



Hinckley National Rail
Freight Interchange
(HNRFI), **Off Site**
Highways Mitigation
Background Paper

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One ◆ Introduction

1.1 PROJECT OVERVIEW

DB Symmetry is promoting proposals for a new strategic rail freight interchange on land east of Hinckley, in Blaby District in Leicestershire. A strategic rail freight interchange (SRFI) is a large multi-purpose freight interchange and distribution centre linked into both the rail and trunk road systems. SRFIs reduce the cost of moving freight by rail and encourage the transfer of freight from road to rail, thereby reducing carbon emissions.

The project

The project is known as the **Hinckley National Rail Freight Interchange (HNRFI)** and includes the following main elements.

- i). Railway sidings and a freight transfer area alongside the two-track railway between Hinckley and Leicester. This line forms a part of Network Rail's 'F2N' freight route between Felixstowe and Nuneaton, lengths of which have been upgraded, and is well-placed in the national rail network to provide direct links to and from major cargo terminals at Southampton, Liverpool and the Humber estuary.
- ii). A new road access directly from Junction 2 of the M69 motorway, which connects the M6 near Coventry to the M1 near Leicester and links to the A5 in between. As a part of the proposals, a northbound off-slip and a southbound on-slip would be added to this Junction, which currently caters only for motorway traffic heading to and from the north.
- iii). Up to 225.57 hectares (ha) of level land for the construction of a rail port for the loading and unloading of freight trains, and for associated high-bay storage and logistics buildings. This development would take place a single land parcel bounded by the railway to the north-west and the M69 to the south-east.
- iv). Land for landscape and planting works, open space and ecological mitigation, drainage balancing ponds and footpath and cycleway links.

Effects on local roads

DB Symmetry undertook extensive informal public consultation about the project in autumn 2018. A particular concern raised by local communities is the potential road traffic effects on local towns and villages, both from the HNRFI development and from the addition of south-facing slips at Junction 2 M69.

In response to this feedback, DB Symmetry has looked at ways of addressing these concerns. Possible improvements to the road network outside of the main HNRFI site have been identified and a further informal public consultation is being held between 8 July and 6 September 2019 to invite comment on these options.

This paper provides technical and environmental information to help inform the public consultation.

1.2 DB SYMMETRY AND THE LOGISTICS SECTOR

In the current context logistics may be defined as the management and movement of goods between manufacturers, suppliers and customers. This can involve the production, processing, batching, transport, recording and storage of products in secure environments. At the heart of a modern logistics operation are storage and distribution buildings – effectively dedicated warehouses with service bays for loading and unloading and with ancillary office and staff accommodation. ‘Just-in-time’ delivery is an increasingly important aspect of a logistics operation, requiring good links to the strategic transport network. DB Symmetry has a proven track record in delivering large logistics projects.

DB Symmetry was originally formed in 2014 as a UK joint venture through the purchase of a 60% holding in Barwood Developments Limited (founded in 1996) by clients advised by Delancey; a specialist real estate investment, development and advisory company. The company has a land portfolio of 3,100 acres, capable of accommodating over 9.2 million sq ft of B8 logistics space, with planning consent being sought for a further 36.6 million sq ft.

The portfolio is extremely well located, concentrated around the main motorway arteries of the UK and primarily around the ‘Golden Triangle’ of the M1 and M40 and the North West’s prime M6 and M62 corridors.

Tritax Big Box REIT purchased an 87% stake in DB Symmetry in February 2019. The purchase price of £370m is part funded by a £250m placement of new shares. The senior management of DB Symmetry will retain a 13% stake in the new business.

1.3 PLANNING REQUIREMENTS

The application process

The Planning Act 2008 introduced a special approval process for nationally significant infrastructure projects (NSIPs), which include a range of major transport, energy, waste and water proposals. These projects include strategic rail freight interchanges of the size proposed here. The proposed extension of Junction 2 of the M69 motorway is also likely to qualify as an NSIP in its own right.

To secure consent for these two NSIP projects – the strategic rail freight interchange and the

altered motorway junction – DB Symmetry must apply for a Development Consent Order (DCO) from the government instead of applying for planning permission locally. The application will be made to the Planning Inspectorate (PINS), which will ‘examine’ the DCO application on behalf of the Secretary of State for Transport.

