hill Road. These accesses are also shown on **Figure 3** and described in further detail below.
- Land located to the south of Chippenham Road
 - Access could be provided from Chippenham Road using the existing farm track located approximately 365 metres east of the Snailwell village boundary (*b*). The alignment of Chippenham Road is relatively straight therefore visibility is good and the width is such that it can accommodate two-way HGV traffic. A route from the A142 Fordham Road is available without travelling through the centre of Snailwell village where weight restrictions limiting vehicles to less than 7.5 tonnes are in force.
 - Land located to the south of the B1085 and west of the A11
 - Access could be provided from the B1085 at two locations. One location is approximately 700 metres west of the A11 / B1085 roundabout junction (*c*) There is an existing access to the area which can be

utilised. The other location is approximately 350 metres west of the A11 / B1085 roundabout junction (d). There is an existing gated access to the agriculture land at this location which could be utilised, opposite the access for WildTracks Outdoor Activity Park.

- Land located to the south of the B1085 and east of the A11
 - Access could be provided from the B1085 Dane Hill Road approximately 200 metres east of the A11 / B1085 roundabout junction (e). There is an existing gated access to the agriculture land at this location which could be utilised.

Sunnica West Site B

2.11 The main vehicular access to Sunnica West Site B could be provided from Chippenham Road and / or Snailwell Road.

2.12 The possible location identified by the Design Team on Chippenham Road is approximately 715 metres east of the village of Snailwell and would utilise an existing farm track (f). It is unlikely that large HGVs such as low loaders could enter at this location without the alignment of the access changing as on entering the field the access route immediately changes direction 45 degrees to the right and therefore would cause issues for longer vehicles when entering or exiting. Chippenham Road is relatively straight in alignment however a hedge and a line of trees would restrict visibility on exit and therefore alterations would need to be made if this was within the control of the applicant. Forward visibility along Chippenham Road from the east is sufficient to see vehicles exiting however it is recommended that any access in this location is signed to warn drivers of slow vehicles exiting.

2.13 Access from Fordham Road could be provided from an existing field access (g). However, all vehicles would need to enter and exit the site to/from the east as approximately 150 metres to the west is a weight limit restriction, restricting vehicles up to a maximum weight of 7.5 tonnes from utilising the bridge over the River Snail. Vehicles would need to travel through the village of Snailwell to/from the A142 Fordham Road. Forward visibility on approach to the access is restricted due to Fordham Road bending to the left.

2.14 The access from Chippenham Road would provide better access than from Fordham Road.

Cable Route Corridor

2.15 A haul road will need to be provided alongside the cable route corridor for vehicles related to the laying of the cables with access provided at intermittent points where the corridor is located near to the local highway network or where the cables crosses the highway network such as on the A142 Fordham Road.

Burwell National Grid Substation Extension

2.16 The Burwell National Grid Substation Extension, where the cable for the DCO Site will connect to, is located within the village of Burwell in Cambridgeshire. The substation is an existing facility located to the north west of the main village on Newnham Drove and an extension is proposed in the adjacent field to the west.

2.17 Newnham Drove is a single track, no through route, road measuring approximately 4.2 metres wide and is relatively straight in alignment from its junction with Weirs Drove along the frontage of the substation and the proposed extension, ensuring that visibility requirements can be met. Passing places are provided intermittently and the road is unclassified and de-restricted in terms of speed. For low levels of traffic which are managed by the site, access at this location is considered feasible.

3.0 Local Authority Freight Management Plans

3.1 SCC and CCC both operate Freight Management Plans which set out the preferred routing options for Heavy Goods Vehicles travelling within both authority areas. The Plans also identify where height and weight restrictions are in place.

SCC Lorry Route Network

3.2 The SCC 'Lorry Route Network' illustrates the routes which SCC have identified as the recommended routes for Heavy Goods Vehicles when travelling within and through the county. There are three route types identified by SCC. The route type, the description and the roads which form those routes are set out in **Table 1** below.

Table 1. SCC Lorry Route Types

Route Type	Description	Roads (Examples)
Strategic Lorry Routes	Predominantly the trunk road network and larger 'A' classified roads. All movements crossing Suffolk should use these, with those starting or ending in the county using them in preference to local lorry routes.	A11
		A14
		A12
		A140
		A143
Zone Distributor Routes	Predominantly 'A' classified and 'B' classified roads. Roads within a zone serving as a route directly to a location or as a route to local access routes.	A134
		A143
		A1101
		A1065
Local Access Routes	Roads or part of roads servicing as access to a specific location.	B1506
		B1085
		B1102
		B1106

Source: SCC

3.3 In addition to the routes identified in **Table 1**, weight restrictions are in place on roads within Suffolk however none are located within the vicinity of the DCO Site Boundary or on the roads which vehicles are likely to travel along to reach the Sunnica East Site.

3.4 A copy of the plan illustrating which roads within Suffolk fall within which route type is included in **Appendix A**.

Cambridgeshire Advisory Freight Map

3.5 The CCC 'Cambridgeshire Advisory Freight Map' illustrates the routes which CCC has identified as the recommended routes for Heavy Goods Vehicles when travelling within and through the county. There are two route types identified by CCC. The route type, the description and the roads which form those routes are set out in **Table 2** below.

Table 2. CCC Lorry Route Types

Route Type	Description	Roads (Examples)
Strategic Route	Predominantly the trunk road network and larger 'A' classified roads.	A11
		A14
		A142
Local Route	Predominantly 'A' classified and 'B' classified roads.	B1085
		B1104
		B1102

Source: CCC

- 3.6 In addition to the routes identified in **Table 2**, weight and height restrictions are in place on roads within Cambridgeshire. There are two roads within the vicinity of the DCO Site Boundary which are affected by a restriction. A three tonne weight restriction has been placed on the bridge over the River Kennet on Badlingham Road. The bridge is located approximately one kilometre west of the south-western boundary of the proposed Sunnica East Site B. Badlingham Road connects with B1085 Elms Road on the sites south-western boundary. The second is located on Fordham Road, where a seven and a half tonne weight restriction has been placed on the bridge over the River Snail. The bridge is located approximately 150 metres of a proposed access to the Sunnica West Site B.
- 3.7 A copy of the plan illustrating which roads within Cambridgeshire fall within which route type is included in **Appendix A**.

