

# East West Rail Phase 2 Compound A1: Bicester

Environmental Appraisal Report

Appendix B - Transport Statement

Network Rail



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## Document History

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# 1. Introduction

## 1.1 Overview

- 1.1.1 Network Rail Infrastructure Limited (NR) have submitted The Network Rail (East West Rail Bicester to Bedford Improvements) Order application, under the Transport and Works Act 1992, for construction and operation of Phase 2 of the East West Rail (EWR) Project; this Order is here referred to as the EWR2 TWAO. This TWAO application has been accompanied by an Environmental Statement (ES), in accordance with The Transport and Works (Applications and Objections Procedure) (England and Wales) Rules 2006 (here referred to as the Applications Rules).
- 1.1.2 The Project Area is within the counties of Oxfordshire County Council (OCC) and Buckinghamshire County Council (BCC) and comprises works along approximately 78 route km of existing railway or railway alignment, running between Bicester in the west to Bedford in the east, with a spur south to Aylesbury and a short spur north to Bletchley. The Project runs through the following local authority areas:
- Cherwell District Council (CDC), within OCC
  - Aylesbury Vale District Council (AVDC), within BCC
  - Milton Keynes Council (MKC), a unitary authority
  - Central Bedfordshire Council (CBC), a unitary authority
  - Bedford Borough Council (BBC), a unitary authority.
- 1.1.3 The EWR Alliance would construct the Project. To help ensure that it can be constructed in a timely and cost-effective manner and achieve the planned programme, it is proposed to set up and conduct advance works at some of the construction compounds required for the Project in advance of the making of the TWAO. These advance works include the following activities:
- Main construction compound set up
  - Preliminary works.
- 1.1.4 Planning applications are being submitted for these advance works; to which this Transport Statement (TS) report relates. This TS specifically relates to compound A1 and should be read alongside the Environmental Appraisal Report (EAR) which describes the advance works entailed in providing these compounds and sets out what the environmental effects of these advance works are expected to be.

## 1.2 Construction compounds

- 1.2.1 Construction compounds will be required across the Project to facilitate the construction and management activities. Each compound will act as the primary point of access off the local highway network into the site. The siting of compounds has considered feedback from landowners, means of access via the local highway network, environmental features and constraints, existing topography and land ownership.
- 1.2.2 There are two types of compound:
- Strategic compound – larger, main compounds from which construction and main project management is undertaken
  - Satellite compound – smaller compounds from which construction for that section is managed.
- 1.2.3 The Project has been split into six Route Sections based on geography, operation and construction programme and methods. The Route Sections are 2A, 2B, 2C, 2D, 2E and the HS2 Interface Area (which sits between Route Section 2A, 2B and 2E).
- 1.2.4 Advance construction is proposed for eleven of the Project compounds: four in in Route Section 2A, six in in Route Section 2B, and one in in Route Section 2C. The advance compound locations and details are summarised in Table 1.1 in the EAR.

- 1.2.5 At each of the eleven compounds, it is proposed to set up the main compound and conduct preliminary works. These advance works are programmed to commence in February 2019 and run through to September 2019, prior to the making of the TWAO. Construction periods for the advance works will be staggered to avoid peaks in activity and vehicle movements, to minimise effects on the local communities and road network, unless the vehicle journeys are planned to serve more than one compound. A summary programme is provided in Inset 1.1 of the EAR.

