SUNNICA ENERGY FARM

EN010106

Volume 6

Environmental Statement

6.1 Chapter 13: Transport and Access

APFP Regulation 5(2)(a)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

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Sunnica Energy Farm

Environmental Statement
Chapter 13: Transport and Access

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13.1 Introduction

13.1.1 This chapter reports the findings of an assessment of the likely significant effects on traffic and transport as a result of the Scheme during construction. The magnitude of change associated with operation and decommissioning have not been assessed within this chapter, as explained in the Transport Chapter of the EIA Scoping Report included in **Appendix 1A** of this Environmental Statement **[EN010106/APP/6.2]**.

13.1.2 The operational life of the Scheme is to be 40 years and decommissioning is therefore estimated to be in 2065. Background traffic flows cannot be accurately forecast over 40 years into the future and therefore the transport impact of the decommissioning phase cannot be accurately assessed. It is not anticipated at this point in time that the impacts associated with decommissioning would be worse than during the construction period.

13.1.3 A Framework Decommissioning Environmental Management Plan (DEMP) has been prepared and is presented in **Appendix 16E** of this Environmental Statement **[EN010106/APP/6.2]** which provides the outline mitigation measures to be adhered to during decommissioning. This requires the production of a Decommissioning Traffic Management Plan (DTMP) and a Decommissioning Worker Travel Plan (DWTP) which will be similar in structure and contain similar measures as those set out in **Appendix 13C: Framework Construction Traffic Management Plan (CTMP) and Travel Plan (TP)** of this Environmental Statement **[EN010106/APP/6.2]**. This will be prepared and finalised prior to the decommissioning phase.

13.1.4 The operation phase was scoped out during scoping stage due to the low number of forecast operational staff. On this basis, as the construction period is considered to have the greatest change on the surrounding transport network, only the construction phase has been assessed.

13.1.5 The assessment has been undertaken with reference to relevant policy and guidance documents outlined below. In addition, a separate Transport Assessment (TA), included in in **Appendix 13B** of this Environmental Statement **[EN010106/APP/6.2],** has been undertaken that considers the general potential transport impacts of the Scheme. Where relevant, the TA report is cross-referenced within this chapter.

13.1.6 This chapter is supported by the following figures **[EN010106/APP/6.3]**:

a. Figure 13-1: Existing Public Rights of Way.
b. Figure 13-2: Public Rights of Way Affected During Construction.
c. Figure 13-3: Public Rights of Way Post-Construction.
d. Figure 13-4: Sunnica East A and B Site Access Locations.
e. Figure 13-5: Sunnica West A and B Site Access Locations.
f. Figure 13-6: Grid Connection Route A and B Site Access Locations 1.
g. Figure 13-7: Grid Connection Route A and B Site Access Locations 2.

h. Figure 13-8: Grid Connection Route A and B Site Access Locations 3.

i. Figure 13-9: Grid Connection Route A and B Site Access Locations 4.

13.2 Legislation and Planning Policy

13.2.1 **Appendix 13A** of this Environmental Statement **[EN010106/APP/6.2]** identifies the legislation, policy, and guidance of relevance to the assessment of significant transport effects of the Scheme.

13.3 Assessment Assumptions and Limitations

13.3.1 The following assumptions and limitations are reflected in this assessment:

a. The global pandemic disrupted the normal traffic flows and patterns on the UK road network, preventing traffic count surveys for this ES. Therefore, no traffic surveys have been undertaken on the local highway network in 2020 or 2021 to obtain baseline flows for total vehicles and Heavy Goods Vehicles (HGVs). The most recent traffic surveys were undertaken on the local highway network in 2016, 2017, and 2018. This traffic data is from local planning applications and the Local Plan evidence base as set out in 'Forest Heath District Council Site Allocation Plan Cumulative Impact Study' document (August 2016) (Ref 13-2). TEMPro growth factors were applied to the traffic survey data to account for regional traffic growth in the intervening period between surveys and assessment year. The use of the Forest Heath District Council Site Allocation Plan Cumulative Impact Study data and approach was agreed with both Suffolk County Council (SCC) and Cambridgeshire County Council (CCC), and National Highways (formerly Highways England) during scoping discussions and set out in the scoping opinions responses. Further detail can be found in section 3.4 of **Appendix 13B: Transport Assessment** of this Environmental Statement **[EN010106/APP/6.2]** which includes a comparison of 2019 and 2020 traffic survey data and discusses the appropriateness of the historic traffic survey data. It was also confirmed by SCC and CCC that undertaking traffic surveys was not appropriate given the impact of the coronavirus pandemic on traffic flows during a meeting on 25th March 2021.

b. The baseline traffic data includes the following locations which are also identified later on in this section:

i Various locations on the A11 in close proximity to the Order Limits;
ii Various locations on the A14 in close proximity to the Order Limits;
iii Red Lodge Dumbbell Roundabouts;
iv Herringswell Road/Bury Road/Gazeley Road Junction;
v B1102 Mildenhall Road/B1085 Chippenham Road Junction;
vi B1085 Chippenham Road/B1085 High Street/B1104 Junction;
vii B1105 Station Road/B1102 Junction;
viii Dane Hill /Turnpike Road Roundabout
ix A142 Snailwell Road/Landwade Road Roundabout; and
x A14 J37.

c. No baseline data was available regarding the local pedestrian and cycle usage. Given the nature of the local routes and area, it is expected the pedestrian and cycle flows to be generally low.

13.3.2 Notwithstanding the limitations regarding traffic data, it is considered the methodology and conclusions to this chapter are robust for where baseline traffic data was available. Where baseline traffic data was unavailable, professional judgement has been applied to form a conclusion, as detailed within the Transport Assessment.

13.3.3 It is acknowledged that there is a gap in the traffic survey data along La Hogue Road for Sunnica West Site A and also on Elms Road along the section to the north-west of the A11/Elms Road T-Junction for Sunnica East Site A. There is also no traffic survey data available for Freckenham Road between Freckenham and Worlington for HGVs to/from Sunnica East Site A. No traffic survey data was available to the west of the A142 along Route Connection A (between the A142 and Burwell), however there is a low number of forecast HGVs and staff along this section of the Scheme.

13.3.4 The construction impacts have been assessed based on a 24-month construction programme. This is the Applicant's target and represents the shortest realistic construction period with the Scheme constructed concurrently, which will therefore generate the highest peak numbers of road traffic trips and on-site construction activities needed to achieve this. Should the construction period be slightly longer, the effects would be extended in duration but would be expected to be the lower in magnitude. The assessment of the construction of 24 months is worst case and any extension or phased construction would be the same or lesser in terms of the effects. The construction of the Grid Connection Route A and B and the Burwell National Grid Substation Extension are assumed to occur in the early phase of the construction period and provides a worst-case assessment of the forecast maximum trip generation in relation to staff vehicles and HGVs. The conclusions of the construction impact assessment would therefore remain valid and represents the worst-case situation. Further information is provided within chapter 5 of **Appendix 13B: Transport Assessment** of this Environmental Statement **[EN010106/APP/6.2]** regarding trip generation, distribution and assignment of HGVs and staff vehicles.

13.3.5 There is also the possibility that the Battery Energy Storage System (BESS) may be built in phases throughout the life of the Scheme as the need arises. Should the BESS be built in phases then associated vehicle trips would be also introduced in phases. From a traffic and transport perspective it is therefore worse to assume that the Scheme is built out in full prior to operation, which has been the basis of the assessment.

13.4 Assessment Methodology

13.4.1 This section of the chapter presents the following:

a. Identification of the information sources that have been consulted throughout preparation of this chapter;

b. The methodology behind the assessment of traffic and transport effects, including the criteria for the determination of the sensitivity of the receptor and the magnitude of change from the baseline condition;

c. An explanation as to how the identification and assessment of potential traffic and transport effects has been reached; and

d. The significance criteria and terminology for assessment of the residual effects to traffic and transport.

Study Area

13.4.2 To determine the study area beyond the proposed Order Limits, for the purposes of assessing effects on vehicle travellers, reference has been made to the IEMA Guidelines (Ref 13-1) which provides guidance on examining the environmental effects of a development in terms of traffic and transportation. The study area has been identified to cover a broad area surrounding the Order limits which includes the likely area for significant effects to occur, with the inclusion of available traffic data on the strategic and local highway networks.

13.4.3 The study area was identified through information provided by the Applicant which anticipates that staff will be sourced from within a 30km radius of the Order limits. Geographical Information Software (GIS) was used to determine any part of a Middle Super Output Area (MSOA) located within a 30km radius of the Order limits. Given the extent the area the MSOAs cover, this is approximately a 45 minutes' drive from the Scheme, which is consistent with **Chapter 12: Socio-Economics and Land Use** of this Environmental Statement **[EN010106/APP/6.1]**, which applies a 45 minutes' travel study area.

13.4.4 The IEMA guidelines (Ref 13-1) sets out two rules in identifying potential links for analysis:

a. **Rule 1**: include highway links where traffic flows will increase by more than 30% (or the number of HGVs will increase by more than 30%); and

b. **Rule 2**: include any other specifically sensitive areas (e.g. accident black spots, conservation areas, hospitals, links with high pedestrian flows etc) where traffic flows have increased by 10% or more.

13.4.5 Based on this, for links where baseline traffic data was available, links where the traffic flows increase by 30% or more within the AM and PM Scheme peak hours as a result of the construction of the Scheme in 2023 have been assessed within this chapter and are set out in paragraph 13.4.5. The peak construction year of the Scheme for traffic is forecast to be 2023, as the forecast peak number of trips occur in the early stages of the project programme. The AM and PM Scheme peak hours assessed are 06:00 to 07:00 and 19:00 to 20:00 respectively which reflects the arrival and departure times of the staff. These hours represent the Scheme peaks and not the road network peaks. This represents a worst-case approach in relation to percentage impact as the percentage increase over the baseline will be greatest during these hours as the background traffic flows would be lower than the network peak hours. Where baseline traffic data is unavailable professional judgement is applied based on the development

trip generation and likely impact. The development peak hours plus Scheme vehicles have also been compared to the network peak hours and the percentage difference identified for the links where Scheme vehicles are forecast, with the absolute vehicle difference and percentage difference identified.

13.4.6 The analysis identified the following links to be included in the study area:

a. A11 southbound off-slip at Red Lodge;
b. A11 southbound on-slip at Red Lodge;
c. A11 northbound off-slip / Elms Road T-junction;
d. Elms Road;
e. B1102 Mildenhall Road (West);
f. B1104 Station Road;
g. B1102 Fordham Road;
h. B1102 Mildenhall Road (East);
i. B1085 Chippenham Road;
j. B1104 (between B1102 Mildenhall Road and B1085 Chippenham Road);
k. B1085 High Street;
l. B1085;
m. La Hogue Road;
n. B1085 Dane Hill Road;
o. Newmarket Road;
p. Warren Road;
q. B1085 Turnpike Road;
r. B1506 Bury Road;
s. B1085 Station Road;
t. B1085 Moulton Road;
u. Herringswell Road;
v. Gazeley Road;
w. A142;
x. Snailwell Road; and
y. Landwade Road.

13.4.7 The A14 Junction 38 is included within the study area and the forecast staff and HGV trips are identified. However, given the arrangement of the junction consists of free flow slip roads and the merge/diverge nature of the junction, capacity modelling cannot be undertaken. At the initial scoping it was not considered there is an existing capacity issue which could be

exacerbated with the forecast vehicles associated with the Scheme, and therefore this is not considered an omission.

Sources of Information

13.4.8 To inform the assessment of the Scheme, information from a number of sources has been used. The sources which have been used are set out below.

a. Personal Injury Collision (PIC) data from Suffolk County Council (SCC) and Cambridgeshire County Council (CCC);

b. Average car occupancy from the Sizewell DCO application which includes information from the Hinkley Point C Power Station development;

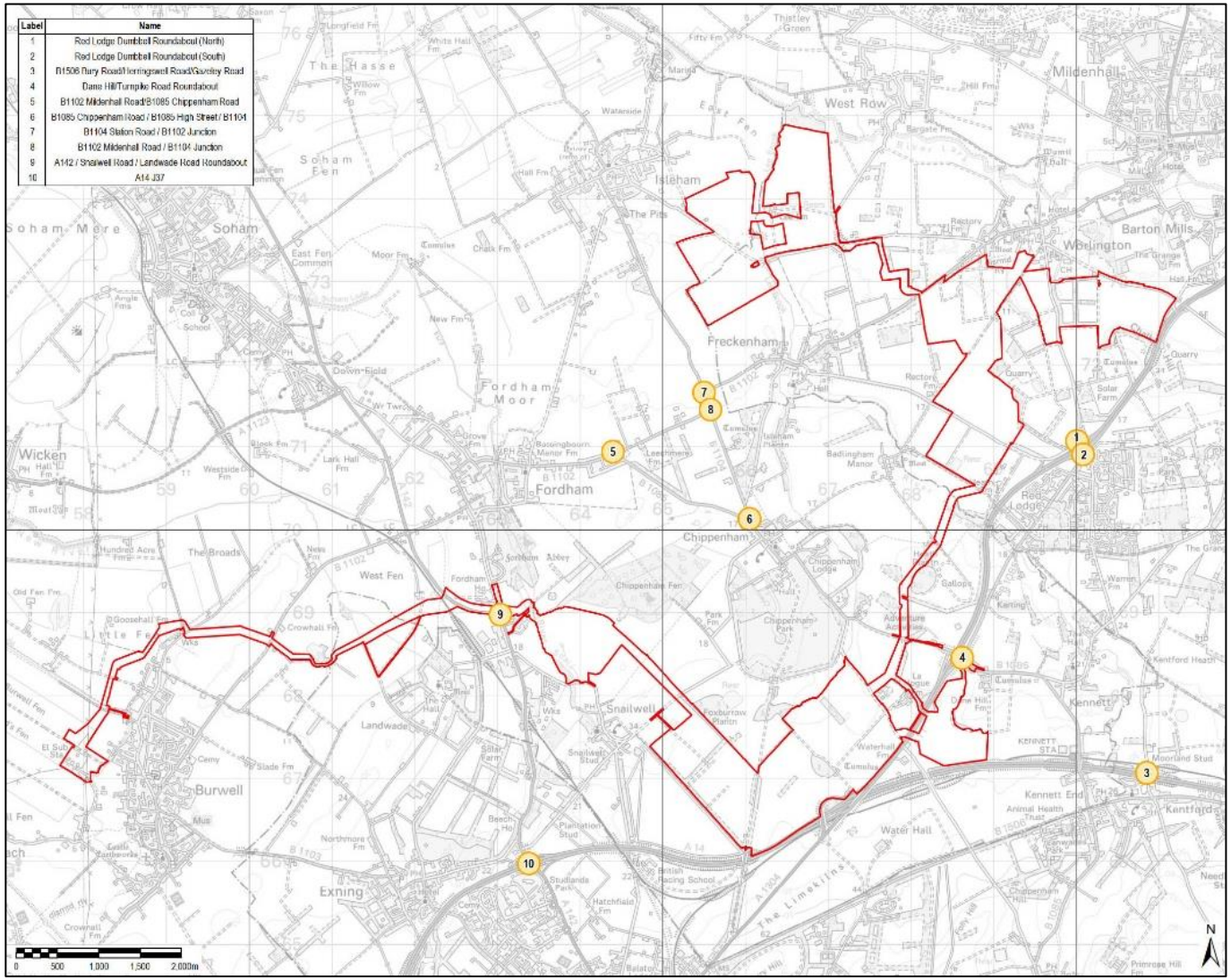
c. WebTRIS Traffic Data for roads under the control of National Highways including the A14 and A11; and

d. Local traffic data sources, including the following:

   i The 'Forest Heath District Council Site Allocation Plan Cumulative Impact Study' document (August 2016) (Ref 13-2) for traffic data at the Dane Hill/Turnpike Roundabout;
   ii Planning Application DC/18/0628/HYB for traffic survey data in 2017 for the Red Lodge Dumbbell Roundabouts and the Herringswell Road/Bury Road/Gazeley road junction;
   iii Planning Application 17/00880/OUM for traffic survey data in 2017 at the A142/Snailwell Road/Landwade Road Roundabout and the A14 J37 Junction;
   iv Planning Application 19/00376/OUM for traffic survey data in 2018 at the B1102 Mildenhall Road/B1085 Chippenham Road junction, B1085 Chippenham Road/B1104 Junction and B1105/B1102 junction; and
   v Speed surveys undertaken in September and October 2021 by a specialist survey company across 16 locations.

13.4.9 The locations of the available traffic data for the local highway network are shown in **Plate 13-1**.

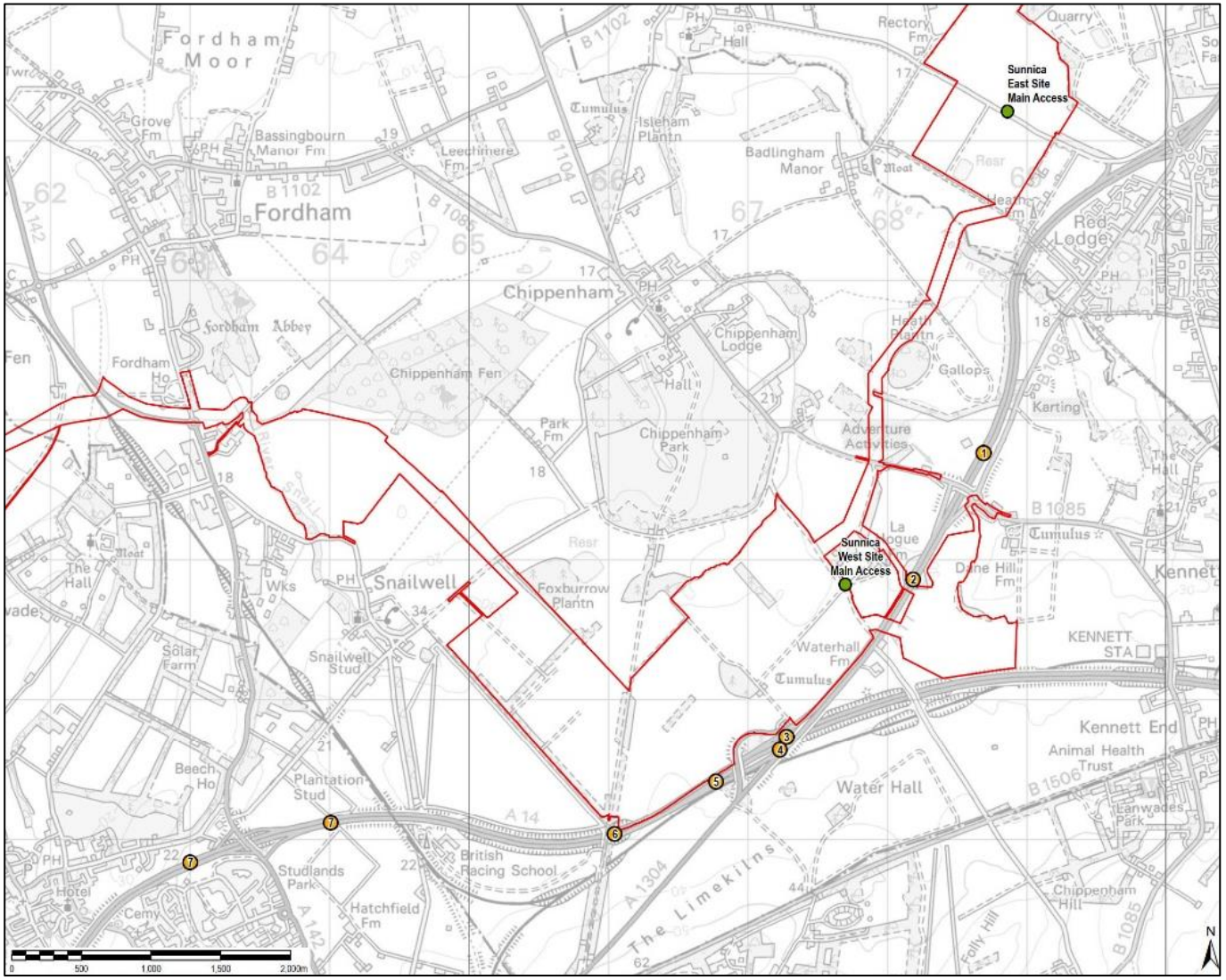
Plate 13-1: Local Traffic Data Locations



13.4.10 Due to the rural location of the Scheme, it has been assumed that the majority of staff will drive or be a vehicle passenger to / from the Order limits, for the purpose of a robust assessment. For the purpose of this assessment, it is assumed that the staff vehicles will have an average vehicle occupancy of 1.5 persons. This is based on the TA for the Sizewell C Project DCO application (May 2020) and also the Hinkley Point C Power Station which is a consented development under construction. As part of the ongoing monitoring an assessment during the early stages of construction of Hinkley Point C Power Station was carried out to identify a staff person per vehicle factor. As part of the Sizewell C DCO application, which is located within Suffolk, information is contained within Appendix 7B of the Consolidated TA regarding the Hinkley Point C car sharing factor calculation. The outcome of the monitoring identified a car share factor of 1.54 which was used within the Sizewell C DCO TA and was subsequently accepted by SCC. It is expected that the level of staff vehicle occupancy will be monitored and managed as set out in the Framework CTMP and TP document.

13.4.11 The WebTRIS dataset was utilised to obtain 2019 traffic flows for those roads under control of National Highways, which includes the A11 and A14 in close proximity to the Order Limits. **Plate 3-2** identifies the WebTRIS data locations utilised to obtain baseline traffic flows on the A11 and A14.

Plate 13-2: WebTRIS Data Locations



13.4.12 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 network peak hours of 08:00 to 09:00 and 17:00 to 18:00 and for the Scheme peak hours of 06:00 to 07:00 and 19:00 to 20:00. This data is still considered the most relevant given September is a neutral month and occurred before the start of the coronavirus pandemic and subsequent national and local lockdowns which have impacted traffic flows. The average Monday to Friday 12-hour traffic flows (07:00 to 19:00) have been obtained from WebTRIS. Further information regarding the WebTRIS traffic data is provided in **Appendix 13B: Transport Assessment** of this Environmental Statement **[EN010106/APP/6.2]**. The weekday peaks are expected to have higher traffic flows than the Saturday peaks and therefore represent a worst-case scenario in relation to the operation of links and junctions.

13.4.13 The 2019 baseline traffic flows for the local highway network have been taken from the 'Forest Heath District Council Site Allocation Plan Cumulative Impact Study' document (August 2016) (Ref 13-2) for the Forest Heath Local Plan assessment and also from the three planning applications. Further information regarding the local highway traffic data is provided in the **Appendix 13B: Transport Assessment** of this Environmental Statement **[EN010106/APP/6.2]**.

Assessment Methodology

13.4.14 The methodology used when assessing the potential transportation magnitude of change of the proposed Scheme on Vehicle Travellers, Non-Motorised Users (NMU) and Public Transport Users has been based on IEMA guidance (Ref 13-1) in combination with professional judgement in relation to the number of forecast staff vehicles and the characteristics of the link and receptors.

13.4.15 In accordance with the IEMA guidance (Ref 13-1) for assessing the environmental impacts of road traffic, the following criteria has been considered in this assessment:

a. Severance;
b. Driver delay;
c. Pedestrian delay;
d. Pedestrian and cyclist amenity;
e. Fear and Intimidation;
f. Accidents and safety; and
g. Hazardous loads.

13.4.16 The significance of effect is determined through consideration of two elements: the magnitude of change and the sensitivity of the receptor. The following sections outline the approach that has been used to determine these factors.

13.4.17 The methodology generally follows that identified in **Chapter 5: EIA Methodology** of this Environmental Statement **[EN010106/APP/6.1]** and identifies both the sensitivity of receptor and the magnitude of change, with the relationship of these two variables allowing the identification of the significance of effect, in line with **Table 13-1**. However, in some cases it has been necessary to consider potential effects across the Order limits as a whole or use professional judgment to consider the effects qualitatively. Where this was the case, it is identified in the analysis.

13.4.18 The overall effect will be determined by measuring the magnitude of change against criteria including: the type and sensitivity of the receptor; and the type of change. Magnitude of change is defined as beneficial or adverse, with effects further defined using the following classifications identified in the guidance:

a. **Negligible** – very little change, approximating to a no change situation;
b. **Minor** – slight, very short, or highly localised change of no significant effect;
c. **Moderate** – limited change (by extent, duration or magnitude) which may be considered significant; and
d. **Major** – considerable change (by extent, duration or magnitude) of more than local significance, or in breach of recognised acceptability, legislation, policy or standards.

13.4.19 The IEMA guidelines (Ref 13-1) state that the magnitude of each change should be determined as the predicted deviation from the baseline conditions. This will be done for the construction phase, as the operational effects have been scoped out and the decommissioning phase is expected to be no worse than the construction phase.

13.4.20 The IEMA guidelines (Ref 13-1) suggest that junction assessments are undertaken to assess **Driver Delay**. However, junction assessments are not considered necessary in this case given the arrival and departure times of staff will be outside the AM and PM network peak hours. Driver Delay has been determined through the analysis of the changes in traffic flows compared to the baseline traffic flows which is contained within the TA. As outlined in the IEMA guidance, increases in traffic flows of 30%, 60% and 90% have been considered to result in a minor, moderate and major change in relation to the development peak hours (06:00-0700 and 19:00-20:00) and also the network peak hours (08:00-09:00 and 17:00-18:00). Where the traffic flow increase is less than 30% it is considered to result in a very low change. On links where baseline traffic data was unavailable professional judgement has been used to assess the significance of change based on the number of additional vehicles. This is considered to be applicable to all modes of transport using the public highway, namely cars, motorcycles, pedal cycles and buses.

13.4.21 **Severance** is defined in the guidelines (Ref 13-1) as the *"perceived division that can occur within a community when it becomes separated by a major traffic artery".* The term is used to describe a complex series of factors that separate people from places and other people. Severance may result from

the difficulty of crossing a heavily trafficked road or a physical barrier created by the road itself. It can also relate to quite minor traffic flows if they impede pedestrian access to essential facilities. IEMA guidelines (Ref 13-1) suggest that a 30%, 60% and 90% increase in traffic flows will result in a minor, moderate and major change in severance respectively, as outlined in the IEMA guidance.

13.4.22 **Pedestrian and Cycle Delay** is considered to be affected by the changes in volume, composition or speed of traffic, in terms of their respective changes on the ability of people to cross the roads. In general, increases in traffic levels and/or traffic speeds are likely to lead to greater increases in pedestrian delay. IEMA guidelines (Ref 13-1) suggest that a 30%, 60% and 90% increase in traffic flows will result in a minor, moderate and major change in pedestrian and cycle delay respectively, as outlined in the IEMA guidance.

13.4.23 **Pedestrian and Cycle Amenity** is broadly defined as "*the relative pleasantness of a journey, and is considered to be affected by traffic flow, traffic composition and pavement width / separation from traffic*". The guidance suggests that a tentative threshold for judging the significance of changes in pedestrian and cycle amenity would be where the traffic flow is halved or doubled. However, to be consistent with the pedestrian and cycle delay assessment, the 30%, 60% and 90% increase in traffic flows has been applied which will result in a minor, moderate, and major change.

13.4.24 **Fear and Intimidation** is "*dependent on the volume of traffic, its HGV composition, and its proximity to people or the lack of protection caused by such factors as narrow pavement widths*". The guidance (Ref 13-1) suggests that an average hourly vehicle flow over an 18-hour day of 600-1200 vehicles has a moderate change upon fear and intimidation, 1200-1800 vehicles a great change, and above 1800 vehicles an extreme change. Outlined in the IEMA guidance, consideration has also been given specifically to HGV flows, with a 30%, 60% and 90% increase in HGV flows considered to result in a minor, moderate and major change respectively. The assessment also qualitatively considers the changes of other relevant factors such as speed, proportion of vulnerable road users, footway widths, lighting and security measures (e.g. CCTV).

13.4.25 In terms of **driver delay**, in the absence of junction assessments and volume to capacity (V/C) information, the sensitivity of highway links is based on the road hierarchy and professional judgement:

a. **Very Low** – local roads intended for local traffic;
b. **Low Sensitivity** – main distributor and secondary distributor roads;
c. **Medium Sensitivity** – primary roads; and
d. **High Sensitivity** – trunk roads.

13.4.26 In terms of **Severance**, **Pedestrian Delay**, **Pedestrian / Cycle Amenity** and **Fear and Intimidation**, the walking and cycling links which are local to the Scheme will be used as receptors. Non-Motorised Users (NMUs) include pedestrians, cyclists and horse-riders. For the construction changes,

the sensitivity of pedestrian routes and cycle routes is based on a qualitative assessment of the 2019 baseline scenario, taking into consideration the importance and attractiveness of the route and the destinations served, the categories of sensitivity have been defined as follows:

a. **Very Low** – Rural road with no pedestrian / cycle facilities provided;
b. **Low Sensitivity** – Strategic vehicular route in a rural setting with pedestrian / cycle facilities;
c. **Medium Sensitivity** – Main vehicular route with pedestrian / cycle facilities provided in built up area; and
d. **High Sensitivity** – Lightly trafficked route provided in a town/village centre setting.

13.4.27 In order to identify the impact on links in the local area for the criteria outlined above the following has been considered for staff vehicle trip generation, distribution and assignment. The Applicant has provided the forecast trip generation for the number of staff and HGVs. As the location of the staff residences is unknown at this point, the Applicant anticipates that staff will be sourced from within a 30km radius of the Order limits. The assessment for the staff vehicle distribution has been based on using GIS Software GIS to determine any part of a MSOA from the 2011 Census data that are located within a 30km radius of the Order Limits. Given the extent the area the MSOAs cover, this is approximately a 45 minutes' drive from the Scheme, which is consistent with **Chapter 12: Socio-Economics and Land Use** of this Environmental Statement **[EN010106/APP/6.1]** which applied a 45 minutes' travel study area. The staff traffic has been distributed using the proportions of the population located within each MSOA as outlined in section 5 of **Appendix 13B: Transport Assessment** of this Environmental Statement **[EN010106/APP/6.2]**. Staff will be required to park their vehicles at one of the two centralised car parking zones. Route planning software has been used to determine the likely routes that will be taken by staff to and from the two centralised car parking zones. Through the measures outlined in section 6 of the Framework CTMP and TP (in **Appendix 13C** of this Environmental Statement **[EN010106/APP/6.2]**) staff will be directed to avoid using the local roads through the surrounding residential areas and directed to use the SRN such as the A11, A14 and the A142 when travelling to/from the two car parks. The forecast HGVs have been split evenly between the local SRN (A11 North, A11 south and A14). Further details regarding the trip generation, distribution and assignment is contained within section 5 of the Transport Assessment.

13.4.28 In order to determine the effect on specific receptors, both the sensitivity of receptors and the magnitude of change, as outlined above, are considered.

13.4.29 **Table 13-1**, which is taken from the IEMA guidance (Ref 13-1). This table has been utilised as it specifically relates to the assessment of traffic. Those effects assessed as major and moderate are considered significant in the context of this assessment.

Table 13-1: Matrix for Determining Significance of Effect

Magnitude of Change	Receptor Sensitivity			
	High	Medium	Low	Very Low
Major Adverse	Major Adverse	Major Adverse	Moderate Adverse	Minor Adverse
Moderate Adverse	Major Adverse	Moderate Adverse	Minor Adverse	Negligible
Minor Adverse	Moderate Adverse	Minor Adverse	Negligible	Negligible
Very Low	Minor Adverse or Minor Beneficial	Negligible	Negligible	Negligible
Minor Beneficial	Moderate Beneficial	Minor Beneficial	Negligible	Negligible
Moderate Beneficial	Major Beneficial	Moderate Beneficial	Minor Beneficial	Negligible
Major Beneficial	Major Beneficial	Major Beneficial	Moderate Beneficial	Minor Beneficial

13.4.30 Potential effects are therefore concluded to be major, moderate, minor or negligible. Following the classification of an effect, a clear statement is then made as to whether that effect would be “significant” or “not significant”. As a general rule, major and moderate effects are considered to be significant, whilst minor and negligible effects are considered not to be significant. However, professional judgment will also be applied where necessary, including taking account of whether the effect is permanent or temporary and whether the classified sensitivity / magnitude meets the qualitative definition, both in terms of over or under-statement. This is particularly important on links where there is a low baseline level of traffic, as small actual increases in traffic would result in a high percentage impact, meaning significance could be over-stated.

13.4.31 The significance of effects on bus users has been qualitatively assessed. Given the distance from the Order limits and low frequency of services, it is not considered appropriate to assess the impact on the local rail services as staff are unlikely to travel to the Order limits via rail. The following has been considered:

a. Frequency of bus services and subsequent consideration of capacity;
b. Potential changes on journey times; and
c. Change in access to bus services.

13.4.32 A detailed assessment of **Accidents and Safety** has been carried out by the examination of road traffic accident data for the most recent five-year period available. This analysis has been included in **Appendix 13B: Transport Assessment** of this Environmental Statement **[EN010106/APP/6.2]** and undertaken to highlight if there are any existing

safety issues on the local road network which may be exacerbated by the Scheme.

13.4.33 With regard to **Hazardous and Dangerous Loads**, paragraph 4.44 of the IEMA guidance (Ref 13-1) indicates that "*the Statement should include a risk or catastrophe analysis to illustrate the potential for an accident to happen and the likely effect of such an event*". Analysis of the road network within the study area indicates that there are no particular features, such as a significant vertical drop immediately beyond the carriageway, which would suggest that the transfer of materials poses a particular risk beyond that which would be expected on the general highway network. Therefore, no specific assessment of transport of Hazardous and Dangerous Loads is required in the ES.

13.5 Stakeholder Engagement

13.5.1 Consultation undertaken to date in relation to transport and access is outlined in the Consultation Report [EN010106/APP/5.1] which is a separate report that is submitted along with the DCO application. **Table 13-2** outlines the matters raised within the Scoping Opinion and how these have been addressed through the ES in relation to transport an access.