4.0 Construction Vehicle Routing

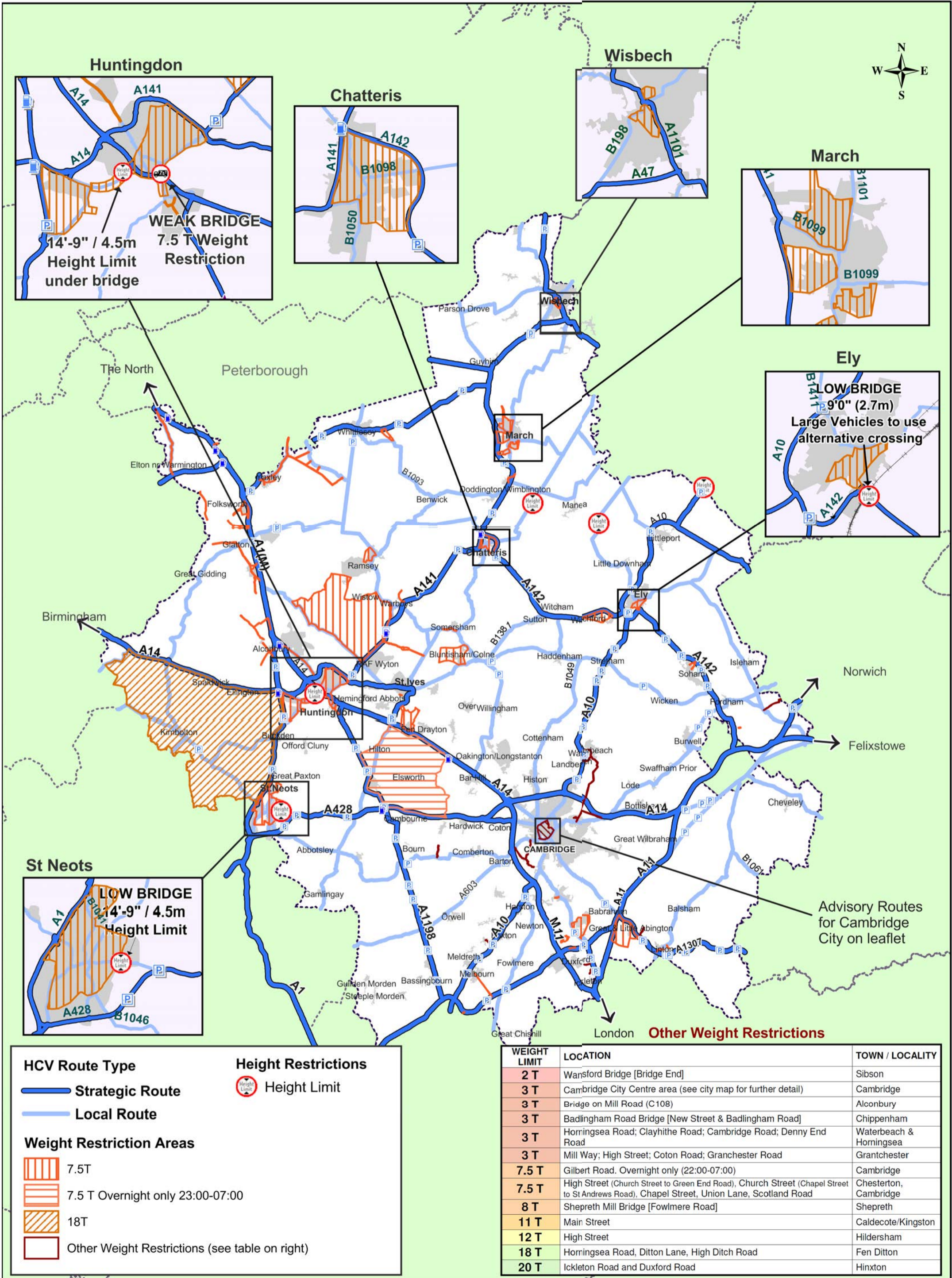
- 4.1 Using these access points, possible routes for construction vehicles have been identified. These are illustrated on plans included in **Appendix B**.
- 4.2 Where possible routes have been identified which are suitable to allow two-way HGV traffic movements such as the trunk road network and those roads identified by both SCC and CCC are being suitable for HGV traffic. The routes identified have also where possible been identified such that they have as little impact on residential areas as possible.
- 4.3 It is understood, during discussions with the Highway Authorities, that a concern exists relating to vehicles utilising Junction 37 of the A14 (A14 / A142 Fordham Road) to transfer from the A14 westbound carriageway to the A14 eastbound carriageway, in effect facilitating a U-turn. This manoeuvre is required due to material such as panels entering the UK at the port of Felixstowe and then travelling westbound to the site. Junction 38 which connects the A14 with the A11 does not provide all movements and therefore vehicles travelling north on the A11 from Felixstowe would have to utilise alternatives. A review of the alternatives would add significant distance to the journeys of vehicles traveling to the site and require HGVs to pass through Bury St. Edmunds and Thetford. This would also require all HGVs from Felixstowe to utilise the 'Fiveways' junction near Mildenhall which has recently been upgraded to improve capacity with vehicles. Although it is appreciated that there are safety and capacity concerns at junction 37 on the A14, this represents the quickest route and one that would impact less on more residential areas. A Construction Traffic Management Plan (CTMP) would be prepared with deliveries occurring outside of peak times to reduce the impact of the development.

5.0 Summary

- 5.1 This Access Strategy has been prepared to illustrate the potential access locations to the proposed Sunnica East Site A, Sunnica East Site B, Sunnica West Site A and Sunnica West Site B near to Worlington, Suffolk and Chippenham, Cambridgeshire respectively as the Burwell National Grid Substation Extension and the cable route corridor.
- 5.2 The Strategy also identifies the likely routes for journeys between the access points and the trunk road network. This is based on a review of the routes available and the information available from SCC and CCC in relation to HGV movements within each county.