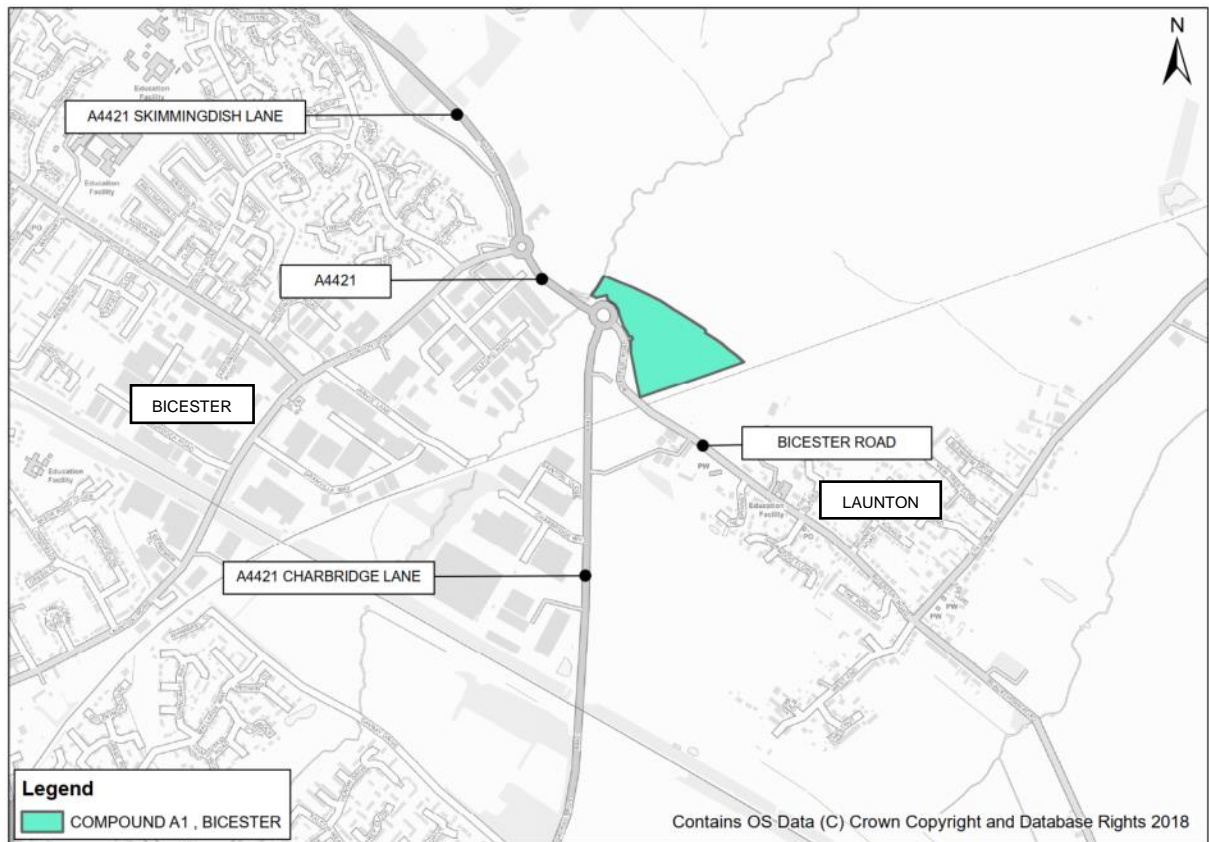
## 1.3 Construction Access Routes

- 1.3.1 Several Construction Access Routes will be used by road vehicles to access the compound sites. Construction traffic will comprise both Heavy Goods Vehicles (HGVs) (over 7.5 Te) and Light Goods Vehicles (LGVs) (under 7.5 Te), carrying materials and staff to and from the compound sites. The Construction Access Routes that will be utilised by the Project are summarised in Table 1.1 in the EAR and illustrated on Figure 2.1 which was also provided in Volume 4 of the ES. They connect the Project Area with the nearby Strategic Road Network (SRN), which provide access to and from the rest of the country.
- 1.3.2 Each compound site has its own dedicated Construction Access Route, or Routes, which have been chosen using the following principles:
- Using the widest and most direct routes to access the M1, M40 or A5
  - Avoiding travel through villages and residential areas, wherever possible
  - Avoiding routes that pass sensitive receptors such as schools, wherever possible
  - Avoiding routes that are winding or involve many turning manoeuvres, wherever possible.
- 1.3.3 The Construction Access Routes identified by these criteria have been assessed for constraints and developed in consultation with the local highway authorities. Vehicle tracking exercises have been completed for each compound and route to ensure HGVs can safely arrive at and leave the compound sites and to inform the design of the site accesses.
- 1.3.4 The ES identified a series of Temporary Highway Works including passing places and junction works along the proposed Construction Access Routes. Passing places have been located to ensure that approaching HGVs have appropriate forward visibility to see oncoming vehicles. The location of these Temporary Highway Works are provided in Appendix H of the TA, which forms Appendix 14.1 of the ES.

## 1.4 Compound A1: Bicester

- 1.4.1 Compound A1 (Bicester) is a strategic compound located north-east of Charbridge Lane, to the east of Bicester, as shown in Inset 1.1.

### Insert 1.1 Compound A1 site location



1.4.2 It is proposed for this compound to act as a base, store and site office for the following advance works:

- Materials import and storage of topsoil and construction materials
- Vegetation clearance along the railway, where this has not already been undertaken as part of recent maintenance, if seasonally appropriate and in accordance with licences
- Repair works to culverts
- Environmental mitigation works where required (such as construction of badger setts, hedgrow routing).

1.4.3 Further details about the proposed activities at this compound are provided in the Section 2 of the EAR.

1.4.4 All work will be carried out during the working hours of 7am to 6pm on Mondays to Fridays and 8am to 4pm on Saturdays. Work undertaken outside of these hours requires approval of the relevant statutory authority. Deliveries will be scheduled to avoid peak traffic hours. All deliveries will be marshalled off the highways and will be unloaded within the compound site footprint.

### Access strategy

1.4.5 The compound would be served from the minor arm of new signal-controlled junction onto Bicester Road, to the southeast of the A4421/Charbridge Lane.

1.4.6 Temporary traffic management and protection will be in place to allow for works to this junction to provide the access. Temporary traffic signals and a recessed access gate have been proposed due to the expected volumes of traffic, to allow safe and unimpeded access and egress to/from the site. Vehicle tracking shows that the proposed design is suitable for all planned vehicles types, although street lamps will be installed/upgraded to enhance visibility. A site access drawing is provided with the planning application submission.

- 1.4.7 HGVs will be able to access the site from either A4421 Skimmingdish Lane or A4421 Charbridge Lane using Construction Access Routes. It is not proposed to provide any passing places for vehicles using Construction Access Routes to access Compound A1, as the local highway network is considered suitable for HGV access.
- 1.4.8 The plant identified to undertake the works has been selected so there is sufficient width to access the site directly off the road. This will ensure that the impact on the public and highway users are minimised as there will be no requirement to unload plant and materials from the highway or local road, rather vehicles will be able to pull directly off the road into the works area.
- 1.4.9 For the purposes of assessment in the Project ES, it was assumed that each construction compound will remain in place throughout the duration of the Project construction, i.e. for a maximum of five years if they are set up towards the beginning of the works; this will be slightly longer if constructed in advance. However, this duration will vary according to the construction programme for the individual Route Section, so some will be less than five years. All construction compounds will be temporary and will be removed as part of the last phase of construction; the land will then be restored and returned to its previous use.