Once a DCO application has been accepted for consideration by the Secretary of State there are extensive further opportunities for public involvement. Local authorities are important participants in the process, being invited to submit ‘Local Impact Reports’ on the local effects of the proposed development. DB Symmetry is in active dialogue with Leicestershire County Council, Blaby District Council and Hinckley and Bosworth Borough Council

Relevant policy

In December 2014 Parliament approved the National Policy Statement for National Networks (‘the NPS’). The NPS covers national road and rail infrastructure and will form the primary basis for the Secretary of State for Transport’s decision on DB Symmetry’s DCO application. The NPS looks at strategic rail freight interchanges specifically. Paragraphs 2.42 to 2.45 of the NPS explain the general importance of strategic rail freight interchanges to the national economy and are reproduced in Figure 1.1 below.

Local planning policy may be a material consideration in the determination of a DCO application.

Figure 1.1: Excerpt from the Department for Transport’s National Policy Statement for National Networks

Importance of strategic rail freight interchanges

2.42 The logistics industry, which directly employs over two million people across more than 190,000 companies generating over £90 billion annually, underpins the efficient operation of most sectors of the wider national economy. Over recent years, rail freight has started to play an increasingly significant role in logistics and has become an important driver of economic growth.

2.43 For many freight movements rail is unable to undertake a full end-to-end journey for the goods concerned. Rail freight interchanges (RFI) enable freight to be transferred between transport modes, thus allowing rail to be used to best effect to undertake the long-haul primary trunk journey, with other modes (usually road) providing the secondary (final delivery) leg of the journey.

2.44 The aim of a strategic rail freight interchange (SRFI) is to optimise the use of rail in the freight journey by maximising rail trunk haul and minimising some elements of the secondary distribution leg by road, through co-location of other distribution and freight activities. SRFIs are a key element in reducing the cost to users of moving freight by rail and are important in facilitating the transfer of freight from road to rail, thereby reducing trip mileage of freight movements on both the national and local road networks.

2.45 The logistics industry provides warehousing and distribution networks for UK manufacturers, importers and retailers - currently this is predominantly a road based industry. However, the users and buyers of warehousing and distribution services are increasingly looking

to integrate rail freight into their transport operations with rail freight options sometimes specified in procurement contracts. This requires the logistics industry to develop new facilities that need to be located alongside the major rail routes, close to major trunk roads as well as near to the conurbations that consume the goods. In addition, the nature of that commercial development is such that some degree of flexibility is needed when schemes are being developed, in order to allow the development to respond to market requirements as they arise.

Environmental impact assessment

DB Symmetry is undertaking an Environmental Impact Assessment (EIA) of its proposals. EIA is a process that aims to improve the environmental design of a development proposal and to provide the decision maker with sufficient information about the environmental effects of the project. The findings of the EIA will be reported in an Environmental Statement (ES) that will be submitted with the DCO application.

Public consultations

The process of applying for a DCO is front-loaded, with applicants required to refine their projects before making an application through an iterative process of environmental impact assessment, design refinement and consultation.

For the HNRFI project, DB Symmetry undertook a first round of informal public consultation between October - December 2018. The current informal consultation, which focuses specifically on the main elements of the potential off-site highways works, is taking place between 8 July and 6 September 2019.

A further formal round of public consultation on the whole project will follow later in 2019 and will take into account the feedback from the current consultation as well as responding to comments on the main HNRFI development received to date. This later consultation will include proposals for further off-site road junction improvements identified through traffic modelling work currently in progress.

A DCO application will follow in 2020. The application must be accompanied by a Consultation Report describing how DB Symmetry undertook consultations and explaining how the development proposals were refined in response to feedback from stakeholders.

1.4 THIS CONSULTATION

The purpose of this consultation is to ensure that local people are aware of the emerging proposals for local road improvements and to provide an opportunity for people to give their feedback and ask any questions. DB Symmetry wants to hear about the day-to-day experience of living in and moving around the local area, to provide context for the quantitative work done by its highway specialist.

The current round of consultation will run from 8 July to 6 September 2019 and includes the following elements.

- Six public exhibitions, at which local residents and other stakeholders are invited to meet the development team and discuss the proposals.
- A mailing of circa 38,700 letters to residents and stakeholders, informing them of the consultation and letting them know how they can participate.
- A dedicated consultation website, providing an online, downloadable version of all of the materials made available at the public meetings.
- Comprehensive social media outreach in order to engage with groups that will find it difficult to attend the public meetings.
- A dedicated community information service, including a community information line and email address, staffed during normal office working hours.