Appendix A – CCC and SCC HGV Route Plans

Cambridgeshire Advisory Freight Map



HCV Route Type

- Strategic Route
- Local Route

Weight Restriction Areas

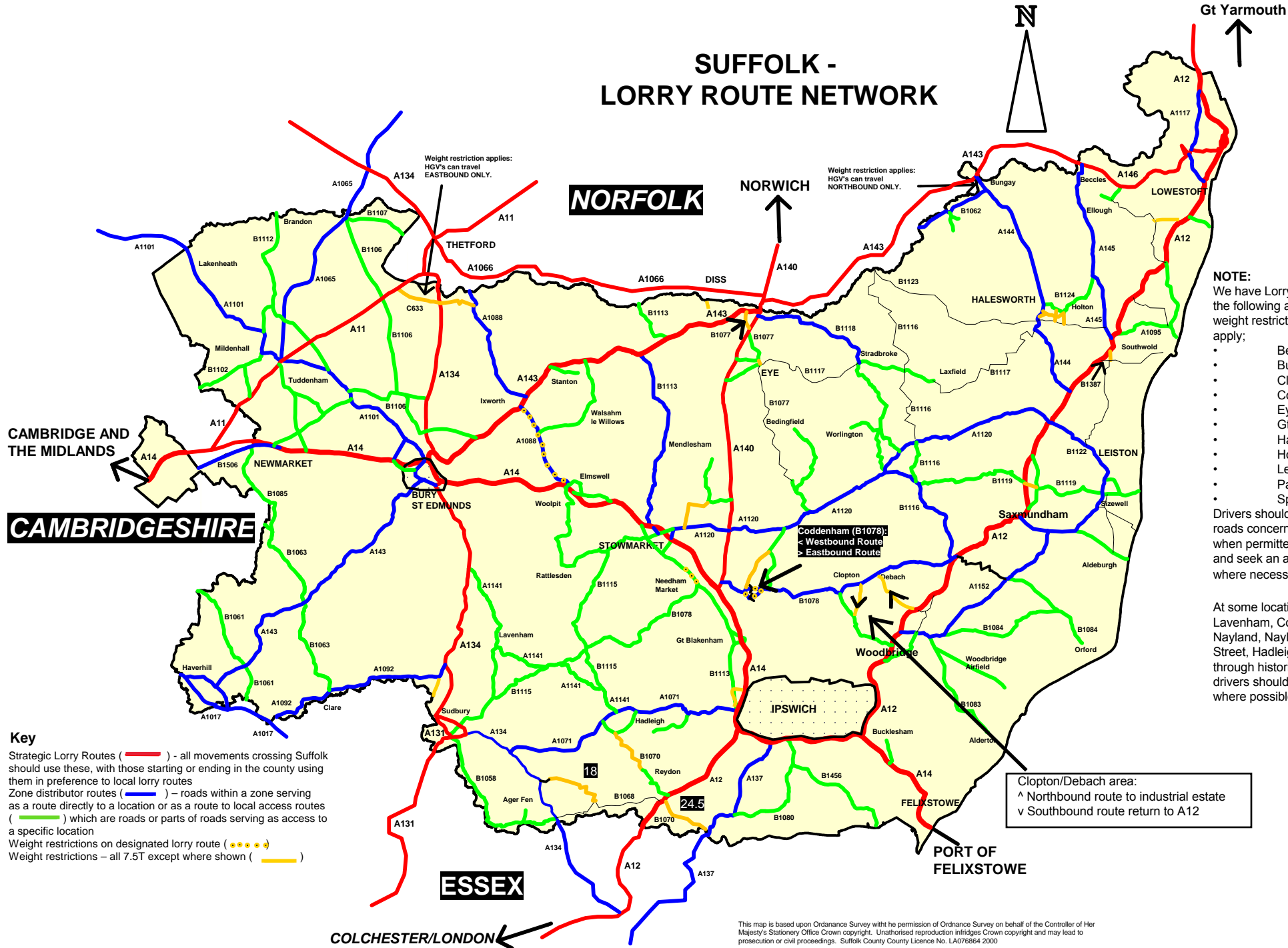
- 7.5T
- 7.5 T Overnight only 23:00-07:00
- 18T
- Other Weight Restrictions (see table on right)

Height Restrictions

- Height Limit

WEIGHT LIMIT	LOCATION	TOWN / LOCALITY
2 T	Wansford Bridge [Bridge End]	Sibson
3 T	Cambridge City Centre area (see city map for further detail)	Cambridge
3 T	Bridge on Mill Road (C108)	Alconbury
3 T	Badlingham Road Bridge [New Street & Badlingham Road]	Chippenham
3 T	Horningsea Road; Clayhithe Road; Cambridge Road; Denny End Road	Waterbeach & Horningsea
3 T	Mill Way; High Street; Coton Road; Granchester Road	Grantchester
7.5 T	Gilbert Road. Overnight only (22:00-07:00)	Cambridge
7.5 T	High Street (Church Street to Green End Road), Church Street (Chapel Street to St Andrews Road), Chapel Street, Union Lane, Scotland Road	Chesterton, Cambridge
8 T	Shepreth Mill Bridge [Fowlmere Road]	Shepreth
11 T	Main Street	Caldecote/Kingston
12 T	High Street	Hildersham
18 T	Horningsea Road, Ditton Lane, High Ditch Road	Fen Ditton
20 T	Ickleton Road and Duxford Road	Hinxton

SUFFOLK - LORRY ROUTE NETWORK



CAMBRIDGE AND THE MIDLANDS

CAMBRIDGESHIRE

Key

Strategic Lorry Routes (—) - all movements crossing Suffolk should use these, with those starting or ending in the county using them in preference to local lorry routes

Zone distributor routes (—) - roads within a zone serving as a route directly to a location or as a route to local access routes (—) which are roads or parts of roads serving as access to a specific location

Weight restrictions on designated lorry route (●●●●●)

Weight restrictions - all 7.5T except where shown (—)

NOTE:
We have Lorry Watch schemes in the following areas where 7.5T weight restriction traffic orders apply;