## 1.5 Report structure

- 1.5.1 The TWAO application has been accompanied by an Environmental Statement (ES), and a Transport Assessment (TA) which is included within Appendix 14.1 of the ES. A Construction Travel Plan (CTP) for the satellite and strategic compounds is also included within Appendix 14.5 in Volume 3 of the ES, setting out a strategy to reduce and manage traffic generation by staff and operatives during the construction period of the Project. This TS cross-references these documents, where relevant.
- 1.5.2 This TS includes the following sections:
- Section 2 provides a summary of the baseline situation, in terms of the existing highway conditions, public transport provision, walking and cycling provision and a summary of the existing road safety record within the vicinity of the compound
  - Section 3 outlines the proposed trip generation and assignment associated with the compound construction and its use for preliminary works, and junction capacity analysis for the proposed revised compound access arrangements
  - Section 4 summarises the findings and conclusions of this TS.
- 1.5.3 To avoid duplication, the summary of relevant policy documents included in the ES/TA has not been included in this report. For this TS, the summary of the following policy documents should be read from section 3 of the TA (Appendix 14.1 of the ES):
- National policy
    - National Planning Policy Guidance (NPPG) (2014)
    - National Policy Statement for National Networks (2015)
  - Local policy
    - Cherwell Local Plan 2011 – 2031 (2015)
    - Connecting Oxfordshire: Local Transport Plan 2015 – 2031.
- 1.5.4 Since publication of the ES/TA, an update to NPPF has been published. The revised NPPF sets out the Government's economic, environmental and social planning policies for England. Taken together, these policies articulate the Government's vision of sustainable development, which should be interpreted and applied locally to meet local aspirations. Section 9 covers 'Promoting Sustainable Transport', relevant elements of which are covered below.
- 1.5.5 Significant development should be focussed on locations which are, or can be sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into consideration in both plan-making and decision making.

- 1.5.6 The NPPF states that planning policies should be prepared with the active involvement of local highways authorities, other transport infrastructure providers and operators and neighbouring council, so that strategies and investment for supporting sustainable infrastructure and development patterns are aligned. In addition, it states that policies should provide for any large-scale infrastructure facilities that need to be located in an area, and that infrastructure and wider development required to support their operation, expansion and contribution to the wider economy.
- 1.5.7 Development should only be prevented or refused on highways groups if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe. For all developments that will generate significant amounts of movement, NPPF states that they should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment, so that the likely impacts of the proposal can be assessed.



## 2. Baseline conditions

2.1.1 The existing transport conditions summarised in this section have been based upon a combination of surveys, site visits, engagement with the local highway authorities and desktop research. Further detail in relation to the baseline conditions is provided in the TA (Appendix 14.1 of the ES).

2.1.2 A summary of the baseline conditions for Compound A1 is provided in Table 2.1.

**Table 2.1: Walking and cycling accessibility – Compound A1**

Walking and cycling catchments <sup>1</sup>			Vehicle access	Bus services	Rail services
500m	2km	5km			
Launton (west of Skinner Road)	Launton, Bicester (east of B4100 and Buckingham Road)	Launton, Bicester, Stratton Audley, Ambrosden, Blackthorn	Bicester Road, Launton	S5 (Oxford – Bicester – Langford); 18 (Buckingham – Steeple Claydon – Bicester)	Bicester Village/ Bicester North railway station

## 2.2 Highway conditions

2.2.1 The following paragraphs provide a brief description of the existing highway network within the vicinity of the compound. A full description of the existing highways surrounding the Project is provided in section 4 of the TA (Appendix 14.1 of the ES).

### Bicester Road

2.2.2 Bicester Road is an east-west carriageway between Bicester and Launton. It is a single carriageway road, which is subject to varying speed limit restrictions (30 – 50mph). To the east of the compound, there are shuttle working signals on the bridge over the railway line which only facilitates a one-way flow of traffic.

### A4421 Charbridge Lane / Skimmingdish Lane

2.2.3 A4421 forms an eastern ring road around Bicester between A4095 (north of Bicester) and A41 (south of Bicester). In the vicinity of Compound A1, the A4421 is a single carriageway road, with a 50mph speed limit restriction.

## 2.3 Public transport

2.3.1 As summarised in Table 2.1, Compound A1 is located within 500m walking distance of bus stops on the A4421 east of Launton Road and 550m<sup>2</sup> of bus stops on Boston Road (near Scampton Close). These bus stops are served by the S5 and 18 services<sup>3</sup>, providing regular connections to/from Oxford and Langford and Bicester and Steeple Claydon/Buckingham, respectively. There are footways provided on Bicester Road and the A4421, although workforce would need to cross Bicester Road from the site access to use.

2.3.2 Compound A1 is also located approximately 2.6km and 4.2km from both Bicester North and Bicester Village railway stations respectively. These stations provide regular services to a range of national destinations including Birmingham, London, Banbury and Oxford.

<sup>1</sup> Walking and cycling accessibility has been determined according to short journey parameters for each travel mode. For walking, a maximum limit of 2km has been used with a desirable limit of 500m. For cycling, a maximum limit of 5km has been established, with a desirable limit of 2km.

<sup>2</sup> These bus stops are slightly outside the 500m radius from the site entrance, however they are still considered viable options for the workforce.

<sup>3</sup> The A4421 bus stops are utilised by the S5 service only.

## 2.4 Walking and cycling

- 2.4.1 There are lit footways/cycleways and pedestrian crossings provided within the vicinity of Compound A1 on Bicester Road and along the A4421 / Charbridge Lane / Skimmingdish Lane.
- 2.4.2 PRoW 272/15/20<sup>4</sup> is a footpath which passes immediately to the west of the compound, although as it is unlit and unpaved not considered suitable for the workforce. Full details of PRoW within the vicinity of the Project are provided in section 4 of the TA (Appendix 14.1 of the ES) and illustrated in Figure 4.7 (Appendix 14.1A of the ES).
- 2.4.3 National Cycle Route 51 runs along A4421 and Bicester Road, providing a cycle route between Bicester, Winslow, Bletchley and Milton Keynes. The location of this cycle route is illustrated in Figure 4.5 (Appendix 14.1A of the ES).
- 2.4.4 The A4421, the B4100 and Howes Lane are not considered suitable for on road cycling due to high traffic speeds/volumes. There is a network of segregated and shared footways and cycleways in the vicinity of these routes that provide safe access for cyclists, except on the A4421 to the north of Caversfield where the footway/cycleway ceases.
- 2.4.5 There is a shared footway/cycleway which provides access to Ambrosden along the A41, although this narrow in places. Other sections of the A41 are not considered suitable for cycling. Cyclists accessing Blackthorn would be required to cross the A41 from Blackthorn Road onto Lower Road, or travel over 20 minutes via other local routes, therefore this is not considered a viable transport option for the workforce.