Table 13-2 Main Matters Raised During Initial Consultation

Consultee	Main matter raised	How has the concern been addressed	Location of response in chapter
The Planning Inspectorate	The operational phase of the proposed Scheme does not need to be assessed as the increases in traffic are likely to be minimal.	The operational phase of the proposed Scheme has not been assessed.	Section 13.8 of this chapter

Consultee	Main matter raised	How has the concern been addressed	Location of response in chapter
	It was agreed that predicting traffic levels over the 40-year timeframe is unpredictable. The ES should assess impacts from changes in transport and access during the decommissioning phase where significant effects are likely.	The impact of decommissioning has not been assessed in detail within this ES given that it will be 40 years. Traffic flows, advances in transport and removal of equipment will have altered such that it is not possible to predict the change at this stage. It was agreed with the Suffolk and Cambridgeshire highway authorities and National Highways that this would not be considered. As part of the DEMP a commitment is made to produce a DTMP and DWTP.	Section 13.8 of this chapter
	The ES should include assessment of impacts of the A11 northbound off slip and priority junction on the Elms Road.	The additional vehicles that are forecast to be added onto the A11 northbound off-slip and priority junction on Elms Road have been reviewed. Junction capacity modelling has not been undertaken as no capacity assessments has been deemed necessary based on further analysis of the potential transport effects of the Scheme.	Section 13.8 of this chapter
	The ES should explain how the Sunnica West sites are accessed and any traffic movements between the sites should be assessed where significant impacts will occur.	The Framework CTMP and TP document, details how each of the Sites will be accessed during the construction period. A mini-bus service will be in place to transport construction staff between the Sites and is outlined in the TA.	**Appendix 13C: CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]**and Section 13.7 of this chapter.

Consultee	Main matter raised	How has the concern been addressed	Location of response in chapter
	The ES should set out the study area for assessment based on industry guidance.	The study area for the assessment has been set out in section 13.4 as outlined in the IEMA Guidance.	Section 13.4 of this chapter.
	The ES should assess any significant effects associated with traffic generation from construction staff travelling to the site of the Scheme due to the lack of public transport facilities.	An assessment has been undertaken on the traffic generated by the construction staff arriving and departing from the Order limits, based on the robust assumption that all staff will travel as a car driver or passenger.	Section 13.8 of this chapter.
East Cambridgeshire District Council	The District Council recommends that the A142/ Landwade Road/Snailwell Road Roundabout and junction 38 on the A14 should be assessed due to existing capacity issues.	An assessment of the additional vehicles added to Junction 38 on the A14 has been undertaken as well as at the A142/Landwade Road/Snailwell Road roundabout.	Section 13.8 of this chapter.
	The impact of decommissioning should be considered as part of the assessment due to the parts of the Scheme having a relatively short lifespan.	The impact of decommissioning has not been considered in detail within this assessment given that it will be in 40 years. Traffic flows, advances in transport and removal of equipment cannot be predicted at this stage. It was agreed with the highway authorities that this would not be considered in detail. As part of the DEMP a commitment is made to produce a DTMP and a DWTP.	Section 13.8 of this chapter.
Norfolk County Council	The impact of the Scheme on the A11 and A14 should be considered due to the fact that the two roads play a significant part in Norfolk's economy.	The impact of the Scheme on both the A11 and A14 is considered within the Transport Assessment.	**Appendix 13B: Transport Assessment** of this Environmental Statement **[EN010106/APP/6.2]**and Section 13.7 of this chapter.

Consultee	Main matter raised	How has the concern been addressed	Location of response in chapter
Public Health England	There is the potential for non-motorised users (NMU) to be impacted through the loss or change in formal Public Rights of Way (PRoW), open space and the existing road network. Additional facilities and enhancement of existing facilities should be provided where necessary to encourage travel by modes other than the private car.	The impact on NMUs has been considered within the assessment. Temporary PRoW closures during construction are set out in the Traffic Regulation Measures Pans – Road Closures **[EN010106/APP/2.4]**.	Sections 13.6 and 13.8 of this chapter.
Suffolk County Council and West Suffolk Council	The highway authority asked for consideration to be given to: a. Mitigation works b. Impacts of decommissioning c. SCC Local Transport Plan d. Scope of assessment e. Assessment years f. Guidance used for assessment g. Zone of influence h. Study area i. PRoW j. NMUs k. Traffic distribution l. Scheme vehicular trips m. Modelling thresholds n. Abnormal Indivisible Loads (AILs)	These items were discussed at a meeting with all highway authorities and are assessed within the TA and this chapter, with the exception of modelling thresholds as no junction modelling / capacity assessments has been deemed necessary based on further analysis of the potential transport effects of the Scheme.	**Appendix 13B: Transport Assessment** of this Environmental Statement **[EN010106/APP/6.2]**and throughout Chapter 13

Consultee	Main matter raised	How has the concern been addressed	Location of response in chapter
Cambridgeshire County Council (Mobilising Local Energy Investment)	It will be helpful to get an understanding of the scale of jobs that will be created during construction to estimate their impact on travelling to site in addition to the HGVs.	The number of workers to be employed during construction and operation phases of the Scheme has been identified and the impact of their travel to the Order limits assessed.	**Appendix 13B: Transport Assessment** of this Environmental Statement **[EN010106/APP/6.2]** and throughout **Chapter 13**
Cambridgeshire County Council (Major Development Transport Assessment Team)	Any planning application submitted would need to be supported by a transport assessment.	A TA has been prepared which assesses the impact of the Scheme on the Strategic Road Network and local road network.	**Appendix 13B: Transport Assessment** of this Environmental Statement **[EN010106/APP/6.2]**
National Highways	Specifically, we would be concerned, not only, about how any cables are going to cross the Strategic road network but also construction traffic. Therefore, we would expect a Transport Assessment to be carried out in accordance with best practice and guidance laid out in Circular Roads 02/13 and National Highways Planning Protocol. The content of which should be discussed with the Highway Authorities before any work is carried out.	A TA has been prepared which assesses the impact of the Scheme on the Strategic Road Network. The scope of assessment was discussed with National Highways.	**Appendix 13B: Transport Assessment** of this Environmental Statement **[EN010106/APP/6.2]**

Source: Scoping Opinion: Proposed Sunnica Energy Farm, April 2019

13.5.2 In addition, a highways meeting was held with SCC, CCC and West Suffolk in March 2021 and with National Highways in May 2021 to discuss transportation comments received on the Preliminary Environmental Information (PEI) Report. A summary of the comments received during statutory consultation discussed during these meetings are provided in **Table 13-3** below.

Table 13-3 Main Matters Raised during further Consultation 1

Consultee	Main matter raised	How has the concern been addressed	Location of response in chapter
SCC and CCC	Access roads to be designed to prevent trafficking of mud and debris onto public highways.	Wheel washing facilities to be provided. Hard standing surface to be provided at each of the access locations.	**Appendix 13C: CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]**
SCC and CCC	12-hour shifts for workers and workers trips outside of typical peak travel times.	The impact on the local transport network has been based on information provided by the Applicant regarding shift hours. The Applicant has confirmed that the working hours are applicable all year round and that no changes would occur in the winter months. The Applicant has confirmed that this is the approach taken to working hours on previous solar energy developments. A Framework CTMP and TP document are included with the DCO submission with the contractor required to produce a full CTMP and TP prior to commencing construction.	**Appendix 13C: CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]**. Condition of application.

Consultee	Main matter raised	How has the concern been addressed	Location of response in chapter
SCC and CCC	Impact at A142 Landwade Road/Snailwell Road roundabout or A14 J38.	Data has been obtained for the A142 Landwade Road/Snailwell Road roundabout and A14 J37 and has been included in the ES Section 13.8 and TA (ES Volume 2: Appendix 13B). The A14 J38 was not considered necessary for assessment given the merge/diverge nature of the junction and the arrival/departure of HGVs within the network peak hours to be managed through the measures set out in the Framework CTMP and TP which will be developed by the contractor into a detailed CTMP and TP. The A14 J38 has been included in the study area for the forecast staff vehicles and HGVs.	Section 13.8 Assessment of Likely Changes of this chapter and Effects and **Appendix 13B: Transport Assessment** of this Environmental Statement **[EN010106/APP/6.2]**.
SCC and CCC	Work vehicle car share factor of 1.5 persons per vehicle. Monitoring, enforcement and controls to be embedded in relevant management plans.	This is based on AECOMs experience on Sizewell C Project DCO application and observed data from the Hinkley Point C power station. Information provided in section 5 of the TA and paragraph 13.4.10 ES Volume 2: Appendix 13B.	Section 13.8 Assessment of Likely Changes of this chapter and Effects and **Appendix 13B: Transport Assessment** of this Environmental Statement **[EN010106/APP/6.2]**. **Appendix 13C: Framework CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]**.
SCC and CCC	10% change in traffic flows should be identified for severance. Consideration to be given to severance is assessed with Design Manual for Roads and Bridges (DMRB) document LA 112.	The ES assessment is based on IEMA guidance. The ES impact section identifies links where staff vehicles are forecast where baseline traffic data was available. Where baseline data is available the percentage change in traffic flows have been identified.	Section 13.8 Assessment of Likely Changes of this chapter and Effects and **Appendix 13B: Transport Assessment** of this Environmental Statement **[EN010106/APP/6.2]**.

Consultee	Main matter raised	How has the concern been addressed	Location of response in chapter
SCC and CCC	Requirement for PRoW surveys to be carried out on all PRoWs.	Further information has been provided in relation to PRoW closures. The Applicant shares the view of the local authorities that the routes should only be closed for a minimum period and is proposing to employ this approach. The Applicant is not proposing to close all PRoW for the duration of the construction period, rather PRoW closures will be for a maximum of three weeks each during construction. Surveys of the PRoWs were not proposed as part of the EIA Scoping and the assessment methodology was not disputed at Scoping stage by the Planning Inspectorate or the Local Authorities.	ES Chapter and **Appendix 13B: Transport Assessment** of this Environmental Statement **[EN010106/APP/6.2]**. Further details can be found in the Traffic Regulation Measures Plans and the combined Framework CTMP and TP document of this Environmental Statement **[EN010106/APP/6.2]**.
SCC and CCC	Assessment of amenity of journeys that are affected by the development.	Amenity has been assessed in relation to severance, pedestrian / cycle delay and fear and intimidation, in line with IEMA Guidance.	ES Section 13.8 Assessment of Likely Changes and Effects of this chapter.
SCC and CCC	Delay at Elms Road T-Junction. Further classification on the number of Abnormal Indivisible Loads.	The Elms Road T-Junction was not assessed within the Forest Heath Local Plan study and therefore assumed there was no existing or forecast capacity issues at the junction. Baseline traffic flows are not available for all of the movements at this junction. Therefore, based on the available baseline data and the forecast staff vehicles, it is considered unlikely there will be capacity issues at this junction during the development peak hours. Staff movements into the Sunnica East Site A car park to be managed during arrival and egress.	**Appendix 13C: Framework CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]**.

Consultee	Main matter raised	How has the concern been addressed	Location of response in chapter
		Information regarding Abnormal Indivisible Loads is provided within the Appendix 13C Framework CTMP and TP document with a summary provided in the ES and TA.	
SCC and CCC	Baseline characteristics and the existing level of fear and intimidation based on existing flows. LA112 could be used.	The assessment is based on IEMA guidance. Fear and intimidation identified on links where baseline traffic flows are available.	Section 13.8 Assessment of Likely Changes of this chapter and Effects and **Appendix 13B: Transport Assessment** of this Environmental Statement **[EN010106/APP/6.2]**
SCC and CCC	Road safety analysis does not consider frequency of use or length of link. Detailed analysis of causation has not been undertaken.	Road safety analysis has been updated in the ES section 13.6 to include length of link and causation. It is noted that causation is not provided for all incidents and therefore the analysis of causation has been undertaken where available.	ES Section 13.6 for road safety sections.
SCC and CCC	More detail regarding access arrangements (swept path analysis, visibility, access widths and layout) to show that they can be used safely by the proposed construction traffic.	Swept path analysis, visibility splays, junction work areas and proposed traffic management has been undertaken and is provided within the ES Volume 2: Appendix 13B, Annex C Framework CTMP and TP document.	**Appendix 13C: Framework CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]**
SCC and CCC	Speed of vehicles through local communities has yet to be analysed in detail.	Staff will be directed to use the A14, A11 and A142 for as much as their journey to and from the two centralised car parks. The proposed traffic management at the accesses is outlined in the Framework CTMP and TP document.	**Appendix 13C: Framework CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]**

Consultee	Main matter raised	How has the concern been addressed	Location of response in chapter
SCC and CCC	Consideration of combined impacts.	Assessment based on IEMA guidance. Combined impact of Sunnica West Sites A and B, Sunnica East Sites A and B, Burwell National Grid Substation Extension and Grid Connection Route A and B is provided in ES.	ES Section 13.8 Assessment of Likely Changes and Effects.
SCC and CCC	Categorisation does not appear to be unreasonable and should be agreed with the relevant highway authority.	Categorisation identified with ES.	ES Section 13.8 Assessment of Likely Changes and Effects.
SCC and CCC	Method for assessing traffic growth is acceptable assuming confirmation is obtained from the relevant planning authorities over any specific developments that should be considered as committed.	Committed developments have been obtained from relevant planning authorities.	ES Section 13.8 Assessment of Likely Changes and Effects and **Appendix 13B: Transport Assessment** of this Environmental Statement **[EN010106/APP/6.2]**,.
SCC and CCC	Confirmation is sought on method used for factoring to the assessed development peak hours.	Information provided with the TA.	**Appendix 13B: Transport Assessment** of this Environmental Statement **[EN010106/APP/6.2]**.
SCC and CCC	Assessment of number of HGV movements. Further details sought on what controls and enforcement will be in place to ensure HGV movements do not use the local highway network during the peak hours and stick to proposed routing. Expected that some form of GPS or ANPR system is used.	Information regarding GPS and ANPR system is provided within the ES Volume 2: Appendix 13Cin the Framework CTMP and TP document.	**Appendix 13C: Framework CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]**

Consultee	Main matter raised	How has the concern been addressed	Location of response in chapter
SCC and CCC	Further classification for the potential number of Abnormal Indivisible Loads.	Information has been provided within the ES Volume 2: Appendix 13C in the Framework CTMP and TP document.	**Appendix 13C: Framework CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]**
SCC and CCC	Encourage or achieve staff travel by pedestrian, cycle and public transport. Mini-bus should also be provided to/from the nearest railway stations. A Travel Plan must be submitted as part of the DCO and relevant commitments made with the Construction Traffic Management Plan.	For the purposes of the assessment, a reasonable worst-case scenario has been assessed whereby only a car share factor of 1.5 (i.e. not one person per vehicle) has been applied to the staff at the development and that all will travel by car. Where possible, the TP includes the promotion of other modes including the provision of minibus service from local rail stations and also urban centres and P & R sites.	**Appendix 13C: Framework CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]**
SCC and CCC	No evidence is submitted to support the shift patterns assessed nor relevant proposals on enforcement to ensure that the impacts are commensurate with those assessed.	The Applicant has confirmed that the working hours are applicable all year round and that no changes would occur in the winter months.	Relevant DCO requirements
SCC and CCC	Distribution of population within the immediate Middle Super Output Areas (MSOAs) has been used, clarification is needed on how this compares to the socio-economic assessment.	Within **Chapter 12: Social-economic and Land Use** of this Environmental Statement **[EN010106/APP/6.1]** a 45-minutes travel study area has been applied based on driving times. The total area covered by the MSOAs (which is any part of an MSOA that is within 30km of the Scheme) is a circa 45 minutes travel time by car. Thus, Transport and Socio-Economic assessments are consistent.	N/A

Consultee	Main matter raised	How has the concern been addressed	Location of response in chapter
SCC and CCC	Limited evidence submitted to support claims about the number of operational staff that is being assessment.	A Framework CTMP and TP document has been prepared as part of the application to be implemented to ensure that the level of trips identified, and the vehicles associated with the development does not exceed those which has been assessed. The level of staff trips is considered to be robust as no use of sustainable modes such as walking, or cycling has been assumed for the purposes of the assessment.	**Appendix 13C: Framework CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]**.
SCC and CCC	Helpful if the method of assessment included a tabular format highlighting the proportional change in traffic flows on each link	Table provided showing the proportional change in traffic flows on each link where baseline traffic data was available.	ES Section 13.8 Assessment of Likely Changes and Effects and **Appendix 13B: Transport Assessment** of this Environmental Statement **[EN010106/APP/6.2]**
SCC and CCC	Highway condition surveys should be undertaken before, during and after construction works.	Noted. The Applicant will undertake a condition survey, before, during and after construction and identify any impacts which are a result of the development which need to remediated. Exact roads to be agreed with local highway authority in advance.	**Appendix 13C: Framework CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]**Relevant DCO requirement.
SCC and CCC	All access points off the highway need to be appropriately designed and constructed to the relevant highways' authority standards.	An access review has been undertaken and provided within the Framework CTMP and TP document.	**Appendix 13C: Framework CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]**

Consultee	Main matter raised	How has the concern been addressed	Location of response in chapter
SCC and CCC	Golf Links Road is a narrow road, used by recreational walkers and cyclists and is, therefore, not suitable for HGVs. The road has hedgerows tight to the carriageway in many places which limits the ability to mitigate highway impacts through increased width or passing places for example. This road should not, therefore, form any part of a routing plan for HGVs.	The use of Golf Links Road has been reviewed following consultation comments and a revised site access has been identified on Newmarket Road between its junctions with the A11 and Golf Links Road.	**Appendix 13C: Framework CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]**
SCC and CCC	The Councils question why existing farm tracks and accesses are not being utilised, for example, the internal road network in and around Bay Farm could be utilised instead of Golf Links Road. The suitability of an access point at E33 is also questioned, with access via E10 appearing more logical.	Where possible, accesses to the developments are using existing farm tracks and accesses; however, land agreements provide limits on where some of those locations can be provided such as at the land to the south of Golf Links Road. The access at E33 is already in existence as it provides access to the farm. It is noted that there is a gated access on the southern boundary of E10 however this cannot accommodate the required cranes. The existing farm access circa 320m to the east will be utilised for the crane access only to reach the northern Section of Sunnica East A such as E03 and E04.	**Appendix 13C: Framework CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]**

Consultee	Main matter raised	How has the concern been addressed	Location of response in chapter
SCC and CCC	The proposal is close to Mildenhall which has considerable growth planned. For example, works are already underway for the Mildenhall Hub. There remains concern about constraints at key junctions within Mildenhall which will be difficult to mitigate. Cumulative traffic impacts need to be considered, not just for projects with planning permission but also allocated in local plans. Evidence is available through the cumulative impact transport study produced by AECOM for the former Forest Heath area Local Plan	The traffic flows used in the assessment are based upon those used in the AECOM cumulative impact transport study 'Forest Heath District Council Site Allocations Plan Cumulative Impact Study' (Ref 13-2) and therefore take account of both permitted and allocated sites.	ES Section 13.8 and **Appendix 13B: Transport Assessment** of this Environmental Statement **[EN010106/APP/6.2]**.

Consultee	Main matter raised	How has the concern been addressed	Location of response in chapter
SCC and CCC	In the long term, constraints at key junctions within Mildenhall will become more difficult to mitigate without further modal shift and the potential for some form additional road capacity has been raised, including a relief road at paragraph 8.4.89 of the Transport Study. The Sunnica proposal should not compromise this longer-term aspiration or longer-term development potential of Mildenhall that might be brought forward through the emerging West Suffolk Plan.	Due to the constraints identified within the Local Plan evidence for Mildenhall, traffic associated with the Scheme is being directed away from Mildenhall with the town not being promoted as a route. HGV routes are being proposed to avoid Mildenhall. Consideration of providing a mini-bus service to Mildenhall if the number of staff living in Mildenhall and working on the Scheme is sufficient to reduce the number of staff vehicles travelling from Mildenhall to the Sites.	**Appendix 13C: Framework CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]**
National Highways	Provision of walking, cycling and horse-riding infrastructure.	The Scheme includes proposed permissive routes.	**Chapter 3: Scheme Description** of this Environmental Statement **[EN010106/APP/6.1]**
National Highways	Agreed construction phase is the only phase needed to be considered in full detail in the TA. Further discussions required on traffic volumes and Strategic Road Network (SRN). Further details should be provided of peak hours for the traffic assessment.	A meeting was held in May 2021 to discuss the proposed HGV and staff vehicle trip generation and distribution on the SRN. Confirmation of working hours has been provided by Applicant.	Relevant DCO requirement in relation to working hours.

Consultee	Main matter raised	How has the concern been addressed	Location of response in chapter
National Highways	Assumptions regarding the decommissioning phase assessment are reasonable in terms of detailed traffic assessment for 40 years' time, however detail of this phase of the development in terms of effect on the SRN should be included.	Decommissioning would not be expected to generate more traffic than construction and therefore the effects would be the same or less than during the construction phase.	N/A
National Highways	Confirmation if any connecting cables will cross the HE network.	A meeting was held in May 2021 and crossing of the SRN was discussed. Details are provided within the Framework CTMP and TP document.	**Appendix 13C: Framework CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]**

13.5.3 In addition, a highways meeting was held with SCC, CCC and West Suffolk in August 2021 to discuss the progress of the transport documentation for the DCO Application. A summary of the comments received during statutory consultation discussed during this meeting are provided in **Table 13-4** below.

Table 13-4 Main Matters Raised during Statutory Consultation

Consultee	Main matter raised	How has the concern been addressed	Location of response in chapter
SCC and CCC	During discussions regarding the proposed traffic management, SCC and CCC identified an expectation to see speed surveys carried out wherever there was an intention to change the speed limit.	Speed surveys have been carried out across a number of locations in relation to the proposed traffic management outlined in the Traffic Regulation Measures Plans. A summary of the speed surveys is provided in the Framework CTMP and TP document. It was agreed that ATC speed measurement would be adequate but, in some circumstances, it may be necessary to carry surveys out on both approaches if the nature of the road differed. A speed survey has been undertaken along Weirs Drove.	**Appendix 13C: Framework CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]**

Consultee	Main matter raised	How has the concern been addressed	Location of response in chapter
	During discussions regarding the Burwell National Grid Substation Extension, CCC did not see an issue with visibility along Newnham Drove and vegetation within the highway corridor could be cut down. It was identified that both options for the Burwell National Grid Substation Extension would be included within the Application, with access off either Weirs Drove or Newnham Drove.		
SCC	During discussions regarding the Golf Links Road site access alternative, SCC identified an expectation to see a Stage 1 Road Safety Audit of an access that close to a major junction.	A stage 1 Road Safety Audit has been carried out and provided in the Framework CTMP and TP document.	**Appendix 13C: Framework CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]**
SCC	During discussions regarding the use of the B1102/Newmarket Road Junction in Worlington SCC asked if alternative routes were considered with SCC to arrange a meeting to discuss the specific use of the junction for development related vehicles.	Alternative routes are outlined within the Framework CTMP and TP document. A meeting was held with SCC to discuss the management of development related HGVs at the B1102/Newmarket Road Junction in Worlington. It was agreed that the HGVs would be escorted by a convoy vehicle through the junction to enable safe passage.	**Appendix 13C: Framework CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]**

13.6 Baseline Conditions

13.6.1 This section reviews the transport facilities and networks available in the vicinity of the Order limits by NMUs, public transport and via the strategic and local highway network.

13.6.2 The Sunnica East Site A is located approximately 3.5km east of Mildenhall, 0.5km south-east of Isleham and 0.6km south-west of West Row. Sunnica East Site B is located approximately 1.5km south-east of Mildenhall, 1km east of Freckenham and immediately south of Worlington. The Sunnica West Site A is located approximately 7km to the east of Burwell and immediately north of the A14 at Newmarket. Sunnica West Site B is

approximately 5.5km to the east of Burwell and 0.5km north of Snailwell. The Sites are connected to the existing Burwell National Grid Substation Extension located on Weirs Drove via Grid Connection Route A which runs between Sunnica East A and Sunnica West A, and Grid Connection Route B from Sunnica West A, through Sunnica West B to the Burwell National Grid Substation Extension.

Existing Baseline

Walking and Cycling

13.6.3 The Scheme 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 assumed to be lightly trafficked. There are several PRoW crossing and connecting the Order limits, which are illustrated in Figure 13-1 of this Environmental Statement **[EN010106/APP/6.3]**.

13.6.4 There are three PRoWs (W-257/002/0, W-257/002/X, and W-257/007/0) located within the boundary of the Sunnica East Site A, which run from Mortimer Lane in the south to Beck Road in the north.

13.6.5 There are two PRoWs located within the boundary of Sunnica East Site B. PRoW (W-257/003/0) runs along the south-western boundary from Turnpike Road at Red Lodge in the south-east to Badlingham Manor in the north-west. An unclassified road (U6006), which is a publicly accessible route, including for equestrians, extends northwards from Elms Road to Worlington.

13.6.6 There are no PRoWs situated within the boundary of the Sunnica West Site A or B itself. Adjacent to Sunnica West Site A there is Snailwell 5 bridleway (PRoW 204/5) which runs along the south-west boundary of Sunnica West Site A. In addition, there is the Snailwell 1 footpath (PRoW 204/1) which crosses the land to the north-west of the Sunnica West Site A boundary.

13.6.7 There is one footpath 49/7 that intersects Grid Connection Route A, located to the south of the Sunnica East Site B, which runs between Red Lodge and Chippenham.

13.6.8 There are six PRoWs that intersect Grid Connection Route B. Towards Snailwell, footpath PRoW 204/1 connects Snailwell with Chippenham Park. Heading west from Sunnica West Site B, footpath 92/19 runs through agricultural fields between Fordham and Snailwell. Footpath 35/10 and 35/11 run between Wicken and Burwell passing through several agricultural fields. There are also two PRoWs 35/7 and 35/17 running between Burwell and Reach, again through agricultural land.

13.6.9 To the west of Sunnica East Site B the B1102 provides a footway for a section along the northern carriageway, alongside vehicles travelling eastbound, 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.

13.6.10 There are no on or off-road dedicated cycling facilities in the vicinity of the Order limits; however, the roads surrounding the Order limits are generally lightly trafficked and therefore could encourage cycling.

Public Transport

13.6.11 Information regarding the local bus and rail services and routes are provided in **Annex B** of **Appendix 13B: Transport Assessment** of this Environmental Statement **[EN010106/APP/6.2]**.

Bus

13.6.12 The closest bus stops to the Sunnica West Site A and B 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.

13.6.13 The closest bus stops to Sunnica East Site A are located over 1km to the north east in Isleham. The bus stops are served infrequently by bus services 203/204, operated by Lord's Travel.

13.6.14 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.

13.6.15 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 circa 2km 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.

13.6.16 **Table 13-5** provides a summary of the bus times serving the bus stops closest to the Sites. The times recorded below are those closest to the start and finish times of the staff (07:00-19:00). Given the bus times identified in the table below, it is considered that the use of existing bus services is not a practical travel option for construction staff given the working hours of 07:00 to 19:00.

Table 13-5: Times of Local Bus Services (Monday to Friday)

Service	Route	Bus Stop Location	AM	PM
203	Isleham – Fordham – Newmarket	Snailwell, Green (Opp)	10:16	-
	Newmarket – Fordham – Isleham		-	13:17
204	Newmarket – Snailwell – Isleham	Snailwell, Green (Opp)	-	18:36

Service	Route	Bus Stop Location	AM	PM
	Isleham – Snailwell – Newmarket		07:04	-
16/16A	Newmarket – Mildenhall – Bury St Edmunds	Red Lodge, Thistle Way (Adj)	06:58 07:26	16:58 17:33
	Bury St Edmunds – Mildenhall – Newmarket		07:07 09:42	17:32 18:32
357	Bury St Edmunds - Red Lodge – Mildenhall – West Row	Freckenham , Elms Road (Opp)	11:13	-
	West Row – Mildenhall – Red Lodge – Bury St Edmunds		09:52	12:42
956	Lakenheath - Mildenhall - Bury St Edmunds	Freckenham , Elms Road (Adj)	07:31	-
	Bury St Edmunds – Lakenheath – Mildenhall		-	16:37

Source: Recorded on 17/05/2021

National Rail

13.6.17 The two closest train stations are located in Kennett and Newmarket, and both stations are on the line between Ipswich and Cambridge.

13.6.18 Kennett railway station is located approximately 4km and 7km from the centralised car parks on Sunnica West A and the Sunnica East B, respectively. Kennett railway station provides 12 car parking spaces and 20 cycle spaces.

13.6.19 Newmarket railway station is located approximately 7km and 11.5km from the centralised car parks on Sunnica West A and the Sunnica East B, respectively. Newmarket station provides 11 car parking spaces with 1 for blue badge holders and 10 cycle spaces.

13.6.20 Both railway stations are served by bus service 16/16A with bus stops located adjacent to the stations.

13.6.21 **Table 13-6** identifies the arrival/departure times of trains at Kennett and Newmarket in the AM and in the PM. It should be noted that the train times have been recorded during the coronavirus pandemic and it is unknown if the timetables are likely to change from those recorded below. The times recorded below are those closest to the start and finish times of the staff.

Table 13-6: Frequency of Train Services (Monday to Friday)

Station	Origin / Destination	AM (Arrival)	PM (Departure)
Kennett	Ipswich	05:54 07:05 07:43	18:15 19:15 21:15
	Cambridge	07:09 09:15	20:07 22:08
Newmarket	Ipswich	07:14 07:51 09:18	19:07 20:08 21:07
	Cambridge	07:01 08:05 09:06	19:18 20:19 21:18

Recorded: 07/01/2021

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

Highway Network

13.6.22 The A11 and A14 form part of Strategic Road Network (SRN) operated by National Highways and are in close proximity to the Sunnica West Sites A and B and East Site B. The A11 runs in a northeast-southwest direction between London and Norwich to the east of the Sites, with a small section of Sunnica West Site A located to the east of the A11 accessed from Dane Hill Road. The A11 is a dual carriageway with two lanes in each direction to the north of A14 Junction 38.

13.6.23 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.

13.6.24 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.

13.6.25 To the west of the Sunnica West Sites, the A142 is a single carriageway that runs in a 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.

13.6.26 Baseline traffic flows were obtained for the SRN from WebTRIS fixed traffic counters maintained by National Highways. Data was obtained for September 2019 as it is a neutral month pre-covid-19 pandemic. The Department for Transport (DfT) Transport Assessment Guidance (TAG) identifies a neutral month from March through to November (excluding August), which avoids holiday periods such as bank holidays, Easter and school holidays. In addition, it is considered 2020 traffic flow data would be unreliable due to the impact of the coronavirus pandemic and the resultant national and local lockdowns. These flows are presented in **Table 13-7**.

Table 13-7: 2019 Baseline Traffic Flows – SRN (Monday to Friday Daily Average)

	06:00-07:00		08:00-09:00		17:00-18:00		19:00-20:00		12-Hours	
	North-bound / East-bound	South-bound / West-bound	North-bound / East-bound	South-bound / West-bound	North-bound / East-bound	South-bound / West-bound	North-bound / East-bound	South-bound / West-bound	North-bound / East-bound	South-bound / West-bound
A11 (North of B1085)	817	1,586	1,003	1,971	2,175	1,395	1,109	755	17,721	18,152
A11 (North of La Hogue Road)	878	1,725	1,117	2,228	2,459	1,489	1,229	805	19,664	19,661
A11 to A14 and A1304 Slip Road (J38)	N/A	1,581	N/A	1,860	N/A	1,243	N/A	676	N/A	16,981
A14 to A11 Slip Road (J38)	708	N/A	1,118	N/A	2,088	N/A	885	N/A	16,420	N/A
A14 (J38)	1,441	1,499	2,040	1,889	4,292	1,207	1,959	552	33,573	15,821
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
A14 J37	1,390	2,982	1,939	3,767	4,190	2,436	2,041	1,232	33,140	32,681
A14 east of Junction 38*	733	1,499	922	1,889	2,204	1,207	1,074	552	17,153	15,821

	06:00-07:00		08:00-09:00		17:00-18:00		19:00-20:00		12-Hours	
	North-bound / East-bound	South-bound / West-bound	North-bound / East-bound	South-bound / West-bound	North-bound / East-bound	South-bound / West-bound	North-bound / East-bound	South-bound / West-bound	North-bound / East-bound	South-bound / West-bound
A11 north of Red Lodge*	817	1,586	1,003	1,971	2,175	1,395	1,109	755	17,721	18,152

Source: WebTRIS **discussed below*

13.6.27 The 2019 traffic data on the A11 North of Red Lodge is unavailable. However, given the close proximity of the traffic survey data on the A11 North of B1085, this has been used as a proxy to forecast the absolute change and percentage change in traffic flows later on.

13.6.28 The 2019 traffic data on the A14 East of J38 is unavailable. The eastbound traffic on the A14 east of J38 is assumed to be the same as that recorded on the A14 J38 as there are no junctions or slip roads for vehicles to enter or egress. For the westbound traffic on the A14 east of J38, it has been derived from the available data on the A14 J38 and the A11 to A11 slip. This is because vehicle that are not travelling along the A14 to the A11 would travel to the A14 east of J38. Sunnica West Site A is adjacent to the A14 and A11 on its southern and eastern edge. To the north Chippenham Road connects to 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.

13.6.29 Sunnica West Site A is bounded 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 Sunnica West Site A which is a single carriageway road with a 60mph speed limit.

13.6.30 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.

13.6.31 Newmarket Road which connects B1102 and A11, runs in a north-east direction and is located to the south-west of Sunnica West Site B. It is a narrow single carriageway with 60 mph speed limit.

13.6.32 Sunnica East Site A is located to the east of the B1104 and north of B1102. Beck Road which runs through the centre of the western part of Sunnica East Site A is a single carriageway road with 60mph speed limit. An unclassified road linking West Row with the B1102 Mildenhall Road at Freckenham provides the border to the east. Is a narrow single carriageway road with 60mph speed limit.

13.6.33 Sunnica East Site B is largely located to the south of the B1102 Fordham Road and Elms Road which runs from the west in Frechenham to the east towards Red Lodge, with a small section of the Sunnica East Site B located to the east which is accessed from Golf Links Road.

13.6.34 Elms Road is partially located within Sunnica East Site B and runs in a broad northwest to southeast direction linking Church Lane in Freckenham with Elms Road and the 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 bounded by hedgerows. The national speed limit applies on this road. There are signs informing that Elms Road is not suitable for HGV located at the junction with the A11 northbound off-slip and Elms Road/Church Lane in Freckenham.