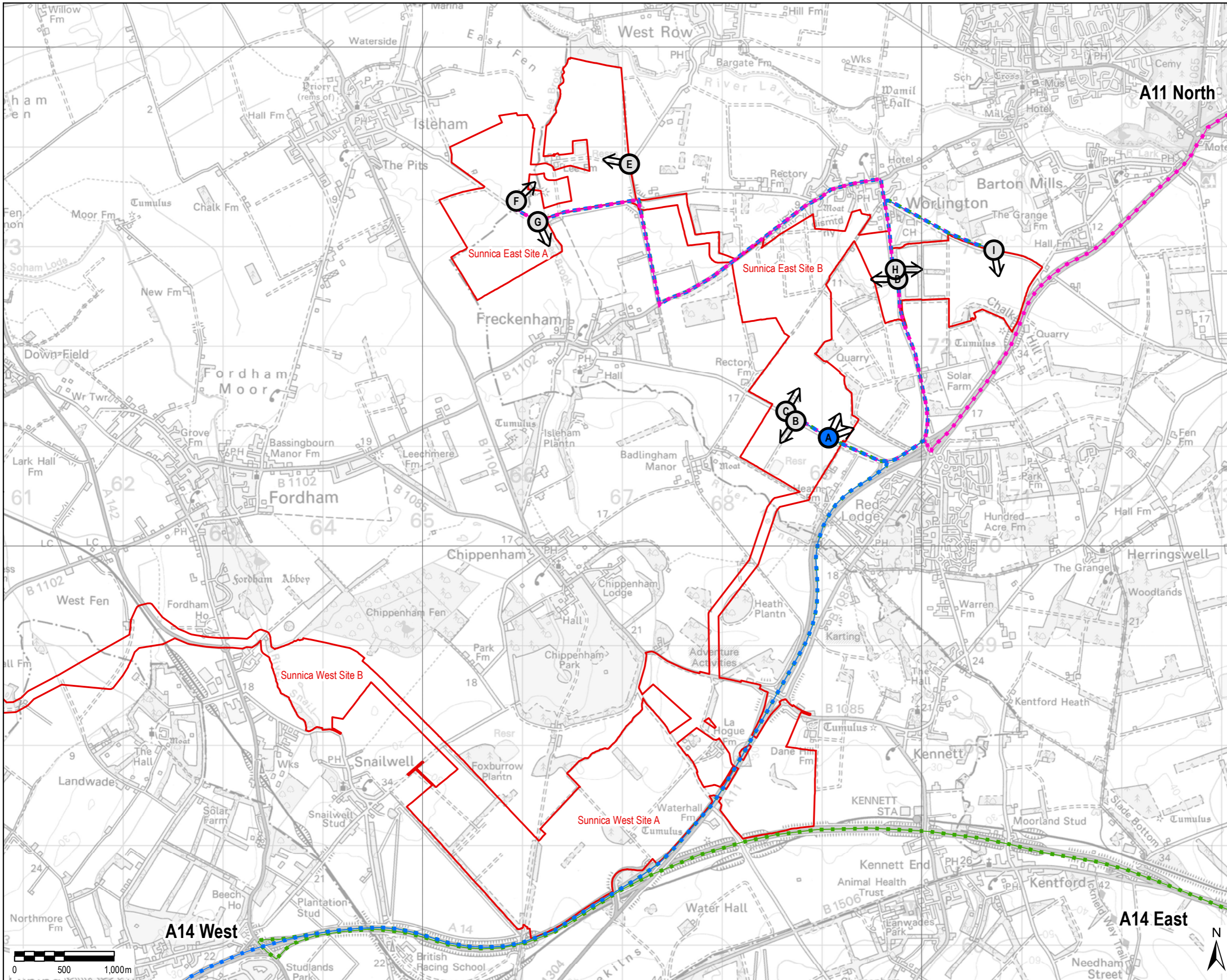
- Beccles
- Bungay
- Claydon
- Coddenham
- Eye
- Gt Waldringfield
- Hadleigh
- Holton
- Leiston
- Palgrave
- Sproughton

Drivers should ensure that the roads concerned are only used when permitted under the Order and seek an alternative route where necessary.

At some locations such as Clare, Lavenham, Coddenham, Stoke by Nayland, Nayland and Benton Street, Hadleigh routes pass through historic villages where drivers should take extra care and where possible avoid

Clopton/Debach area:
^ Northbound route to industrial estate
v Southbound route return to A12

Appendix B – Potential Construction Routes



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LEGEND

- Scheme Boundary
- Access Point**
- ↑ Primary Access
- ↑ Secondary Access
- Sunnica East HGV Inbound**
- A14 E
- A14 W
- A11 N

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Purpose of Issue
TRANSPORT ASSESSMENT

Client
SUNNICA LTD



Drawing Title

**FIGURE 01
HGV INBOUND ROUTE
SUNNICA EAST**

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AECOM Internal Project No. 60589004		Scale @ A3 1:35,000	

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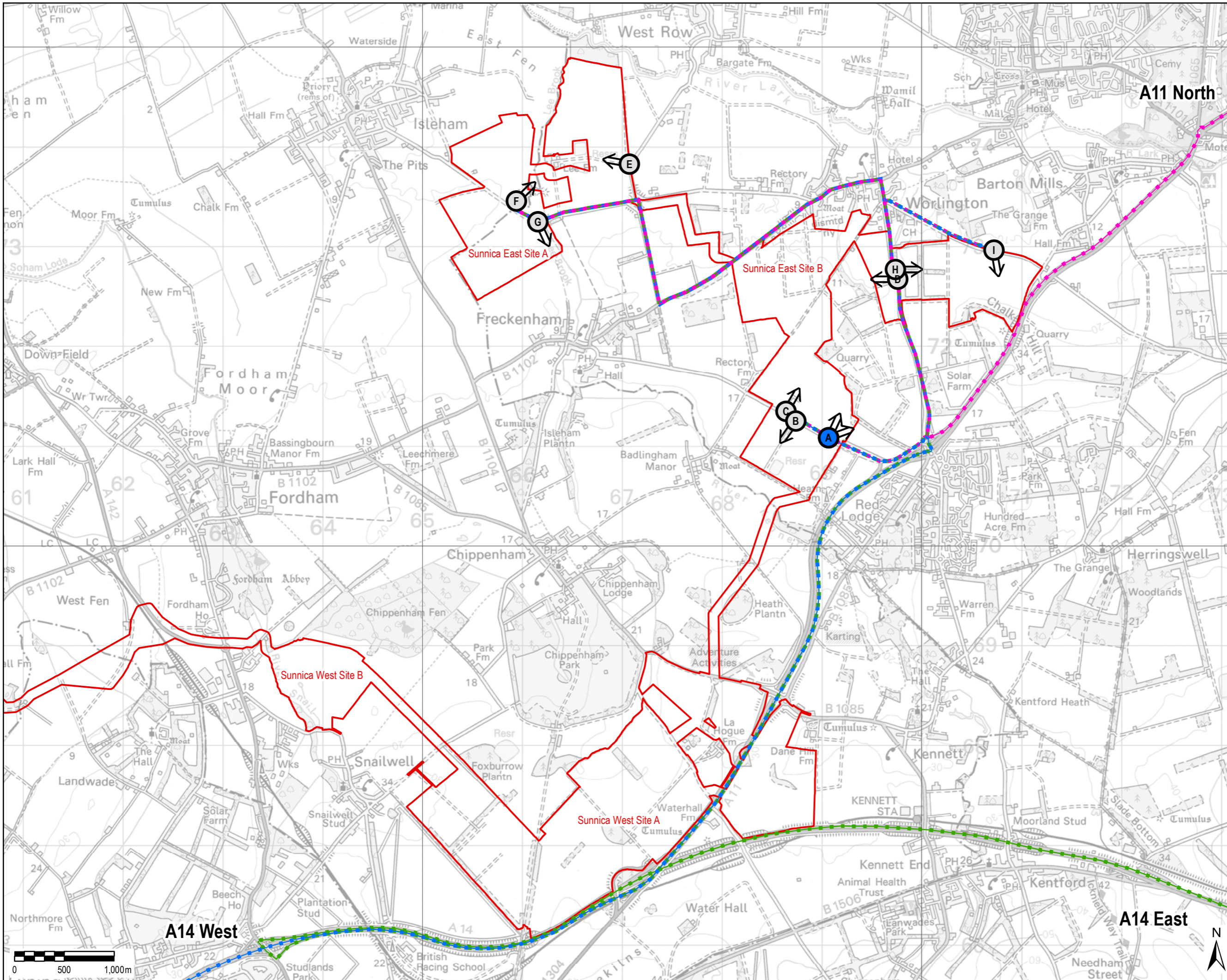
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LEGEND