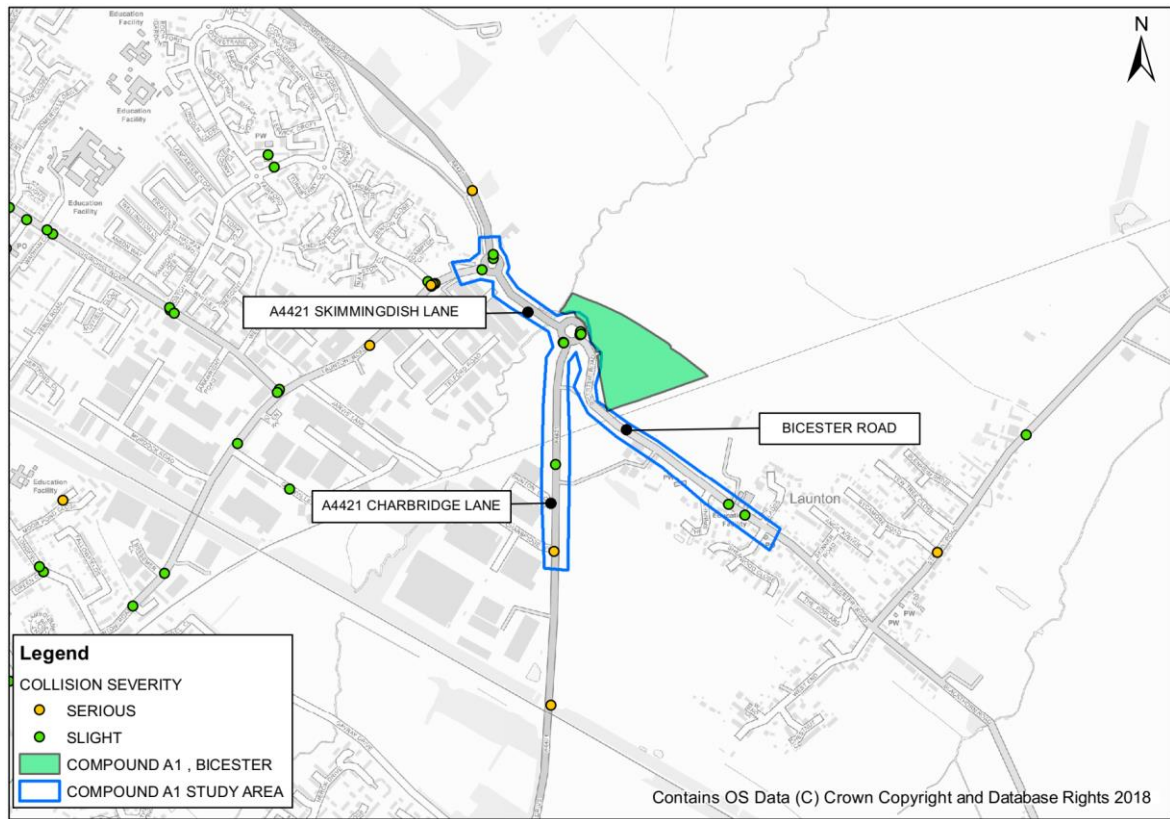
## 2.5 Road safety

- 2.5.1 The data sources, key terminology and methodology used in this assessment are summarised in Appendix A of this report.
- 2.5.2 The study area, as shown in Insert 2.1, includes the following links/junctions:
- Skimmingdish Lane / A4421 / Unnamed Road junction
  - Skimmingdish Lane / Bicester Road / A4421 Charbridge Lane
  - Bicester Road
  - A4421 Charbridge Lane.

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<sup>4</sup> It is acknowledged that some local PRoWs are subject to temporary closures and diversions as a result of the Project and construction work associated with committed developments. Further information of closures associated with the Project are provided in Appendix 14.4, Volume 3 of the ES and Scheme Drawings provided in Volume 4 of the ES.

### Insert 2.1 Road safety study area



2.5.3 Further road safety analysis for the wider transport construction study area, including the Construction Access Routes for Compound A1, is set out in section 6 of the TA (Appendix 14.1 of the ES). Table 2.2 provides a summary of the road safety assessment conducted for the above study area, with details of involvement of HGVs, non-motorised users (NMUs) and common causation factors.

**Table 2.2: Road safety assessment summary**

Location	Number of collisions				Number of collisions involving:		Common Causation Factors
	Slight	Serious	Fatal	Total	HGVs	NMUs	
Skimmingdish Lane / A4421 / Unnamed Road (Junction)	3	0	0	3	0	1	Travelling too fast Loss of control
Skimmingdish Lane / Bicester Road / A4421 Charbridge Lane (Junction)	5	0	0	5	0	0	Loss of control Careless / in a hurry
Bicester Road (Link)	2	0	0	2	0	0	Failed to look Poor turn
A4421 Charbridge Lane (Link)	1	1	0	2	0	0	Following too close Failed to look

2.5.4 Table 2.2 shows that within the five-year analysis period, 12 collisions occurred within the study area, one of which was serious with the remainder classified as slight. On the Skimmingdish Lane / A4421 / Unnamed Road junction, one collision involved a NMU, which is reported to have involved a vehicle colliding with a cyclist. None of the collisions within the study area involved HGVs. There were no common causation factors between collisions at each location, other than those relating to driver error.

2.5.5 In summary, it is considered that there are no specific existing road safety concerns within the study area. The frequency and severity of collisions reported at each location was low, and there were no common causation factors other than those relating to driver error.

## 2.6 Summary

2.6.1 This section provides an audit of transport networks within the vicinity of the site, including:

- An overview of the highway network
- An audit of the public transport available within the vicinity of the site
- A summary of wider bus networks
- An overview of relevant pedestrian facilities, including PRoW which cross the site
- An overview of relevant cycle facilities
- An assessment of road safety within the vicinity of the site.