13.6.35 Several roads are crossed by Grid Connection Route A and B, and internal cable crossing within the Sites, which will result in temporary road closures and include the following: Weirs Drove, Newham Drove, Little Fen Road, First Drove, Broads Road, Chippenham Road, La Hogue Road, B1085, Elms Road, Beck Road, Isleham Road, B1102 Frechenham Road, Newmarket Road (between Worlington and Red Lodge) and UC6006. During construction the working hours for staff will be from 07:00 to 19:00 weekdays. Therefore, the peak hours during the construction period for staff arrival will be between 06:00 to 07:00 and staff departure between 19:00 to 20:00 on weekdays. Therefore, 06:00 to 07:00 forms the development network peak hour in the AM and 19:00 to 20:00 forms the development network peak hour in the PM. As a result, the baseline traffic flows have been identified for these hours in addition to the normal network peak hours. Due to the lack of Saturday traffic survey data, it is assumed based on professional experience the weekday peaks have higher traffic flows than the Saturday traffic flows and therefore represent a worst-case scenario in relation to the operation of links and junctions and therefore Saturday traffic flows have not been considered.

13.6.36 Within the PEI Report the traffic flows for the local highway network at the Red Lodge Dumbbell Roundabouts and Dane Hill/Turnpike Road Roundabout were derived from the ‘Forest Heath District Council Site Allocation Plan Cumulative Impact Study’ document (August 2016) (Ref. 13-7), which was prepared by AECOM. The traffic surveys carried out for the ‘Forest Heath District Council Site Allocation Plan Cumulative Impact Study’ document (August 2016) (Ref. 13-7) assessment were undertaken at junctions across the WSC area on Tuesday 28th June 2016 between 07:00 hours and 10:00 hours and 16:00 hours and 19:00 hours. However, since the production of the PEI Report additional traffic survey data has been obtained from three local planning applications, which has supplemented the traffic survey data from the ‘Forest Heath District Council Site Allocation Plan Cumulative Impact Study’ document (August 2016) (Ref. 13-7) assessment. The traffic survey data at the Red Lodge Dumbbell Roundabouts has been superseded with 2017 traffic survey data from the DC/18/0628/HYB planning application. The traffic survey data from the ‘Forest Heath District Council Site Allocation Plan Cumulative Impact Study’ document (August 2016) (Ref. 13-7) assessment is utilised for the Dane

Hill/Turnpike Road Roundabout. The traffic survey data from the three planning applications is summarised below:

a. DC/18/0628/HYB: traffic survey data for the Red Lodge to Kentford corridor in 2017 for the AM peak hour of 08:00-09:00 and the PM peak hour of 17:00-18:00. The junctions included are Red Lodge Dumbbell Roundabouts and the Herringswell Road/Bury Road/Gazeley Road junction.

b. 19/00376/OUM: traffic survey data in 2018 for the AM peak hour of 07:30-08:30 and the PM peak hour of 16:45-17:45. The junctions included are B1085/B1104 junction, B1085/B1102 junction and B1104/B1102 junction.

c. 17/00880/OUM: traffic survey data in 2017 for the AM peak hour of 08:00-09:00 and the PM peak hour of 17:00-18:00. The junctions included are the A142/Snailwell Road/Landwade Road roundabout and A14 J37.

13.6.37 A summary of the 2016-2018 baseline traffic flow data is provided within the TA in Tables 13-3, 13-4 and 13-5. In addition, the TEMPro growth factors can be found in the **Appendix 13B: Transport Assessment** of this Environmental Statement **[EN010106/APP/6.2]** which have been applied to the 2016-2018 traffic survey data in **Table 13-7**.

13.6.38 In order to assess the development peak hours of 06:00-07:00 and 19:00-20:00, factors have been identified to convert the 08:00-09:00 and 17:00-18:00 traffic survey data obtained from the three planning applications and 'Forest Heath District Council Site Allocation Plan Cumulative Impact Study' Assessment. The traffic survey data did not cover the 06:00-07:00 and 19:00-20:00 periods as they are outside the traditional peak periods (07:00-10:00 and 16:00-19:00) undertaken in Manual Turning Count (MCC) traffic surveys.

13.6.39 The conversion from the AM and PM network peak hours to the construction AM and PM peak hours used an ATC which was carried out over 24-hours for 7-consecutive days in March 2017 on Warren Road, Red Lodge. Based on the Monday to Friday average for the 08:00-09:00 and 17:00-18:00 network peak hours and development peak hours of 06:00-07:00 and 19:00-20:00, the conversion factors have been derived and are identified below:

a. 2018: 08:00-09:00 to 06:00-07:00 – x0.4

b. 2018: 17:00-18:00 to 19:00-20:00 – x0.4

13.6.40 The conversion factors above have been applied to the traffic survey data identified in the Section 3 of **Appendix 13B: Transport Assessment** of this Environmental Statement **[EN010106/APP/6.2]**. The conversion factor derived from the ATC on Warren Road, Red Lodge is considered appropriate to be applied to these junctions given its close proximity to Red Lodge, Kennett and Chippenham.

13.6.41 In addition to the 2017 ATC traffic survey, an ATC was undertaken in June 2016 on Market Street (B1102), Fordham as provided in the 17/00880/OUM

planning application. The Automatic Traffic Counts (ATC) was carried out over 24-hours for 7-consecutive days. Based on the Monday to Friday average for the 08:00-09:00 and 17:00-18:00 network peak hours and development peak hours of 06:00-07:00 and 19:00-20:00, the conversion factors have been derived and are identified below:

a. 2016: 08:00-09:00 to 06:00-07:00 – x0.5

b. 2016: 17:00-18:00 to 19:00-20:00 – x0.5

13.6.42 The conversion factors above have also been applied to the traffic survey data for the A142 Fordham Road/Snailwell Road/Landwade Road Roundabout and the A14 J37. The conversion factor derived from the ATC on Market Street, Fordham is considered appropriate to be applied to these junctions given its close proximity it is expected that the difference in traffic flows within the development peak hours and highway peak hours are likely to be similar at the two junctions along the A142 corridor.

13.6.43 **Table 13-8** identifies the 2019 derived local highway traffic flows for the development peak hours (06:00-07:00 and 19:00-20:00). The 2019 base highway traffic flows are based on the 2016-2018 traffic survey data, TEMPro growth factors and the conversion factors discussed previously in this section which are discussed in further detail in the TA.

Table 13-8: Traffic Flows 2019 (Vehicles)

Location	AM Peak (06:00-07:00)		PM Peak (19:00-20:00)	
	NB / EB	SB / WB	NB / EB	SB / WB
Red Lodge Dumbbell Roundabout (North)				
Elms Road	74	30	139	27
Newmarket Road	90	143	89	147
A11 NB On-Slip Red Lodge	101	N/A	102	N/A
Newmarket Road (South)	168	164	153	220
Red Lodge Dumbbell Roundabout (South)				
Newmarket Road (North)	166	165	150	220
A11 SB Off-Slip (Red Lodge)	N/A	71	N/A	92
Warren Road	173	84	101	189
B1085 Turnpike Road	57	50	63	72
A11 SB On-Slip (Red Lodge)	N/A	166	N/A	83
B1506 Bury Road / Herringswell Road / Gazeley Road Junction				
B1506 Bury Road (East)	228	170	173	188
Gazeley Road (South)	22	29	37	16
B1506 Bury Road (West)	181	175	148	161
Herringswell Road (North)	44	104	81	58
B1102 Mildenhall Road / B1085 Chippenham Road Junction				

Location	AM Peak (06:00-07:00)		PM Peak (19:00-20:00)	
	NB / EB	SB / WB	NB / EB	SB / WB
B1102 Mildenhall Road (East)	51	66	70	62
B1085 Chippenham Road (South)	46	70	61	33
B1102 Mildenhall Road (West)	119	110	98	118
B1085 Chippenham Road / B1104 Junction				
B1085 Chippenham Road (North-West)	43	75	63	29
B1104 (North-East)	38	109	100	34
B1085 Chippenham Road (South)	77	180	162	63
B1104 / B1102 Junction				
B1104 (North)	87	25	87	24
B1102 (West)	74	66	74	66
B1104 (South)	145	74	144	73
Dane Hill/Turnpike Road Roundabout				
B1085 (North-West)	60	180	90	154
B1085 Turnpike Road (East)	63	112	118	62
B1085 Dane Hill Road (South)	90	138	126	91
A11 SB On-Slip (West)	N/A	121	N/A	44
A142/Snailwell Road/Landwade Road Roundabout				
A142 (North)	325	542	571	362
Snailwell Road (East)	139	17	14	69
A142 (South)	311	334	405	400
Landwade Road (West)	60	132	216	67
A14 J37				
A142 Fordham Road (North)	365	439	487	444
A14 Westbound Off-Slip (East)	N/A	209	N/A	207
Fordham Road (South)	293	415	481	354
A14 Eastbound Off-Slip (West)	376	N/A	267	N/A

Road Safety

13.6.44 Personal Injury Collision (PIC) data on the surrounding highway network has been obtained from SCC and CCC for the most recent five years (60 months) available at the time of request, which included incidents that occurred between January 2014 and August 2019. As a result of the coronavirus pandemic and the impact on the reduced traffic flows during national and regional lockdowns, the PIA has remained consistent with the previous analysis undertaken for the PEI Report Pre-2020.

13.6.45 Due to CCCs arrangement with the police, contributory factors in relation to the cause of PICs are not available; however, STATS 21 codes were provided for the data provided by SCC and therefore contributory factors

could be determined for that data. **Appendix 13B: Transport Assessment** of this Environmental Statement **[EN010106/APP/6.2]** identifies the locations of all the incidents recorded in this time period.

13.6.46 Ten incidents have been excluded from the analysis as the primary contributory factor was found to be driver intoxication and is therefore an unrelated to road layout or traffic conditions. Excluding these ten incidents there were a total of 125 PICs, of which 101 were classified as slight, 21 serious, and three were classified as fatal. **Table 13-9** identifies the summary of location and severity of incidents at junctions with **Table 13-10** summarising for links with the addition of link length and number of incidents per km along the link.

Table 13-9: Summary of Location and Severity of Incidents at Junctions

Location	Incident Severity				Annual Frequency			
	Slight	Serious	Fatal	Total	Slight	Serious	Fatal	Total
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

Table 13-10: Summary of Location and Severity of Incidents on Links

		Incident Severity					Annual Frequency			
Location	Link Length (km)	Slight	Serious	Fatal	Total	Total per km	Slight	Serious	Fatal	Total
Snailwell Road	0.9	4	0	0	4	4	0.8	0.0	0.0	0.8
B1102 Mildenhall Road	2.3	3	1	0	4	2	0.6	0.2	0.0	0.8
A11 NB between B1085 and La Hogue Road	1.3	0	2	0	2	2	0.0	0.4	0.0	0.4
Soham Road and Newmarket Road	2.7	3	1	0	4	1	0.6	0.2	0.0	0.8
A142 between Fordham Road and Newmarket Road	3.5	1	1	0	2	1	0.2	0.2	0.0	0.4
Isleham Road	1.75	4	0	0	4	2	0.8	0.0	0.0	0.8
A11 between B1085 and Red Lodge	3.1	2	0	0	2	1	0.4	0.0	0.0	0.4
Dane Hill Road	1	0	1	1	2	2	0.0	0.2	0.2	0.4
B1102 Carter Street	1.25	4	1	0	5	4	0.8	0.2	0.0	1.0
Chippenham Road	1.85	1	1	0	2	1	0.2	0.2	0.0	0.4
B1104 Station Road	2.5	3	0	0	3	0	0.6	0.0	0.0	0.6
A11 NB (South of Red Lodge)	1.5	6	1	0	7	0	1.2	0.2	0.0	1.4

		Incident Severity					Annual Frequency			
Location	Link Length (km)	Slight	Serious	Fatal	Total	Total per km	Slight	Serious	Fatal	Total
A11 SB (South of Red Lodge)	1.5	1	1	0	2	0	0.2	0.2	0.0	0.4
A11 NB (North of Red Lodge)	1.4	2	0	0	2	0	0.4	0.0	0.0	0.4
A11 SB (North of Red Lodge)	1.4	1	0	0	1	0	0.2	0.0	0.0	0.2
B1085 Turnpike Road	1.77	2	0	0	2	0	0.4	0.0	0.0	0.4
B1102	3	0	1	1	2	0	0.0	0.2	0.2	0.4
A14 EB (East of J37)	1	4	1	0	5	0	0.8	0.2	0.0	1.0
A14 WB (East of J37)	1	4	0	0	4	0	0.8	0.0	0.0	0.8
A14 WB (West of J37)	1.2	0	1	0	1	0	0.0	0.2	0.0	0.2
A14 WB Off-Slip	0.38	0	0	0	0	0	0.0	0.0	0.0	0.0
A142 Fordham Rd (South of A14)	0.7	3	0	0	3	0	0.6	0.0	0.0	0.6
A142 Fordham Rd (North of A14)	1.4	3	1	0	4	0	0.6	0.2	0.0	0.8
A142 Fordham Rd between A14 slips	0.3	4	0	0	4	4	0.8	0.0	0.0	0.8
Other Locations		24	1	1	26		4.8	0.2	0.2	5.2
TOTAL		**101**	**21**	**3**	**125**		**-**	**-**	**-**	**-**

13.6.47 The tables above indicate 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. A fatal incident was recorded in SCC on the A142 Fordham Road (North of the A14). The contributory factor codes recorded for this PIC included 506 and 507, which refers to users not displaying lights at night or in poor visibility and riders wearing dark clothing.

13.6.48 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.

13.6.49 A total of seven incidents were recorded on the A11 northbound (south of Red Lodge junction), with an average of 1.4 incidents per year, six of which were classified as slight and one as serious. It was found there were no common contributory factors at these locations.

13.6.50 Based on the information available the PIC data provided did not show incidents occurring frequently at any particular location.

13.6.51 As noted above, PIC data provided by SCC included contributory factors, with multiple factors recorded for some incidents. A summary of these contributory factors for incidents at key links and junctions in the area is provided in **Table 13-11** below.

Table 13-11: Summary of Contributing Factors for Incidents from the SCC Data

Location	Total Incidents	Total Casualties	Road environment contributed	Vehicle defects	Injudicious action	Driver/Rider error or reaction	Impairment or distraction	Behaviour or inexperience	Vision affected by external factors	Pedestrian only (casualty or uninjured)
Junctions										
A11 off-slip/ Elms Road	3	3			1	2		1	1	
Warren Rd/ Hundred Acre Way/Carnation Way	2	3			1	1				
A142 Fordham Rd/ A14 EB off-slip	6	9			1	6		1		
A142 Fordham Rd/ A14 WB off-slip	7	9		1	2	5	2	3		
A142/ Windmill Hill Jct	2	6			1	2		1		
Links										
A11 NB (South of Red Lodge Junction)	7	13	2		2	5	1	2	1	
A11 SB (South of Red Lodge Junction)	2	3				1		1		
A11 NB (North of Red Lodge Junction)	2	5	2						2	
A11 SB (North of Red Lodge Junction)	1	1						1		
B1085 Turnpike Road	2	2					1			1
B1102	2	5			1	2	1	1		

Location	Total Incidents	Total Casualties	Road environment contributed	Vehicle defects	Injudicious action	Driver/Rider error or reaction	Impairment or distraction	Behaviour or inexperience	Vision affected by external factors	Pedestrian only (casualty or uninjured)
A14 EB (East of Jct 37)	5	5				2		1		
A14 WB (East of Jct 37)	4	5			1	2	1	1		
A14 WB (West of Jct 37)	1	1					1			
A14 WB off-slip	0	0								
A142 Fordham Rd (South of A14)	3	4	1		2	3	1	1		
A142 Fordham Rd (North of A14)	4	4			1	4			1	
A142 Fordham Rd between A14 slips	4	6				4		2		
Miscellaneous	16	20	2		3	13	3	3	2	1
TOTAL	**73**	**104**	**7**	**1**	**16**	**52**	**11**	**19**	**7**	**2**

13.6.52 **Table 13-11** indicates that over 70% of the recorded incidents in the data provided by SCC at key links and junctions include driver error as a contributory factor. The road environment was only a contributory factor in less than 10% of PICs.

13.6.53 In addition, the data has been analysed to determine whether any modal trends exist in the incidents around the Order limits, focusing in particular upon vulnerable road users, pedestrians, cyclists, motorcyclists and children. It is noted that children identified in the table below could have occurred as a vehicle passenger. The results of this analysis are discussed below and summarised in **Table 13-12**.

Table 13-12: Summary of Total PICs and PICs Involving Vulnerable Road Users by Location (Junctions and Links)

Location	Pedestrians	Cyclists	Motorcyclists	Children
Junctions				
B1104 / B1102	0	0	1	0
B1085 / La Hogue Road	0	0	0	0
A11 Off-Slip/Elms Road	0	0	1	0
Warren Rd/Hundred Acre Way/Carnation Way	0	0	0	0
A142 Fordham Rd/A14 EB Off-Slip	0	0	0	1
A142 Fordham Rd/A14 WB off-slip	0	1	0	0
A142/Windmill Hill	0	0	0	0
Links				
Snailwell Road	1	0	0	0
B1102 Mildenhall Road	2	0	1	0
A11 NB between B1085 and La Hogue Road	0	0	1	0
Soham Road and Newmarket Road	0	0	1	0
A142 between Fordham Road and Newmarket Road	0	0	1	0
Isleham Road	1	0	0	1
A11 between B1085 and Red Lodge	0	0	0	2

Location	Pedestrians	Cyclists	Motorcyclists	Children
Dane Hill Road	0	0	0	0
B1102 Carter Street	2	1	0	0
Chippenham Road	0	0	0	0
B1085 Turnpike Road	0	0	1	0
B1104 Station Road	0	0	0	0
A11 NB (South of Red Lodge)	0	0	0	0
A11 SB (South of Red Lodge)	0	0	0	0
A11 NB (North of Red Lodge)	0	0	0	0
A11 SB (North of Red Lodge)	0	0	0	0
B1085 Turnpike Road	1	0	0	1
B1102	0	1	0	0
A14 EB (East of J37)	0	0	1	0
A14 WB (East of J37)	0	0	0	0
A14 WB (West of J37)	0	0	0	0
A14 WB Off-Slip	0	0	0	0
A142 Fordham Rd (South of A14)	0	0	0	0
A142 Fordham Rd (North of A14)	0	0	0	0
A142 Fordham Rd between A14 slips	0	0	1	0
Other Locations	1	5	5	1
TOTAL	**8**	**8**	**14**	**6**

13.6.54 In total 35 vulnerable users were involved in the incidents, eight pedestrian, eight cyclists, 13 motorcyclists, and six children. No incidents were recorded in the immediate vicinity of the accesses to Sunnica East Site A and B and Sunnica West Site A and B within the most recent five years of PIC data obtained.

13.6.55 Since the PIC data was obtained, further information regarding the extension of the Burwell National Grid Substation Extension and Grid Connection Route A and B has become available. Therefore, further investigation on Crash Map has been undertaken on the roads outside of the previous study area from Exning to the Burwell National Grid Substation

Extension along Newmarket Road, Reach Road and Weirs Drove. This analysis shows no incidents recorded between 2015 and 2019 along Weirs Drove or Reach Road. Two incidences were recorded at the Windmill Hill/Swan Lane junction, one in 2016 and one in 2018, resulting in a slight and a serious severity. Four incidences were recorded along Newmarket Road (B1103) resulting in three slight and one serious severity accident. These incidences were recorded across a circa 3km length of road and not at any one particular location.

13.6.56 Based on the information available the PIC data provided did not show high proportions of vulnerable user incidents occurring at any particular location.

13.6.57 Overall, with the data available the PIC analysis does not indicate a particular safety concern that needs to be considered as part of the Scheme proposals.

Future Baseline

Strategic Highway

13.6.58 WebTRIS data and local highway traffic flow data has been utilised to forecast the 2023 highway baseline conditions. Further details are provided in Section 3 of **Appendix 13B: Transport Assessment** of this Environmental Statement **[EN010106/APP/6.2]** with a summary provided below.

13.6.59 The peak construction year of the Scheme for traffic is forecast to be 2023, as the maximum number of trips to and from the Order limits mostly occur in the early stages of the project programme. 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 13-13.**

Table 13-13: TEMPro growth factors

Area	Time Period	Growth Factor
East Cambridgeshire 007	Off-Peak 00:00-06:59 and19:00-23:59	1.0791
Forest Heath 006	Off-Peak 00:00-06:59 and19:00-23:59	1.0835
East Cambridgeshire 007	Average Weekday	1.0876
Forest Heath 006	Average Weekday	1.0949

13.6.60 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 13-14.**

Table 13-14: 2023 Baseline Traffic Flows for SRN (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 and 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
A14 (East of Junction 38) *	794	1,624	1,163	599	18,781	17,322
A11 (North of Red Lodge) *	885	1,718	1,201	818	19,402	19,874

**discussed in paragraph 13.6.27 and 13.6.28*

Local Highway

13.6.61 Using the conversion factors and TEMPro growth factors outlined in **Table 13-13** and the TA, traffic flows have been converted from the AM network peak hour 08:00-09:00 to 06:00-07:00 and the PM network peak hour 17:00-18:00 to 19:00-20:00. The resultant 2023 baseline traffic flow diagram for the local highway network can be found in **Appendix 13B: Transport Assessment** of this Environmental Statement **[EN010106/APP/6.2]**.

13.6.62 **Table 13-15** summarises the 2023 baseline traffic flows for key links on the local highway network.

Table 13-15: 2023 Peak Hour Local Baseline Traffic Flows

Location	AM Peak (0600-0700)		PM Peak (1900-2000)	
	NB/ EB	SB/ WB	NB/ EB	SB/ WB
Red Lodge Dumbbell Roundabout (North)				
Elms Road	79	32	148	29
Newmarket Road	96	153	95	157
A11 NB On-Slip Red Lodge	108	N/A	109	N/A
Newmarket Road (South)	180	175	163	236
Red Lodge Dumbbell Roundabout (South)				
Newmarket Road (North)	177	176	161	235
A11 SB Off-Slip (Red Lodge)	N/A	76	N/A	99
Warren Road	185	90	108	202
B1085 Turnpike Road	61	54	67	77
A11 SB On-Slip	N/A	182	N/A	89
B1506 Bury Road / Herringswell Road / Gazeley Road				
B1506 Bury Road (East)	244	182	185	201
Gazeley Road (South)	24	31	39	17
B1506 Bury Road (West)	193	187	158	172
Herringswell Road (North)	47	111	87	63
B1102 Mildenhall Road / B1085 Chippenham Road				
B1102 Mildenhall Road (East)	54	71	75	66
B1085 Chippenham Road	49	75	65	36
B1102 Mildenhall Road (West)	127	117	105	126
B1085 Chippenham Road / B1085 High Street / B1104				
B1085 Chippenham Road (North)	46	79	67	31
B1104	40	117	107	36
B1085 High Street	82	192	173	67
B1104 / B1102				
B1104 Station Road (North)	93	26	93	26
B1102 (East)	79	70	79	70
B1102 (South)	154	79	153	78
Dane Hill Road / Turnpike Road Roundabout				
B1085 (North-West)	67	206	96	201
B1085 Turnpike Road	78	138	139	78
B1085 Dane Hill Road (South)	146	163	157	132
A11 SB On-Slip	N/A	182	N/A	69
A142 / Snailwell Road / Landwade Road				
A142 North	348	580	612	388
Snailwell Road	149	18	15	74

Location	AM Peak (0600-0700)		PM Peak (1900-2000)	
	NB/ EB	SB/ WB	NB/ EB	SB/ WB
A142 South	333	357	434	429
Landwade Road	65	142	232	72
A14 J37				
A142 Fordham Road (North)	390	468	521	474
A14 WB Off-Slip (East)	223	N/A	221	N/A
Fordham Road (South)	312	443	514	378
A14 EB Off-Slip (West)	N/A	232	N/A	225

Link Sensitivity

13.6.63 As stated in section 13.4 the criteria for highway sensitivity is the following:

a. **Very Low** – local roads intended for local traffic;
b. **Low Sensitivity** – main distributor and secondary distributor roads;
c. **Medium Sensitivity** – primary roads; and
d. **High Sensitivity** – trunk roads

13.6.64 In addition, the criteria for NMU sensitivity is the following:

a. **Very Low**– Rural road with no pedestrian / cycle facilities provided;
b. **Low Sensitivity** – Strategic vehicular route in a rural setting with pedestrian / cycle facilities;
c. **Medium Sensitivity** – Main vehicular route with pedestrian / cycle facilities provided in built up area; and
d. **High Sensitivity** – Lightly trafficked route provided in a town/village centre setting.

13.6.65 In terms of highway sensitivity, the A11 and A14 off-slips have been categorised as low sensitivity as these off-slips connect to local roads. Although the on-slips connect to the SRN they have been classified as very low sensitivity as they are free flowing and the merges onto the A11 and A14 operate well within theoretical capacity.

13.6.66 Using the methodology above that has been outlined in section 13.4, the highway and NMU sensitivity for the links being assessed is presented in **Table 13-16** below.

Table 13-16: Highway and NMU Link Sensitivity

Location	Highway Sensitivity	NMU Sensitivity
Red Lodge Dumbbell Roundabout (North)		
Elms Road	Very Low Sensitivity	Very Low Sensitivity
Newmarket Road	Very Low Sensitivity	Very Low Sensitivity

Location	Highway Sensitivity	NMU Sensitivity
A11 NB On-Slip Red Lodge	Very Low Sensitivity	Very Low Sensitivity
Newmarket Road (South)	Very Low Sensitivity	Very Low Sensitivity
Red Lodge Dumbbell Roundabout (South)		
Newmarket Road (North)	Very Low Sensitivity	Very Low Sensitivity
A11 SB Off-Slip (Red Lodge)	Low Sensitivity	Very Low Sensitivity
Warren Road	Very Low Sensitivity	Medium Sensitivity
B1085 Turnpike Road	Low Sensitivity	Medium Sensitivity
A11 SB On-Slip	Very Low Sensitivity	Very Low Sensitivity
B1506 Bury Road / Herringswell Road / Gazeley Road		
B1506 Bury Road (East)	Low Sensitivity	Medium Sensitivity
Gazeley Road (South)	Very Low Sensitivity	Very Low Sensitivity
B1506 Bury Road (West)	Low Sensitivity	Medium Sensitivity
Herringswell Road (North)	Very Low Sensitivity	Low Sensitivity
B1102 Mildenhall Road / B1085 Chippenham Road		
B1102 Mildenhall Road (East)	Low Sensitivity	Very Low Sensitivity
B1085 Chippenham Road	Low Sensitivity	Low Sensitivity
B1102 Mildenhall Road (West)	Low Sensitivity	Medium Sensitivity
B1085 Chippenham Road / B1085 High Street / B1104		
B1085 Chippenham Road (North)	Low Sensitivity	Very Low Sensitivity
B1104	Low Sensitivity	Very Low Sensitivity
B1085 High Street	Low Sensitivity	High Sensitivity
B1104 Station Road / B1102		
B1104 Station Road (North)	Low Sensitivity	Very Low Sensitivity
B1102 (East)	Low Sensitivity	Very Low Sensitivity
B1102 (South)	Low Sensitivity	Very Low Sensitivity
B1102 Mildenhall Road / B1104		
B1102	Low Sensitivity	Very Low Sensitivity
B1104	Low Sensitivity	Very Low Sensitivity
B1102 Mildenhall Road (West)	Low Sensitivity	Very Low Sensitivity
Dane Hill Road / Turnpike Road Roundabout		
B1085 (North-West)	Low Sensitivity	Very Low Sensitivity
B1085 Turnpike Road	Low Sensitivity	Low Sensitivity
B1085 Dane Hill Road (South)	Low Sensitivity	Very Low Sensitivity
A11 SB On-Slip	Very Low Sensitivity	Very Low Sensitivity
A142 / Snailwell Road / Landwade Road		
A142 North	Medium Sensitivity	Low Sensitivity
Snailwell Road	Very Low Sensitivity	Very Low Sensitivity
A142 South	Medium Sensitivity	Low Sensitivity
Landwade Road	Very Low Sensitivity	Very Low Sensitivity

Location	Highway Sensitivity	NMU Sensitivity
A14 J37		
A142 Fordham Road (North)	Medium Sensitivity	Very Low Sensitivity
A14 WB Off-Slip (East)	Low Sensitivity	Very Low Sensitivity
Fordham Road (South)	Very Low Sensitivity	Very Low Sensitivity
A14 EB Off-Slip (West)	Low Sensitivity	Very Low Sensitivity

13.7 Embedded Design Mitigation

HGVs

13.7.1 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 Order limits during the network peak hours. In addition, departing HGVs will be managed to avoid departing in the PM to avoid being released from the Order limits during the network peak hour.

13.7.2 Adequate space will be made available within the Order limits to ensure no overspill queueing is caused onto the surrounding road network, which will be outlined in the CTMP. Further information regarding the consideration of the requirements for Abnormal Indivisible Loads (AILs) including the number of vehicles required, routeing, and access requirements are set out **Appendix 13C: Framework CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]** with indicative access locations shown on Figures 13-4 to 13-9 **[EN010106/APP/6.3]** . Management of HGVs within the Order limits and being released onto the highway network will be managed through a CTMP (a Framework CTMP and TP document is provided **Appendix 13C: Framework CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]** and secured in a requirement attached to the DCO.

13.7.3 The HGV deliveries, including AILs and cranes, will be routed onto the SRN (A11 / A14) to travel to / from the Order limits; more detail on the routes can be found in **Appendix 13C: Framework CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]**. The Police will also be given advanced notification under the Road Vehicle Authorisation of Special Types Order 2003.

13.7.4 The cranes will be required at the four accesses where the substations are located which includes Sunnica West Site A (La Hogue Road), Sunnica East Site A (Beck Road), Sunnica East Site B (Elms Road) and the Burwell National Grid Substation Extension (Weirs Drove for Option 1 or Newnham Drove for Option 2). Management of these vehicles will be made through the CTMP prepared by the contractor / Applicant which will restrict their movements to outside of the network peak periods. A summary of the forecast crane and AIL movements required are in **Appendix 13C: Framework CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]**. The movements associated with the cranes and AILs are expected to be a short-term impact occurring on the inbound and outbound movement to/from the Site. Therefore, the impact of the cranes

and AILs are not considered further in this chapter. Two location options are included for the Burwell National Grid Substation Extension, one option located to the south of the existing substation and accessed via Weirs Drove, with the second option located to the east of the existing substation and accessed via Newnham Drove. The forecast traffic flows are the same for Option 1 and Option 2 and therefore the impact of the Burwell National Grid Substation Extension is only discussed once.

13.7.5 Information regarding the proposed traffic management during the construction period which relates to the site accesses and cable crossings is included in **Appendix 13C: Framework CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]**. The proposed traffic management includes temporary road closures, temporary PRoW closures, temporary traffic signals and temporary speed limits required to operate the accesses safely

Staff Vehicles

13.7.6 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 Order limits each day. Staff will also be directed to use the SRN in the vicinity of the Order limits such as the A11, A14 and A142 to travel to/from the Order limits where appropriate to minimise the amount of construction traffic using local roads through the nearby villages.

13.7.7 The parking strategy seeks to minimise the potential impact of the vehicle trips associated with the staff, in particular on the surrounding villages. Two evenly split temporary car parking areas are proposed to be used throughout the construction period, one within Sunnica West Site A and the other in Sunnica East Site B, which are accessed as follows:

a. Sunnica West Site A – to be accessed off La Hogue Road which links to the A11 approximately 400m / 0.25 miles to the south of the access; and

b. Sunnica East Site B – to be accessed off Elms Road, which is located circa 1km / 0.6 miles from the A11 northbound off-slip/Elms Road T-Junction and is also located in close proximity 1.6km / 1 mile to the Red Lodge Dumbbell Roundabouts.

13.7.8 During arrival of staff at both the 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 vehicles entering the car parking areas are undertaken in a timely and safe manner. Given the working patterns identified it is not expected that 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 providing 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.

13.7.9 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 Sites. 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 SRN in the vicinity of the Sites such as the A11, A14 and A142. This will assist in minimising the number of vehicle trips which could occur on the local roads, in particular through Fordham, Freckenham, Worlington, Red Lodge, Chippenham and Snailwell. Where possible, staff's primary working location will be the same as their parking permit location.

13.7.10 A mini-bus service will be used to transport staff around the Sites 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 compounds. The choice of vehicle for the mini-bus will be based on calculated passenger demand, with the largest appropriate capacity vehicle used to minimise the number of vehicle trips required. Further information is provided regarding the forecast mini-bus trips during the construction phase in section 6.4 in **Appendix 13B: Transport Assessment** of this Environmental Statement **[EN010106/APP/6.2]**.

13.7.11 Considering the start/finish time of staff arriving before 07:00 and departing after 19:00, any mini-bus service trips on the local highway network are expected to occur outside of the peak highway hours of 08:00-09:00 and 17:00-18:00 and are not expected to be significant in terms of impact on the local highway network.

13.7.12 Once staff origin locations are known, investigation will be made into providing a mini-bus service to the local residential areas to pick up/drop off staff who live locally. In addition, this will investigate the potential to provide the mini-bus service to local railway stations. The aim of this mini-bus service is to decrease the number of staff vehicle trips to/from the Order limits. The measures discussed above are identified within section 6 of the **Appendix 13C: Framework CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]** document which will be secured as part of the DCO application.

13.8 Assessment of Likely Changes and Effects

13.8.1 The changes and effects (both beneficial and adverse) associated with the construction of the Scheme are outlined in the sections below. The assessments have been undertaken following consideration of the embedded mitigation measures described in Section 13.7. Consideration is given to the potential changes in respect to construction traffic for each of the identified user groups.

Construction

13.8.2 The following section of the chapter will assess the likely changes in respect of the construction period on vehicle travellers, public transport and non-

motorised users. Construction is anticipated to start in summer of 2023, and with a 24-month construction programme that would last until summer 2025, at the earliest.

Sunnica East Site A and B

Vehicle Travellers – Scheme Traffic Forecast

13.8.3 The construction worker shift covers a 12-hour period. Therefore, it is assumed there will be a 10-hour construction delivery window as this excludes the two network peak hours. With movements split equally across the hours, which is considered a reasonable and robust approach based on previous experience and professional judgement, (noting that there will be more arrivals at the start of the day and departures towards the end), it would be anticipated that on average there will be up to three construction HGVs per hour (six movements).

13.8.4 The peak number of construction staff is forecast to be 834 construction staff per day for the Sunnica East Sites A and B. This includes the staff that are associated with the two on-site substations. Based on an average of 1.5 passengers per vehicle, this would equate to 502 staff vehicles. Due to the number of staff being split into different sites and categories there is rounding present when calculating the number of staff vehicles. Construction staff would be required to arrive between 06:00 and 07:00 and depart between 19:00 and 20:00.