- Scheme Boundary
- Access Point**
- ↑ Primary Access
- ↑ Secondary Access
- Sunnica East HGV Outbound**
- A14 E
- A14 S
- A11 N

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Drawing Title

**FIGURE 02
HGV OUTBOUND ROUTE
SUNNICA EAST**

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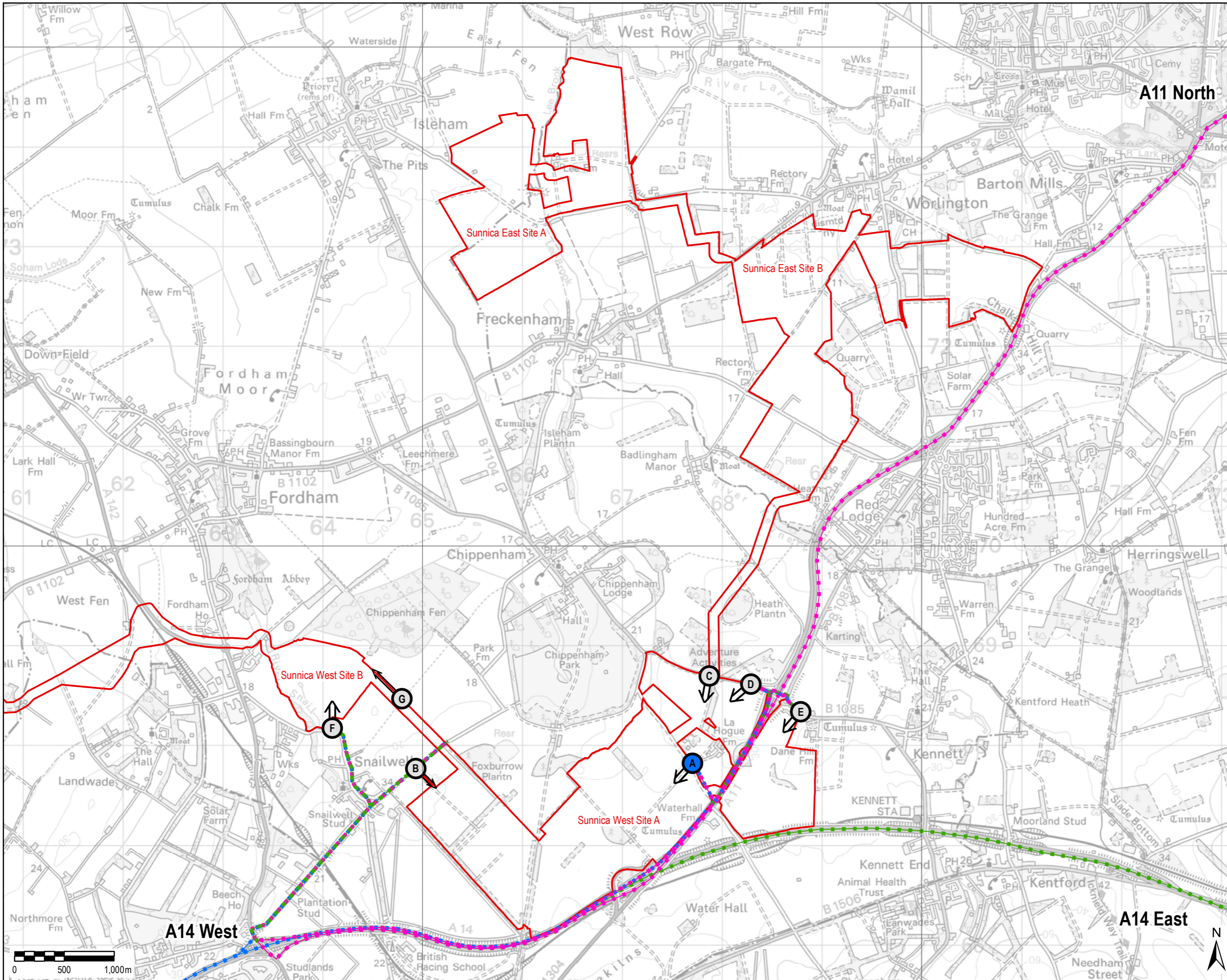
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LEGEND


- Scheme Boundary
- Access Point**
- ↑ Primary Access
- ↑ Secondary Access
- Sunnica West HGV Inbound**
- A14 E
- A14 W
- A11 N