## 3. Assessment

### 3.1 Introduction

3.1.1 This section of the report provides a summary of the methodology and assessment of the impact of the advance works on the local transport network.

3.1.2 This section of the report has been split into the following sections:

- Programme
- Trip generation
- Construction Access Routes
- Sustainable transport.

### 3.2 Programme

3.2.1 There are two key stages to the advance works at each compound as set out in Insert 3.1.

#### Insert 3.1 Stages of advance works



3.2.2 Initially, the access will be set up at the compound, including vegetation clearance of the highway and field boundaries, highway junction works and traffic control (where required). Following this, a range of works will be undertaken to construct the compound, install utilities and act as a base for equipment and staff. After the compound has been set up, preliminary works will be completed which includes the following activities within the Network Rail owned land:

- Drainage
- Culvert repairs
- Repairs to structures
- Maintenance activities.

3.2.3 Each compound would not be utilised for the main works until the TWAO has been made. If the TWAO is not made, then the Alliance will ensure removal of the advance works compounds and reinstatement (where needed) of the affected sites to equivalent to their original condition.

3.2.4 It is not proposed for all compounds to be under construction at the same time, although some overlap may occur between compound set ups. A core team of 10 staff would be used to supervise activities across all compounds.

3.2.5 It is proposed for work at this compound to start in April 2019, and for the construction of the compound to take approximately 16 weeks.

### 3.3 Trip generation

3.3.1 Table 3.1 presents the two-way daily trip generation (vehicles).

**Table 3.1: Daily trip generation (two-way vehicle trips)<sup>5</sup>**

Activity	Daily Two-Way Vehicle Trips			
	Staff and Operatives	LGVs	HGVs	Total
Main compound set up	127	60	36	223
Preliminary works	87	40	12	139

3.3.2 The daily trips (office based) and operatives (site based), LGVs and HGVs have been converted to peak hour trips using the assumptions and methodology outlined in Chapter 11 of the TA (Appendix 14.1 of the ES). Table 3.2 presents the two-way peak hour vehicle trip generation. As stated above, the main compound set up and preliminary works will occur consecutively rather than at the same time.

**Table 3.2: Peak hour trip generation (two-way vehicles)**

Activity	AM Peak				PM Peak			
	Staff and Operatives	LGVs	HGVs	Total	Staff and Operatives	LGVs	HGVs	Total
Main compound set up	2	6	4	12	13	6	4	23
Preliminary works	2	4	2	13	13	4	2	19

3.3.3 Based on the proposed trip generation set out in Table 3.2, it is not considered that the trips generated by the main compound set up and preliminary works would have a material impact on the highway network during the peak hours.

3.3.4 For Compound A1, the trip generation for the main construction works (as assessed in the ES) is set out in Table 3.3.

**Table 3.3: Peak hour trip generation for main construction works (two-way vehicles)**

	Peak Hour Two-Way Vehicle Trips			
	Staff and Operatives	LGVs	HGVs	Total Vehicles
AM peak	8	5	12	25
PM peak	57	5	12	74

3.3.5 It is noted that the peak hour trips from the advance works are lower than the main construction works which were assessed in the ES.

<sup>5</sup> Assuming 1.5 passengers per vehicle for staff and operatives in line with TA methodology (Appendix 14.1 of the ES). Values for HGV and LGV trips have been rounded to nearest even number, assuming all vehicles arrive and depart within the same hour.

## 3.4 Junction capacity assessment

- 3.4.1 Given that the proposed access to Compound A1 has been revised since the submission of the TWAO, junction capacity analysis of the site access and roundabout between Bicester Road and A4421 has been conducted. Modelling outputs have been included in Appendix C.
- 3.4.2 These junctions have been modelled using peak flows for the main construction works.

### Bicester Road/Compound A1 site access

- 3.4.3 LinSig v3.2 has been used to undertake a junction capacity assessment of the site access. Generally, a DoS (Degree of Saturation) of below of below 90% indicates that a junction operates within acceptable thresholds of capacity, and over acceptable thresholds of capacity between 90% and 100%. A DoS of over 100% would indicate that the junction operates over capacity.
- 3.4.4 The results presented in Table 3.4 show that the junction is forecast to operate well within acceptable thresholds of capacity during both the AM and PM peak periods in the construction future baseline and cumulative scenario. In all modelled scenarios, the queues do not extend to the shuttle working signals to the south of the access. Therefore, it is not considered that the provision of this signalised site access would have an impact on the local highway network.

**Table 3.4: Compound A1 site access– Junction Capacity Results Summary**

Approach	AM Peak		PM Peak	
	Mean Max Queue (PCU)	DoS (%)	Mean Max Queue (PCU)	DoS (%)
<b>Construction Future Baseline scenario</b>				
Bicester Road (N)	7.3	46.4	8.0	47.7
Compound A1 site access	1.0	23.1	2.9	56.8
Bicester Road (S)	3.4	55.2	3.1	54.0
<b>Cumulative scenario</b>				
Bicester Road (N)	7.3	46.4	8.1	48.0
Compound A1 site access	1.0	23.8	3.1	54.0
Bicester Road (S)	3.4	55.8	2.8	56.8

### A4421/Bicester Road

- 3.4.5 Junctions 9 software has been used to undertake junction capacity assessment of this roundabout. Generally, an RFC (Ratio of Flow to Capacity) of below 0.85 (for roundabout and priority junctions) indicates that a junction operates within capacity for the assessed flows. An RFC of over 1.0 indicates that a junction is operating over capacity.
- 3.4.6 Table 3.5 shows the junction capacity model outputs for the A4421/Bicester Road roundabout. Table 3.5 shows that the proposed roundabout access junction can accommodate the anticipate traffic flows in all future scenarios, with a maximum RFC of 0.76. This demonstrates that the proposed compound access would not cause any noticeable delay or queueing.