Vehicle Travellers – Driver Delay

13.8.5 **Table 13-17** and **Table 13-18** identify the forecast 2023 development AM peak hour (06:00-07:00) and PM peak hour (19:00-20:00) Base traffic flows and the Sunnica East Sites A and B staff vehicles. Where staff vehicle trips are forecast, the percentage and absolute change in the development peak hour is identified as well as a comparison to the AM and PM network peak hour traffic flows (08:00-09:00 and 17:00-18:00) by identifying the absolute and percentage difference between the development peak hour plus Sunnica East Sites A and B staff vehicles and the AM and PM network peak hour traffic flows. A dash has been included where there is no forecast change in traffic flows.

Table 13-17: Driver Delay – Sunnica East Site A and B – 2023 AM (Vehicles – Single Direction)

Location	2023 AM Development Peak Hour (06:00-07:00)										AM Network Peak Hour (08:00-09:00)		2023 Dev AM Peak Hour + Dev minus Network Peak Hour			
	2023 Base (06:00-07:00)		Staff Vehicle (06:00-07:00)		2023 Base+Dev (06:00-07:00)		2023 % Change (06:00-07:00)		Magnitude				Absolute Difference		% Difference	
	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB
Red Lodge Dumbbell Roundabout (North)																
Elms Road	79	32	0	160	79	193	-	497%	-	Major Adverse	-	80	-	113	-	141%
Newmarket Road	96	153	0	0	96	153	-	-	-	-	-	-	-	-	-	-
A11 NB On-Slip	108	N/A	0	0	108	N/A	-	-	-	-	-	-	-	-	-	-
Newmarket Road (South)	180	175	160	0	340	175	89%	-	Moderate Adverse	-	446	-	-105	-	-24%	-
Red Lodge Dumbbell Roundabout (South)																
Newmarket Road (North)	177	176	160	0	338	176	91%	-	Major Adverse	-	439	-	-101	-	-23%	-
A11 SB Off-Slip	N/A	76	0	76	N/A	152	-	99%	-	Major Adverse	-	189	-	-37	-	-20%
Warren Road	185	90	85	0	269	90	46%	-	Minor Adverse	-	458	-	-188	-	-41%	-
B1085 Turnpike Road	61	54	0	0	61	54	-	-	-	-	-	-	-	-	-	-
A11 SB On-Slip	N/A	178	N/A	0	N/A	178	-	-	-	-	-	-	-	-	-	-
B1506 Bury Road / Herringswell Road / Gazeley Road																
B1506 Bury Road (East)	244	182	0	73	244	255	-	40%	-	Minor Adverse	605	-	-361	-	-	-43%
Gazeley Road (South)	24	31	0	0	24	31	-	-	-	-	-	-	-	-	-	-
B1506 Bury Road (West)	193	187	0	73	193	261	-	39%	-	Minor Adverse	480	-	-286	-	-	-44%
Herringswell Road (North)	47	111	0	0	47	111	-	-	-	-	-	-	-	-	-	-

Location	2023 AM Development Peak Hour (06:00-07:00)										AM Network Peak Hour (08:00-09:00)		2023 Dev AM Peak Hour + Dev minus Network Peak Hour			
	2023 Base (06:00-07:00)		Staff Vehicle (06:00-07:00)		2023 Base+Dev (06:00-07:00)		2023 % Change (06:00-07:00)		Magnitude				Absolute Difference		% Difference	
	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB
B1102 Mildenhall Road / B1085 Chippenham Road																
B1102 Mildenhall Road (East)	54	71	0	0	54	71	-	-	-	-	-	-	-	-	-	-
B1085 Chippenham Road (South)	49	75	0	0	49	75	-	-	-	-	-	-	-	-	-	-
B1102 Mildenhall Road (West)	127	117	0	0	127	117	-	-	-	-	-	-	-	-	-	-
B1085 Chippenham Road / B1085 High Street / B1104																
B1085 Chippenham Road	46	79	0	0	46	79	-	-	-	-	-	-	-	-	-	-
B1104	40	117	0	0	40	117	-	-	-	-	-	-	-	-	-	-
B1085 High Street	82	192	0	0	82	192	-	-	-	-	-	-	-	-	-	-
B1104 Station Road / B1102																
B1104 Station Road (North)	93	26	0	20	93	46	-	75%	-	Moderate Adverse	-	65	-	-19	-	-30%
B1102 (East)	79	70	20	0	99	70	25%	-	Very Low	-	196	-	-97	-	-50%	-
B1102 (South)	154	79	0	0	154	79	-	-	-	-	-	-	-	-	-	-
B1102 Mildenhall Road / B1104																
B1102	151	82	0	0	151	82	-	-	-	-	-	-	-	-	-	-
B1104	84	22	0	0	84	22	-	-	-	-	-	-	-	-	-	-
B1102 Mildenhall Road (West)	70	63	0	0	70	63	-	-	-	-	-	-	-	-	-	-

Location	2023 AM Development Peak Hour (06:00-07:00)										AM Network Peak Hour (08:00-09:00)		2023 Dev AM Peak Hour + Dev minus Network Peak Hour			
	2023 Base (06:00-07:00)		Staff Vehicle (06:00-07:00)		2023 Base+Dev (06:00-07:00)		2023 % Change (06:00-07:00)		Magnitude				Absolute Difference		% Difference	
	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB
Dane Hill Road / Turnpike Road Roundabout																
B1085 (North-West)	67	206	0	0	67	206	-	-	-	-	-	-	-	-	-	-
B1085 Turnpike Road	78	138	0	0	78	138	-	-	-	-	-	-	-	-	-	-
B1085 Dane Hill Road (South)	146	163	0	0	146	163	-	-	-	-	-	-	-	-	-	-
A11 SB On-Slip	N/A	182	N/A	0	N/A	182	-	-	-	-	-	-	-	-	-	-
A142 / Snailwell Road / Landwade Road																
A142 (North)	348	580	0	75	348	655	-	13%	-	Very Low	-	1,196	-	-541	-	-45%
Snailwell Road (East)	149	18	0	0	149	18	-	-	-	-	-	-	-	-	-	-
A142 (South)	333	357	0	75	333	433	-	21%	-	Very Low	-	737	-	-304	-	-41%
Landwade Road (West)	65	142	0	0	65	142	-	-	-	-	-	-	-	-	-	-
A14 J37																
A142 Fordham Road (North)	390	468	0	75	390	544	-	16%	-	Very Low	-	966	-	-422	-	-44%
A14 Westbound Off-Slip (East)	223	N/A	0	N/A	223	N/A	-	-	-	-	-	-	-	-	-	-
Fordham Road (South)	312	443	0	0	312	443	-	-	-	-	-	-	-	-	-	-
A14 Eastbound Off-Slip (West)	N/A	232	N/A	0	N/A	232	-	-	-	-	-	-	-	-	-	-

Table 13-18: Driver Delay – Sunnica East Site A and B – 2023 PM (Vehicles – Single Direction)

Location	2023 PM Development Peak Hour (19:00-20:00)										PM Network Peak Hour (17:00-18:00)		2023 Dev Peak Hour + Dev minus Network Peak Hour			
	2023 Base (19:00-20:00)		Staff Vehicle (19:00-20:00)		2023 Base+Dev (19:00-20:00)		2023 % Change (19:00-20:00)		Magnitude				Absolute Difference		% Difference	
	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB
Red Lodge Dumbbell Roundabout (North)																
Elms Road	148	29	474	0	623	29	320%	-	Major Adverse	-	370	-	253	-	68%	-
Newmarket Road	95	157	0	0	95	157	-	-	-	-	-	-	-	-	-	-
A11 NB On-Slip	109	N/A	76	N/A	184	N/A	70%	-	Moderate Adverse	-	271	-	-87	-	-32%	-
Newmarket Road (South)	163	236	0	399	163	634	-	169%	-	Major Adverse	-	587	-	47	-	8%
Red Lodge Dumbbell Roundabout (South)																
Newmarket Road (North)	161	235	0	399	161	634	-	170%	-	Major Adverse	-	586	-	48	-	8%
A11 SB Off-Slip	N/A	99	N/A	0	N/A	99	-		-	-	-	-	-	-	-	-
Warren Road	108	202	0	85	108	286	-	42%	-	Minor Adverse	-	503	-	-216	-	-43%
B1085 Turnpike Road	67	77	0	0	67	77	-		-	-	-	-	-	-	-	-
A11 SB On-Slip	N/A	89	N/A	314	N/A	403	-	353%	-	Major Adverse	-	175	-	228	-	131%
B1506 Bury Road / Herringswell Road / Gazeley Road																
B1506 Bury Road (East)	185	201	73	0	258	201	40%	-	Minor Adverse	-	461	-	-203	-	-44%	-
Gazeley Road (South)	39	17	0	11	39	29	-	67%	-	Moderate Adverse	-	43	-	-14	-	-33%
B1506 Bury Road (West)	158	172	0	0	158	172	-	-	-	-	-	-	-	-	-	-
Herringswell Road (North)	87	63	0	85	87	147	-	136%	-	Major Adverse	-	156	-	-9	-	-6%

Location	2023 PM Development Peak Hour (19:00-20:00)										PM Network Peak Hour (17:00-18:00)		2023 Dev Peak Hour + Dev minus Network Peak Hour			
	2023 Base (19:00-20:00)		Staff Vehicle (19:00-20:00)		2023 Base+Dev (19:00-20:00)		2023 % Change (19:00-20:00)		Magnitude				Absolute Difference		% Difference	
	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB
B1102 Mildenhall Road / B1085 Chippenham Road																
B1102 Mildenhall Road (East)	75	66	0	0	75	66	-	-	-	-	-	-	-	-	-	-
B1085 Chippenham Road (South)	65	36	0	0	65	36	-	-	-	-	-	-	-	-	-	-
B1102 Mildenhall Road (West)	105	126	0	0	105	126	-	-	-	-	-	-	-	-	-	-
B1085 Chippenham Road / B1085 High Street / B1104																
B1085 Chippenham Road	67	31	0	0	67	31	-	-	-	-	-	-	-	-	-	-
B1104	107	36	0	0	107	36	-	-	-	-	-	-	-	-	-	-
B1085 High Street	173	67	0	0	173	67	-	-	-	-	-	-	-	-	-	-
B1104 Station Road / B1102																
B1104 Station Road (North)	93	26	20	0	112	26	21%	-	Very Low	-	231	-	-119	-	-51%	-
B1102 (East)	79	70	0	20	79	89	-	28%	-	Very Low	-	174	-	-85	-	-49%
B1102 (South)	153	78	0	0	153	78	-	-	-		-	-	-	-	-	-

Location	2023 PM Development Peak Hour (19:00-20:00)										PM Network Peak Hour (17:00-18:00)		2023 Dev Peak Hour + Dev minus Network Peak Hour			
	2023 Base (19:00-20:00)		Staff Vehicle (19:00-20:00)		2023 Base+Dev (19:00-20:00)		2023 % Change (19:00-20:00)		Magnitude				Absolute Difference		% Difference	
	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB
B1102 Mildenhall Road / B1104																
B1102	150	82	0	0	150	82	-	-	-	-	-	-	-	-	-	-
B1104	84	22	0	0	84	22	-	-	-	-	-	-	-	-	-	-
B1102 Mildenhall Road (West)	69	63	0	0	69	63	-	-	-	-	-	-	-	-	-	-
Dane Hill Road / Turnpike Road Roundabout																
B1085 (North-West)	96	201	0	0	96	201	-	-	-	-	-	-	-	-	-	-
B1085 Turnpike Road	139	78	0	0	139	78	-	-	-	-	-	-	-	-	-	-
B1085 Dane Hill Road (South)	157	132	0	0	157	132	-	-	-	-	-	-	-	-	-	-
A11 SB On-Slip	N/A	69	N/A	0	N/A	69	-	-	-	-	-	-	-	-	-	-
A142 / Snailwell Road / Landwade Road																
A142 (North)	612	388	75	0	688	388	12%	-	Very Low	-	1,350	-	-662	-	-49%	-
Snailwell Road (East)	15	74	0	0	15	74	-	-	-	-	-	-	-	-	-	-
A142 (South)	434	429	75	0	510	429	17%	-	Very Low	-	957	-	-448	-	-47%	-
Landwade Road (West)	232	72	0	0	232	72	-	-	-	-	-	-	-	-	-	-

Location	2023 PM Development Peak Hour (19:00-20:00)										PM Network Peak Hour (17:00-18:00)		2023 Dev Peak Hour + Dev minus Network Peak Hour			
	2023 Base (19:00-20:00)		Staff Vehicle (19:00-20:00)		2023 Base+Dev (19:00-20:00)		2023 % Change (19:00-20:00)		Magnitude				Absolute Difference		% Difference	
	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB
A14 J37																
A142 Fordham Road (North)	521	474	75	0	596	-	14%	-	Very Low	-	1,147	-	-551	-	-48%	-
A14 Westbound Off-Slip (East)	221	N/A	0	N/A	-	N/A	-	-	-	-	-	-	-	-	-	-
Fordham Road (South)	514	378	0	0	-	-	-	-	-	-	-	-	-	-	-	-
A14 Eastbound Off-Slip (West)	N/A	225	N/A	75	N/A	300	-	34%	-	Minor Adverse	-	495	-	-195	-	-39%

Red Lodge Dumbbell Roundabouts

13.8.6 **Table 13-17** indicates that between 06:00 and 07:00 it is forecast that 76 staff vehicles will travel on the A11 Southbound Off-Slip and 85 staff vehicles will travel northbound on Warren Road at the Red Lodge Dumbbell Roundabouts. This results in 160 staff vehicles travelling northbound on Newmarket Road and southbound on Elms Road at the Red Lodge Dumbbell Roundabout.

13.8.7 On the A11 Southbound Off-Slip this would equate to a 99% increase in traffic flow, on Warren Road this would equate to a 46% increase in traffic flows, on Newmarket Road (North) at the southern dumbbell roundabout, this would equate to a 91% increase in traffic flow, on Newmarket Road (South) at the northern dumbbell roundabout, this would equate to a 89% increase in traffic flows and on Elms Road this would equate to a 497% increase in traffic flow between 06:00 and 07:00. However, this increase would equate to circa three vehicle per minute during the AM development peak hour (06:00-07:00) at the Red Lodge Dumbbell Roundabouts.

13.8.8 Elms Road has a **very low** highway sensitivity with a major adverse magnitude of change and therefore results in a **minor adverse** classification of effect in terms in the AM. This effect would be **short-term** and **not significant**.

13.8.9 Newmarket Road (South) at the northern dumbbell roundabout, has a **very low** highway sensitivity with a moderate adverse magnitude of change and therefore results in a **negligible** classification of effect in terms of driver delay in the AM. This effect would be **short-term** and **not significant**.

13.8.10 Newmarket Road (North) at the southern dumbbell roundabout, has a **very low** highway sensitivity with a major adverse magnitude of change and therefore results in a **minor adverse** classification of effect in terms of driver delay in the AM. This effect would be **short-term** and **not significant**.

13.8.11 A11 Southbound Off-Slip has a **low** highway sensitivity with a major adverse magnitude of change and therefore results in a **moderate adverse** classification of effect in terms of driver delay in the AM. However, it is noted that between 06:00 and 07:00 plus Sunnica East Sites A and B staff vehicles, it is forecast the traffic flows will be 20% lower than the network peak hours on the A11 Southbound Off-Slip (08:00-09:00). In addition, the 'Forest Heath District Council Site Allocation Plan Cumulative Impact Study' document (August 2016) (Ref. 13-7) indicates that the links at the Red Lodge Dumbbell Roundabouts, are forecast to operate within capacity at between 0.4 to 0.5 maximum Ratio to Flow Capacity (RFC) in 2031 in the AM and PM network peak hours. This considered the operation of the Red Lodge Dumbbell Roundabouts with the additional growth between 2023 and 2031 which will not be present in 2023. Therefore, the operation of the Red Lodge Dumbbell Roundabouts is considered to perform better than this and have a greater residual capacity. Considering the above, it is considered that on the A11 Southbound Off-Slip it would actually result in a **minor adverse** classification of effect in terms of driver delay in the AM. This effect would be **short-term** and **not significant**.

13.8.12 Warren Road has a **very low** highway sensitivity with a major adverse magnitude of change and therefore results in a **negligible** classification of effect in terms of driver delay in the AM. This effect would be **short-term** and **not significant**.

13.8.13 **Table 13-18** indicates that between 19:00 and 20:00 it is forecast that 76 staff vehicles will travel on the A11 Northbound On-Slip, 85 staff vehicles will travel southbound on Warren Road and 314 staff vehicles will travel on the A11 Southbound On-Slip at the Red Lodge Dumbbell Roundabouts. This results in 474 staff vehicles travelling eastbound on Elms Road at the Red Lodge Dumbbell Roundabout. This increase would equate to circa eight vehicles per minute during the PM development peak hour (19:00-20:00) at the Red Lodge Dumbbell Roundabouts.

13.8.14 On the A11 Southbound On-Slip this would equate to a 353% increase in traffic flow, on Warren Road this equates to a 42% increase in traffic flow, on Newmarket Road (North) at the southern dumbbell roundabout, this would equate to a 170% increase in traffic flow, on Newmarket Road (South) at the northern dumbbell roundabout, this would equate to a 169% increase in traffic, on the A11 Northbound On-Slip this would equate to a 70% increase in traffic flow and on Elms Road this would equate to a 320% increase in traffic flow between 19:00 and 20:00.

13.8.15 Elms Road has a **very low** highway sensitivity with a major adverse magnitude of change and therefore results in a **minor adverse** classification of effect in terms of driver delay in the PM. This effect would be **short-term** and **not significant**.

13.8.16 A11 Northbound On-Slip has a **very low** highway sensitivity with a moderate adverse magnitude of change and therefore results in a **negligible** classification of effect in terms of driver delay in the PM. This effect would be **short-term** and **not significant**.

13.8.17 Newmarket Road (South) at the northern dumbbell roundabout, has a **very low** highway sensitivity with a major adverse magnitude of change and therefore results in a **minor adverse** significance of effect in the PM. This effect would be **short-term** and **not significant**.

13.8.18 Newmarket Road (North) at the southern dumbbell roundabout, has a **very low** highway sensitivity with a major adverse magnitude of change and therefore results in a **minor adverse** classification of effect in the PM. This effect would be **short-term** and **not significant**.

13.8.19 Warren Road has a **very low** highway sensitivity with a minor adverse magnitude of change and therefore results in a **negligible** classification of effect in terms of driver delay in the PM. This effect would be **short-term** and **not significant**.

13.8.20 A11 Southbound On-Slip has a **very low** highway sensitivity with a major adverse magnitude of change and therefore results in a **minor adverse** classification of effect in terms of driver delay in the AM. This effect would be **short-term** and **not significant**.

B1506 Bury Road/Herringswell Road/Gazeley Road Junction

13.8.21 **Table 13-17** indicates that between 06:00 and 07:00 it is forecast that 73 staff vehicles will travel westbound on the B1506 Bury Road and eastbound on B1506 Bury Road at the B1506 Bury Road/Herringswell Road/Gazeley Road junction.

13.8.22 This would equate to a 40% increase in traffic flow on the B1506 Bury Road (East) and a 39% increase in traffic flows on the B1506 Bury Road (West) between 06:00 and 07:00. This increase would equate to circa one vehicle per minute during the development peak hour (06:00-07:00) at the B1506 Bury Road/Herringswell Road/Gazeley Road junction. Between 06:00 and 07:00 plus Sunnica East Sites A and B staff vehicles, it is forecast that the traffic flows will be 43% lower on the B1506 Bury Road (East) and 44% lower on the B1506 Bury Road (West) compared to 08:00-09:00 when there will be no staff vehicles.

13.8.23 Both the B1506 Bury Road (East) and B1506 Bury Road (West) have **low** highway sensitivity and **minor adverse** magnitude of change resulting in a negligible classification of effect in terms of driver delay in the AM. The effect would be **short-term** and **not significant**.

13.8.24 **Table 13-18** indicates that between 19:00 and 20:00 it is forecast that 73 staff vehicles will travel on the B1506 Bury Road (West), 11 staff vehicles on Gazeley Road (South) and 85 staff vehicles will travel southbound on Herringswell Road at the B1506 Bury Road/Herringswell Road/Gazeley Road junction.

13.8.25 This would equate to a 40% increase in traffic flow on B1506 Bury Road (East), 67% increase in traffic flow on Gazeley Road (south) and a 136% increase in traffic flow on Herringswell Road (North) between 19:00 and 20:00. However, this increase would only equate to circa one vehicle per minute during the development peak hour (19:00-20:00) at the B1506 Bury Road/ Herringswell Road/Gazeley Road junction. Between 19:00 and 20:00 traffic flows plus Sunnica East Sites A and B staff vehicles, it is forecast that the traffic flows will be 44% lower on B1506 Bury Road (East), 33% lower on Gazeley Road (South) and 6% lower on Herringswell Road (north) compared to the network peak hour between 17:00 and 18:00 when there will be no staff vehicles.

13.8.26 The B1506 Bury Road (East) has **low** highway sensitivity and minor adverse magnitude of change resulting in a **minor adverse** classification of effect in terms of driver delay in the PM. The effect would be **short-term** and **not significant**.

13.8.27 Gazeley Road (South) has **very low** highway sensitivity and moderate adverse magnitude of change resulting in a **negligible** classification of effect in terms of driver delay in the PM. The effect would be **short-term** and **not significant**.

13.8.28 Herringswell Road has **very low** highway sensitivity and major adverse magnitude of change resulting in a **minor adverse** classification of effect in

terms of driver delay in the PM. The effect would be **short-term** and **not significant**.

Chippenham Junctions

13.8.29 The Chippenham Junctions include the B1102 Mildenhall Road/B1085 Chippenham Road junction, B1085 Chippenham Road/B1085 High Street/B1104 junction, B1104 Station Road/B1102 junction and B1102 Mildenhall Road/B1104 junction. **Table 13-17** indicates that between 06:00 and 07:00 it is forecast that 20 staff vehicles will travel on the B1104 Station Road (North) and on B1102 (East) at the B1104 Station Road/B1102 junction. This would equate to a 75% increase in traffic flow on the B1104 Station Road (North) and a 25% increase on the B1102 (East) between 06:00 and 07:00. However, this increase would equate to circa one vehicle per three minutes during the AM development peak hour (06:00-07:00) at the B1104 Station road/B1102 junction. Between 06:00 and 07:00 plus Sunnica East Sites A and B staff vehicles, it is forecast that the traffic flows will be 30% lower on the B1104 Station Road (North) and 50% lower on the B1102 (South) compared to 08:00-09:00 when there will be no staff vehicles.

13.8.30 The B1104 Station Road (North) has a **low** sensitivity and moderate adverse magnitude of change resulting in a **minor adverse** classification of effects in terms of driver delay in the AM. The effect would be **short-term** and **not significant**.

13.8.31 The B1102 (East) has a **low** sensitivity and very low magnitude of change resulting in a **negligible** classification of effects in terms of driver delay in the AM. The effect would be **short-term** and **not significant**.

13.8.32 **Table 13-18** indicates that between 19:00 and 20:00 it is forecast that 20 staff vehicles will travel on the B1104 Station Road (North) and on B1102 (East) at the B1104 Station Road/B1102 junction. This would equate to a 21% increase in traffic flow on the B1104 Station Road (North) and a 28% increase on the B1102 (East) between 19:00 and 20:00. However, this increase would only equate to circa one vehicle per three minutes during the PM development peak hour (19:00-20:00) at the B1104 Station Road/B1102 junction. Between 19:00 and 20:00 plus Sunnica East Sites A and B staff vehicles, it is forecast that the traffic flows will be 51% lower on the B1104 Station Road (North) and 49% lower on the B1102 (South) compared to 17:00-18:00 when there will be no staff vehicles.

13.8.33 The B1104 Station Road (North) has a **low** sensitivity and very low magnitude of change resulting in a **negligible** classification of effects in terms of driver delay in the PM. The effect would be **short-term** and **not significant**.

13.8.34 The B1102 (East) has a **low** sensitivity and very low magnitude of change resulting in a **negligible** classification of effects in terms of driver delay in the AM. The effect would be **short-term** and **not significant**.

A142 Corridor

13.8.35 The A40 Corridor junctions include the A142/Snailwell Road/Landwade Road Junction and the A14 J37. **Table 13-17** indicates that between 06:00 and 07:00 it is forecast that 75 staff vehicles will travel on the A142 (North) and A142 (South) at the A142/Snailwell Road/Landwade Road junction. This would equate to a 13% increase in traffic flow on the A142 (North) and a 21% increase in traffic flow on the A142 (South) between 06:00 and 07:00. This increase would equate to circa one vehicle per minute during the development peak hour (06:00-07:00) at the A142/Snailwell Road/Landwade Road junction. Between 06:00 and 07:00 plus Sunnica East Sites A and B staff vehicles, it is forecast that the traffic flows will be 45% lower on the A142 (North) and 41% lower on the A142 (South) compared to 08:00-09:00 when there will be no staff vehicles.

13.8.36 **Table 13-17** indicates that between 06:00 and 07:00 it is forecast that 75 staff vehicles will travel on the A142 Fordham Road (North) at the A14 J37 junction. This would equate to a 16% increase in traffic flow between 06:00 and 07:00. This increase would equate to circa one vehicle per minute during the development peak hour (06:00-07:00) at the A14 J37. Between 06:00 and 07:00 plus Sunnica East Sites A and B staff vehicles, it is forecast that the traffic flows will be 44% lower compared to 08:00-09:00 when there will be no staff vehicles.

13.8.37 Both the A142 (North) and A142 (South) have a **medium** sensitivity and very low magnitude of change results in a **negligible** classification of effects in terms of driver delay in the AM. The effect would be **short-term** and **not significant**.

13.8.38 The A142 Fordham Road (North) has a **medium** sensitivity and a very low magnitude of change resulting in a **negligible** classification of effects in terms of driver delay in the AM. The effect would be **short-term** and **not significant**.

13.8.39 **Table 13-18** indicates that between 19:00 and 20:00 it is forecast that 75 staff vehicles will travel on the A142 Fordham Road (North) and on the A14 Eastbound Off-Slip (West) at the A14 J37 junction.

13.8.40 This would equate to a 16% increase in traffic flow between 19:00 and 20:00 at the A14 J37. This increase would equate to circa one vehicle per minute during the development peak hour (19:00-20:00) at the A14 J37. It is noted between 19:00 and 20:00 plus Sunnica East Sites A and B staff vehicles, it is forecast the traffic flows will be 48% lower on the A142 Fordham Road (North) and 39% lower on the A14 Eastbound Off-Slip (West) compared to 17:00-18:00 when there will be no staff vehicles.

13.8.41 The A142 Fordham Road (North) has a **medium** sensitivity and a very low magnitude of change resulting in a **negligible** classification of effects in terms of driver delay in the PM. The effect would be **short-term** and **not significant**.

13.8.42 The A14 Eastbound Off-Slip (West) has a **medium** sensitivity and a minor adverse magnitude of change resulting in a **minor adverse** classification of

effects in terms of driver delay in the PM. The effect would be **short-term** and **not significant**.

Driver Delay – Sunnica East Sites A and B Summary

13.8.43 As the vehicles associated with the construction are anticipated to travel outside of the network peak hours and the level of traffic forecast in the development AM and PM peak hours (06:00-07:00 and 19:00-20:00) are in most cases less than or similar to the highway AM and PM peak hours (08:00-09:00 and 17:00-18:00), the delay that the vehicle travellers are generally forecast to experience due to Sunnica East Sites A and B staff would be no worse than in the highway AM and PM peak hours.

13.8.44 In the AM development peak hour, 12 of the 37 links assessed are forecast to experience an increase in traffic flows in 2023 due to the construction of the Scheme. Of these 12 links, one link is forecast to have a minor adverse classification of effect and 11 are forecast to have a negligible classification of effect in terms of driver delay.

13.8.45 In the PM development peak hour, 15 of the 37 links assessed are forecast to experience an increase in traffic flows in 2023 due to the construction of the Scheme. Of these 15 links, one link is forecast to have a minor adverse classification of effect and 14 are forecast to have a negligible classification of effect in terms of driver delay.

13.8.46 Therefore, overall, for Sunnica East Sites A and B, no receptors are forecast to experience a significant effect in terms of driver delay during the construction period. Any effects would be **short-term** and **not significant**.

Vehicle Travellers and NMUs – Accidents and Safety

13.8.47 The PIC analysis presented in section 13.6 does not indicate any significant safety design issues at these locations. The PICA for the past five years obtained from SCC and CCC indicate that three incidents have occurred at the A11 Off-Slip / Elms Road T-junction, two incidents on the A11 southbound (South of Red Lodge) and two incidents on the B1102. This equates to less than one incident per year at each location. One incident was classified as fatal on the B1102. Seven incidents were recorded on the A11 northbound (South of Red Lodge) over the five-year period, this is 1.4 incidents per year.

13.8.48 As the construction staff and HGV traffic will travel outside of the network peak hours it is considered that development traffic will be added to the network when it is generally operating at a lower level of stress than under peak hour conditions and therefore the magnitude of change is **minor adverse**. The PIC data has not identified any areas of sensitivity and as identified in **Table 13-16**, the sensitivity of the A11 off-slip is **low**. As such, the overall classification of effect on vehicles travellers in terms of accidents and safety is **negligible** during the construction period **and not significant**.

Public Transport Users

13.8.49 It is considered that there will not be a significant delay on the local roads associated with construction activity at peak times due to construction staff

arriving and departing the Sunnica East Sites A and B outside of peak hours between 07:00-08:00 and 19:00-20:00 which has been outlined previously in this chapter.

13.8.50 At the time of writing, it is not anticipated that any bus services will be affected by the closure of roads during the construction period of the Scheme, as no current bus routes would be affected. The temporary road closures are expected to be for a maximum of one week and the effect would be classified as **minor adverse** if a bus route was impacted by a temporary road closure. Therefore, the magnitude of change on public transport users is considered to be **negligible**.

13.8.51 Due to the limited number of bus routes and services in the area the sensitivity for public transport users is considered to be **very low**.

13.8.52 Therefore, it is considered that the significance of effect on public transport users will be **negligible** and **not significant**.

NMUs

NMUs – Scheme Traffic Forecast

13.8.53 The Scheme traffic forecasts are based on the increase on the local road network where NMUs could travel based on links which are local to the Scheme. The SRN has not been included in this area as even though the SRN is open to NMUs it is considered unlikely to be used by them. The percentage change is based on the two-way traffic flows.

13.8.54 The peak number of vehicles associated with the staff for the Sunnica East Sites A and B is forecast to be 502. This equates to approximately eight vehicles per minute during the development peak hours. On average across the 24-month construction period, approximately 341 staff vehicles are forecast to travel to / from the Sunnica East Sites A and B per day, equating to approximately five to six vehicles per minute during the Scheme peak hours. The increase in traffic is forecast to occur outside of network peak hours and therefore it is anticipated that there will be fewer existing pedestrian and cyclist trips during this time that may be affected by the increase in traffic flow.

NMUs – Severance, Pedestrian and Cycle Delay and Pedestrian and Cycle Amenity

13.8.55 **Table 13-19** and **Table 13-20** below identifies the link sensitivity, two-way percentage change, magnitude and significance for NMU's severance, pedestrian and cycle delay and amenity. A hyphen has been included in the table below where there is no forecast change in traffic flows.