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Project Title



Drawing Title
**FIGURE 03
HGV INBOUND ROUTE
SUNNICA WEST**

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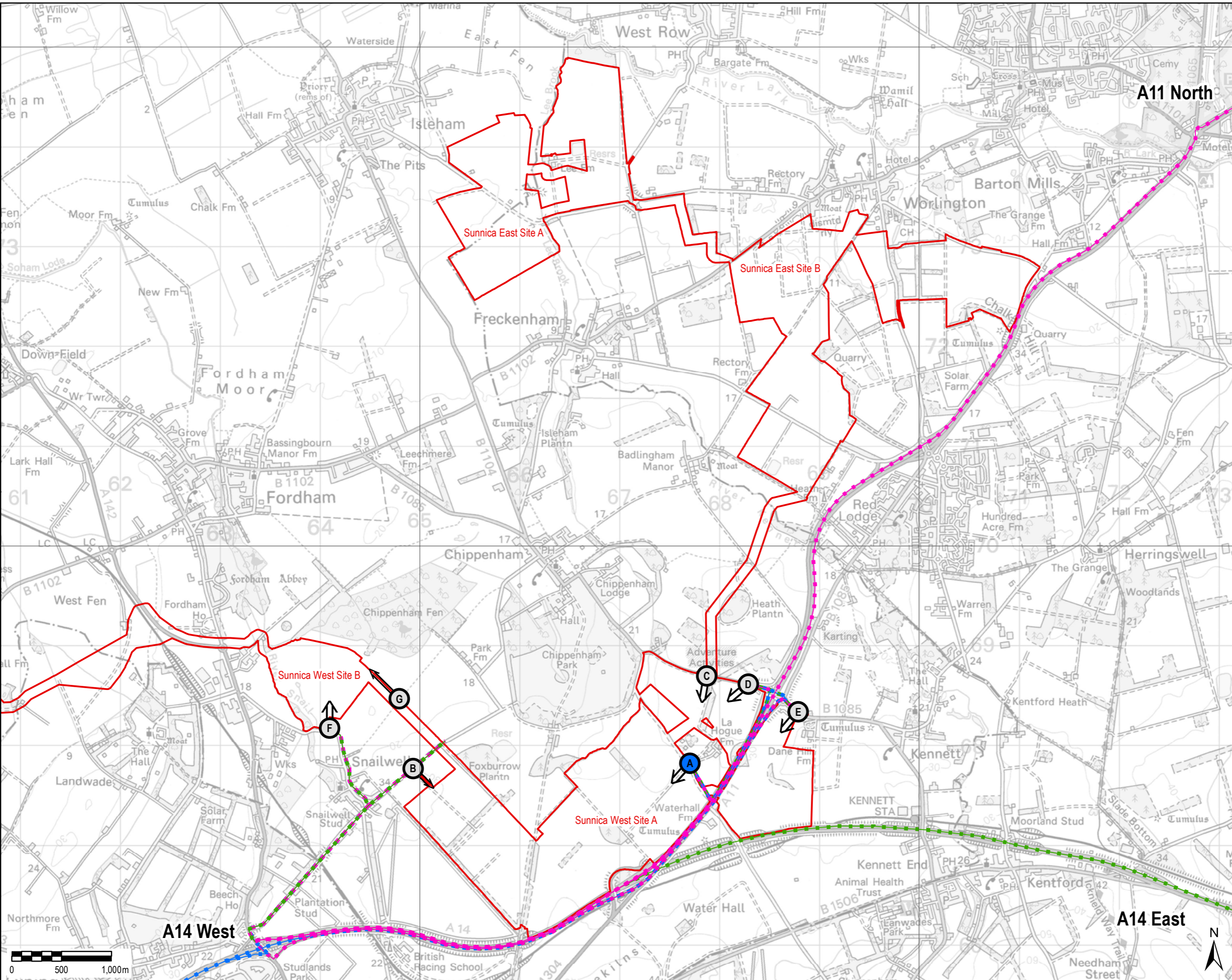
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- LEGEND**
- Scheme Boundary
 - Access Point**
 - ↑ Primary Access
 - ↑ Secondary Access

- Sunnica West HGV Outbound**
- A14 E
 - A14 W
 - A11 N

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Drawing Title

**FIGURE 04
HGV OUTBOUND ROUTE
SUNNICA WEST**

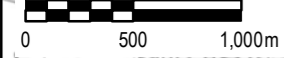
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A14 West

A14 East

A11 North

Sunnica East Site A

Sunnica East Site B

Sunnica West Site B

Sunnica West Site A

F

B

C

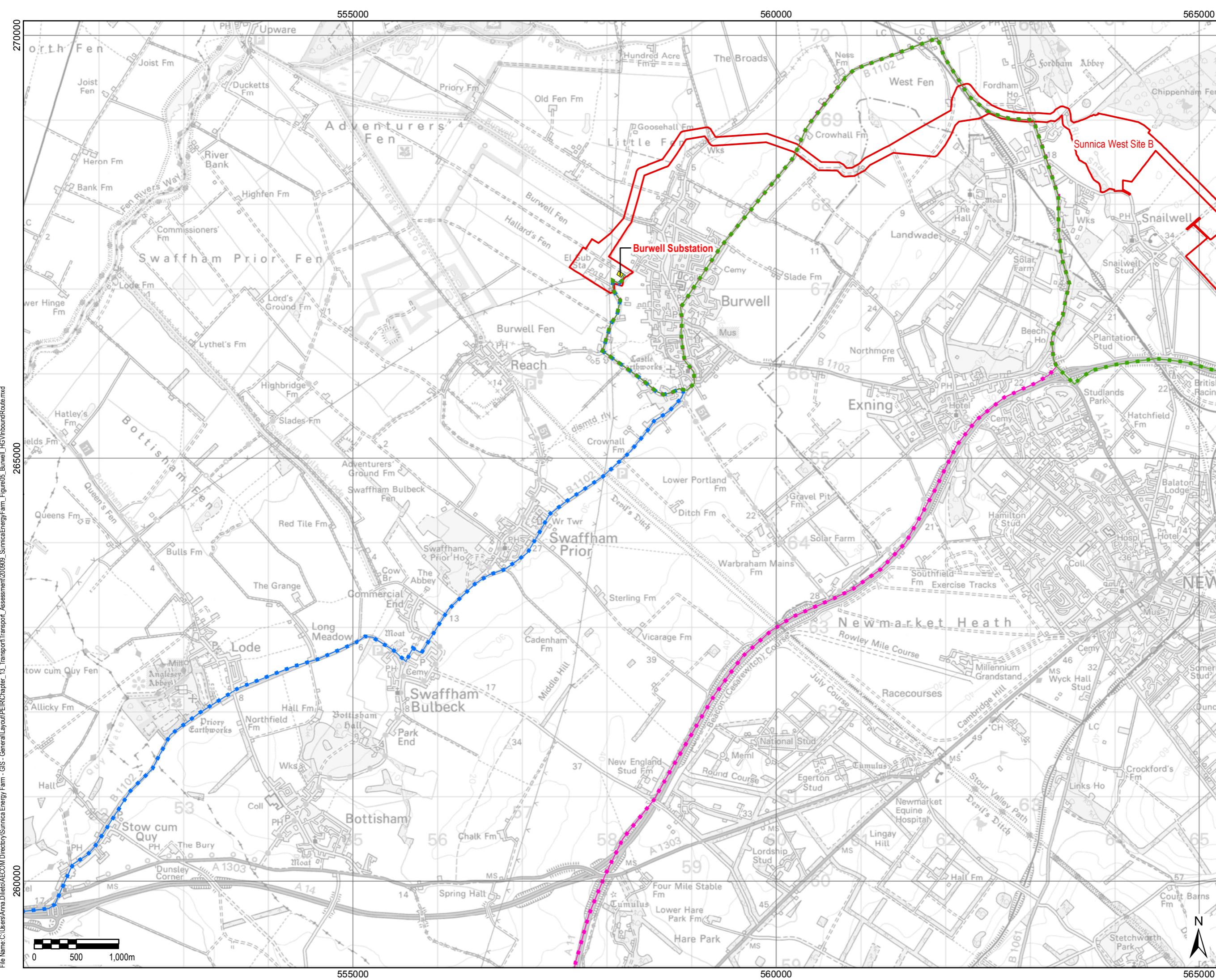
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- LEGEND**
- Scheme Boundary
 - Burwell Substation
 - Burwell HGV Inbound**
 - HGV Routes**
 - - - A11 S
 - - - A14 E
 - - - A14 W