**Table 3.5: A4421/Bicester Road – Junction Capacity Results Summary**

	AM Peak			PM Peak		
	Queue (PCUs)	Delay (s)	RFC	Queue (PCUs)	Delay (s)	RFC
<b>2020 Baseline</b>						
Bicester Road (E)	1	5	0.37	0	4	0.28
A4421 / Charbridge Road (S)	1	3	0.40	1	4	0.45
A4421 (W)	3	9	0.72	3	9	0.70
<b>Construction Future Baseline Scenario</b>						
Bicester Road (E)	1	5	0.40	1	5	0.35
A4421 / Charbridge Road (S)	1	3	0.42	1	4	0.47
A4421 (W)	3	10	0.74	3	9	0.72
<b>Cumulative Scenario</b>						
Bicester Road (E)	1	5	0.41	1	5	0.35
A4421 / Charbridge Road (S)	1	3	0.42	1	4	0.49
A4421 (W)	3	11	0.76	3	9	0.72



## 3.5 Sustainable transport mitigation

- 3.5.1 It is recognised that not all person trips will result in a vehicle trip, with a proportion of staff and operatives sharing cars/using other modes of travel. To reflect this, the car occupancy rate of 1.5 persons per vehicle has been assumed in the calculation of vehicle trips set out in Table 3.1 and Table 3.2.
- 3.5.2 As set out in Section 2 of this report, there are opportunities for sustainable transport to be used by operatives to access Compound A1. The CTP sets out a 'bus and rail strategy' to actively encourage bus and rail travel to/from this site, which includes a commitment to investigate options to provide a minibus to and from nearby transport hubs such as Bicester Village Railway Station, Bicester Park and Ride and Bicester North Railway Station. Any updates to this provision would be included in revisions of the CTP.
- 3.5.3 As it is proposed that the main construction set up will be completed over a 16-week period, it is not considered that there will be a considerable impact on public transport services. In addition, the CTP states that staff travel habits as well as usage and demand for facilities will be monitored on a regular basis.

## 3.6 Summary

- 3.6.1 This section has demonstrated that Compound A1 is forecast to generate 12 two-way vehicle trips in the AM peak and 23 two-way vehicle trips in the PM peak for the main compound set up, and 13 two-way vehicle trips in the AM peak and 19 two-way vehicle trips in the PM peak for the preliminary works. These forecast trips are lower than those assessed for the main construction works. It is concluded that the additional trips generated by the advance works are not forecast to have an adverse impact on the highway network and that therefore, physical mitigation works are not required.

## 4. Summary

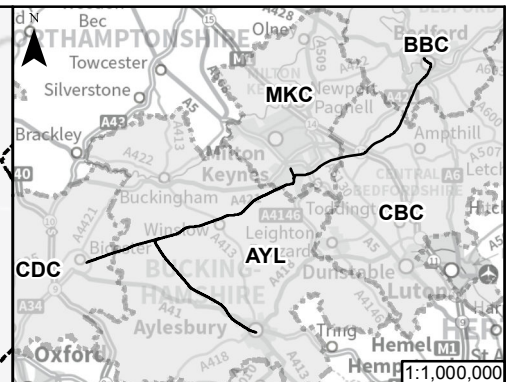
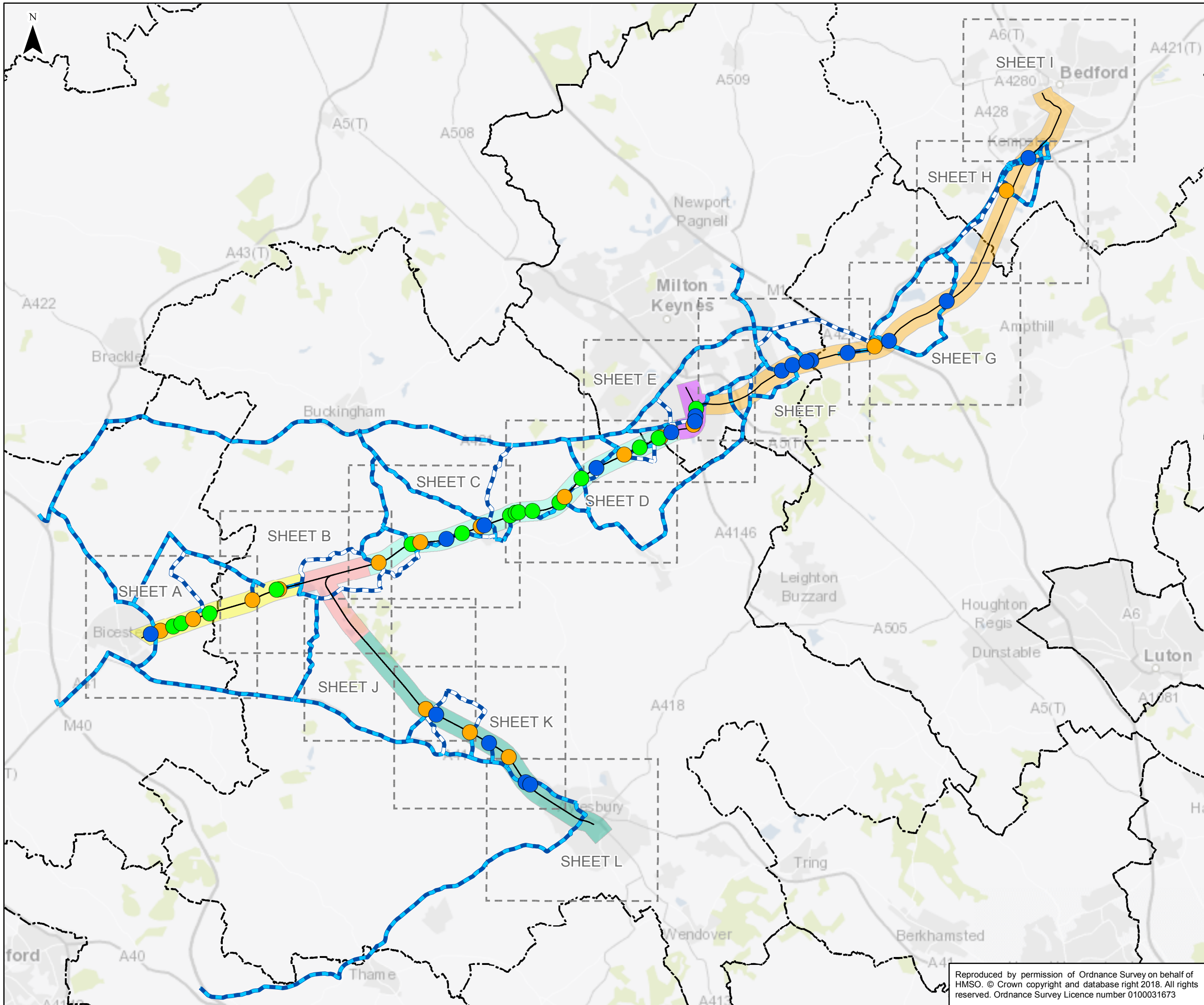
### 4.1 Overview of findings