Table 13-19: NMUs – Severance, Pedestrian and Cycle Delay and Amenity – Sunnica East Site A and B – 2023 AM

Location	Link Sensitivity	2023 Two-Way % Change	Magnitude	Significance of Effect
Red Lodge Dumbbell Roundabout (North)				
Elms Road	Very Low Sensitivity	144%	Major Adverse	Minor Adverse
Newmarket Road	-	-	-	-
A11 NB On-Slip	-	-	-	-
Newmarket Road (South)	Very Low Sensitivity	45%	Minor Adverse	Negligible
Red Lodge Dumbbell Roundabout (South)				
Newmarket Road (North)	Very Low Sensitivity	45%	Minor Adverse	Negligible
A11 SB Off-Slip	Very Low Sensitivity	99%	Major Adverse	Minor Adverse
Warren Road	Medium Sensitivity	31%	Minor Adverse	Minor Adverse
B1085 Turnpike Road	-	-	-	-
A11 SB On-Slip (Red Lodge)	-	-	-	-
B1506 Bury Road / Herringswell Road / Gazeley Road				
B1506 Bury Road (East)	Medium Sensitivity	17%	Negligible	Negligible
Gazeley Road (South)	-	-	-	-
B1506 Bury Road (West)	Medium Sensitivity	19%	Negligible	Negligible
Herringswell Road (North)	-	-	-	-
B1102 Mildenhall Road / B1085 Chippenham Road				
B1102 Mildenhall Road (East)	Very Low Sensitivity	16%	Negligible	Negligible
B1085 Chippenham Road (South)	Low Sensitivity	13%	Negligible	Negligible
B1102 Mildenhall Road (West)	-	-	-	-
B1085 Chippenham Road / B1085 High Street / B1104				
B1085 Chippenham Road	-	-	-	-
B1104	-	-	-	-
B1085 High Street	-	-	-	-

Location	Link Sensitivity	2023 Two-Way % Change	Magnitude	Significance of Effect
B1104 Station Road / B1102				
B1104 Station Road (North)	-	-	-	-
B1102 (East)	-	-	-	-
B1102 (South)	-	-	-	-
B1102 Mildenhall Road / B1104				
B1102	-	-	-	-
B1104	-	-	-	-
B1102 Mildenhall Road (West)	-	-	-	-
Dane Hill Road / Turnpike Road Roundabout				
B1085 (North-West)	-	-	-	-
B1085 Turnpike Road	-	-	-	-
B1085 Dane Hill Road (South)	-	-	-	-
A11 SB On-Slip	-	-	-	-
A142 / Snailwell Road / Landwade Road				
A142 (North)	Low Sensitivity	8%	Negligible	Negligible
Snailwell Road (East)	-	-	-	-
A142 (South)	Low Sensitivity	11%	Negligible	Negligible
Landwade Road (West)	-	-	-	-
A14 J37				
A142 Fordham Road (North)	Very Low Sensitivity	9%	Negligible	Negligible
A14 Westbound Off-Slip (East)	-	-	-	-
Fordham Road (South)	-	-	-	-
A14 Eastbound Off-Slip (West)	-	-	-	-

Table 13-20: NMUs – Severance, Pedestrian and Cycle Delay and Amenity – Sunnica East Site A and B – 2023 PM

Location	Link Sensitivity	2023 Two-Way % Change	Magnitude	Significance
Red Lodge Dumbbell Roundabout (North)				
Elms Road	Very Low Sensitivity	267%	Major Adverse	Minor Adverse
Newmarket Road	-	-	-	-
A11 NB On-Slip	Very Low Sensitivity	70%	Major Adverse	Minor Adverse
Newmarket Road (South)	Very Low Sensitivity	100%	Major Adverse	Minor Adverse
Red Lodge Dumbbell Roundabout (South)				
Newmarket Road (North)	Very Low Sensitivity	101%	Major Adverse	Minor Adverse
A11 SB Off-Slip	-	-	-	-
Warren Road	Medium Sensitivity	27%	Negligible	Negligible
B1085 Turnpike Road	-	-	-	-
A11 SB On-Slip	Very Low Sensitivity	353%	Major Adverse	Minor Adverse
B1506 Bury Road / Herringswell Road / Gazeley Road				
B1506 Bury Road (East)	Medium Sensitivity	19%	Negligible	Negligible
Gazeley Road (South)	Very Low Sensitivity	20%	Negligible	Negligible
B1506 Bury Road (West)	-	-	-	-
Herringswell Road (North)	Low Sensitivity	57%	Minor Adverse	Minor Adverse
B1102 Mildenhall Road / B1085 Chippenham Road				
B1102 Mildenhall Road (East)	-	-	-	-
B1085 Chippenham Road (South)	-	-	-	-
B1102 Mildenhall Road (West)	-	-	-	-
B1085 Chippenham Road / B1085 High Street / B1104				
B1085 Chippenham Road	-	-	-	-
B1104	-	-	-	-
B1085 High Street	-	-	-	-

Location	Link Sensitivity	2023 Two-Way % Change	Magnitude	Significance
B1104 Station Road / B1102				
B1104 Station Road (North)	Very Low Sensitivity	16%	Negligible	Negligible
B1102 (East)	Very Low Sensitivity	13%	Negligible	Negligible
B1102 (South)	-	-	-	-
B1102 Mildenhall Road / B1104				
B1102	-	-	-	-
B1104	-	-	-	-
B1102 Mildenhall Road (West)	-	-	-	-
Dane Hill Road / Turnpike Road Roundabout				
B1085 (North-West)	-	-	-	-
B1085 Turnpike Road	-	-	-	-
B1085 Dane Hill Road (South)	-	-	-	-
A11 SB On-Slip	-	-	-	-
A142 / Snailwell Road / Landwade Road				
A142 (North)	Low Sensitivity	8%	Negligible	Negligible
Snailwell Road (East)	-	-	-	-
A142 (South)	Low Sensitivity	9%	Negligible	Negligible
Landwade Road (West)	-	-	-	-
A14 J37				
A142 Fordham Road (North)	Very Low Sensitivity	8%	Negligible	Negligible
A14 Westbound Off-Slip (East)	-	-	-	-
Fordham Road (South)	-	-	-	-
A14 Eastbound Off-Slip (West)	Very Low Sensitivity	34%	Minor Adverse	Negligible

13.8.56 **Table 13-19** indicates that, in the AM peak, three of the 37 links assessed are forecast to have a minor adverse classification of effect with regards to severance, pedestrian delay, pedestrian / cycle amenity and fear and intimidation during the construction period. The remaining links are forecast to have no impact or a negligible significance of effect.

13.8.57 **Table 13-19** indicates that Warren Road is forecast to experience a 31% increase in two-way traffic flows in the development AM peak hour during the construction period. Warren Road provides access to Red Lodge from the south. There are footways along Warren Road, and it is a main vehicular route through a residential area, therefore this link has a medium sensitivity in terms of NMUs. It is considered that Warren Road has a **minor adverse** change with regards to severance, pedestrian delay, pedestrian / cycle amenity and fear and intimidation in relation to the increase of construction traffic. The magnitude of change on potential NMUs using Warren Road is **minor adverse**, the sensitivity is **medium,** therefore the significance of the effect during the construction period is **minor adverse**. This is a **short-term** effect and **not significant.**

13.8.58 **Table 13-20** indicates that six of the 37 links within the area of assessment are forecast to have a minor adverse significance of effect with regards to severance, pedestrian delay, pedestrian / cycle amenity and fear and intimidation during the construction period. The remaining links are forecast to have no impact or a negligible significance of effect.

13.8.59 Herringswell Road and Warren Road are located within the residential areas of Kentford and Red Lodge respectively and provide footways along the carriageway. Both Herringswell and Warren Road are discussed in further details below.

13.8.60 **Table 13-20** indicates that Herringswell Road is forecast experience a 57% increase in two-way traffic flows in the PM development peak during the construction period. Herringswell Road provides a route from Kentford to the south of the Order limits towards Sunnica East Site B centralised car park. There are footways along Herringswell Road and therefore has a low sensitivity for NMUs. It is considered that the Herringswell Road has **minor adverse** change with regards to severance, pedestrian delay, pedestrian / cycle amenity and fear and intimidation in relation to the increase of construction traffic. The magnitude of change on potential NMUs using Herringswell Road is **minor adverse**, the sensitivity is **low,** therefore the significance of the effect during the construction period is **minor adverse**. This effect is **not significant** and would be **short-term**.

13.8.61 As a result, in terms of Severance, Pedestrian Delay, Pedestrian / Cycle Amenity and Fear and Intimidation the construction traffic related to the Sunnica East Site is forecast to have a **minor adverse** significance of effect. This is a **short-term** effect and **not significant**.

NMUs – PRoW

13.8.62 During construction, four PRoWs that are located either within or near the Sunnica East Sites A and B are anticipated to be temporarily closed. A plan illustrating the temporary PRoW closures can be found in Figure 13-2

included in this Environmental Statement **[EN010106/APP/6.3].** The temporary closures will be supported by appropriate signage.

13.8.63 Notwithstanding, the PRoWs would be closed for the shortest timeframe reasonably necessary to carry out the works. It is expected that the PRoWs would be closed for a maximum of three weeks. When a PRoW is temporarily closed there is expected to be alternative option available within the local area on the existing network.

13.8.64 These PRoW are predominantly used for recreational purposes and there is a wide network of PRoWs in the surrounding area providing residents with alternative routes.

13.8.65 The Sunnica East Sites A and B are located in a rural area with limited footways and pedestrian and cycle facilities in the area. There are several PRoWs crossing and connecting the Scheme to local villages such as Worlington, Freckenham and Red Lodge. There are no on or off-road cycling facilities within the vicinity of the Sunnica East Sites A and B; however, the roads surrounding the Sites are generally lightly trafficked and therefore could facilitate cycling. There is no data available on the number of pedestrians and cyclists using the PRoWs that will be temporarily closed; however, it is considered that the number of users affected is likely to be low. The magnitude of change on those using PRoW is **minor adverse**, the sensitivity is **low,** therefore the significance of the effect during the construction period is **minor adverse**. This effect would be **short-term** and **not significant**.

NMUs – Fear and Intimidation

13.8.66 Consideration has been given to HGV flows during construction. The main HGV access for Sunnica East Sites A and B is proposed to be from Elms Road into Sunnica East Site B. The access is located in close proximity to the A11 northbound Off-Slip/Elms Road T-junction. It is anticipated that on average there will be 29 HGVs Annual Average Weekday Traffic (AAWT) (58 movements) to the Sunnica East Sites A and B over the 24-month construction programme. It is forecast that there will be a peak in HGV deliveries during construction months three with 57 HGVs AAWT (114 movements). This would not result in a 30% increase, as this is identified in the IEMA guidance to result in a minor change, in AAWT HGV activity along the A11 and A14. Furthermore, there are likely to be very few, NMUs using the SRN who would be affected by these short-term HGV trips.

13.8.67 The construction worker shift covers a 12-hour period. Therefore, it is assumed there will be a 10-hour construction delivery window as this excludes the two network peak hours. Movements are split equally across the hours, which is considered a reasonable and robust approach based on previous experience and professional judgement, (noting that there will be more arrivals at the start of the day and departures towards the end), it would be anticipated that on average there will be approximately three HGV deliveries per hour (six movements) to the Sunnica East Sites A and B. As there is no accurate HGV data available for this part of the local road network, it is our professional judgement that, based on data for other roads in the study area, the magnitude of change associated with the Scheme is

likely to be **minor adverse**. The majority of roads that the HGVs would use to access the Sunnica East Site have a very low or low sensitivity in terms of NMU. Therefore, to be robust the sensitivity of receptor for this assessment is **low**.

13.8.68 HGVs associated with the Sunnica East Sites A and B will be routed to the SRN for the majority of the journey to minimise the change on the local roads and villages. The HGV routes to the Sites are outlined in **Appendix 13C: Framework CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]**.

13.8.69 Therefore, it is considered that the magnitude of change would be **minor adverse,** the sensitivity would be **low** and therefore the classification of effect in terms of fear and intimidation is **minor adverse**. This is a **short-term** effect and **not significant.**

Summary

13.8.70 **Table 13-21** outlines a summary of the magnitude of impact and significance of effect for vehicle travellers, NMUs and public transport users for the Sunnica East Sites A and B. Where a range of sensitivity, magnitude and significance is reported earlier in this chapter, the table below identifies the worst-case outcome.

Table 13-21: Summary of Magnitude of Change and Significance of Effect for Sunnica East (A and B) Sites

Description of Effects	Sensitivity (Value)	Description of Change	Magnitude of Change	Effect Category	Significant? (Yes / No)
Vehicle Traveller					
Driver Delay	Ranges from Medium to Very Low	No increase in traffic on the surrounding road network during the network peak hours. However, there is an increase in traffic flows within the development peak hours.	Range from Major Adverse to Very Low	Ranges from Minor Adverse to Negligible	No

Description of Effects	Sensitivity (Value)	Description of Change	Magnitude of Change	Effect Category	Significant? (Yes / No)
Accidents and Safety	Low	No accidents involving vulnerable road users were recorded within the vicinity of the Sunnica East Sites A and B	Minor Adverse	Minor Adverse	No
NMUs					
Severance	Low	Temporary closure of some PRoWs and increase in traffic flows.	Minor Adverse	Minor Adverse	No
Pedestrian Delay / PRoW	Low	Some PRoWs to be closed temporarily in the vicinity of the Sunnica East Sites A and B.	Minor Adverse	Minor Adverse	No
Pedestrian / Cycle Amenity	Low	Temporary closure of some PRoWs and increase in traffic flows.	Minor Adverse	Minor Adverse	No
Fear and Intimidation	Low	Low increase in HGV flows.	Minor Adverse	Minor Adverse	No
Accidents and Safety	Low	No accidents involving vulnerable road users were recorded within the vicinity of the Sunnica East Sites A and B accesses.	Minor Adverse	Minor Adverse	No
Public Transport Users					
Public Transport Users	Negligible	No impact on bus or train services.	Negligible	Negligible	No

Sunnica West Site A and B

Vehicle Travellers – Scheme Forecast Traffic Flows

13.8.71 The construction worker shift covers a 12-hour period. Therefore, it is assumed there will be a 10-hour construction delivery window as this excludes the two network peak hours. Movements are split equally across the hours, which is considered a reasonable and robust approach based on previous experience and professional judgement, (noting that there will be more arrivals at the start of the day and departures towards the end), it would be anticipated that on average there will be up to 23 construction HGVs per hour (46 movements).

13.8.72 The peak number of construction staff is forecast to be 777 construction staff per day for the Sunnica West Sites A and B. This includes the staff that are associated with the one substation on Sunnica West Site A and the Burwell National Grid Substation Extension which are anticipated to use the Sunnica West Site A main access. Based on an average of 1.5 passengers per vehicle, this would equate to 522 Sunnica West staff vehicles. The number of staff vehicles is subject to rounding due to the breakdown of staff per type of works. Construction staff would be expected to arrive between 06:00 and 07:00 and depart between 19:00 and 20:00.

Vehicle Travellers – Driver Delay

13.8.73 **Table 13-22** and **Table 13-23** identify the forecast 2023 development AM peak hour (06:00-07:00) and PM peak hour (19:00-20:00) traffic flows for the Sunnica West Sites A and B staff vehicles, the percentage impact on the development peak hour, the AM and PM network peak hour traffic flows (08:00-09:00 and 17:00-18:00) and the difference between the development peak hour plus Sunnica West Sites A and B staff vehicles and the AM and PM network peak hour traffic flows. The table also identifies the magnitude of change for the AM and PM development peak hours (06:00-07:00 and 19:00-20:00).

Table 13-22: Driver Delay – Sunnica West Site A and B – 2023 AM (Vehicles – Single Direction)

Location	2023 AM Development Peak Hour (06:00-07:00)										AM Network Peak Hour (08:00-09:00)		2023 Dev AM Peak Hour + Dev minus Network Peak Hour			
	2023 Base (06:00-07:00)		Staff Vehicle (06:00-07:00)		2023 Base+Dev (06:00-07:00)		2023 % Change (06:00-07:00)		Magnitude				Absolute Difference		% Difference	
	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB
Red Lodge Dumbbell Roundabout (North)																
Elms Road	79	32	0	0	79	32	79	32	-	-	-	-	-	-	-	-
Newmarket Road	96	153	0	0	96	153	96	153	-	-	-	-	-	-	-	-
A11 NB On-Slip	108	N/A	0	N/A	108	N/A	108	N/A	-	-	-	-	-	-	-	-
Newmarket Road (South)	180	175	0	0	180	175	180	175	-	-	-	-	-	-	-	-
Red Lodge Dumbbell Roundabout (South)																
Newmarket Road (North)	177	176	0	0	177	176	-	-	-	-	-	-	-	-	-	-
A11 SB Off-Slip	N/A	76	N/A	58	N/A	134	-	76%	-	Moderate Adverse		189		-54		-29%
Warren Road	185	90	0	0	185	90	-	-	-	-	-	-	-	-	-	-
B1085 Turnpike Road	61	54	0	58	61	112	-	109%	-	Major Adverse	-	133	-	-21	-	-16%
A11 SB On-Slip	N/A	178	N/A	0	N/A	178	-	N/A	-	-	-	440	-	-262	-	-
B1506 Bury Road / Herringswell Road / Gazeley Road																
B1506 Bury Road (East)	244	182	0	71	244	252	-	39%	-	Minor Adverse	-	450	-	-198	-	-44%
Gazeley Road (South)	24	31	0	71	24	102	-	228%	-	Major Adverse	-	77	-	25	-	32%
B1506 Bury Road (West)	193	187	0	0	193	187	-	-	-	-	-	-	-	-	-	-
Herringswell Road (North)	47	111	0	0	47	111	-	-	-	-	-	-	-	-	-	-

Location	2023 AM Development Peak Hour (06:00-07:00)										AM Network Peak Hour (08:00-09:00)		2023 Dev AM Peak Hour + Dev minus Network Peak Hour			
	2023 Base (06:00-07:00)		Staff Vehicle (06:00-07:00)		2023 Base+Dev (06:00-07:00)		2023 % Change (06:00-07:00)		Magnitude				Absolute Difference		% Difference	
	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB
B1102 Mildenhall Road / B1085 Chippenham Road																
B1102 Mildenhall Road (East)	54	71	0	0	54	71	54	71	-	-	-	-	-	-	-	-
B1085 Chippenham Road (South)	49	75	0	0	49	75	49	75	-	-	-	-	-	-	-	-
B1102 Mildenhall Road (West)	127	117	0	0	127	117	127	117	-	-	-	-	-	-	-	-
B1085 Chippenham Road / B1085 High Street / B1104																
B1085 Chippenham Road	46	79	0	0	46	79	46	79	-	-	-	-	-	-	-	-
B1104	40	117	0	0	40	117	40	117	-	-	-	-	-	-	-	-
B1085 High Street	82	192	0	0	82	192	82	192	-	-	-	-	-	-	-	-
B1104 Station Road / B1102																
B1104 Station Road (North)	93	26	0	22	93	49	-	85%	-	Moderate Adverse	-	65	-	-16	-	-25%
B1102 (East)	79	70	0	0	79	70	-		-	-	-	-	-	-	-	-
B1102 (South)	154	79	0	22	154	101	-	28%	-	Negligible	-	195	-	-94	-	-48%
B1102 Mildenhall Road / B1104																
B1102	151	82	0	22	151	104	-	27%	-	Negligible	-	203	-	-99	-	-49%
B1104	84	22	0	22	84	44	-	102%	-	Major Adverse	-	54	-	-10	-	-18%
B1102 Mildenhall Road (West)	70	63	0	0	70	63	-	-	-	-	-	-	-	-	-	-

Location	2023 AM Development Peak Hour (06:00-07:00)										AM Network Peak Hour (08:00-09:00)		2023 Dev AM Peak Hour + Dev minus Network Peak Hour			
	2023 Base (06:00-07:00)		Staff Vehicle (06:00-07:00)		2023 Base+Dev (06:00-07:00)		2023 % Change (06:00-07:00)		Magnitude				Absolute Difference		% Difference	
	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB
Dane Hill Road / Turnpike Road Roundabout																
B1085 (North-West)	67	206	139	0	206	206	208%	-	Major Adverse	-	166	-	40	-	24%	-
B1085 Turnpike Road	78	138	0	58	78	196	-	42%	-	Minor Adverse	-	342	-	-146	-	-43%
B1085 Dane Hill Road (South)	146	163	81	0	227	163	56%	-	Minor Adverse	-	361	-	-134	-	-37%	-
A11 SB On-Slip	N/A	182	N/A	0	N/A	182	--	-	-	-	-	-	-	-	-	-
A142 / Snailwell Road / Landwade Road																
A142 (North)	348	580	0	68	348	648	-	12%	-	Very Low	-	1,196	-	-548	-	-46%
Snailwell Road (East)	149	18	0	0	149	18	-	-	-	-	-	-	-	-	-	-
A142 (South)	333	357	0	68	333	425	-	19%	-	Very Low	-	737	-	-312	-	-42%
Landwade Road (West)	65	142	0	0	65	142	-	-	-	-	-	-	-	-	-	-
A14 J37																
A142 Fordham Road (North)	390	468	0	68	390	536	-	14%	-	Very Low	-	966	-	-430	-	-44%
A14 Westbound Off-Slip (East)	223	N/A	0	N/A	223	N/A	-	-	-	-	-	-	-	-	-	-
Fordham Road (South)	312	443	0	0	312	443	-	-	-	-	-	-	-	-	-	-
A14 Eastbound Off-Slip (West)	N/A	232	N/A	0	N/A	232	-	-	-	-	-	-	-	-	-	-

*Rounding errors may occur in the table above

Table 13-23: Driver Delay – Sunnica West Site A and B – 2023 PM (Vehicles – Single Direction)

Location	2023 PM Development Peak Hour (19:00-20:00)										PM Network Peak Hour (17:00-18:00)		2023 Dev PM Peak Hour + Dev minus Network Peak Hour			
	2023 Base (19:00-20:00)		Staff Vehicle (19:00-20:00)		2023 Base+Dev (19:00-20:00)		2023 % Change (19:00-20:00)		Magnitude				Absolute Difference		% Difference	
	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB
Red Lodge Dumbbell Roundabout (North)																
Elms Road	148	29	0	0	148	29	148	29	-	-	-	-	-	-	-	-
Newmarket Road	95	157	0	0	95	157	95	157	-	-	-	-	-	-	-	-
A11 NB On-Slip	109		0		109		109		-	-	-	-	-	-	-	-
Newmarket Road (South)	163	236	0	0	163	236	163	236	-	-	-	-	-	-	-	-
Red Lodge Dumbbell Roundabout (South)																
Newmarket Road (North)	161	235	0	0	161	235	161	235	-	-	-	-	-	-	-	-
A11 SB Off-Slip		99		0		99		99	-	-	-	-	-	-	-	-
Warren Road	108	202	0	0	108	202	108	202	-	-	-	-	-	-	-	-
B1085 Turnpike Road	67	77	0	0	67	77	67	77	-	-	-	-	-	-	-	-
B1506 Bury Road / Herringswell Road / Gazeley Road																
B1506 Bury Road (East)	185	201	71	0	256	201	38%	-	Minor Adverse	-	461	-	-206	-	-45%	-
Gazeley Road (South)	39	17	0	0	39	17	-	-	-	-	-	-	-	-	-	-
B1506 Bury Road (West)	158	172	71	0	229	172	45%	-	Minor Adverse	-	394	-	-165	-	-42%	-
Herringswell Road (North)	87	63	0	0	87	63	-	-	-	-	-	-	-	-	-	-

Location	2023 PM Development Peak Hour (19:00-20:00)										PM Network Peak Hour (17:00-18:00)		2023 Dev PM Peak Hour + Dev minus Network Peak Hour			
	2023 Base (19:00-20:00)		Staff Vehicle (19:00-20:00)		2023 Base+Dev (19:00-20:00)		2023 % Change (19:00-20:00)		Magnitude				Absolute Difference		% Difference	
	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB
B1102 Mildenhall Road / B1085 Chippenham Road																
B1102 Mildenhall Road (East)	75	66	0	0	75	66	75	66	-	-	-	-	-	-	-	-
B1085 Chippenham Road (South)	65	36	0	0	65	36	65	36	-	-	-	-	-	-	-	-
B1102 Mildenhall Road (West)	105	126	0	0	105	126	105	126	-	-	-	-	-	-	-	-
B1085 Chippenham Road / B1085 High Street / B1104																
B1085 Chippenham Road	67	31	0	0	67	31	-	-	-	-	-	-	-	-	-	-
B1104	107	36	22	0	129	36	21%	-	Very Low	-	266	-	-137	-	-52%	-
B1085 High Street	173	67	22	0	196	67	13%	-	Very Low	-	432	-	-237	-	-55%	-
B1104 Station Road / B1102																
B1104 Station Road (North)	93	26	22	0	115	26	24%	-	Very Low	-	231	-	-116	-	-50%	-
B1102 (East)	79	70	0	0	79	70	-	-	-	-	-	-	-	-	-	-
B1102 (South)	153	78	22	0	176	78	15%	-	Very Low	-	382	-	-207	-	-54%	-
B1102 Mildenhall Road / B1104																
B1102	150	82	22	0	173	82	15%	-	Very Low	-	375	-	-202	-	-54%	-
B1104	84	22	22	0	106	22	27%	-	Very Low	-	209	-	-103	-	-49%	-
B1102 Mildenhall Road (West)	69	63	0	0	69	63	-	-	-	-	-	-	-	-	-	-

Location	2023 PM Development Peak Hour (19:00-20:00)										PM Network Peak Hour (17:00-18:00)		2023 Dev PM Peak Hour + Dev minus Network Peak Hour			
	2023 Base (19:00-20:00)		Staff Vehicle (19:00-20:00)		2023 Base+Dev (19:00-20:00)		2023 % Change (19:00-20:00)		Magnitude				Absolute Difference		% Difference	
	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB
Dane Hill Road / Turnpike Road Roundabout																
B1085 (North-West)	96	201	0	363	96	564	-	180%	-	Major Adverse	-	502	-	62	-	12%
B1085 Turnpike Road	139	78	0	0	139	78	-	-	-	-	-	-	-	-	-	-
B1085 Dane Hill Road (South)	157	132	0	81	157	213	-	61%	-	Moderate Adverse	-	329	-	-116	-	-35%
A11 SB On-Slip	N/A	69	N/A	282	N/A	351	-	408%	-	Major Adverse	-	172	-	179	-	104%
A142 / Snailwell Road / Landwade Road																
A142 (North)	612	388	68	0	680	388	11%	-	Very Low	-	1,350	-	-670	-	-50%	-
Snailwell Road (East)	15	74	0	0	15	74	-	-	-	-	-	-	-	-	-	-
A142 (South)	434	429	68	0	502	429	16%	-	Very Low	-	957	-	-455	-	-48%	-
Landwade Road (West)	232	72	0	0	232	72	-	-	-	-	-	-	-	-	-	-
A14 J37																
A142 Fordham Road (North)	521	474	75	0	596	-	14%	-	Very Low	-	1,147		-551		-48%	-
A14 Westbound Off-Slip (East)	221	N/A	0	N/A	-	-	-	-	-	-	-	-	-	-	-	-
Fordham Road (South)	514	378	0	0	-	-	-	-	-	-	-	-	-	-	-	-
A14 Eastbound Off-Slip (West)	N/A	225	N/A	75	-	300	-	34%	-	Minor Adverse	-	495	-	-195	-	-39%

*Rounding errors may occur in the table above

Red Lodge Dumbbell Roundabouts

13.8.74 **Table 13-22** indicates that between 06:00 and 07:00 it is forecast that there will be 58 staff vehicles related to Sunnica West on the A11 Southbound Off-Slip and on the B1085 Turnpike Road at the Red Lodge Dumbbell Roundabouts to the Sunnica West Sites. On Turnpike Road this would equate to a 109% increase in traffic flow and 76% on the A11 Southbound Off-Slip between 06:00 and 07:00. However, this increase would equate to circa one vehicle per minute during the AM development peak hour (06:00-07:00) at the Red Lodge Southern Dumbbell Roundabout. Between 06:00 and 07:00 plus Sunnica West Site A and B staff vehicles, it is forecast the traffic flows will be 16% lower on the B1085 Turnpike Road and 29% lower on the A11 Southbound Off-Slip than in the network peak hour between 08:00 and 09:00 when there would be no staff vehicles.

13.8.75 Turnpike Road has a **low** highway sensitivity with a major adverse magnitude of change and therefore results in a **minor adverse** classification of effect in terms of driver delay in the AM. This effect would be **short-term** and **not significant**.

13.8.76 The A11 Southbound Off-Slip has a **low** highway sensitivity with a moderate adverse magnitude of change and therefore results in a **minor adverse** classification of effect in terms of driver delay in the AM. This effect would be **short-term** and **not significant**.

B1506 Bury Road/Herringswell Road/Gazeley Road Junction

13.8.77 **Table 13-22** indicates that between 06:00 and 07:00 it is forecast that 71 staff vehicles related to Sunnica West on the B1506 Bury Road (East) and on Gazeley Road at the B1506 Bury Road/Herringswell Road/Gazeley Road junction. This would equate to a 228% increase in traffic flow on Gazeley Road and 39% increase on B1506 Bury Road (East) between 06:00 and 07:00 when there would be no staff vehicles. This increase would equate to circa one vehicle per minute during the development peak hour (06:00-07:00) at the B1506 Bury Road/Herringswell Road/Gazeley Road junction. Between 06:00 and 07:00 plus Sunnica West Sites A and B staff vehicles, it is forecast the traffic flows will be 32% (25 vehicles) higher on Gazeley Road and 44% lower on B1506 Bury Road (East) compared to traffic flows between 08:00-09:00 when there will be no staff vehicles.

13.8.78 Gazeley Road has a **very low** highway sensitivity with a major adverse magnitude of change and therefore results in a **minor adverse** classification of effect in terms of driver delay in the AM. This effect would be **short-term** and **not significant**.

13.8.79 B1506 Bury Road (East) has a **low** highway sensitivity with a minor adverse magnitude of change and therefore results in a **minor adverse** classification of effect in terms of driver delay in the AM. This effect would be **short-term** and **not significant**.

13.8.80 **Table 13-23** indicates that between 19:00 and 20:00 it is forecast that 71 staff vehicles will travel on the B1506 Bury Road (West) and on B1506 Bury Road (East) at the B1506 Bury Road/Herringswell Road/Gazeley Road

junction. This would equate to a 45% increase in traffic flow on B1506 Bury Road (West) and a 38% increase on B1506 Bury Road (East) between 19:00 and 20:00. This increase would equate to circa one vehicle per minute during the development peak hour (19:00-20:00) at the B1506 Bury Road/Herringswell Road/Gazeley Road junction. Between 19:00 and 20:00 plus Sunnica West Sites A and B staff vehicles, it is forecast the traffic flows will be 42% lower on B1506 Bury Road (West) and 45% lower on B1506 Bury Road (East) compared to traffic flows between 17:00-18:00 when there will be no staff vehicles.

13.8.81 B1506 Bury Road (West) has a **low** highway sensitivity with a minor magnitude of change and therefore results in a **negligible** classification of effect in terms of driver delay in the PM. This effect would be **short-term** and **not significant**.

13.8.82 B1506 Bury Road (East) has a **low** highway sensitivity with a minor magnitude of change and therefore results in a **negligible** classification of effect in terms of driver delay in the PM. This effect would be **short-term** and **not significant**.

Chippenham Junctions

13.8.83 The Chippenham Junctions include the B1102 Mildenhall Road/B1085 Chippenham Road junction, B1085 Chippenham Road/B1085 High Street/B1104 junction, B1104 Station Road/B1102 junction and B1102 Mildenhall Road/B1104 junction. **Table 13-22** indicates that between 06:00 and 07:00 it is forecast that 22 staff vehicles related to Sunnica West on the B1104 Station Road (North) and on B1102 (South) at the B1104 Station Road/B1102 junction. This would equate to an 85% increase in traffic flow on the B1104 Station Road (North) and a 28% increase on the B1102 (South) between 06:00 and 07:00. However, this increase would equate to circa one vehicle per three minutes during the AM development peak hour (06:00-07:00) at the B1104 Station Road/B1102 junction. It is noted between 06:00 and 07:00 plus Sunnica East Sites A and B staff vehicles, it is forecast the traffic flows will be 25% lower on the B1104 Station Road (North) and 48% lower on the B1102 (South) compared to 08:00-09:00 when there will be no staff vehicles.

13.8.84 The B1104 Station Road (North) has a **low** sensitivity and moderate adverse magnitude of change resulting in a **minor adverse** classification of effects in terms of driver delay in the AM. The effect would be **short-term** and **not significant**.

13.8.85 The B1102 (South) has a **low** sensitivity and very low magnitude of change resulting in a **negligible** classification of effects in terms of driver delay in the AM. The effect would be **short-term** and **not significant**.

13.8.86 **Table 13-22** indicates that between 06:00 and 07:00 it is forecast that 22 staff vehicles related to Sunnica West on the B1102 and on B1104 at the B1102 Mildenhall Road/B1104 junction. This would equate to an 27% increase in traffic flow on the B1102 and a 102% increase on the B1104 between 06:00 and 07:00. However, this increase would equate to circa one vehicle per three minutes during the AM development peak hour (06:00-

07:00) at the B1102 Mildenhall Road/B1104 junction. It is noted between 06:00 and 07:00 plus Sunnica East Sites A and B staff vehicles, it is forecast the traffic flows will be 49% lower on the B1102 18% lower on the B1104 compared to 08:00-09:00 when there will be no staff vehicles.

13.8.87 The B1102 has a **low** sensitivity and moderate adverse magnitude of change resulting in a **minor adverse** classification of effects in terms of driver delay in the AM. The effect would be **short-term** and **not significant**.

13.8.88 The B1104 has a **low** sensitivity and major adverse magnitude of change resulting in a **moderate adverse** classification of effects in terms of driver delay in the AM. However, considering the increase is 22 vehicles, circa one vehicle every three minutes on the link, the traffic flows are lower in the development peak than in the network peak and based on professional opinion, it is not considered that the staff vehicles will have a significant effect on driver delay on the link. Therefore, the classification of effect has been recategorized as **minor adverse**. The effect would be **short-term** and **not significant**.

13.8.89 **Table 13-23** indicates that between 19:00 and 20:00 it is forecast that 20 staff vehicles related to Sunnica West on the B1104 and on B1085 High Street at the B1085 Chippenham road/B1085 High Street/B1104 junction. This would equate to a 21% increase in traffic flow on the B1104 and a 15% increase on the B1085 High Street between 19:00 and 20:00. However, this increase would equate to circa one vehicle per three minutes during the PM development peak hour (19:00-20:00) at the B1085 Chippenham Road/B1085 High Street/B1104 junction. It is noted between 19:00 and 20:00 plus Sunnica East Sites A and B staff vehicles, it is forecast the traffic flows will be 52% lower on the B1104 and 55% lower on the B1085 high Street compared to 17:00-18:00 when there will be no staff vehicles.

13.8.90 The B1104 has a **low** sensitivity and very low adverse magnitude of change resulting in a **negligible** classification of effects in terms of driver delay in the PM. The effect would be **short-term** and **not significant**.

13.8.91 The B1085 High Street has a **low** sensitivity and very low magnitude of change resulting in a **negligible** classification of effects in terms of driver delay in the PM. The effect would be **short-term** and **not significant**.

13.8.92 **Table 13-23** indicates that between 19:00 and 20:00 it is forecast that 22 staff vehicles related to Sunnica West on the B1104 Station Road (North) and on B1102 (South) at the B1104 Station Road/B1102 junction. This would equate to a 24% increase in traffic flow on the B1104 Station Road (North) and a 15% increase on the B1102 (South) between 19:00 and 20:00. However, this increase would equate to circa one vehicle per three minutes during the PM development peak hour (19:00-20:00) at the B1104 Station Road/B1102 junction. It is noted between 19:00 and 20:00 plus Sunnica East Sites A and B staff vehicles, it is forecast the traffic flows will be 54% lower on the B1104 Station Road (North) and 49% lower on the B1102 (South) compared to 17:00-18:00 when there will be no staff vehicles.

13.8.93 The B1104 Station Road (North) has a **low** sensitivity and very low magnitude of change resulting in a **negligible** classification of effects in terms of driver delay in the PM. The effect would be **short-term** and **not significant**.

13.8.94 The B1102 (South) has a **low** sensitivity and very low magnitude of change resulting in a **negligible** classification of effects in terms of driver delay in the AM. The effect would be **short-term** and **not significant**.

13.8.95 **Table 13-23** indicates that between 19:00 and 20:00 it is forecast that 22 staff vehicles will travel on the B1102 and on B1104 at the B1102 Mildenhall Road/B1104 junction. This would equate to a 15% increase in traffic flow on the B1102 and a 27% increase on the B1104 between 19:00 and 20:00. However, this increase would equate to circa one vehicle per three minutes during the PM development peak hour (19:00-20:00) at the B1102 Mildenhall road/B1104 junction. It is noted between 19:00 and 20:00 plus Sunnica East Sites A and B staff vehicles, it is forecast the traffic flows will be 54% lower on the B1102 and 49% lower on the B1104 compared to 17:00-18:00 when there will be no staff vehicles.