Two ◆ Proposed road access arrangements

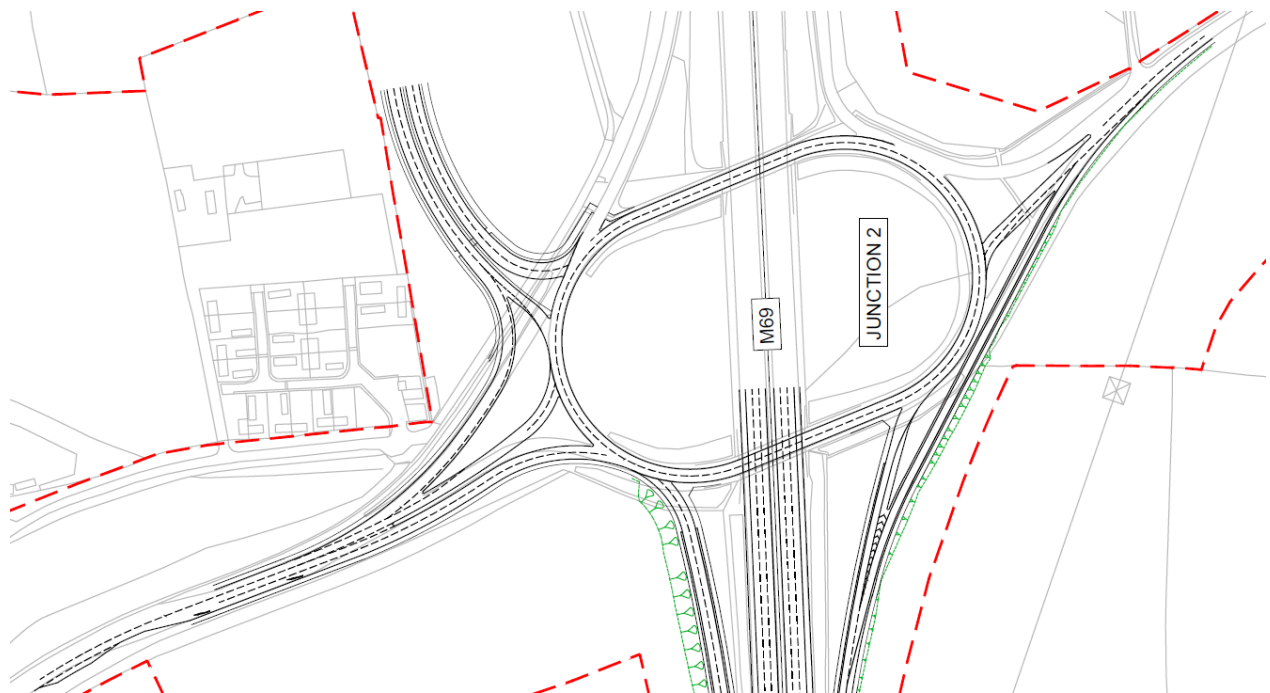
2.1 SITE ACCESS

The proposed development is situated in a highly accessible location and is extremely well served by the road as well as rail, with direct access onto the M69 motorway via Junction 2 and thereafter the wider Strategic Road Network (SRN).

The proposed site access would be created directly onto the north-western side of Junction 2 via a dual-carriageway connection to the junction and extending into the site. There is a significant amount of residual capacity existing in the current junction arrangement to accommodate traffic growth.

M69 Junction 2 currently only has slip roads to and from the north. This development will deliver new slip roads to and from the south and will make the junction an ‘all-movements’ junction. The introduction of southern slip roads will enable development traffic to be distributed across the junction and the wider SRN, minimising mileage on the local highway network. The proposals are shown on Figure 2.1 below.

Figure 2.1: Proposed Site Access Arrangements at M69 Junction 2 (extract only)



To minimise impact on local roads, route management strategies will be implemented to ensure that traffic uses suitable routes and is concentrated on the strategic road network. All HGV traffic would be confined to using the strategic road network by enforceable route management plans for deliveries and collections.

2.2 EMERGENCY ACCESS

Primarily, access for emergency vehicles would be via the main site access at Junction 2. The proposed dual-carriageway arrangement affords good capacity and flexibility for managing traffic in the event of an emergency. However, Burbage Common Road naturally provides a highway connection to facilitate access to the site for emergency vehicles only, via both the existing rail bridge (linking to the B4668 Leicester Road), and via the B581 Station Road from Elmhursthorpe.