- 4.1.1 This report assesses the transportation impact arising from the advance set up of Compound A1 including main compound set up and associated preliminary works, for the purposes of a planning application.
- 4.1.2 Compound A1 (Bicester) is located on Bicester Road, to the northwest of Launton, within the Oxfordshire local authority.
- 4.1.3 Details of the relevant national and local policy have been provided in relation to transport consideration, as summarised in the TA (appendix 14.1 of the ES).
- 4.1.4 A baseline review of the existing transport networks within the vicinity of Compound A1 have been included, highlighting key sustainable transport infrastructure and roads with details of pedestrian and cycle routes. This review highlighted there are a number of lit routes for pedestrians to/from Compound A1, facilitating access to sustainable transport infrastructure with regular services into Bicester and surrounding residential areas.
- 4.1.5 A detailed road safety assessment has been carried out considering the location and severity of collisions, highlighting collisions involving non-motorised users and HGVs. Based on this assessment, it is not considered that there are any road safety issues within the vicinity of Compound A1.
- 4.1.6 Details of the programme of works and trip generation for the main compound set up and preliminary works has been provided for the AM and PM peak periods, by vehicle type. These have been calculated in line with the methodology and assumptions set out in the TA (Appendix 14.1 of the ES).
- 4.1.7 The assessment has demonstrated that these advance works will generate fewer trips during peak periods and occur over shorter time periods than the main construction works. Therefore, it was concluded that the additional trips generated by the advance works are not forecast to have an adverse impact on the highway network and that therefore, physical mitigation works are not required.
- 4.1.8 Given the revised access arrangements to Compound A1 since the submission of the TWAO, junction capacity analysis has been provided. It is not considered that the provision of a signalised site access on Bicester Road would have an impact on the local highway network.

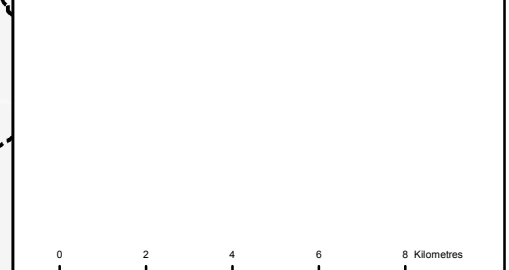
### 4.2 Conclusion

- 4.2.1 It is concluded within this TS that the construction trips generated by the advance works can be accommodated in transport terms, and that the proposals accord with the requirements of national and local policy.

# Figures



- PROJECT EXTENTS
- ROUTE SECTION 2A
- ROUTE SECTION 2B
- ROUTE SECTION 2C
- ROUTE SECTION 2D
- ROUTE SECTION 2E
- HS2 INTERFACE AREA
- - - LOCAL AUTHORITY BOUNDARY
- - - MAP SHEETS
- TOUCH POINTS
- CONSTRUCTION COMPOUND
- LOCAL ACCESS POINT
- STRUCTURE
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- LGV ONLY CONSTRUCTION ACCESS ROUTE



Rev	Date	Description of Revisions	Dsmd	Chkd	Appr
P01	20/06/18	FIRST ISSUE	KS	RS	SR