13.8.96 The B1102 has a **low** sensitivity and very low magnitude of change resulting in a **negligible** classification of effects in terms of driver delay in the PM. The effect would be **short-term** and **not significant**.

13.8.97 The B1104 has a **low** sensitivity and very low magnitude of change resulting in a **negligible** classification of effects in terms of driver delay in the AM. The effect would be **short-term** and **not significant**.

Dane Hill/B0185 Turnpike Road Roundabout

13.8.98 **Table 13-22** indicates that between 06:00 and 07:00 it is forecast that there will be 58 staff vehicles related to Sunnica West on the B1085 Turnpike Road and 81 staff vehicles on B1085 Dane Hill Road (South) and 139 staff vehicles on the B1085 (North-West) at the Dane Hill/B1085 Turnpike Road Roundabout. This would equate to a 42% increase in traffic flows on B1085 Turnpike Road, 56% increase in traffic flows on B1085 Dane Hill Road (south) and a 208% increase in traffic flow on the B1085 (North-West) between 06:00 and 07:00. However, this increase would equate to circa two vehicle per minute during the development peak hour (06:00-07:00) at the Dane Hill/Turnpike Roundabout. Between 06:00 and 07:00 plus Sunnica West Sites A and B staff vehicles, it is forecast the traffic flows will be 43% lower on the B1085 Turnpike Road (South) and 37% lower on the B1085 Dane Hill Road (South) while it is forecast to be 24% (40 vehicles) higher on the B1085 (North-West) compared to the traffic flows between 08:00 and 09:00 when there will be no staff vehicles.

13.8.99 The B1085 (North-West) has a **low** sensitivity and major adverse magnitude of change resulting in a **moderate** classification of effects in terms of driver delay in the AM. However, the increase in traffic on the B1085 (North-West) is forecast to be travelling northbound away from the junction resulting in free-flowing traffic along the link. Considering the above and also that the increase in traffic flows only results in two vehicles per minute along the link,

the significance for driver delay has been recategorized as **minor adverse**. The effect would be **short-term** and **not significant**.

13.8.100 The B1085 Turnpike Road has a **low** sensitivity and minor magnitude of change resulting in a **negligible** classification of effects in terms of driver delay in the AM. The effect would be **short-term** and **not significant**.

13.8.101 The B1085 Dane Hill Road (South) has a **low** sensitivity and minor adverse magnitude of change resulting in a **negligible** classification of effects in terms of driver delay in the AM. The effect would be **short-term** and **not significant**.

13.8.102 **Table 13-23** indicates that between 19:00 and 20:00 it is forecast that 363 staff vehicles related to Sunnica West on the B1085 (North-West), 81 staff vehicles on B1085 Dane Hill Road (South) and 282 staff vehicles on the A11 southbound On-Slip at the Dane Hill/B1085 Turnpike Road Roundabout. This would equate to a 180% increase in traffic flows on the B1085 (North-West), a 61% increase in traffic flows on B1085 Dane Hill road (South) and a 408% increase in traffic flow on the A11 Southbound On-Slip between 19:00 and 20:00. However, this increase would equate to circa four to five vehicles per minute during the development peak hour (19:00-20:00) at the Dane Hill/Turnpike Roundabout. Between 19:00 and 20:00 plus Sunnica West Sites A and B staff vehicles, it is forecast the traffic flows will be 12% (62 vehicles) higher on the B1085 (North-West), 35% lower on the B1085 Turnpike Road and 104% higher on the A11 southbound On-Slip compared to the traffic flows between 17:00 and 18:00 when there will be no staff vehicles.

13.8.103 The B1085 (North-West) has a **low** sensitivity and major adverse magnitude of change resulting in a **moderate adverse** classification of effects in terms of driver delay in the PM. The impact at the Dane Hill/B1085 Turnpike Roundabout has been based on the forecast peak staff vehicles (522) for Sunnica West Sites A and B which is forecast for a one-month period. Whereas the average Sunnica West staff vehicles across the construction period is 303 vehicles, which is 58% lower than the construction peak. In addition, this will be managed by the embedded mitigation measures in **Appendix 13C: Framework CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]** which will encourage staff to travel by sustainable modes, car share or the for the mini-bus service to potentially pick-up/drop-off to local residential areas/public transport hubs. The egress of staff vehicles in the PM highway peak will also be managed through the embedded mitigation measures outlined in **Appendix 13C: Framework CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]**. Therefore, based on the above and professional opinion, staff vehicles are not considered likely to have a significant effect at the junction and the significance of effects has been recategorized as **minor adverse** on the B1085 (North-West) in the PM. The effect would be **short-term** and **not significant**.

13.8.104 The B1085 Turnpike Road has a **low** sensitivity and minor magnitude of change resulting in a **minor adverse** classification of effects in terms of driver delay in the AM. The effect would be **short-term** and **not significant**.

13.8.105 The A11 southbound On-Slip has a **very low** sensitivity and major adverse magnitude of change resulting in a **minor adverse** classification of effects in terms of driver delay in the AM. The effect would be **short-term** and **not significant**.

A142 Corridor

13.8.106 The A40 Corridor junctions include the A142/Snailwell Road/Landwade Road Junction and the A14 J37. **Table 13-22** indicates that between 06:00 and 07:00 it is forecast that 68 staff vehicles will travel on the A142 (North) and A142 (South) at the A142/Snailwell Road/Landwade Road junction. This would equate to a 12% increase in traffic flow on the A142 (North) and a 19% increase in traffic flow on the A142 (South) between 06:00 and 07:00. This increase would equate to circa one vehicle per minute during the development peak hour (06:00-07:00) at the A142/Snailwell Road/Landwade Road junction. It is noted that between 06:00 and 07:00 plus Sunnica East Sites A and B staff vehicles, it is forecast the traffic flows will be 46% lower on the A142 (North) and 42% lower on the A142 (South) compared to 08:00-09:00 when there will be no staff vehicles.

13.8.107 **Table 13-22** indicates that between 06:00 and 07:00 it is forecast that 68 staff vehicles related to Sunnica West on the A142 Fordham Road (North) at the A14 J37 junction. This would equate to a 14% increase in traffic flow between 06:00 and 07:00. This increase would equate to circa one vehicle per minute during the development peak hour (06:00-07:00) at the A14 J37. It is noted between 06:00 and 07:00 plus Sunnica East Sites A and B staff vehicles, it is forecast the traffic flows will be 44% lower compared to 08:00-09:00 when there will be no staff vehicles.

13.8.108 Both the A142 (North) and A142 (South) have a **medium** sensitivity and very low magnitude of change results in a **negligible** classification of effects in terms of driver delay in the AM. The effect would be **short-term** and **not significant**.

13.8.109 The A142 Fordham Road (North) has a **medium** sensitivity and a very low magnitude of change resulting in a **negligible** classification of effects in terms of driver delay in the AM. The effect would be **short-term** and **not significant**.

13.8.110 **Table 13-23** indicates that between 19:00 and 20:00 it is forecast that 68 staff vehicles will travel on the A142 (North) and A142 (South) at the A142/Snailwell Road/Landwade Road junction. This would equate to a 11% increase in traffic flow on the A142 (North) and a 16% increase in traffic flow on the A142 (South) between 19:00 and 20:00. This increase would equate to circa one vehicle per minute during the development peak hour (19:00-20:00) at the A142/Snailwell Road/Landwade Road junction. It is noted that between 19:00 and 20:00 plus Sunnica East Sites A and B staff vehicles, it is forecast the traffic flows will be 50% lower on the A142 (North) and 48% lower on the A142 (South) compared to 17:00-18:00 when there will be no staff vehicles.

13.8.111 **Table 13-23** indicates that between 19:00 and 20:00 it is forecast that 75 staff vehicles related to Sunnica West on the A142 Fordham Road (North)

and on the A14 Eastbound Off-Slip (West) at the A14 J37 junction. This would equate to a 14% increase in traffic flow on the A142 Fordham Road (North) and a 34% increase on the A14 Eastbound Off-Slip (West) between 19:00 and 20:00 at the A14 J37. This increase would equate to circa one vehicle per minute during the development peak hour (19:00-20:00) at the A14 J37. It is noted between 19:00 and 20:00 plus Sunnica East Sites A and B staff vehicles, it is forecast the traffic flows will be 48% lower on the A142 Fordham Road (North) and 39% lower on the A14 Eastbound Off-Slip (West) compared to 17:00-18:00 when there will be no staff vehicles.

13.8.112 The A142 Fordham Road (North) has a **medium** sensitivity and a very low magnitude of change resulting in a **negligible** classification of effects in terms of driver delay in the PM. The effect would be **short-term** and **not significant**.

13.8.113 The A14 Eastbound Off-Slip (West) has a **low** sensitivity and a minor adverse magnitude of change resulting in a **negligible** classification of effects in terms of driver delay in the PM. The effect would be **short-term** and **not significant**.

Vehicle Travellers – Driver Delay – Sunnica West Summary

13.8.114 In the AM peak hour, all links assessed are forecast to have a negligible classification of effect in terms of driver delay in 2023 due to the construction of the Scheme. This is a due to the traffic flows during the construction AM development peak hour being forecast to be generally lower than the traffic flows during the AM network peak hour with the exception of Gazeley Road (south) at the B1506 Bury Road/Herringswell Road/Gazeley Road junction and B1085 (North-West) at the Dane Hill Road/Turnpike Road Roundabout which are not considered to be significant given the total vehicles forecast on the links.

13.8.115 In the PM peak hour, one of the 37 links is forecast to have a minor adverse classification of effect in terms of driver delay in 2023 due to the construction of the Scheme. The remaining links are forecast to have a negligible significance of effect.

13.8.116 Therefore, the significance of the effect during the construction period is **negligible**. This effect would be **short-term** and **not significant**.

Vehicle Travellers and NMUs – Accidents and Safety

13.8.117 The PIA for the past five years obtained from SCC and CCC indicates that three incidents have occurred at the B1085 / La Hogue Road junction, two incidents on the B1085 Turnpike Road and two incidents on Dane Hill Road. One incident was classified as fatal on Dane Hill Road. This equates to less than one incident per year at each location. It is considered that this does not indicate any significant safety design issues at these locations. Therefore, the magnitude of change at these locations is forecast to be **negligible** and the highway sensitivity for these locations range from **very low to low**. As the construction staff and HGV traffic will travel outside of the network peak hours it is considered that the overall significance of effect on vehicles travellers in terms of accidents and safety is **negligible** during

the construction period. This effect would be **short-term** and **not significant**.

Public Transport Users

13.8.118 It is considered that there will not be a significant change in delay on the local roads associated with construction activity at peak times due to HGVs and construction staff arriving and departing the Sunnica West Sites A and B outside of peak hours.

13.8.119 At the time of writing, it is not anticipated that any bus services will be affected by the closure of roads during the construction period of the Scheme, as no current bus routes would be affected. The temporary road closures are expected to be for a maximum of one week and the effect would be classified as **minor adverse** if a bus route was impacted by a temporary road closure. Therefore, the magnitude of change on public transport users is considered to be **negligible**.

13.8.120 Due to the limited number of bus routes and services in the area the sensitivity for public transport users is considered to be **very low**.

13.8.121 Therefore, it is considered that the significance of effect on public transport users would be **negligible**. This effect would be **short-term** and **not significant**.

NMUs

NMUs – Severance, Pedestrian and Cycle Delay and Amenity

13.8.122 **Table 13-24** and **Table 13-25** below identify the link sensitivity, two-way percentage change, magnitude and significance for NMU's severance, pedestrian and cycle delay and amenity. A hyphen has been included in the table below where there is no forecast change.

Table 13-24: NMUs – Severance, Pedestrian and Cycle Delay and Amenity – Sunnica West Site A and B – 2023 AM

Location	Link Sensitivity	2023 Two-Way % Change	Magnitude	Significance
Red Lodge Dumbbell Roundabout (North)				
Elms Road	-	-	-	-
Newmarket Road	-	-	-	-
A11 NB On-Slip	-	-	-	-
Newmarket Road (South)	-	-	-	-
Red Lodge Dumbbell Roundabout (South)				
Newmarket Road (North)	-	-	-	-
A11 SB Off-Slip	Very Low Sensitivity	76%	Major Adverse	Minor Adverse
Warren Road	-	-	-	-
B1085 Turnpike Road	Medium Sensitivity	51%	Minor Adverse	Minor Adverse
A11 SB On-Slip (Red Lodge)	-	-	-	-
B1506 Bury Road / Herringswell Road / Gazeley Road				
B1506 Bury Road (East)	Medium Sensitivity	17%	Negligible	Negligible
Gazeley Road (South)	Very Low Sensitivity	129%	Major Adverse	Minor Adverse
B1506 Bury Road (West)	-	-	-	-
Herringswell Road (North)	-	-	-	-
B1102 Mildenhall Road / B1085 Chippenham Road				
B1102 Mildenhall Road (East)	-	-	-	-
B1085 Chippenham Road (South)	-	-	-	-
B1102 Mildenhall Road (West)	-	-	-	-
B1085 Chippenham Road / B1085 High Street / B1104				
B1085 Chippenham Road	-	-	-	-
B1104	-	-	-	-
B1085 High Street	-	-	-	-

Location	Link Sensitivity	2023 Two-Way % Change	Magnitude	Significance
B1104 Station Road / B1102				
B1104 Station Road (North)	Very Low Sensitivity	19%	Negligible	Negligible
B1102 (East)	-	-	-	-
B1102 (South)	Very Low Sensitivity	10%	Negligible	Negligible
B1102 Mildenhall Road / B1104				
B1102	Very Low Sensitivity	10%	Negligible	Negligible
B1104	Very Low Sensitivity	21%	Negligible	Negligible
B1102 Mildenhall Road (West)	-	-	-	-
Dane Hill Road / Turnpike Road Roundabout				
B1085 (North-West)	Very Low Sensitivity	51%	Minor Adverse	Negligible
B1085 Turnpike Road	Low Sensitivity	27%	Negligible	Negligible
B1085 Dane Hill Road (South)	Very Low Sensitivity	26%	Negligible	Negligible
A11 SB On-Slip	-	-	-	-
A142 / Snailwell Road / Landwade Road				
A142 (North)	Low Sensitivity	7%	Negligible	Negligible
Snailwell Road (East)	Very Low Sensitivity	0%	Negligible	Negligible
A142 (South)	Low Sensitivity	10%	Negligible	Negligible
Landwade Road (West)	-	-	-	-
A14 J37				
A142 Fordham Road (North)	Very Low Sensitivity	8%	Negligible	Negligible
A14 Westbound Off-Slip (East)	-	-	-	-
Fordham Road (South)	-	-	-	-
A14 Eastbound Off-Slip (West)	-	-	-	-

Table 13-25: NMUs – Severance, Pedestrian and Cycle Delay and Amenity – Sunnica West Site A and B – 2023 PM

Location	Link Sensitivity	2023 Two-Way % Change	Magnitude	Significance
Red Lodge Dumbbell Roundabout (North)				
Elms Road	-	-	-	-
Newmarket Road	-	-	-	-
A11 NB On-Slip	-	-	-	-
Newmarket Road (South)	-	-	-	-
Red Lodge Dumbbell Roundabout (South)				
Newmarket Road (North)	-	-	-	-
A11 SB Off-Slip	-	-	-	-
Warren Road	-	-	-	-
B1085 Turnpike Road	-	-	-	-
A11 SB On-Slip	-	-	-	-
B1506 Bury Road / Herringswell Road / Gazeley Road				
B1506 Bury Road (East)	Medium Sensitivity	18%	Negligible	Negligible
Gazeley Road (South)	-	-	-	-
B1506 Bury Road (West)	Medium Sensitivity	21%	Negligible	Negligible
Herringswell Road (North)	-	-	-	-
B1102 Mildenhall Road / B1085 Chippenham Road				
B1102 Mildenhall Road (East)	-	-	-	-
B1085 Chippenham Road (South)	-	-	-	-
B1102 Mildenhall Road (West)	-	-	-	-
B1085 Chippenham Road / B1085 High Street / B1104				
B1085 Chippenham Road	-	-	-	-
B1104	Very Low Sensitivity	16%	Negligible	Negligible
B1085 High Street	-	-	-	-

Location	Link Sensitivity	2023 Two-Way % Change	Magnitude	Significance
B1104 Station Road / B1102				
B1104 Station Road (North)	Very Low Sensitivity	19%	Negligible	Negligible
B1102 (East)	-	-	-	-
B1102 (South)	Very Low Sensitivity	10%	Negligible	Negligible
B1102 Mildenhall Road / B1104				
B1102	Very Low Sensitivity	10%	Negligible	Negligible
B1104	Very Low Sensitivity	21%	Negligible	Negligible
B1102 Mildenhall Road (West)	-	-	-	-
Dane Hill Road / Turnpike Road Roundabout				
B1085 (North-West)	Very Low Sensitivity	122%	Major Adverse	Minor Adverse
B1085 Turnpike Road	-	-	-	-
B1085 Dane Hill Road (South)	Very Low Sensitivity	28%	Negligible	Negligible
A11 SB On-Slip	Very Low Sensitivity	408%	Major Adverse	Minor Adverse
A142 / Snailwell Road / Landwade Road				
A142 (North)	Low Sensitivity	7%	Negligible	Negligible
Snailwell Road (East)	-	-	-	-
A142 (South)	Low Sensitivity	8%	Negligible	Negligible
Landwade Road (West)	-	-	-	-
A14 J37				
A142 Fordham Road (North)	Very Low Sensitivity	7%	Negligible	Negligible
A14 Westbound Off-Slip (East)	-	-	-	-
Fordham Road (South)	-	-	-	-
A14 Eastbound Off-Slip (West)	Very Low Sensitivity	30%	Minor Adverse	Negligible

13.8.123 **Table 13-24** and **Table 13-25** indicate that during the construction period only the B1085 Turnpike Road is forecast to experience a minor adverse classification of effect in terms of severance, pedestrian delay, pedestrian / cycle amenity and fear and intimidation. The remaining links are forecast to have a **negligible** significance of effect during the construction period.

13.8.124 To travel to the Sunnica West Site A main access, 58 staff vehicles are forecast to travel through Red Lodge via Turnpike Road in the development AM peak hour due to staff travelling on the A11 southbound to the Red Lodge junction. This equates to approximately one vehicle per minute. There is a toucan crossing at the B1085 Turnpike Road / Boundary Road / Elms Road junction to enable pedestrian and cyclists to cross the road. This reduces any potential severance caused by increased traffic flows on the B1085 Turnpike Road. Red Lodge (via B1085 Turnpike Road) is considered to have a **medium** sensitivity in terms of severance, pedestrian delay and pedestrian / cycle amenity. The additional traffic will travel through the village off-peak and it will also be outside the 'daytime' period when high traffic flows could create severance within the village. Given the lack of baseline traffic data on this link, the forecast number of staff vehicles and presence of toucan crossing, professional judgement has been applied. The magnitude of change on those using Turnpike Road in terms of severance is **minor adverse,** the sensitivity is **medium,** therefore the significance of the effect during the construction period is **minor adverse**. This effect would be **short-term**.

13.8.125 As stated above it is forecast that the northbound traffic B1085 (North of the Dane Hill Road Roundabout) has a 208% increase in traffic due to the construction of the development in the AM development peak hour. In the PM development peak hour, traffic is forecast to increase by 180%. The IEMA guidelines consider this to be a high change to severance on this link. In addition, when compared to the AM and PM network peak hours, the increase of traffic flows is less than 30% increase on the network peak hours. However, due to the lack of nearby amenities the B1085 (North of the Dane Hill Road Roundabout) has a **very low** sensitivity in terms of severance, pedestrian delay, pedestrian / cycle amenity and fear and intimidation. The Scheme has a **major adverse** change on severance on this link resulting in a **minor adverse** significance. This effect would be **short-term**.

13.8.126 La Hogue Road provides access between the A11 and the B1085 and the La Hogue Farm Shop and Café. There are no pedestrian and cycle facilities located along La Hogue Road and therefore has **very low** sensitivity. Based on the anticipated low pedestrian and cycle flows, it has been determined that La Hogue Road has a **minor adverse** magnitude change in terms of severance, pedestrian delay, pedestrian / cycle amenity and fear and intimidation. This results in a **minor adverse** significance of effect. This effect would be **short-term**.

13.8.127 Overall, in terms of Severance, Pedestrian Delay, Pedestrian / Cycle Amenity and Fear and Intimidation, in the AM peak hour three of the 37 links assessed are forecast to have a minor adverse significance of effect and two links in the PM peak hour. The remaining links are forecast to have

no impact or have a negligible significance of effect, therefore the overall significance of effect is **negligible**. This effect would be **short-term** and **not significant**.

NMUs – PRoW

13.8.128 During construction one PRoW (204/5) located on the south-west boundary of Sunnica West Site A that connects Snailwell to Newmarket is anticipated to be temporarily closed. A plan illustrating the temporary PRoW closures can be found in Figure 13-2 included in this Environmental Statement **[EN010106/APP/6.3].** Any closures of PRoWs will be outlined within the CTMP and scheduled based on the final design with the aim to minimise the actual duration of closure with diversion routes identified and signs indicating those routes provided for all users.

13.8.129 Notwithstanding, the PRoWs would be closed for the shortest timeframe reasonably necessary to carry out the works. It is expected in the majority of cases that the PRoWs would be closed for a maximum of three weeks. When a PRoW is temporarily closed there is expected to be alternative options available within the local area on the existing network.

13.8.130 The PRoWs are assumed to be used predominantly for recreational purposes and there is a wide network of PRoW in the surrounding area providing residents with alternative routes.

13.8.131 The Sunnica West Sites A and B are located in a rural area with limited footways and pedestrian and cycle on-road facilities in the area. There are no on or off-road cycling facilities within the vicinity of the Sites; however, the roads surrounding each of the Sites are generally lightly trafficked and therefore could encourage cycling. There is no data available on the number of pedestrians and cyclists using the PRoW that will be temporarily closed; however, it is considered that the number of users affected will be low. The magnitude of change on those using the PRoW is **minor adverse,** the sensitivity is **low,** therefore the significance of the effect during the construction period is **minor adverse**. This effect would be **short-term** and **not significant**.

NMUs – Forecast Traffic Flows

13.8.132 The peak number of vehicles associated with the staff for the Sunnica West Sites A and B is forecast to be 522, which equates to approximately eight to nine vehicles per minute during the development AM and PM peak hours. On average across the 24-month construction period, 303 staff vehicles are forecast to travel to and from the Sunnica West Site A centralised car park per day, equating to approximately four to five vehicles per minute during the Scheme AM and PM development peak hours. The increase in traffic is forecast to occur outside of network peak hours and therefore it is anticipated that there will be fewer existing pedestrian and cyclist trips during this time that may be affected by the increase in traffic flow.

NMUs – Fear and Intimidation

13.8.133 Consideration has been given to HGV flows during construction. The main HGV access for Sunnica West Site A is proposed to be from La Hogue

Road into Sunnica West Site A. This access is located in 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.

13.8.134 During construction it is anticipated that on average there will be 23 HGVs AAWT (46 movements) to the main access for the Sunnica West Site A over the 24-month construction programme. It is forecast that there will be a peak in HGV deliveries during construction months three and four with 52 HGVs AAWT (104 movements). This would result in less than a 30% increase in AAWT HGV activity along the A11 and A14.

13.8.135 The construction worker shift covers a 12-hour period. Therefore, it is assumed there will be a 10-hour construction delivery window as this excludes the two network peak hours. Movements are 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 that on average there will be two HGV deliveries per hour (four movements) to the Sunnica West Sites A and B. Across the 24-month construction programme a maximum of five deliveries per hour is anticipated to occur during construction month seven. As there is no HGV data available for the local road network, it is our professional judgement that based on data for other roads in the study area, that any increase associated with the Scheme is likely to be **minor adverse** in magnitude along the B1085 and La Hogue Road.

13.8.136 Therefore, it is considered that the magnitude of change would be **minor adverse** with a **low** sensitivity and therefore the classification of effect in terms of fear and intimidation is **minor adverse**. This effect would be **short-term** and **not significant**.

Summary

13.8.137 **Table 13-26** below outlines a summary of the magnitude of change and significance of effect for vehicle travellers, NMUs and public transport users for the Sunnica West Sites A and B.

Table 13-26: Summary of Magnitude of Change and Significance of Effect for Sunnica West (A and B) Sites

Description of Effect	Sensitivity (Value)	Description of Change	Magnitude of Change	Effect Category	Significant? (Yes / No)
Vehicle Traveller					
Driver Delay	Ranges from Medium to Very Low	Increase in traffic on the surrounding road network.	Range from Major Adverse to Very Low	Ranges from Minor Adverse to Negligible	No
Accidents and Safety	Low	A low number of accidents were recorded within the vicinity of the Sunnica West Sites A and B.	Negligible	Negligible	No
NMU					
Severance	Medium	Closure of PRoW and increase in traffic flows.	Minor Adverse	Minor Adverse	No
Pedestrian Delay / PRoW	Medium	PRoW are being closed in the vicinity of the Sunnica West Sites A and B.	Minor Adverse	Minor Adverse	No
Pedestrian / Cycle Amenity	Medium	Closure of PRoW and increase in traffic flows.	Minor Adverse	Minor Adverse	No
Fear and Intimidation	Medium	Increase in HGV flows.	Minor Adverse	Minor Adverse	No
Accidents and Safety	Low	No accidents involving vulnerable road users were recorded within the vicinity of the Sunnica West Sites A and B access.	Minor Adverse	Minor Adverse	No
Public Transport Users					
Delay	Negligible	No impact on bus or train services.	Negligible	Negligible	No

Burwell National Grid Substation Extension

Vehicle Travellers – Driver Delay

13.8.138 There are two options under consideration for the Burwell National Grid Substation Extension, as outlined in **Chapter 3: Scheme Description** of this Environmental Statement **[EN010106/APP/6.1]**. One option is located to the south of the existing substation and is accessed via Weirs Drove. The second option is located to the east of the existing substation and accessed via Newnham Drove. The forecast traffic flows, and impact related to the Burwell National Grid Substation Extension are the same for Option 1 and Option 2. Therefore, the impact of the Burwell National Grid Substation Extension is only discussed once.

13.8.139 The construction staff associated with the Burwell National Grid Substation Extension will be required to travel to the Sunnica West Site A centralised car park and the mini-bus will transport the staff to the Burwell National Grid Substation Extension site. It is forecast for the Burwell National Grid Substation Extension that a maximum of 37 (74 movements) staff vehicles will be required to park at the Sunnica West A centralised car park per day during the eight-month construction period. The 37 (74 movements) however the staff movements are not forecast to travel to the Burwell National Grid Substation Extension site. As a result, it is expected there will be three mini-bus trips to the Burwell National Grid Substation Extension to drop staff off at the beginning of the shift, as well as three mini-bus trips to return staff to the Sunnica West centralised car park.

13.8.140 It is forecast on average six HGVs (12 movements) will be required at the Burwell National Grid Substation Extension with a maximum of nine HGVs (18 movements) per day, during the construction period. It is forecast up to nine construction HGVs over the day (18 movements) in relation to the Burwell National Grid Substation Extension. The link sensitivity in the area ranges from **very low** to **low**. The magnitude of change in the peak hour of the development proposals are expected to be **very low** resulting in a **negligible** significance of effect. The impact of Burwell National Grid Substation Extension on vehicles travellers in terms of driver delay is anticipated to be **negligible**. This effect would be **short-term** and **not significant**.

Vehicle Travellers and NMUs – Accidents and Safety

13.8.141 The PIA for the past five years obtained from SCC and CCC indicate that no incidents have been recorded in the area surrounding the Burwell National Grid Substation Extension.

13.8.142 Therefore, the magnitude of change at these locations is forecast to be **negligible** with a **very low** sensitivity. As the construction staff and HGV traffic will travel outside of the network peak hours it is considered that the overall significance of effect on vehicles travellers in terms of accidents and safety is **negligible** during the construction period. This effect would be **short-term** and **not significant**.

Public Transport

13.8.143 It is considered that there will not be a significant change in delay on the local roads associated with construction activity at peak times due to construction staff arriving and departing the from the Burwell National Grid Substation Extension site outside of peak hours.

13.8.144 At the time of writing, it is not anticipated that any bus services will be affected by the closure of roads during the construction period of the Scheme , as no current bus routes would be affected. The temporary road closures are expected to be for a maximum of one week and the effect would be classified as **minor adverse** if a bus route was impacted by a temporary road closure. Therefore, the magnitude of change on public transport users is considered to be **negligible**.

13.8.145 Due to the limited number of bus routes and services in the area the sensitivity for public transport users is considered to be **very low**.

13.8.146 Therefore, it is considered that the significance of effect on public transport users would be **negligible**. This effect would be **short-term** and **not significant**.

NMUs

NMUs – Severance, Pedestrian and Cycle Delay and Amenity

13.8.147. The absolute traffic flows are expected to be low on the local highways surrounding the Burwell National Grid Substation Extension with a small number of additional vehicles. Therefore, in terms of Severance, Pedestrian Delay, Pedestrian / Cycle Amenity and Fear and Intimidation all of the links within an easy walking and cycling distance from the Burwell National Grid Substation Extension with the magnitude of change on NMUs is **minor adverse**, the sensitivity is **low**, therefore the significance of the effect during the construction period is **minor adverse**. This effect would be **short-term** and **not significant**.

NMU – PRoW

There are no PRoW that are affected by the Burwell National Grid Substation Extension.

NMU – Fear and Intimidation

13.8.148 The construction worker shift covers a 12-hour period. Therefore, it is assumed there will be a 10-hour construction delivery window as this excludes the two network peak hours. Movements are 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 that on average there will be less than one HGV delivery per hour to the Burwell National Grid Substation Extension site over the course of the day. This is not considered to be a significant change in the composition of the existing traffic around the existing substation. Therefore, it is considered that the magnitude of change would be **minor adverse**, the sensitivity is **low** and therefore the

classification of effect in terms of fear and intimidation is **negligible**. This effect would be **short-term** and **not significant**.

Summary

13.8.149 **Table 13-27** outlines a summary of the magnitude of change and significance of effect for vehicle travellers, NMUs and public transport users for the Burwell National Grid Substation Extension.

Table 13-27: Summary of Magnitude of Change and Significance of Effect for the Burwell National Grid Substation Extension

Receptor	Sensitivity (Value)	Description of Change	Magnitude of Change	Effect Category	Significant? (Yes / No)
Vehicle Traveller					
Driver Delay	Ranges from Very Low to Low	Low increase in traffic flows near the Burwell National Grid Substation Extension	Negligible	Negligible	No
Accidents and Safety	Negligible	No accidents within the vicinity of the Burwell National Grid Substation Extension.	Negligible	Negligible	No
NMU					
Severance	Low	No PRoW are being closed in the vicinity and there is a low increase in traffic flows.	Minor Adverse	Minor Adverse	No
Pedestrian Delay / PRoW	Low	There are no PRoW that are affected by the Burwell National Grid Substation Extension	Minor Adverse	Minor Adverse	No
Pedestrian / Cycle Amenity	Low	No pedestrian or cycle facilities are being closed during construction.	Minor Adverse	Minor Adverse	No
Fear and Intimidation	Negligible	Low increase in HGV flows.	Negligible	Negligible	No
Accidents and Safety	Negligible	No accidents involving vulnerable road users were recorded within the vicinity of the Burwell National Grid Substation Extension.	Negligible	Negligible	No

Receptor	Sensitivity (Value)	Description of Change	Magnitude of Change	Effect Category	Significant? (Yes / No)
Public Transport Users					
Public Transport Users	Negligible	No impact on bus or train services.	Negligible	Negligible	No

Grid Connection Routes A and B

Vehicle Travellers - Driver Delay and Accidents and Safety

13.8.150 It is forecast that a maximum of five staff vehicles (10 movements) per day will be required during the seven-month Grid Connection Route A and B construction window. Given the location of the Grid Connection Route A and B will change as the construction is progressed, the staff associated with the construction of this element will go to the most appropriate Grid Connection Route A and B site access. There will be no staff vehicles in the network peak hours and the increase in traffic flow as a result of the staff vehicles is not expected to impact the operation of the local junctions. The links in this area have a **very low to low** sensitivity while the magnitude of change in the development peak hour is expected to be **very low** resulting in a **negligible** significance of effect. This effect will be **short-term** and **not significant**.

13.8.151 The PIA for the past five years obtained from SCC and CCC indicate that no incidents have been recorded in the area surrounding Grid Connection Routes A and B. It is therefore considered that the magnitude of change in terms of accidents and safety on vehicle travellers will be **negligible**, in addition the links in this area have a **very low to low** sensitivity.

13.8.152 Therefore, it is considered that the significance of effect on vehicles travellers in terms of driver delay and accidents and safety is **negligible**. This effect would be **short-term** and **not significant**.

Public Transport Users

13.8.153 It is considered that there will not be a significant delay on the local roads associated with construction activity at peak times due to construction staff arriving and departing outside of peak hours.

13.8.154 At the time of writing, it is not anticipated that any bus services will be affected by the closure of roads during the construction period of the Scheme, as no current bus routes would be affected. The temporary road closures are expected to be for a maximum of one week and the effect would be classified as **minor adverse** if a bus route was impacted by a temporary road closure. Therefore, the magnitude of change on public transport users is considered to be **negligible**.

13.8.155 Due to the limited number of bus routes and services in the area the sensitivity for public transport users is considered to be **very low**.

13.8.156 Therefore, it is considered that the significance of effect on public transport users would be **negligible**. This effect would be **short-term** and **not significant**.

Vehicle Travellers and NMUs – Accidents and Safety

13.8.157 With regard to accidents and safety, as noted in Section 13.6, no incidents involving vulnerable road users were identified near Grid Connection Routes A and B. Therefore, it is considered that the magnitude of change would be **negligible**, with a **very low** sensitivity and therefore the significance of effect is **negligible** during the construction period. This effect would be **short-term** and **not significant.**

NMUs

NMUs – Severance, Pedestrian and Cycle Delay and Pedestrian and Cycle Amenity

13.8.158 In terms of Severance, Pedestrian Delay, Pedestrian / Cycle Amenity and Fear and Intimidation all of the links within an easy walking and cycling distance from the Grid Connection Routes A and B have a **very low** sensitivity. The magnitude of change on those links are **negligible** and therefore the significance of the effect during the construction period is **negligible**. This effect would be **short-term** and **not significant**.

NMUs – PRoW

13.8.159 During construction seven PRoW that cross Grid Connection Route A and Bare anticipated to be temporarily closed. These include PRoW (92/19) that crosses to the north of Landwade and the unnamed PRoW to the west of PRoW 35/7b.