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Client
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**FIGURE 05
HGV INBOUND ROUTE
BURWELL**

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AECOM Internal Project No. 60589004		Scale @ A3 1:40,000	

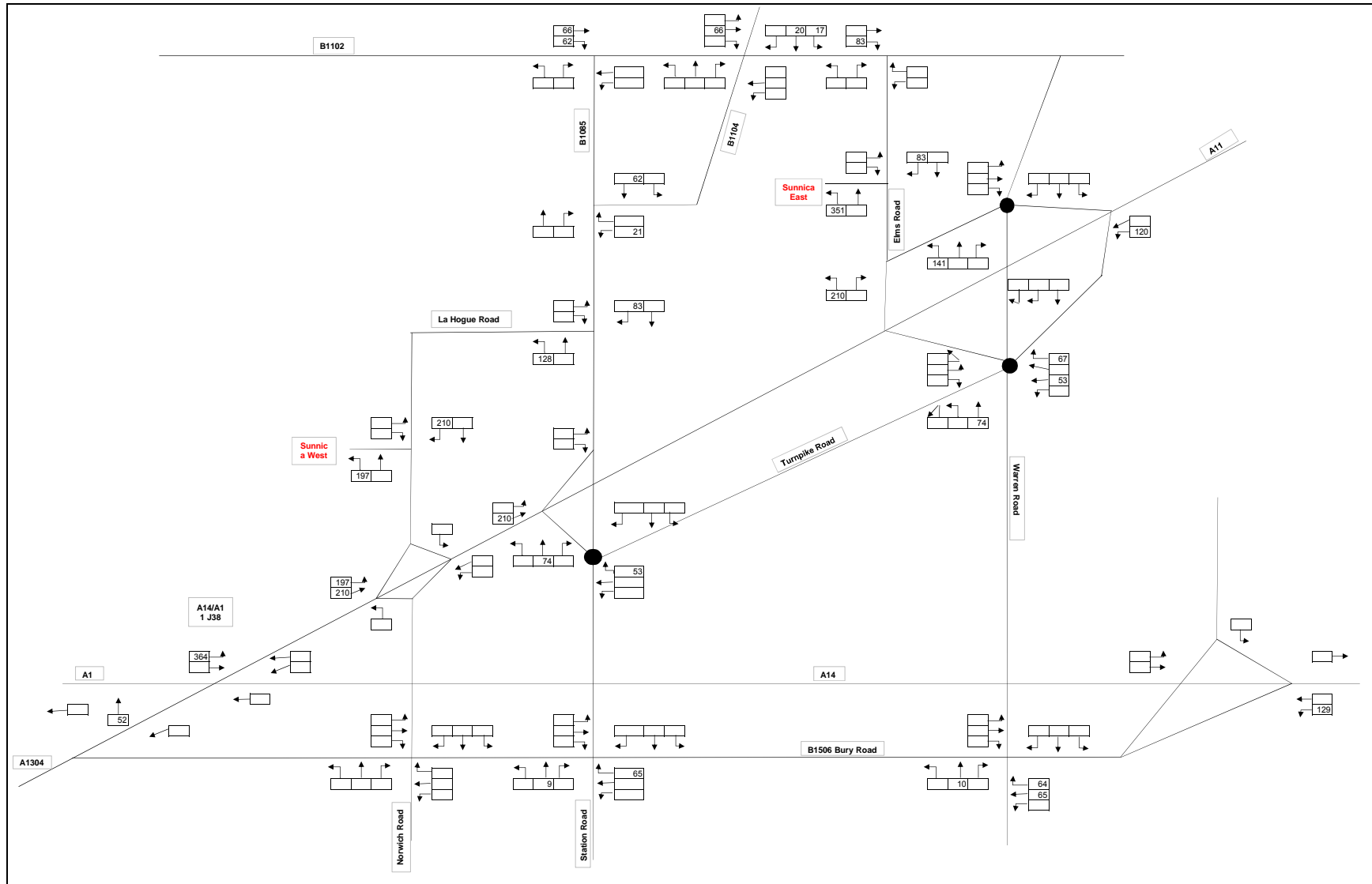
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Appendix I – Construction Staff Vehicle Flow diagrams



Client:
Sunnica Limited

Project:
Sunnica Solar Farm

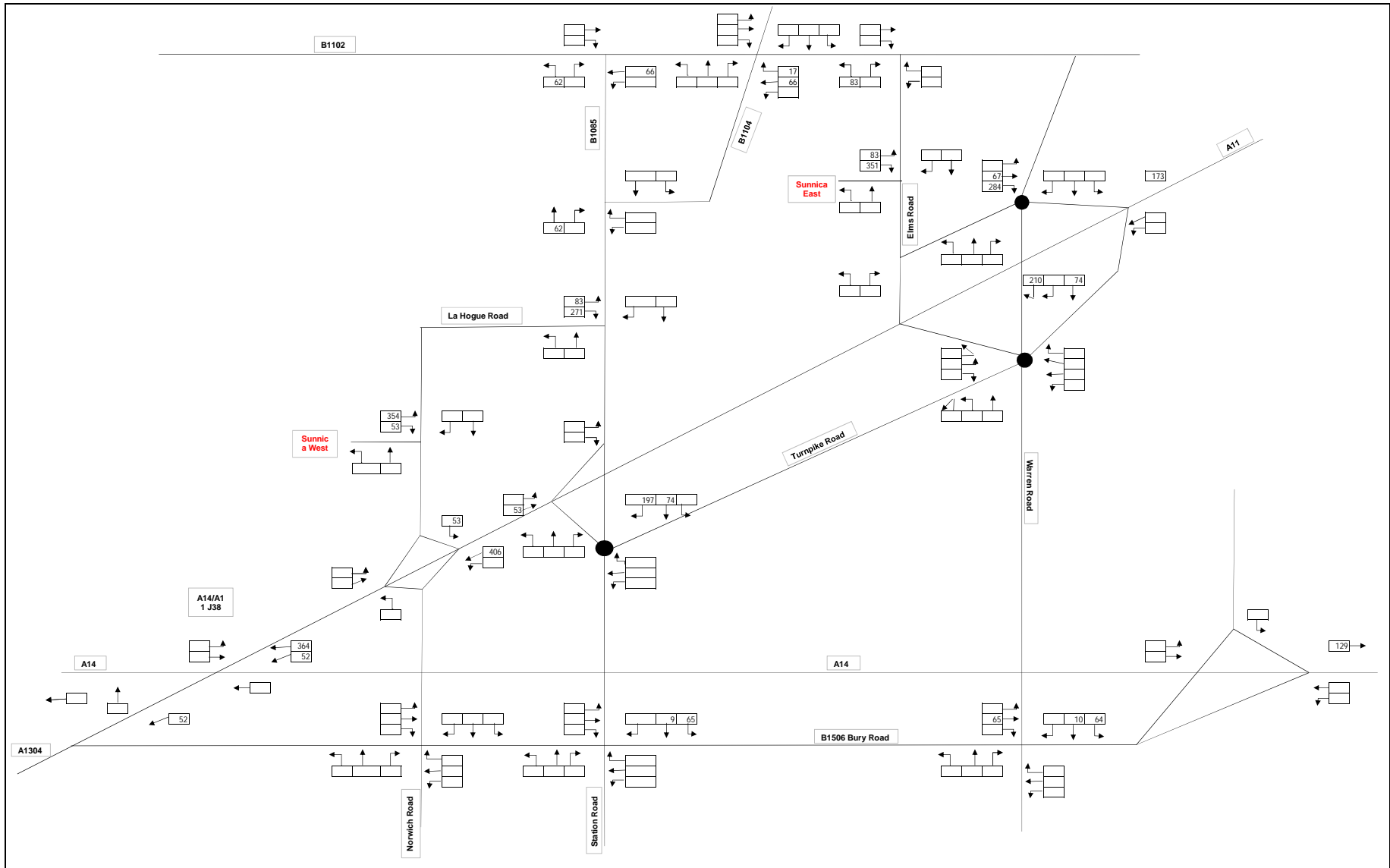
Peak Construction Worker Vehicle Flows Inbound AM Development Peak Hour