Status: **PUBLISHED - STAGE APPROVED** Suitability: **A1**



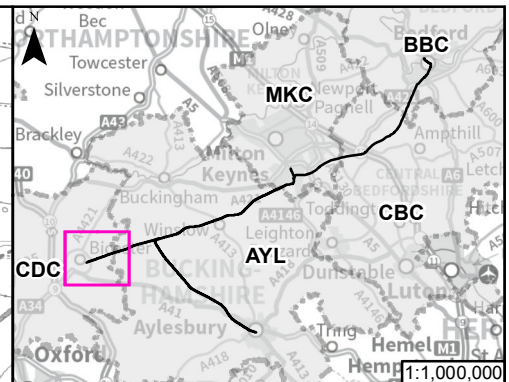
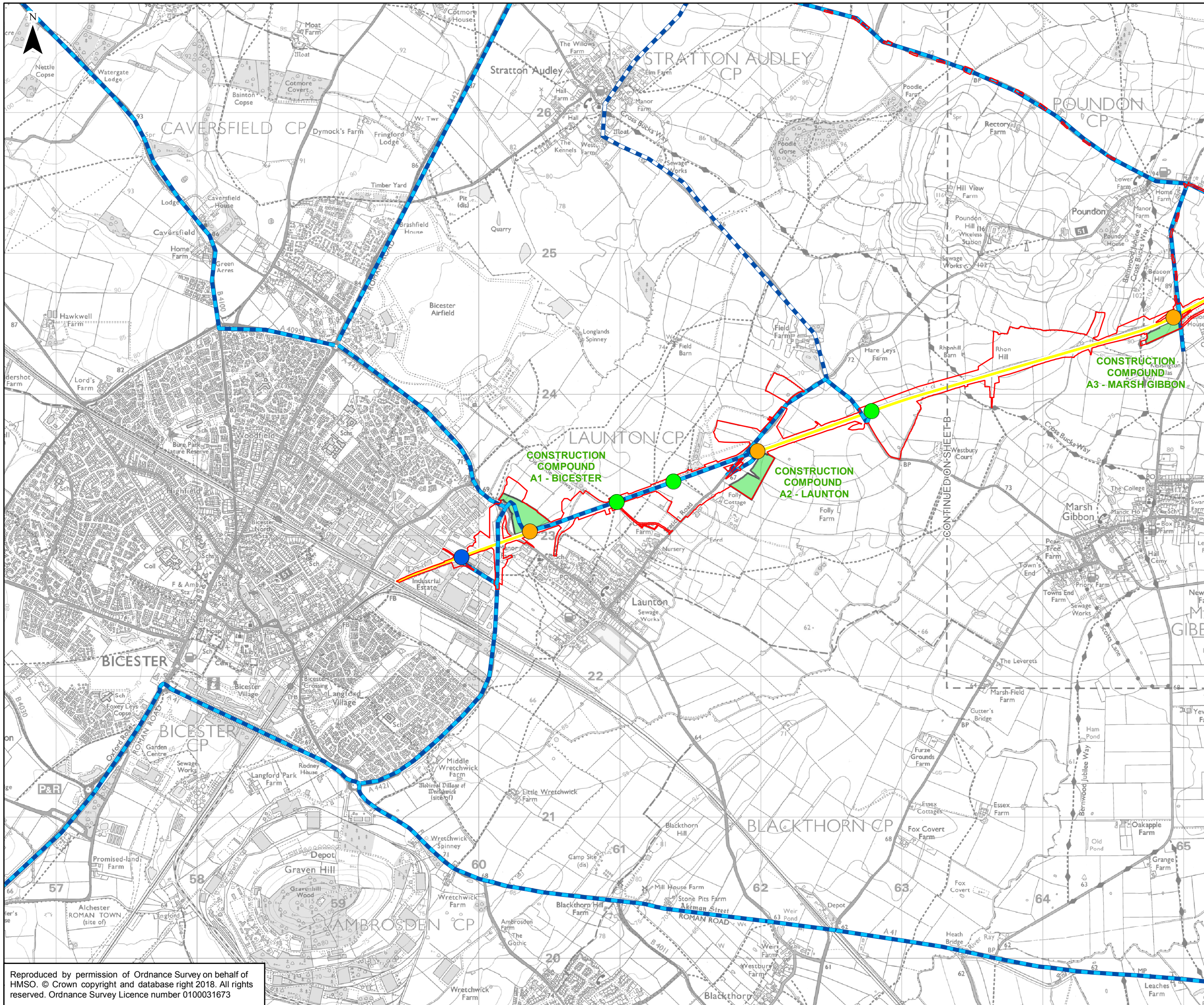
Project: **THE NETWORK RAIL (EAST WEST RAIL BICESTER TO BEDFORD IMPROVEMENTS) ORDER**

Drawing Title: **FIGURE 2.1 INDEX CONSTRUCTION ACCESS ROUTES, COMPOUNDS & TOUCH POINTS**

Designed	Kelvin Snell	Signed	KRS	Date	20/06/2018
Drawn	Kelvin Snell	Signed	KRS	Date	20/06/2018
Checked	Richard Shortridge	Signed	RS	Date	20/06/2018
Approved	Steve Ricks	Signed	S.R.	Date	20/06/2018

Scale(s)	<b>1:175,000</b>	ELR & Project Chainage	N/A
Design Package Risk Classification	<b>NORMAL</b>	Sheet	1 of 1
Alternative Reference	<b>Alternative_Ref</b>	Revision	<b>P01</b>
Drawing Number	<b>133735_RW-EWR-XX-XX-DR-LE-010803</b>		

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**PROJECT EXTENTS**

- ROUTE SECTION 2A
- SCHEME BOUNDARY
- LOCAL AUTHORITY BOUNDARY
- ADJACENT MAP SHEETS

**TOUCH POINTS**

- CONSTRUCTION COMPOUND
- LOCAL ACCESS POINT
- STRUCTURE
- CONSTRUCTION COMPOUND
- HGV/LGV CONSTRUCTION ACCESS ROUTE
- LGV ONLY CONSTRUCTION ACCESS ROUTE

0 0.25 0.5 0.75 1 Kilometres

P01	20/06/18	1ST ISSUE SCHEME BOUNDARY-04/06/18	LA	RS	SR
Rev	Date	Description of Revisions	Dsrd	Chkd	Appr
Status	PUBLISHED - STAGE APPROVED				Suitability
					A1



Project **THE NETWORK RAIL (EAST WEST RAIL BICESTER TO BEDFORD IMPROVEMENTS) ORDER**

Drawing Title **FIGURE 2.1A CONSTRUCTION ACCESS ROUTES, COMPOUNDS & TOUCH POINTS**

Designed	Lizzie Augarde	Signed	<i>LA</i>	Date	20/06/2018
Drawn	Lizzie Augarde	Signed	<i>LA</i>	Date	20/06/2018
Checked	Richard Shortridge	Signed	<i>RS</i>	Date	20/06/2018
Approved	Steve Ricks	Signed	<i>SR</i>	Date	20/06/2018

Scale(s)	<b>1:25,000</b>	ELR & Project Chainage	N/A
Design Package Risk Classification	<b>NORMAL</b>	Sheet	1 of 12
Alternative Reference	<b>Alternative_Ref</b>	Revision	<b>P01</b>
Drawing Number	<b>133735_RW-EWR-XX-XX-DR-LE-010690</b>		

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