13.8.160 A plan illustrating the temporary PRoW closures can be found Figure 13-2 included in this Environmental Statement **[EN010106/APP/6.3].** The temporary closures will be supported by appropriate and clearly signed alternative routes.

13.8.161 It is assumed the PRoWs are predominantly used for recreational purposes and there is a wide network of PRoW in the surrounding area providing residents with alternative routes. The PRoWs would be closed for the shortest timeframe reasonably necessary to carry out the works. It is expected in the majority of cases that the PRoWs would be closed for a maximum of three weeks. When a PRoW is temporarily closed there is expected to be alternative options available within the local area on the existing network.

13.8.162 Therefore, by taking the above factors into consideration, it is considered that the magnitude of change of the construction on non-motorised users with regard to severance, pedestrian / cycle amenity and delay is **minor adverse** in the development peak hours, the magnitude of change is considered to be **very low**. The sensitivity for NMUs in this area is considered to be **very low**. Therefore, the overall classification of effect in terms of severance, pedestrian / cycle amenity and delay is **negligible**. This effect would be **short-term** and **not significant**.

NMUs – Fear and Intimidation

13.8.163 Consideration has been given specifically to HGV flows during construction. Based on the information provided by the Applicant, Grid Connection Route A and Bare forecast to require a combined maximum of 45 daily HGV (90 movements) during month 3 of the construction. In relation to the construction of Grid Connection Route A and B, the increase in HGVs is not considered likely to be significant enough to increase the HGV traffic flows by 30% in the local area.

13.8.164 The construction worker shift covers a 12-hour period. Therefore, it is assumed there will be a 10-hour construction delivery window as this excludes the two network peak hours. Movements are 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 that on average there will be four to five HGV delivery per hour (eight to ten movements) to Grid Connection Route A and B. Grid Connection Route A and site accesses are spread across the Scheme and therefore the HGV trips will be spread across the extent of Grid Connection Route A and B. It is are expected that they would take the same route used to access the Sites and would return to the SRN network at the earliest opportunity.

13.8.165 The magnitude of change on NMUs is **negligible**, the sensitivity is **low,** therefore the significance of the effect during the construction period is **negligible**. This effect would be **short-term** and **not significant**.

Summary

13.8.166 **Table 13-28** outlines a summary of the magnitude of change and significance of effect for vehicle travellers, NMUs and public transport users for Grid Connection Route A and B.

Table 13-28: Summary of Magnitude of Change and Significance of Effect for the Grid Connection Route A and Grid Connection Route B

Description of Effects	Sensitivity (Value)	Description of Change	Magnitude of Change	Effect Category	Significant? (Yes / No)
Vehicle Traveller					
Driver Delay	Ranges from Very Low to Low	No increase in traffic on the surrounding road network during the network peak hours. However, there is an increase in traffic flows within the development peak hours.	Negligible	Negligible	No
Accidents and Safety	Ranges from Very Low to Low	No accidents within the vicinity of Grid Connection Route A and B.	Negligible	Negligible	No
NMU					
Severance	Negligible	PRoW are being closed in the vicinity and there is a low increase in traffic flows.	Minor Adverse	Negligible	No
Pedestrian Delay	Negligible	PRoW are being closed in the vicinity of Grid Connection Route A and B.	Minor Adverse	Negligible	No

Description of Effects	Sensitivity (Value)	Description of Change	Magnitude of Change	Effect Category	Significant? (Yes / No)
Pedestrian / Cycle Amenity	Negligible	No pedestrian or cycle facilities are being closed during construction.	Minor Adverse	Negligible	No
Fear and Intimidation	Low	Low increase in HGV flows.	Negligible	Negligible	No
Accidents and Safety	Negligible	No accidents involving vulnerable road users were recorded within the vicinity of Grid Connection Route A and B.	Negligible	Negligible	No
Public Transport Users					
Delay	Negligible	No impact on bus or train services.	Negligible	Negligible	No

Combined Effects of the Scheme on Receptors

13.8.167 This section discusses the combined effects of the Scheme which includes Sunnica East Site A and B, Sunnica West Site A & B, Grid Connection Route A, Grid Connection Route B and the Burwell National Grid Substation Extension.

Vehicle Travellers – Scheme Traffic Forecast

13.8.168 It is forecast that 1,393 construction staff is the maximum number of construction staff required across the Scheme per day. Based on an average of 1.5 passengers per vehicle, this would equate to 937 staff vehicles across the Scheme. Staff would be expected to arrive between 06:00 and 07:00 and depart between 19:00 and 20:00 and therefore will avoid the highway peak times when the highway network is likely to be at its most congested. In the network peak hours there will be no staff vehicles.

Vehicle Travellers - Driver Delay

13.8.169 **Table 13-29** and **Table 13-30** identify the forecast 2023 development AM peak hour (06:00-07:00) and PM peak hour (19:00-20:00) traffic flows and the Order limits. Where staff vehicles are forecasted the percentage change on the development peak hour traffic flows are identified as well as a comparison to the AM and PM network peak hour traffic flows (08:00-09:00 and 17:00-18;00) by identifying the absolute and percentage change between the development peak hour plus all staff vehicles and the AM and PM network peak hour traffic flows.

Table 13-29: Driver Delay – Scheme – 2023 AM (Vehicles – Single Direction)

Location	2023 AM Development Peak Hour (06:00-07:00)										AM Network Peak Hour (08:00-09:00)		2023 Dev AM Peak Hour + Dev minus Network Peak Hour			
	2023 Base (06:00-07:00)		Staff Vehicle (06:00-07:00)		2023 Base+Dev (06:00-07:00)		2023 % Change (06:00-07:00)		Magnitude				Absolute Difference		% Difference	
	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB
Red Lodge Dumbbell Roundabout (North)																
Elms Road	79	32	0	160	79	193	-	497%	-	Major Adverse	-	80	-	113	-	141%
Newmarket Road	96	153	0	0	96	153	-	-	-	-	-	-	-	-	-	-
A11 NB On-Slip	108	N/A	0	N/A	108	N/A	-	-	-	-	-	-	-	-	-	-
Newmarket Road (South)	180	175	160	0	340	175	89%	-	Moderate Adverse	-	446	-	-105	-	-24%	-
Red Lodge Dumbbell Roundabout (South)																
Newmarket Road (North)	177	176	160	0	338	176	91%	-	Major Adverse	-	439	-	-101	-	-23%	-
A11 SB Off-Slip	N/A	76	N/A	134	N/A	210	-	176%	-	Major Adverse	-	189	-	21	-	11%
Warren Road	185	90	85	0	269	90	46%	-	Minor Adverse	-	458	-	-188	-	-41%	-
B1085 Turnpike Road	61	54	0	58	61	112	-	109%	-	Major Adverse	-	133	-	-21	-	-16%
B1506 Bury Road / Herringswell Road / Gazeley Road																
B1506 Bury Road (East)	244	182	0	144	244	326	-	79%	-	Moderate Adverse	-	450	-	-124	-	-28%
Gazeley Road (South)	24	31	0	71	24	102	-	228%	-	Major Adverse	-	77	-	25	-	32%
B1506 Bury Road (West)	193	187	0	73	193	261	-	39%	-	Minor Adverse	-	464	-	-204	-	-44%
Herringswell Road (North)	47	111	0	0	47	111	-	-	-	-	-	-	-	-	-	-

Location	2023 AM Development Peak Hour (06:00-07:00)										AM Network Peak Hour (08:00-09:00)		2023 Dev AM Peak Hour + Dev minus Network Peak Hour			
	2023 Base (06:00-07:00)		Staff Vehicle (06:00-07:00)		2023 Base+Dev (06:00-07:00)		2023 % Change (06:00-07:00)		Magnitude				Absolute Difference		% Difference	
	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB
B1102 Mildenhall Road / B1085 Chippenham Road																
B1102 Mildenhall Road (East)	54	71	0	0	54	71	-	-	-	-	-	-	-	-	-	-
B1085 Chippenham Road (South)	49	75	0	0	49	75	-	-	-	-	-	-	-	-	-	-
B1102 Mildenhall Road (West)	127	117	0	0	127	117	-	-	-	-	-	-	-	-	-	-
B1085 Chippenham Road / B1085 High Street / B1104																
B1085 Chippenham Road	46	79	0	0	46	79	-	-	-	-	-	-	-	-	-	-
B1104	40	117	0	0	40	117	-	-	-	-	-	-	-	-	-	-
B1085 High Street	82	192	0	0	82	192	-	-	-	-	-	-	-	-	-	-
B1104 Station Road / B1102																
B1104 Station Road (North)	93	26	0	42	93	68	-	160%	-	Major Adverse	-	65	-	3	-	5%
B1102 (East)	79	70	20	0	99	70	25%	-	Very Low	-	196	-	-97	-	-50%	-
B1102 (South)	154	79	0	22	154	101	-	28%	-	Very Low	-	195	-	-94	-	-48%
B1102 Mildenhall Road / B1104																
B1102	151	82	0	22	151	104	-	27%	-	Very Low	-	203	-	-99	-	-49%
B1104	84	22	0	22	84	44	-	102%	-	Major Adverse	-	54	-	-10	-	-18%
B1102 Mildenhall Road (West)	70	63	0	0	70	63	-	-	-	-	-	-	-	-	-	-

Location	2023 AM Development Peak Hour (06:00-07:00)										AM Network Peak Hour (08:00-09:00)		2023 Dev AM Peak Hour + Dev minus Network Peak Hour			
	2023 Base (06:00-07:00)		Staff Vehicle (06:00-07:00)		2023 Base+Dev (06:00-07:00)		2023 % Change (06:00-07:00)		Magnitude				Absolute Difference		% Difference	
	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB
Dane Hill Road / Turnpike Road Roundabout																
B1085 (North-West)	67	206	139	0	206	206	208%	-	Major Adverse	-	166	-	40	-	24%	-
B1085 Turnpike Road	78	138	0	58	78	196	-	42%	-	Minor Adverse	-	342	-	-146		-43%
B1085 Dane Hill Road (South)	146	163	81	0	227	163	56%	-	Minor Adverse	-	361	-	-134	-	-37%	-
A11 SB On-Slip	N/A	182	N/A	0	N/A	182	-	-	-	-	-	-	-	-	-	-
A142 / Snailwell Road / Landwade Road																
A142 (North)	348	580	0	143	348	723	-	25%	-	Very Low	-	1,196	-	-473	-	-40%
Snailwell Road (East)	149	18	0	0	149	18	-	-	-	-	-	-	-	-	-	-
A142 (South)	333	357	0	143	333	500	-	40%	-	Minor Adverse	-	737	-	-237	-	-32%
Landwade Road (West)	65	142	0	0	65	142	-	-	-	-	-	-	-	-	-	-
A14 J37																
A142 Fordham Road (North)	390	468	0	143	390	611	-	31%	-	Minor Adverse	-	966	-	-354	-	-37%
A14 Westbound Off-Slip (East)	223	N/A	0	N/A	223	N/A	-	-	-	-	-	-	-	-	-	-
Fordham Road (South)	312	443	0	0	312	443	-	-	-	-	-	-	-	-	-	-
A14 Eastbound Off-Slip (West)	N/A	232	N/A	0	N/A	232	-	-	-	-	-	-	-	-	-	-

Table 13-30: Driver Delay – Scheme – 2023 PM (Vehicles – Single Direction)

Location	2023 PM Development Peak Hour (19:00-20:00)										AM Network Peak Hour (17:00-18:00)		2023 Dev PM Peak Hour + Dev minus Network Peak Hour			
	2023 Base (19:00-20:00)		Staff Vehicle (19:00-20:00)		2023 Base+Dev (19:00-20:00)		2023 % Change (19:00-20:00)		Magnitude				Absolute Difference		% Difference	
	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB
Red Lodge Dumbbell Roundabout (North)																
Elms Road	148	29	474	0	623	29	320%	-	Major Adverse	-	370	-	253	-	68%	-
Newmarket Road	95	157	0	0	95	157	-	-	-	-	-	-	-	-	-	-
A11 NB On-Slip	109	N/A	76	N/A	184	N/A	70%	N/A	Moderate Adverse	N/A	271	N/A	-87	N/A	-32%	N/A
Newmarket Road (South)	163	236	0	399	163	634	-	169%	-	Major Adverse	-	587	-	47	-	8%
Red Lodge Dumbbell Roundabout (South)																
Newmarket Road (North)	161	235	0	399	161	634	-	170%	-	Major Adverse	-	586	-	48		8%
A11 SB Off-Slip	N/A	99	N/A	0	N/A	99	N/A	-	-	-	-	-	-	-	-	-
Warren Road	108	202	0	85	108	286	-	42%	-	Minor Adverse	-	503	-	-216		-43%
B1085 Turnpike Road	67	77	0	0	67	77	-	-	-	-	-	-	-	-	-	-
B1506 Bury Road / Herringswell Road / Gazeley Road																
B1506 Bury Road (East)	185	201	144	0	329	201	78%	-	Moderate Adverse	-	461	-	-132	-	-29%	-
Gazeley Road (South)	39	17	0	11	39	29	-	67%	-	Moderate Adverse	-	43	-	-14	-	-33%
B1506 Bury Road (West)	158	172	71	0	229	172	45%	-	Minor Adverse	-	394	-	-165	-	-42%	-
Herringswell Road (North)	87	63	0	85	87	147	-	136%	-	Major Adverse	-	156	-	-9	-	-6%

Location	2023 PM Development Peak Hour (19:00-20:00)										AM Network Peak Hour (17:00-18:00)		2023 Dev PM Peak Hour + Dev minus Network Peak Hour			
	2023 Base (19:00-20:00)		Staff Vehicle (19:00-20:00)		2023 Base+Dev (19:00-20:00)		2023 % Change (19:00-20:00)		Magnitude				Absolute Difference		% Difference	
	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB
B1102 Mildenhall Road / B1085 Chippenham Road																
B1102 Mildenhall Road (East)	75	66	0	0	75	66	75	66	-	-	-	-	-	-	-	-
B1085 Chippenham Road (South)	65	36	0	0	65	36	65	36	-	-	-	-	-	-	-	-
B1102 Mildenhall Road (West)	105	126	0	0	105	126	105	126	-	-	-	-	-	-	-	-
B1085 Chippenham Road / B1085 High Street / B1104																
B1085 Chippenham Road	67	31	0	0	67	31	-	-	-	-	-	-	-	-	-	-
B1104	107	36	22	0	129	36	21%	-	Very Low	-	266	-	-137	-	-52%	-
B1085 High Street	173	67	22	0	196	67	13%	-	Very Low	-	432	-	-237	-	-55%	-
B1104 Station Road / B1102																
B1104 Station Road (North)	93	26	42	0	134	26	45%	-	Minor Adverse	-	231	-	-96	-	-42%	-
B1102 (East)	79	70	0	20	79	89	-	28%	-	Very Low	-	174	-	-85	-	-49%
B1102 (South)	153	78	22	0	176	78	15%	-	Very Low	-	382	-	-207	-	-54%	-
B1102 Mildenhall Road / B1104																
B1102	150	82	22	0	173	82	15%	-	Very Low	-	375	-	-202	-	-54%	-
B1104	84	22	22	0	106	22	27%	-	Very Low	-	209	-	-103	-	-49%	-
B1102 Mildenhall Road (West)	69	63	0	0	69	63	-	-	-	-	-	-	-	-	-	-

Location	2023 PM Development Peak Hour (19:00-20:00)										AM Network Peak Hour (17:00-18:00)		2023 Dev PM Peak Hour + Dev minus Network Peak Hour			
	2023 Base (19:00-20:00)		Staff Vehicle (19:00-20:00)		2023 Base+Dev (19:00-20:00)		2023 % Change (19:00-20:00)		Magnitude				Absolute Difference		% Difference	
	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB	NB / EB	SB / WB
Dane Hill Road / Turnpike Road Roundabout																
B1085 (North-West)	96	201	0	363	96	564	-	180%	-	Major Adverse	-	502	-	62	-	12%
B1085 Turnpike Road	139	78	0	0	139	78	-	-	-	-	-	-	-	-	-	-
B1085 Dane Hill Road (South)	157	132	0	81	157	213	-	61%	-	Moderate Adverse	-	329	-	-116	-	-35%
A11 SB On-Slip		69		282		351	-	408%	-	Major Adverse	-	172	-	179	-	104%
A142 / Snailwell Road / Landwade Road																
A142 (North)	612	388	143	0	755	388	23%	-	Very Low	-	1,350	-	-594	-	-44%	-
Snailwell Road (East)	15	74	0	0	15	74	-	-	-	-	-	-	-	-	-	-
A142 (South)	434	429	143	0	577	429	33%	-	Minor Adverse	-	957	-	-380	-	-40%	-
Landwade Road (West)	232	72	0	0	232	72	-	-	-	-	-	-	-	-	-	-
A14 J37																
A142 Fordham Road (North)	521	474	143	0	664	474	27%	-	Very Low	-	1,147	-	-484	-	-42%	-
A14 Westbound Off-Slip (East)	221	N/A	143	N/A	364	N/A	65%	-	Moderate Adverse	-	486	-	-123	-	-25%	-
Fordham Road (South)	514	378	0	0	514	378	-	-	-	-	-	-	-	-	-	-
A14 Eastbound Off-Slip (West)	N/A	225	N/A	0	N/A	225	-	-	-	-	-	-	-	-	-	-

Red Lodge Dumbbell Roundabouts

13.8.170 **Table 13-29** indicates that between 06:00 and 07:00 it is forecast that at the Red Lodge northern Roundabout, 160 staff will travel on Elms Road and Newmarket Road (South) between 06:00 and 07:00. At the Red Lodge southern Dumbbell Roundabout, it is forecast 160 staff will travel on Newmarket Road (North), 134 on A11 Southbound Off-Slip, 85 on Warren Road and 58 on B1085 Turnpike Road between 06:00 and 07:00. However, this increase would equate to circa three vehicles per minute during the AM development peak hour (06:00-07:00) at the Red Lodge Dumbbell Roundabouts between 06:00 and 07:00.

13.8.171 Within the development peak hour of 06:00-07:00 plus all the development staff vehicles, it is forecast the traffic flows will be 141% higher (113 vehicles) on Elms Road, 24% lower on Newmarket Road (South), 23% lower on Newmarket Road (North), 11% higher on A11 Southbound Off-Slip, 41% lower on Warren Road and 16% lower B1085 Turnpike Road than the traffic flows in the network peak hour between 08:00 and 09:00.

13.8.172 Elms Road has a **very low** highway sensitivity with a major adverse magnitude of change and therefore results in a **minor adverse** significance of effect in terms in the AM. This effect would be **short-term** and **not significant**.

13.8.173 Newmarket Road (South) at the northern dumbbell roundabout, has a **very low** highway sensitivity with a moderate adverse magnitude of change and therefore results in a **negligible** classification of effect in terms of driver delay in the AM. This effect would be **short-term** and **not significant**.

13.8.174 Newmarket Road (North) at the southern dumbbell roundabout, has a **very low** highway sensitivity with a major adverse magnitude of change and therefore results in a **minor adverse** classification of effect in terms of driver delay in the AM. This effect would be **short-term** and **not significant**.

13.8.175 A11 Southbound Off-Slip has a **low** highway sensitivity with a major adverse magnitude of change and therefore results in a **moderate adverse** classification of effect in terms of driver delay in the AM. This effect would be **short-term** and **not significant**. However, it is noted that between 06:00 and 07:00 plus Scheme staff vehicles, it is forecast the traffic flows will be only 11% (21 vehicles) higher than the network peak hours on the A11 Southbound Off-Slip (08:00-09:00). In addition, the 'Forest Heath District Council Site Allocation Plan Cumulative Impact Study' document (August 2016) (Ref. 13-7) indicates that the links at the Red Lodge Dumbbell Roundabouts, are forecast to operate within capacity at between 0.4 to 0.5 maximum RFC 2031 in the AM and PM network peak hours. This considered the operation of the Red Lodge Dumbbell Roundabouts with the additional growth between 2023 and 2031 which will not be present in 2023. Therefore, the operation of the Red Lodge Dumbbell Roundabouts are considered to perform better than this and have a greater residual capacity. Considering the above and based on professional opinion it is considered that the it would actually result in a **minor adverse** classification of effect in

terms of driver delay in the AM. This effect would be **short-term** and **not significant**.

13.8.176 Warren Road has a **very low** highway sensitivity with a minor adverse magnitude of change and therefore results in a **negligible** classification of effect in terms of driver delay in the AM. This effect would be **short-term** and **not significant**.

13.8.177 Turnpike Road has a **low** highway sensitivity with a major adverse magnitude of change and therefore results in a **minor adverse** classification of effect in terms of driver delay in the AM. This effect would be **short-term** and **not significant**.

13.8.178 **Table 13-30** indicates that between 19:00 and 20:00 it is forecast that 474 staff vehicles will travel on Elms Road, 76 on the A11 Northbound On-Slip and 399 on Newmarket Road (south) at the Red Lodge northern Dumbbell Roundabout. On Elms Road this would equate to a 320% increase in traffic flow, a 70% increase in traffic flows on A11 Northbound On-Slip and a 169% increase in traffic flow on Newmarket Road (South) between 19:00 and 20:00. However, this increase would equate to circa eight vehicle per minute during the PM development peak hour (19:00-20:00). Between 19:00 and 20:00 plus Scheme staff vehicles, it is forecast the traffic flows will be 68% higher on Elms Road, 32% lower on the A11 Northbound On-Slip and 8% higher on Newmarket Road (South) than traffic flows in the network peak hour between 17:00 and 18:00.

13.8.179 Elms Road has a **very low** highway sensitivity with a major adverse magnitude of change and therefore results in a **minor adverse** significance of effect in terms in the PM. This effect would be **short-term** and **not significant**.

13.8.180 The A11 Northbound On-Slip has a **very low** highway sensitivity with a moderate adverse magnitude of change and therefore results in a **negligible** classification of effect in terms of driver delay in the PM. This effect would be **short-term** and **not significant**.

13.8.181 Newmarket Road (South) at the northern dumbbell roundabout, has a **very low** highway sensitivity with a major adverse magnitude of change and therefore results in a **minor adverse** classification of effect in terms of driver delay in the PM. This effect would be **short-term** and **not significant**.

13.8.182 Newmarket Road (North) at the southern dumbbell roundabout, has a **very low** highway sensitivity with a major adverse magnitude of change and therefore results in a **minor adverse** classification of effect in terms of driver delay in the PM. This effect would be **short-term** and **not significant**.

13.8.183 Warren Road has a **very low** highway sensitivity with a minor adverse magnitude of change and therefore results in a **negligible** classification of effect in terms of driver delay in the PM. This effect would be **short-term** and **not significant**.

B1506 Bury Road/Herringswell Road/Gazeley Road Junction

13.8.184 **Table 13-29** indicates that between 06:00 and 07:00 it is forecast that 144 staff vehicles will travel on the B1506 Bury Road (East), 71 on Gazlay Road (south) and 73 on B1506 Bury Road (West) at the B1506 Bury Road/Herringswell Road/Gazeley Road junction. This would equate to a 79% increase in traffic flow on the B1506 Bury Road, a 228% increase on Gazeley road and 39% increase on B1506 Bury Road (West) between 06:00 and 07:00. This increase would equate to circa one vehicle per minute during the development peak hour (06:00-07:00) at the B1506 Bury Road/Herringswell road/Gazeley Road junction. Between 06:00 and 07:00 plus all staff vehicles, it is forecast the traffic flows will be 28% lower on the B1506 Bury Road (East), 32% (25 vehicles) higher on Gazeley Road and 44% lower on the B1506 Bury Road (West) compared to 08:00-09:00 when there will be no staff vehicles.

13.8.185 The B1506 Bury Road (East) has a **low** highway sensitivity and minor adverse magnitude of change resulting in a **minor adverse** classification of effect in terms of driver delay in the AM. The effect would be **short-term** and **not significant**.

13.8.186 The Gazeley Road (South) has a **very low** highway sensitivity and major adverse magnitude of change resulting in a **minor adverse** classification of effect in terms of driver delay in the AM. The effect would be **short-term** and **not significant**.

13.8.187 The B1506 Bury Road (West) has a **low** highway sensitivity and minor adverse magnitude of change resulting in a **negligible** classification of effect in terms of driver delay in the AM. The effect would be **short-term** and **not significant**.

13.8.188 **Table 13-30** indicates that between 19:00 and 20:00 it is forecast that 144 staff vehicles will travel on the B1506 Bury Road (East), 11 on Gazlay Road (south) and 71 on B1506 Bury Road (West) and 85 on Herringswell Road (North) at the B1506 Bury Road/Herringswell Road/Gazeley Road junction. This would equate to a 78% increase in traffic flow on the B1506 Bury Road, a 67% increase on Gazeley Road, a 45% increase on B1506 Bury Road (West) and a 136% increase on Herringswell Road (North) between 19:00 and 20:00. This increase would equate to circa two vehicles per minute during the development peak hour (19:00-20:00) at the B1506 Bury Road/Herringswell Road/Gazeley Road junction. Between 19:00 and 20:00 plus all staff vehicles, it is forecast the traffic flows will be 29% lower on the B1506 Bury Road (East), 33% lower on Gazeley Road (South), 42% lower on the B1506 Bury Road (West) and 6% lower on Herringswell Road compared to 17:00-18:00 when there will be no staff vehicles.

13.8.189 The B1506 Bury Road (East) has a **low** highway sensitivity and moderate adverse magnitude of change resulting in a **minor adverse** classification of effect in terms of driver delay in the PM. The effect would be **short-term** and **not significant**.

13.8.190 The Gazeley Road (South) has a **very low** highway sensitivity and moderate adverse magnitude of change resulting in a **negligible**

classification of effect in terms of driver delay in the PM. The effect would be **short-term** and **not significant**.

13.8.191 The B1506 Bury Road (West) has a **low** highway sensitivity and minor adverse magnitude of change resulting in a **negligible** classification of effect in terms of driver delay in the PM. The effect would be **short-term** and **not significant**.

13.8.192 Herringswell Road (North) has a **very low** highway sensitivity and major adverse magnitude of change resulting in a **minor adverse** classification of effect in terms of driver delay in the PM. The effect would be **short-term** and **not significant**.

Chippenham Junctions

13.8.193 The Chippenham Junctions include the B1102 Mildenhall Road/B1085 Chippenham Road junction, B1085 Chippenham Road/B1085 High Street/B1104 junction, B1104 Station Road/B1102 junction and B1102 Mildenhall Road/B1104 junction. **Table 13-29** indicates that between 06:00 and 07:00 it is forecast that 42 staff vehicles will travel on the B1104 Station Road (north), 20 staff vehicles on B1102 (East) and 22 staff vehicles on B1102 (South) at the B1104 Station Road/B1102 junction. This would equate to a 160% increase in traffic flow on the B1104 Station Road (North), 25% increase on B1102 (East) and 28% increase on B1102 (South) between 06:00 and 07:00. However, this increase would equate to one vehicle per three minutes during the AM development peak hour (06:00-07:00) at the B1104 Station Road/B1102 junction. Between 06:00 and 07:00 plus all staff vehicles, it is forecast the traffic flows will be 5% higher on the B1104 Station Road (North), 50% lower on B1102 (East) and 48% lower on B1102 (South) compared to the traffic flows between 08:00 and 09:00 when there will be no staff vehicles.

13.8.194 **Table 13-29** indicates that between 06:00 and 07:00 it is forecast that 22 staff vehicles will travel on the B1104 and 22 staff vehicles on B1104 at the B1102 Mildenhall Road/B1104 junction. This would equate to a 27% increase in traffic flow on the B1102 and 102% increase on B1104 between 06:00 and 07:00. However, this increase would equate to one vehicle per three minutes during the AM development peak hour (06:00-07:00) at the B1102 Mildenhall Road/B1104 junction. Between 06:00 and 07:00 plus all staff vehicles, it is forecast the traffic flows will be 49% lower on B1102 and 18% lower on B1104 compared to the traffic flows between 08:00 and 09:00 when there will be no staff vehicles.

13.8.195 The B1104 Station Road (North) at the B1104 Station Road/B1102 junction have a **low** sensitivity and major magnitude of change resulting in a **major adverse** classification of effects in terms of driver delay in the AM. Considering the increase in traffic on the B1104 Station Road (North) at the B1104 Station Road/B1102 junction is 42 staff vehicles, resulting in two vehicle every three minutes which increases the development peak hour traffic flows to three vehicles higher than the network peak hour. Considering this based on professional opinion it is not considered likely that the staff vehicles will have a significant effect on driver delay at the

junction. Therefore, the significance of effects has been recategorized at **minor adverse**. The effect would be **short-term** and **not significant**.

13.8.196 The B1102 (East) at the B1104 Station Road/B1102 junction has a **low** sensitivity and very low magnitude of change resulting in a **negligible** classification of effects in terms of driver delay in the AM. The effect would be **short-term** and **not significant**.

13.8.197 The B1102 (South) at the B1104 Station Road/B1102 junction has a **low** sensitivity and very low magnitude of change resulting in a **negligible** classification of effects in terms of driver delay in the AM. The effect would be **short-term** and **not significant**.

13.8.198 The B1102 at the B1102 Mildenhall Road/B1104 junction has a **low** sensitivity and very low magnitude of change resulting in a **negligible** classification of effects in terms of driver delay in the AM. The effect would be **short-term** and **not significant**.

13.8.199 The B1104 has a **low** sensitivity and major magnitude of change resulting in a **moderate adverse** classification of effects in terms of driver delay in the AM. Considering the increase in traffic on the B1104 at the B1102 Mildenhall Road/B1104 junction is 22 staff vehicles, resulting in one vehicle every three minutes, professional opinion does not consider likely that the staff vehicles will have a significant effect on driver delay at the junction. Therefore, the significance of effects has been recategorized at **minor adverse**. The effect would be **short-term** and **not significant**.

13.8.200 **Table 13-30** indicates that between 19:00 and 20:00 it is forecast that 22 staff vehicles will travel on B1104 and B1085 High Street at the B1085 Chippenham Road/B1085 High Street/B1104 junction. This would equate to a 21% increase in traffic flow on the B1104 and 13% increase on B1085 High Street between 19:00 and 20:00. However, this increase would equate to one vehicle per three minutes during the PM development peak hour (19:00-20:00) at the B1085 Chippenham Road/B1085 High Street/B1104 junction. Between 19:00 and 20:00 plus all staff vehicles, it is forecast the traffic flows will be 52% lower on B1104 and 55% lower on B1085 High Street compared to the traffic flows between 17:00 and 18:00 when there will be no staff vehicles.

13.8.201 The B1104 at the B1085 Chippenham Road/B1085 High Street/B1104 junction has a **low** sensitivity and very low magnitude of change resulting in a **negligible** classification of effects in terms of driver delay in the PM. The effect would be **short-term** and **not significant**.

13.8.202 The B1085 High Street at the B1085 Chippenham Road/B1085 High Street/B1104 junction has a **low** sensitivity and very low magnitude of change resulting in a **negligible** classification of effects in terms of driver delay in the PM. The effect would be **short-term** and **not significant**.

13.8.203 **Table 13-30** indicates that between 19:00 and 20:00 it is forecast that 42 staff vehicles will travel on the B1104 Station Road (North), 20 staff vehicles on B1102 (East) and 22 staff vehicles on B1102 (South) at the B1104

Station Road/B1102 junction. This would equate to a 45% increase in in traffic flow on the B1104 Station Road (North), a 28% increase on the B1102 (East) and a 15% increase on the B1102 (South) between 19:00 and 20:00. This increase would equate to one vehicle per three minutes during the PM development peak hour (19:00-20:00) at the B1104 Station road B1102 junction. Between 19:00 and 20:00 plus all staff vehicles, it is forecast the traffic flows will circa 42% lower on the B1104 Station Road (north), 49% lower on B1102 (East) and 54% lower on B1102 (South) compared to the traffic flows between 17:00 and 18:00 when there will be no staff vehicles.

13.8.204 The B1104 Station Road at the B1104 Station Road / B1102 junction has a **low** sensitivity and minor adverse magnitude of change resulting in a **negligible** classification of effects in terms of driver delay in the PM. The effect would be **short-term** and **not significant**.

13.8.205 The B1102 (East) at the B1104 Station Road / B1102 junction has a **low** sensitivity and very low magnitude of change resulting in a **negligible adverse** classification of effects in terms of driver delay in the PM. The effect would be **short-term** and **not significant**.

13.8.206 The B1102 (South) at the B1104 Station Road / B1102 junction has a **low** sensitivity and very low magnitude of change resulting in a **negligible adverse** classification of effects in terms of driver delay in the PM. The effect would be **short-term** and **not significant**.

13.8.207 **Table 13-30** indicates that between 19:00 and 20:00 it is forecast that 22 staff vehicles will travel on the B1102 and B1104 at the B1104 Station Road/B1102 junction. This would equate to a 15% increase in in traffic flow on the B1102 and a 27% increase on the B1104 between 19:00 and 20:00. This increase would equate to one vehicle per three minutes during the PM development peak hour (19:00-20:00) at the B1102 Mildenhall Road/B1104 junction. Between 19:00 and 20:00 plus all staff vehicles, it is forecast the traffic flows will circa 54% lower on the B1102 and 49% lower on B1104 compared to the traffic flows between 17:00 and 18:00 when there will be no staff vehicles.

13.8.208 The B1102 at the B1102 Mildenhall Road /B1104 junction has a **low** sensitivity and very low magnitude of change resulting in a **negligible** classification of effects in terms of driver delay in the PM. The effect would be **short-term** and **not significant**.

13.8.209 The B1104 at the B1102 Mildenhall Road /B1104 junction has a **low** sensitivity and very low magnitude of change resulting in a **negligible adverse** classification of effects in terms of driver delay in the PM. The effect would be **short-term** and **not significant**.

Dane Hill/Turnpike Road Roundabout

13.8.210 **Table 13-29** indicates that between 06:00 and 07:00 it is forecast that 139 staff vehicles will travel on the B1085 (North-West), 58 staff vehicles on B1085 Turnpike road and 81 staff vehicles on B1085 Dane Hill Road (South) at the Dane Hill/Turnpike Road Roundabout. This would equate to a

208% increase in traffic flow on the B1085 (North-West), a 53% increase on B1085 Turnpike Road and a 56% increase on B1085 Dane Hill Road (South) between 06:00 and 07:00. This increase would equate to circa two to three vehicles per minute during the development peak hour (06:00-07:00). Between 06:00 and 07:00 plus all staff vehicles, it is forecast the traffic flows will be 24% (40 vehicles) higher on the B1085 (North-West), 43% lower on the B1085 Turnpike Road and 37% lower on the B1085 Dane Hill Road (South) compared to the traffic flows between 08:00 and 09:00 when there will be no staff vehicles.