In the scenario with the A47 Link (discussed later in this topic paper), a second access opportunity is introduced, effectively replacing the emergency access on the western side of the site/Burbage Common Road. In this scenario, it is envisaged that the easternmost emergency access will still be provided, in addition to the two accesses (A47 link and M69 Junction 2).

Any emergency access points would be managed and physically restricted for use by the emergency services for access to the site itself only. It is not envisaged that any physical changes will be required to either the carriageway or verges at the B581 Station Road Junction, but a replacement rail bridge may be required.

2.3 SUSTAINABLE TRAVEL

DB Symmetry is committed to encouraging travel to the site to be undertaken by all modes, and will actively be promoting travel by modes other than single occupancy private motor car. A key component of this is the preparation of a Travel Plan, which will identify targets and measures to achieve this, including the promotion of walking and cycling, public transport, electric vehicles and car-sharing.

2.4 TRANSPORT HIGHWAYS MODELLING OVERVIEW

Highways modelling - where we stand to date

The highway network can be broadly categorised as the 'Strategic Road Network' (SRN) which consists of motorways and trunk roads, such as the M69, A5, M1, M6, A42 and M42, and the 'local highway network' such as the A47, B581, B4668, B4669, and B4114.

It is the responsibility of Highways England (HE) to operate, maintain and improve the SRN, and of Leicestershire County Council (LCC) for the immediate local highway network.

LCC has a strategic traffic model which it uses to assess the effects of all large developments in

the County. In liaison with LCC and Highways England, DB Symmetry has commissioned an assessment to be undertaken using LCC’s **Pan-Regional Transport Model (PRTM)** to assess changes to the road network as a result of the proposed HNRFI development.

The PRTM identifies where changes in traffic flows are likely to occur along roads and at junctions. Where potential adverse effects are identified detailed analysis is to be undertaken.

The PRTM also identifies traffic effects beyond Leicestershire’s administrative boundaries and into neighbouring highway areas such as Warwickshire, the border of which runs broadly alongside the A5 Watling Street, or Leicester City.

Figure 2.2: Excerpt from Leicestershire County Council’s Overview of Leicestershire County Council’s Model

2.1 Tier 1 – Pan Regional Transport Model (PRTM)



The PRTM is a model derived and extended from our LLITM. The model boundary covers a total of 24 authorities including the entire East Midlands and West Midlands. The model was initially constructed in order to ascertain the national significance of developments. The model has a great deal of enhancement outside of Leicestershire, including all SRN, A-Road and the major B-Roads across the model area.

The model is calibrated and validated to a level which is WebTAG compliant for both traffic flows and journey times. The PRTM also includes a fully-fledged Variable Demand Model (VDM)

It is used to assess schemes which have potential to have a national impact

Figure 2.1 Review of Pan Regional Transport Model

The following scenarios have been assessed in order to understand the impacts of the HNRFI development in the future years of 2026 and 2036:

- 1. Base (without HNRFI proposed development, without M69 Junction 2 improvements)**
This provides a baseline against which to assess the changes arising from the proposals.
- 2. Base + HNRFI proposed development (without M69 Junction 2 improvements)**
This provides an assessment of the development impacts in the hypothetical scenario that access to the site is gained without M69 J2 southern slip roads being constructed.
- 3. Base + M69 Junction 2 improvements (without HNRFI proposed development)**
This tells us what the impacts of the slip roads will have on route choices of existing/background traffic (trips not related to the development itself).
- 4. Base + HNRFI proposed development, with M69 Junction 2 improvements**
This identifies the cumulative impacts of the development traffic and the introduction of the slip roads combined. In turn, this will identify where any mitigation is needed.

The above modelling is complete and is informing our next steps. The next steps include identification of potential mitigation options, and detailed analysis of local impacts at a micro level. Once this has been undertaken and the mitigation package has been identified, a final stage of PRTM scenario assessment will be undertaken:

5. Base + HNRFI proposed development, with M69 Junction 2 improvements and with mitigation package

2.5 HIGHWAYS MODELLING - FILTERING OF INFORMATION

The PRTM assessment has been undertaken for scenarios 1-4 above. This provides us with a significant amount of data across a wide highway network - as indicated in Figure 2.3. At each of these locations, we have classified and directional traffic flows for each arm of a junction, and an indicative junction performance indicator relative to its capacity (referred to as Volume over Capacity (VoC)).