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Client:	Sunnica Limited
Project:	Sunnica Solar Farm

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Appendix J – Potential Rights of Way Post-Construction

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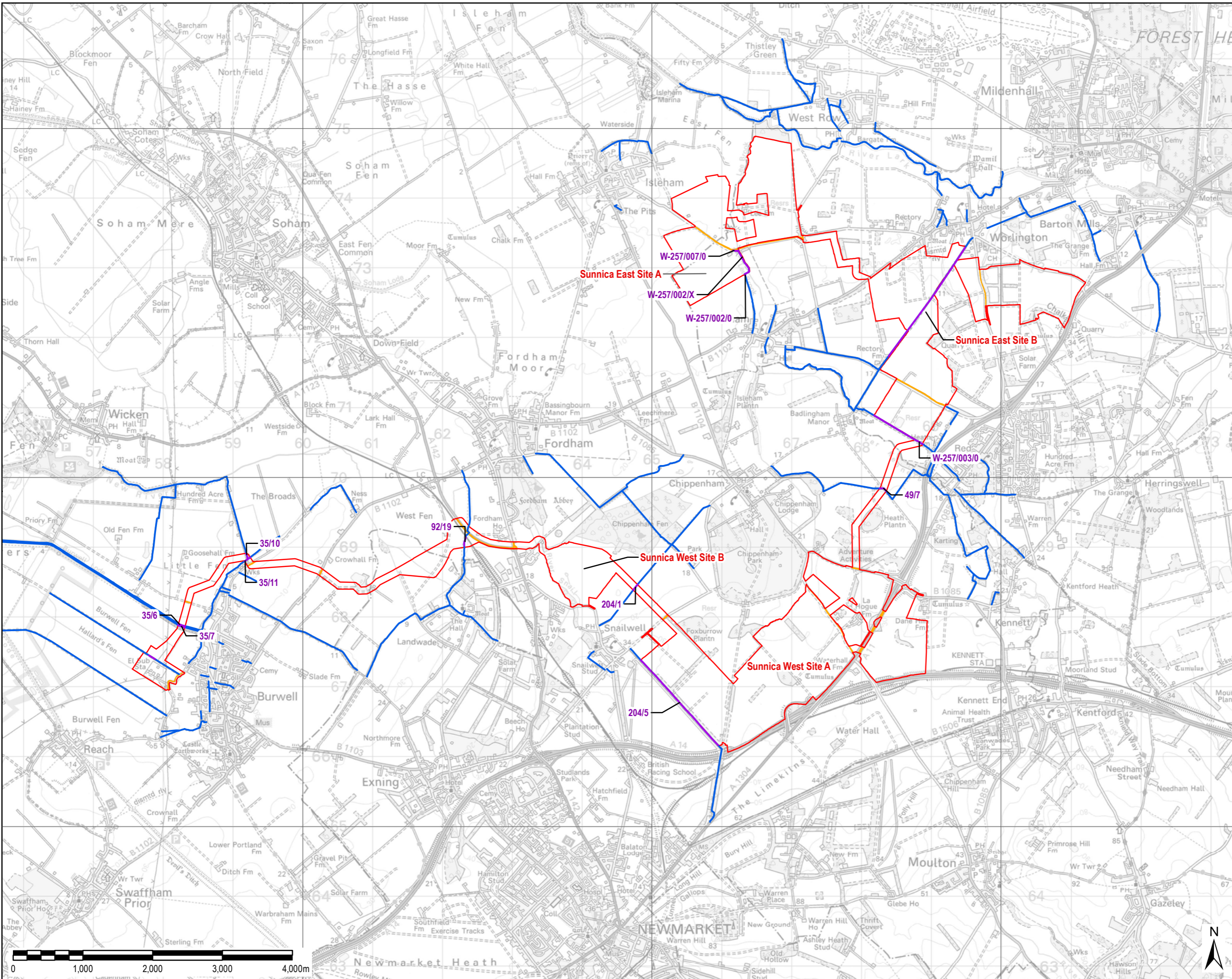
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- LEGEND**
- Scheme Boundary
 - Public Highway within Scheme
 - Existing Public Right of Way
 - Public Right of Way Closed During Construction

NOTE:
Public highways run through the Sunnica East Site, which are not part of the site boundary. These have been digitised based on the 1:1250 scale OS Mastermap.

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Purpose of Issue
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Client
SUNNICA LTD



Drawing Title
**FIGURE 13-2
PUBLIC RIGHTS OF WAY
CLOSED DURING
CONSTRUCTION**

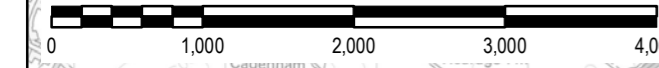
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