13.8.211 The B1085 (North-West) has a **low** sensitivity and major magnitude of change resulting in a **moderate adverse** classification of effects in terms of driver delay in the AM. It is noted the increase in vehicles is circa two vehicles per minute and the traffic flows are forecast to be similar to the network peak hour. In addition, the 'Forest Heath District Council Site Allocation Plan Cumulative Impact Study' document (August 2016) (Ref. 13-7) indicates that the links at the Dane Hill roundabout is forecast to operate within capacity with a maximum RFC of between 0.46 and 0.51 in 2031 during the AM and PM network peak hours. This considered the operation of the Dane Hill Roundabout with the additional growth between 2023 and 2031 which will not be present in 2023. Therefore, the operation of the Dane Hill Roundabout is considered to perform better than this and have a greater residual capacity. Therefore, based on the above and professional opinion, it is considered that the B1085 (North-West) would actually result in a **minor adverse** significance of effects in terms of driver delay in the AM. Therefore, the significance of effects has been recategorized as **minor adverse**. The effect would be **short-term** and **not significant**.

13.8.212 The B1085 Turnpike Road has a **low** sensitivity and minor magnitude of change resulting in a **negligible** classification of effects in terms of driver delay in the AM. The effect would be **short-term** and **not significant**.

13.8.213 The B1085 Dane Hill Road (South) has a **low** sensitivity and minor adverse magnitude of change resulting in a **minor adverse** classification of effects in terms of driver delay in the AM. The effect would be **short-term** and **not significant**.

13.8.214 **Table 13-30** indicates that between 19:00 and 20:00 it is forecast that 363 staff vehicles on the B1085 (North-West), 81 staff vehicles on B1085 Dane Hill Road (South) and 282 staff vehicles on the A11 southbound On-Slip at the Dane Hill/B1085 Turnpike Road Roundabout. This would equate to a 180% increase in traffic flows on the B1085 (North-West), a 61% increase in traffic flows on B1085 Dane Hill road (South) and a 408% increase in traffic flow on the A11 Southbound On-Slip between 19:00 and 20:00. However, this increase would equate to circa four to five vehicles per minute during the development peak hour (19:00-20:00) at the Dane Hill/Turnpike Roundabout. Between 19:00 and 20:00 plus Sunnica West Sites A and B staff vehicles, it is forecast the traffic flows will be 12% (62 vehicles) higher on the B1085 (North-West), 35% lower on the B1085 Turnpike Road and 104% higher on the A11 southbound On-Slip compared to the traffic flows between 17:00 and 18:00 when there will be no staff vehicles.

13.8.215 The B1085 (North-West) has a **low** sensitivity and major adverse magnitude of change resulting in a **moderate adverse** classification of effects in terms of driver delay in the PM. The increase in traffic flow would result in an additional four to five vehicles per minute at the Dane Hill Roundabout. In addition, the 'Forest Heath District Council Site Allocation Plan Cumulative Impact Study' document (August 2016) (Ref. 13-7) indicates that the links at the Dane Hill roundabout is forecast to operate within capacity with a maximum RFC of between 0.46 and 0.51 in 2031 during the AM and PM network peak hours. This considered the operation of the Dane Hill Roundabout with the additional growth between 2023 and 2031 which will not be present in 2023. Therefore, the operation of the Dane Hill Roundabout is considered to perform better than this and have a greater residual capacity. Therefore, based on the above and professional opinion, it is considered that the B1085 (North-West) would actually result in a **minor adverse** significance of effects in terms of driver delay in the PM. Therefore, the significance of effects has been recategorized as **minor adverse**. The effect would be **short-term** and **not significant**.

13.8.216 The B1085 Dane Hill Road has a **low** sensitivity and moderate magnitude of change resulting in a **minor adverse** classification of effects in terms of driver delay in the AM. The effect would be **short-term** and **not significant**.

13.8.217 The A11 southbound On-Slip has a **very low** sensitivity and major adverse magnitude of change resulting in a **minor adverse** classification of effects in terms of driver delay in the AM. The effect would be **short-term** and **not significant**.

A142 Corridor

13.8.218 The A40 Corridor junctions include the A142/Snailwell Road/Landwade Road Junction and the A14 J37. **Table 13-29** indicate that between 06:00 and 07:00 it is forecast that 143 staff vehicles will travel on the A142 (North) and A142 (South) at the A142/Snailwell Road/Landwade Road junction. This would equate to a 25% increase in traffic flow on the A142 (North) and a 40% increase in traffic flow on the A142 (South) between 06:00 and 07:00. This increase would equate to circa two vehicles per minute during the development peak hour (06:00-07:00) at the A142/Snailwell Road/Landwade Road junction. It is noted that between 06:00 and 07:00 plus Sunnica East Sites A and B staff vehicles, it is forecast the traffic flows will be 40% lower on the A142 (North) and 32% lower on the A142 (South) compared to 08:00-09:00 when there will be no staff vehicles.

13.8.219 **Table 13-29** indicates that between 06:00 and 07:00 it is forecast that 143 staff vehicles are forecast to travel on the A142 Fordham Road (North) at the A14 J37 junction. This would equate to a 31% increase in traffic flow between 06:00 and 07:00. This increase would equate to circa two vehicles per minute during the development peak hour (06:00-07:00) at the A14 J37. It is noted between 06:00 and 07:00 plus Sunnica East Sites A and B staff vehicles, it is forecast the traffic flows will be 37% lower compared to 08:00-09:00 when there will be no staff vehicles.

13.8.220 The A142 (North) has a **medium** sensitivity and very low magnitude of change results in a **negligible** classification of effects in terms of driver delay in the AM. The effect would be **short-term** and **not significant**.

13.8.221 The A142 (South) has a **medium** sensitivity and minor adverse magnitude of change results in a **minor adverse** classification of effects in terms of driver delay in the AM. The effect would be **short-term** and **not significant**.

13.8.222 The A142 Fordham Road (North) has a **medium** sensitivity and a minor adverse magnitude of change resulting in a **minor adverse** classification of effects in terms of driver delay in the AM. The effect would be **short-term** and **not significant**.

13.8.223 **Table 13-30** indicates that between 19:00 and 20:00 it is forecast that 143 staff vehicles will travel on the A142 (North) and A142 (South) at the A142/Snailwell Road/Landwade Road junction. This would equate to a 23% increase in traffic flow on the A142 (North) and a 33% increase in traffic flow on the A142 (South) between 19:00 and 20:00. This increase would equate to circa two vehicles per minute during the development peak hour (19:00-20:00) at the A142/Snailwell Road/Landwade Road junction. It is noted that between 19:00 and 20:00 plus Sunnica East Sites A and B staff vehicles, it is forecast the traffic flows will be 44% lower on the A142 (North) and 40% lower on the A142 (South) compared to 17:00-18:00 when there will be no staff vehicles.

13.8.224 **Table 13-30** indicates that between 19:00 and 20:00 it is forecast that 143 staff vehicles are forecast to travel on the A142 Fordham Road (North) and on the A14 Eastbound Off-Slip (West) at the A14 J37 junction. This would equate to a 27% increase in traffic flow on the A142 Fordham Road (North) and a 65% increase on the A14 Eastbound Off-Slip (West) between 19:00 and 20:00 at the A14 J37. This increase would equate to circa two vehicles per minute during the development peak hour (19:00-20:00) at the A14 J37. It is noted between 19:00 and 20:00 plus Sunnica East Sites A and B staff vehicles, it is forecast the traffic flows will be 42% lower on the A142 Fordham Road (North) and 25% lower on the A14 Eastbound Off-Slip (West) compared to 17:00-18:00 when there will be no staff vehicles.

13.8.225 The A142 Fordham Road (North) has a **medium** sensitivity and a very low magnitude of change resulting in a **negligible** classification of effects in terms of driver delay in the PM. The effect would be **short-term** and **not significant**.

13.8.226 The A14 Eastbound Off-Slip (West) has a **low** sensitivity and a moderate adverse magnitude of change resulting in a **minor adverse** classification of effects in terms of driver delay in the PM. The effect would be **short-term** and **not significant**.

Vehicle Travellers - Driver Delay – Scheme Summary

13.8.227 As the vehicles associated with the staff vehicles are anticipated to travel outside of the network peak hours and the level of traffic forecast in the development AM and PM peak hours (06:00-07:00 and 19:00-20:00) are in most cases less than or similar to the highway AM and PM peak hours

(08:00-09:00 and 17:00-18:00), the delay that the vehicle travellers are forecast to experience due to the Scheme is generally no worse than in the highway AM and PM peak hours.

13.8.228 As outlined in **Appendix 13C: Framework CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]**, the two centralised car parks will be managed when staff arrive 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 two centralised car parking areas are undertaken in a timely and safe manner.

13.8.229 Therefore, it is considered that the overall magnitude of change in terms of driver delay on vehicle travellers is compared to the baseline situation is **minor adverse** during the construction period with a **low** sensitivity. This results in a **minor adverse** significance of effect. This effect would be **short-term** and **not significant**.

Vehicle Travellers and NMUs – Accidents and Safety

13.8.230 The PIA for the past five years obtained from SCC and CCC indicate that ten incidents have been excluded from the PIA analysis as the primary contributory factor was found to be driver intoxication. 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 in the selected area.

13.8.231 In the area surrounding the Sunnica East Sites A and B three incidents were recorded at the A11 Off-Slip / Elms Road T-junction, two incidents on the A11 southbound (South of Red Lodge) and two incidents on the B1102. This equates to less than one incident per year at each location. One incident was classified as fatal on the B1102. Seven incidents were recorded on the A11 northbound (South of Red Lodge) over the five-year period, this is 1.4 incidents per year. Therefore, the magnitude of change is **minor adverse**. As identified in **Table 13-16,** the sensitivity of the A11 off-slip is **medium**.

13.8.232 In the area surrounding the Sunnica West Sites A and B, three incidents were recorded at the B1085 / La Hogue Road junction, two incidents on the B1085 Turnpike Road and two incidents on Dane Hill Road. One incident was classified as fatal on Dane Hill Road. This equates to less than one incident per year at each location. It is considered that this does not indicate any significant safety design issues at these locations. Therefore, the magnitude of change at these locations is forecast to be **negligible** and the highway sensitivity for these locations range from **very low to low**.

13.8.233 As the construction staff and HGV traffic will travel outside of the network peak hours it is considered that the overall significance of effect on vehicles travellers in terms of accidents and safety is **minor adverse** during the construction period.

NMUs

NMUs – Severance, Pedestrian and Cycle Delay and Pedestrian and Cycle Amenity

13.8.234 **Table 13-31** and **Table 13-32** identifies the link sensitivity, two-way percentage change, magnitude and significance for NMU's severance, pedestrian and cycle delay and amenity for the Scheme. A hyphen has been included in the tables below where there is no forecast change in traffic flows.

Table 13-31: NMUs – Severance, Pedestrian and Cycle Delay and Amenity – Scheme – 2023 AM

Location	Link Sensitivity	2023 Two-Way % Change	Magnitude	Significance
Red Lodge Dumbbell Roundabout (North)				
Elms Road	Very Low Sensitivity	144%	Major Adverse	Minor Adverse
Newmarket Road	-	-	-	-
A11 NB On-Slip	-	-	-	-
Newmarket Road (South)	Very Low Sensitivity	45%	Minor Adverse	Negligible
Red Lodge Dumbbell Roundabout (South)				
Newmarket Road (North)	Very Low Sensitivity	45%	Minor Adverse	Negligible
A11 SB Off-Slip	Very Low Sensitivity	176%	Major Adverse	Minor Adverse
Warren Road	Medium Sensitivity	31%	Minor Adverse	Minor Adverse
B1085 Turnpike Road	Medium Sensitivity	51%	Minor Adverse	Minor Adverse
A11 SB On-Slip (Red Lodge)	-	-	-	-
B1506 Bury Road / Herringswell Road / Gazeley Road				
B1506 Bury Road (East)	Medium Sensitivity	34%	Minor Adverse	Minor Adverse
Gazeley Road (South)	Very Low Sensitivity	129%	Major Adverse	Minor Adverse
B1506 Bury Road (West)	Medium Sensitivity	19%	Negligible	Negligible
Herringswell Road (North)	-	-	-	-
B1102 Mildenhall Road / B1085 Chippenham Road				
B1102 Mildenhall Road (East)	-	-	-	-
B1085 Chippenham Road (South)	-	-	-	-
B1102 Mildenhall Road (West)	-	-	-	-
B1085 Chippenham Road / B1085 High Street / B1104				
B1085 Chippenham Road	-	-	-	-
B1104	-	-	-	-
B1085 High Street	-	-	-	-

Location	Link Sensitivity	2023 Two-Way % Change	Magnitude	Significance
B1104 Station Road / B1102				
B1104 Station Road (North)	Very Low Sensitivity	35%	Minor Adverse	Negligible
B1102 (East)	Very Low Sensitivity	13%	Negligible	Negligible
B1102 (South)	Very Low Sensitivity	10%	Negligible	Negligible
B1102 Mildenhall Road / B1104				
B1102	Very Low Sensitivity	10%	Negligible	Negligible
B1104	Very Low Sensitivity	21%	Negligible	Negligible
B1102 Mildenhall Road (West)	-	-	-	-
Dane Hill Road / Turnpike Road Roundabout				
B1085 (North-West)	Very Low Sensitivity	51%	Minor Adverse	Negligible
B1085 Turnpike Road	Low Sensitivity	27%	Negligible	Negligible
B1085 Dane Hill Road (South)	Very Low Sensitivity	26%	Negligible	Negligible
A11 SB On-Slip	-	-	-	-
A142 / Snailwell Road / Landwade Road				
A142 (North)	Low Sensitivity	15%	Negligible	Negligible
Snailwell Road (East)	-	-	-	-
A142 (South)	Low Sensitivity	21%	Negligible	Negligible
Landwade Road (West)	-	-	-	-
A14 J37				
A142 Fordham Road (North)	Very Low Sensitivity	17%	Negligible	Negligible
A14 Westbound Off-Slip (East)	-	-	-	-
Fordham Road (South)	-	-	-	-
A14 Eastbound Off-Slip (West)	-	-	-	-

Table 13-32: NMUs – Severance, Pedestrian and Cycle Delay and Amenity – Scheme – 2023 PM

Location	Link Sensitivity	2023 Two-Way % Change	Magnitude	Significance
Red Lodge Dumbbell Roundabout (North)				
Elms Road	Very Low Sensitivity	267%	Major Adverse	Minor Adverse
Newmarket Road	-	-	-	-
A11 NB On-Slip	Very Low Sensitivity	70%	Major Adverse	Minor Adverse
Newmarket Road (South)	Very Low Sensitivity	100%	Major Adverse	Minor Adverse
Red Lodge Dumbbell Roundabout (South)				
Newmarket Road (North)	Very Low Sensitivity	101%	Major Adverse	Minor Adverse
A11 SB Off-Slip	-	-	-	-
Warren Road	Medium Sensitivity	27%	Negligible	Negligible
B1085 Turnpike Road	-	-	-	-
A11 SB On-Slip	Very Low Sensitivity	353%	Major Adverse	Negligible
B1506 Bury Road / Herringswell Road / Gazeley Road				
B1506 Bury Road (East)	Medium Sensitivity	37%	Minor Adverse	Minor Adverse
Gazeley Road (South)	Very Low Sensitivity	20%	Negligible	Negligible
B1506 Bury Road (West)	Medium Sensitivity	21%	Negligible	Negligible
Herringswell Road (North)	Low Sensitivity	57%	Minor Adverse	Minor Adverse
B1102 Mildenhall Road / B1085 Chippenham Road				
B1102 Mildenhall Road (East)	-	-	-	-
B1085 Chippenham Road (South)	-	-	-	-
B1102 Mildenhall Road (West)	-	-	-	-
B1085 Chippenham Road / B1085 High Street / B1104				
B1085 Chippenham Road	-	-	-	-
B1104	Very Low Sensitivity	16%	Negligible	Negligible
B1085 High Street	Medium Sensitivity	9%	Negligible	Negligible

Location	Link Sensitivity	2023 Two-Way % Change	Magnitude	Significance
B1104 Station Road / B1102				
B1104 Station Road (North)	Very Low Sensitivity	35%	Minor Adverse	Negligible
B1102 (East)	Very Low Sensitivity	13%	Negligible	Negligible
B1102 (South)	Very Low Sensitivity	10%	Negligible	Negligible
B1102 Mildenhall Road / B1104				
B1102	Very Low Sensitivity	10%	Negligible	Negligible
B1104	Very Low Sensitivity	21%	Negligible	Negligible
B1102 Mildenhall Road (West)	-	-	-	-
Dane Hill Road / Turnpike Road Roundabout				
B1085 (North-West)	Very Low Sensitivity	122%	Major Adverse	Minor Adverse
B1085 Turnpike Road	-	-	-	-
B1085 Dane Hill Road (South)	Very Low Sensitivity	28%	Negligible	Negligible
A11 SB On-Slip	Very Low Sensitivity	408%	Major Adverse	Minor Adverse
A142 / Snailwell Road / Landwade Road				
A142 (North)	Low Sensitivity	14%	Negligible	Negligible
Snailwell Road (East)	-	-	-	-
A142 (South)	Low Sensitivity	17%	Negligible	Negligible
Landwade Road (West)	-	-	-	-
A14 J37				
A142 Fordham Road (North)	Low Sensitivity	14%	Negligible	Negligible
A14 Westbound Off-Slip (East)	-	-	-	-
Fordham Road (South)	-	-	-	-
A14 Eastbound Off-Slip (West)	Very Low Sensitivity	64%	Major Adverse	Minor Adverse

13.8.235 **Table 13-31** indicates that, in the AM peak, 15 of the 37 links assessed are forecast to have a minor adverse classification of effect with regards to severance, pedestrian delay, pedestrian / cycle amenity and fear and intimidation during the construction period. The remaining links are forecast to have no impact or a negligible significance of effect.

13.8.236 **Table 13-31** indicates that Warren Road is forecast to experience a 31% increase in two-way traffic flows in the development AM peak hour during the construction period. Warren Road provides access to Red Lodge from the south. There are footways along Warren Road, and it is a main vehicular route through a residential area, therefore this link has a medium sensitivity in terms of NMUs. It is considered that Warren Road has a **minor adverse** change with regards to severance, pedestrian delay, pedestrian / cycle amenity and fear and intimidation in relation to the increase of construction traffic. The magnitude of change on potential NMUs using Warren Road is **minor adverse**, the sensitivity is **medium,** therefore the significance of the effect during the construction period is **minor adverse**. This is a **short-term** effect and **not significant.**

13.8.237 **Table 13-32** indicates in the PM peak, nine of the 37 links assessment are forecast to have a minor adverse significance of effect with regards to severance, pedestrian delay, pedestrian / cycle amenity and fear and intimidation during the construction period. The remaining links are forecast to have no impact or a negligible significance of effect.

13.8.238 Herringswell Road and Warren Road are located within the residential areas of Kentford and Red Lodge respectively and provide footways along the carriageway. Both Herringswell and Warren Road are discussed in further details below.

13.8.239 **Table 13-20** indicates that Herringswell Road is forecast experience a 57% increase in two-way traffic flows in the PM development peak during the construction period. Herringswell Road provides a route from Kentford to the south of the Order limits towards Sunnica East Site B centralised car park. There are footways along Herringswell Road and therefore has a low sensitivity for NMUs. It is considered that the Herringswell Road has **minor adverse** change with regards to severance, pedestrian delay, pedestrian / cycle amenity and fear and intimidation in relation to the increase of construction traffic. The magnitude of change on potential NMUs using Herringswell Road is **minor adverse**, the sensitivity is **low,** therefore the significance of the effect during the construction period is **minor adverse**. This effect is **not significant** and would be **short-term**.

13.8.240 As a result, in terms of Severance, Pedestrian Delay, Pedestrian / Cycle Amenity and Fear and Intimidation the construction traffic related to the Sunnica East Site is forecast to have a **minor adverse** significance of effect. This is a **short-term** effect and **not significant**.

NMUs – PRoW

13.8.241 During construction, eight PRoWs that are located either within or near the order limits are anticipated to be temporarily closed. A plan illustrating the temporary PRoW closures can be found in Figure 13-2 of this

Environmental Statement **[EN010106/APP/6.3]**. The PRoW closures include the following: w-257/002/X, W-257/007/7/0, W257/002/0, 49/7, 204/1, 92/19 AND 35/10. The temporary closures will be supported by appropriate signage.

13.8.242 Notwithstanding, the PRoWs would be closed for the shortest timeframe reasonably necessary to carry out the works. It is expected that the PRoWs would be closed for a maximum of three weeks. When a PRoW is temporarily closed there is expected to be alternative option available within the local area on the existing network.

13.8.243 These PRoW are predominantly used for recreational purposes and there is a wide network of PRoWs in the surrounding area providing residents with alternative routes.

13.8.244 The Order limits are located in a rural area with limited footways and pedestrian and cycle facilities in the area. There are several PRoWs crossing and connecting the Scheme to local villages such as Worlington, Freckenham and Red Lodge. There are no on or off-road cycling facilities within the vicinity of the Sunnica East Sites A and B; however, the roads surrounding the Sites are generally lightly trafficked and therefore could facilitate cycling. There is no data available on the number of pedestrians and cyclists using the PRoWs that will be temporarily closed; however, it is considered that the number of users affected is likely to be low. The magnitude of change on those using PRoW is **minor adverse**, the sensitivity is **low,** therefore the significance of the effect during the construction period is **minor adverse**. This effect would be **short-term** and **not significant**.

13.8.245 In terms of Severance, Pedestrian Delay, Pedestrian / Cycle Amenity and Fear and Intimidation all of the links within an easy walking and cycling distance from the Order limits. The magnitude of change is **minor adverse**, the sensitivity is **low**, therefore the significance of the effect during the construction period is **minor adverse**. This effect would be **short-term** and **not significant**.

NMUs – Fear and Intimidation

13.8.246 Consideration has been given to HGV flows during construction. The main HGV access for Sunnica East Sites A and B is proposed to be from Elms Road into Sunnica East Site B and from La Hogue Road for Sunnica West Site A. Both the site accesses are located in close proximity to the A11. Furthermore, there are likely to be very few, NMUs using the SRN who would be affected by the HGV trips. The construction worker shift covers a 12-hour period. Therefore, it is assumed there will be a 10-hour construction delivery window as this excludes the two network peak hours. Movements are split equally across the hours, which is considered a reasonable and robust approach based on previous experience and professional judgement, (noting that there will be more arrivals at the start of the day and departures towards the end) and it is our professional judgement that, based on data for other roads in the study area, the magnitude of change associated with the Scheme is likely to be **minor adverse** and the majority of roads that the HGVs would use to access the Scheme have a very low or low sensitivity in

terms of NMU. Therefore, to be robust the sensitivity of receptor for this assessment is **low**.

13.8.247 HGVs associated with the Scheme will be routed to the SRN for the majority of the journey to minimise the change on the local roads and villages. The HGV routes to the Sites are outlined in **Appendix 13C: Framework CTMP and TP** of this Environmental Statement **[EN010106/APP/6.2]**.

13.8.248 Based on the information contained within in tables above the magnitude of change of the combined effects for the Scheme is considered **minor adverse,** the sensitivity is **low,** therefore the significance of the effect during the construction period is **minor adverse**. This effect would be **short-term** occurring across the study area and none are identified as significant.

Public Transport Users

13.8.249 It is considered that there will not be a significant change in delay on the local roads associated with construction activity at peak times due to construction staff arriving and departing outside of peak hours.

13.8.250 At the time of writing, it is not anticipated that any bus services will be affected by the closure of roads during the construction period of the Scheme, as no current bus routes would be affected. The temporary road closures are expected to be for a maximum of one week and the effect would be classified as **minor adverse** if a bus route was impacted by a temporary road closure. Therefore, the magnitude of change on public transport users is considered to be **negligible**.

13.8.251 Due to the limited number of bus routes and services in the area the sensitivity for public transport users is considered to be **very low**.

13.8.252 Therefore, it is considered that the significance of effect on public transport users would be **negligible**. This effect would be **short-term** and **not significant**.

Summary

13.8.253 **Table 13-33** outlines a summary of the magnitude of change and significance of effect for vehicle travellers, NMUs and public transport users for the combined effects on receptors.

Table 13-33: Summary of Magnitude of Change and Significance of Effect for the Combined Effects on Receptors

Description of Effects	Sensitivity (Value)	Description of Change	Magnitude of Change	Effect Category	Significant? (Yes / No)
Vehicle Traveller					
Driver Delay	Ranges from medium to very low	Increase in traffic on the surrounding road network.	Ranges from Major Adverse to very low	Ranges from Minor Adverse to Negligible	No
Accidents and Safety	Low	No accidents within the vicinity of the main access points.	Very Low	Very Low	No
NMU					
Severance	Medium	Closure of PRoW and increase in traffic flows.	Very Low	Minor Adverse	No
Pedestrian Delay	Low	PRoW to be closed in the vicinity of the Order Limits.	Minor Adverse	Minor Adverse	No
Pedestrian / Cycle Amenity	Low	Closure of PRoW and increase in traffic flows.	Minor Adverse	Minor Adverse	No
Fear and Intimidation	Very Low	Low increase in HGV flows.	Very Low	Minor Adverse	No
Accidents and Safety	Low	No accidents within the vicinity of the main access points.	Very Low	Very Low	No
Public Transport Users					
Delay	Very Low	No impact on bus or train services.	Very Low	Very Low	No

Operation

13.8.254 During scoping the assessment of the operational phase was scoped out. It is anticipated that there will be up to 17 permanent staff on-site during the operational phase during a single shift, with staff working on a three-shift pattern. There will also be a requirement for additional staff to attend the Sites when required for maintenance and cleaning activities. If all the 17 permanent staff drove daily to the Scheme this would result in an additional 17 vehicles on the highway network. It is noted that there is the potential for share sharing for operational staff which would reduce the number of vehicles on the highway network during the operational phase. Therefore, it is not considered necessary to assess the operational phase of the Scheme given that it will generate very low levels of traffic with peak traffic movements occurring during the construction phase.

Decommissioning

13.8.255 The operational life of the Scheme is to be 40 years and decommissioning is therefore estimated to be in 2065. Background traffic flows cannot be accurately forecast over 40 years into the future and therefore the transport impact of the decommissioning phase cannot be accurately assessed. It is not anticipated at this point in time that the impacts associated with decommissioning would be worse than during the construction period. On this basis as the construction period is considered to have the greatest change on the surrounding transport network, only the construction phase has been assessed. The effect of the decommissioning phase is anticipated to be the same or less than this, and therefore also not significant. A Framework DEMP has been prepared see **Appendix 16E** of this Environmental Statement **[EN010106/APP/6.2]** and will be developed prior to the decommissioning phase to control the potential impacts. A DTMP and a DWTP will be produced prior to commencing decommissioning.

13.9 Additional Monitoring, Mitigation and Enhancement Measures

13.9.1 No significant adverse effects are anticipated during construction and therefore no additional mitigation, other than the embedded mitigation outlined in Section 13.7, is proposed.

Monitoring

13.9.2 No monitoring is required for the additional mitigation and enhancement measures.

Enhancements

13.9.3 After construction during the operation phase, there are three permissive routes that may be provided in the surrounding area, which are identified in in **Appendix 13B: Transport Assessment** of this Environmental Statement **[EN010106/APP/6.2]**. The permissive paths proposed are:

a. A new permissive path adjacent to Beck Road at Sunnica East Site A increasing the recreational value across Sunnica East Site A and providing increased connectivity between Freckenham and the southern edge of Isleham;

b. A new permissive path across Sunnica East Site B, to provide access from the existing unclassified road (U6006) across the north of Sunnica East Site B to connect with Golf Links Road; and

c. A new permissive path adjacent to Elms Road and around the perimeter of Sunnica East Site B, which will connect U6006 with PRoW W-257/003/0 which runs to Red Lodge.

13.9.4 The provision of the permissive routes would result in a **minor benefit** to NMUs while the effect would be **long-term**, however, this is not significant in EIA terms.

13.10 Residual Effects

13.10.1 This section summarises the residual significant effects of the Scheme on vehicle travellers, NMUs and public transport users. Residual effects are defined as moderate or major. Minor effects are listed in **Table 13-34** (Scheme construction).

13.10.2 **Table 13-34** outlines the likely residual construction effects after mitigation.

Table 13-34: Summary of Residual Effects (Construction)

Receptor	Description of Change	Significance of Effect without Mitigation	Mitigation/ Enhancement Measure	Residual Effect after Mitigation
Sunnica East Sites A and B				
Vehicle Traveller – Driver Delay	No increase in traffic on the surrounding road network during the network peak hours. However, there is an increase in traffic flows within the development peak hours.	Negligible	N/A	Negligible
Vehicle Traveller – Accidents and Safety	A low number of accidents were recorded within the vicinity of the Sunnica East Sites A and B accesses.	Minor Adverse	N/A	Minor Adverse
NMU – Severance	Closure of PRoW and increase in traffic flows.	Minor Adverse	N/A	Minor Adverse
NMU – Pedestrian Delay	PRoW to be closed in the vicinity of the Sunnica West Sites A and B.	Minor Adverse	N/A	Minor Adverse
NMU – Pedestrian / Cycle Amenity	Closure of PRoW and increase in traffic flows.	Minor Adverse	N/A	Minor Adverse
NMU – Fear and Intimidation	Low increase in HGV flows.	Minor Adverse	N/A	Minor Adverse
NMU – Accidents and Safety	No accidents involving vulnerable road users were recorded within the vicinity of the Sunnica East Sites A and B access.	Minor Adverse	N/A	Minor Adverse
Public Transport Users	No impact on bus or train services.	Negligible	N/A	Negligible

Receptor	Description of Change	Significance of Effect without Mitigation	Mitigation/ Enhancement Measure	Residual Effect after Mitigation
Sunnica West Sites A and B				
Vehicle Traveller – Driver Delay	No increase in traffic on the surrounding road network during the network peak hours. However, there is an increase in traffic flows within the development peak hours.	Negligible	N/A	Negligible
Vehicle Traveller – Accidents and Safety	A low number of accidents were recorded within the vicinity of the Sunnica West Sites A and B accesses.	Negligible	N/A	Negligible
NMU – Severance	Closure of PRoW and increase in traffic flows.	Minor Adverse	N/A	Minor Adverse
NMU – Pedestrian Delay	PRoW to be closed in the vicinity of the Sunnica West Site A.	Minor Adverse	N/A	Minor Adverse
NMU – Pedestrian / Cycle Amenity	Closure of PRoW and increase in traffic flows.	Minor Adverse	N/A	Minor Adverse
NMU – Fear and Intimidation	Increase in HGV flows.	Minor Adverse	N/A	Minor Adverse
NMU – Accidents and Safety	No accidents involving vulnerable road users were recorded within the vicinity of the Sunnica West Sites A and B accesses.	Minor Adverse	N/A	Minor Adverse

Receptor	Description of Change	Significance of Effect without Mitigation	Mitigation/ Enhancement Measure	Residual Effect after Mitigation
Burwell National Grid Substation Extension				
Vehicle Traveller – Driver Delay	No increase in traffic on the surrounding road network during the network peak hours.	Negligible	N/A	Negligible
Vehicle Traveller – Accidents and Safety	No accidents within the vicinity of the Burwell National Grid Substation Extension.	Negligible	N/A	Negligible
NMU – Severance	No PRoW are to be closed in the vicinity and there is a low increase in traffic flows.	Minor Adverse	N/A	Minor Adverse
NMU – Pedestrian Delay	No PRoW are to be closed in the vicinity of Burwell National Grid Substation Extension.	Minor Adverse	N/A	Minor Adverse
NMU – Pedestrian / Cycle Amenity	No pedestrian or cycle facilities are being closed during construction.	Minor Adverse	N/A	Minor Adverse
NMU – Fear and Intimidation	Low increase in HGV flows.	Negligible	N/A	Negligible
NMU – Accidents and Safety	No accidents involving vulnerable road users were recorded within the vicinity of the Burwell National Grid Substation Extension.	Negligible	N/A	Negligible
Public Transport Users	No impact on bus or train services.	Negligible	N/A	Negligible

Receptor	Description of Change	Significance of Effect without Mitigation	Mitigation/ Enhancement Measure	Residual Effect after Mitigation
Grid Connection Routes A and B				
Vehicle Traveller – Driver Delay	No increase in traffic on the surrounding road network during the network peak hours.	Negligible	N/A	Negligible
Vehicle Traveller – Accidents and Safety	No accidents within the vicinity of the Grid Connection Route A and B.	Negligible	N/A	Negligible
NMU – Severance	PRoW to be closed in the vicinity and there is a low increase in traffic flows.	Negligible	N/A	Negligible
NMU – Pedestrian Delay	PRoW to be closed in the vicinity of the Grid Connection Route A and B.	Negligible	N/A	Negligible
NMU – Pedestrian / Cycle Amenity	No pedestrian or cycle facilities are being closed during construction.	Negligible	N/A	Negligible
NMU – Fear and Intimidation	Low increase in HGV flows.	Negligible	N/A	Negligible
NMU – Accidents and Safety	No accidents involving vulnerable road users were recorded within the vicinity of the Grid Connection Route A and B.	Negligible	N/A	Negligible
Public Transport Users	No impact on bus or train services.	Negligible	N/A	Negligible

13.11 Cumulative Effects

13.11.1 The future baselines to 2023 has been calculated using TEMPro growth factors which include forecast development growth. Therefore, the baseline includes cumulative growth and the cumulative effects are considered within the Assessment of Likely Impacts and Effects above. Base traffic data that does not include the flows from cumulative schemes is not available and it has not been possible to collect representative new data due to coronavirus pandemic restrictions.

13.12 References

Ref 13-1 Institute of Environmental Assessment, (1994). 'Guidelines for the Environmental Assessment of Road Traffic'. IEA, Horncastle.

Ref 13-2 AECOM, (August 2016). 'Forest Heath District Council Site Allocations Plan Cumulative Impact Study'. AECOM, Norwich.