It is necessary to identify where the impacts occur, and given the extent of information available we need to filter the information to identify which locations require more detailed analysis. This exercise is undertaken in liaison with LCC and Highways England, with the PRTM outputs and local knowledge being applied. For those locations where we expect to undertake a more detailed analysis, we have collected traffic data – and these locations are identified in Figure 2.4.

Figure 2.3: Road junctions for which traffic modelling data have been gathered, using LCC's PRTM model

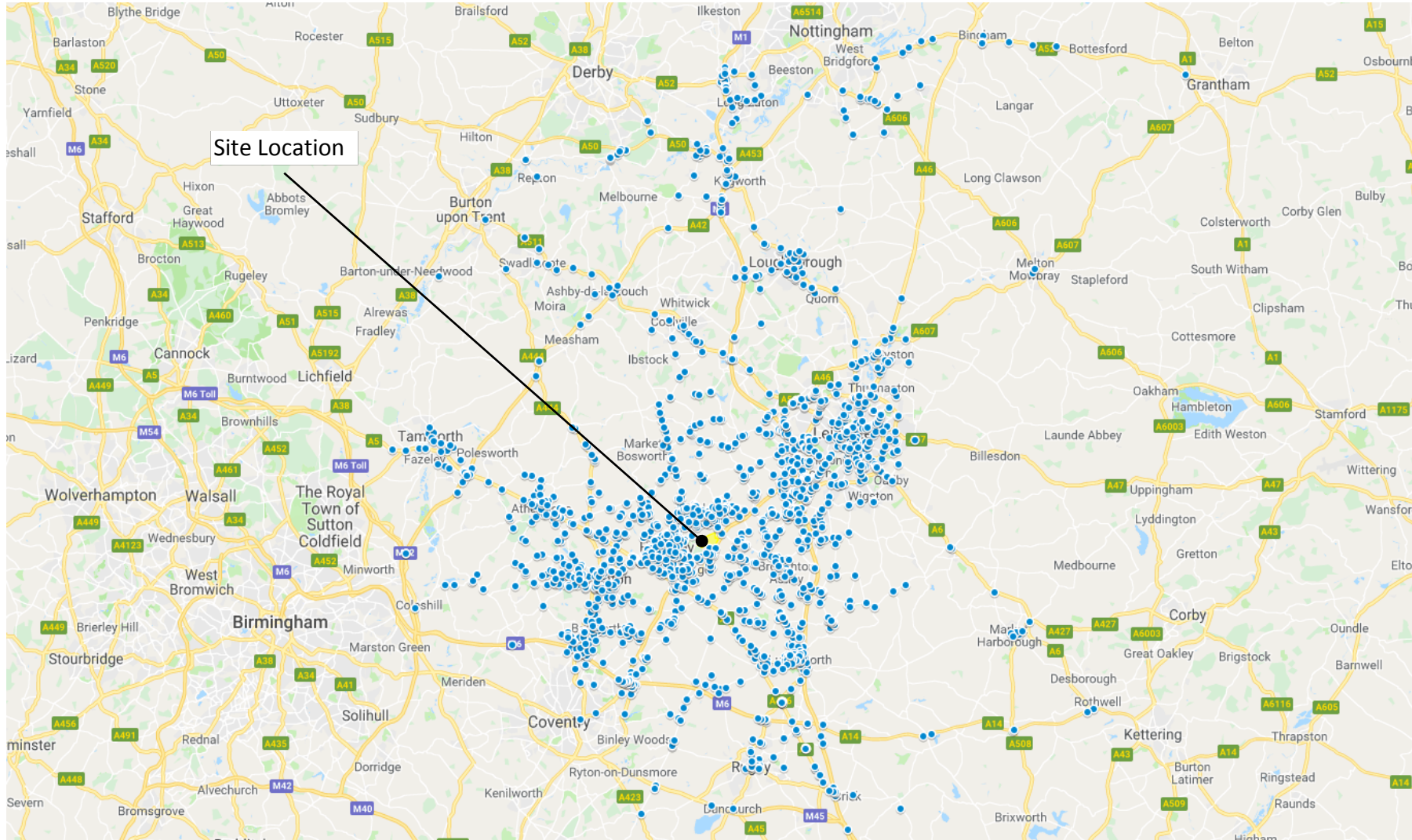
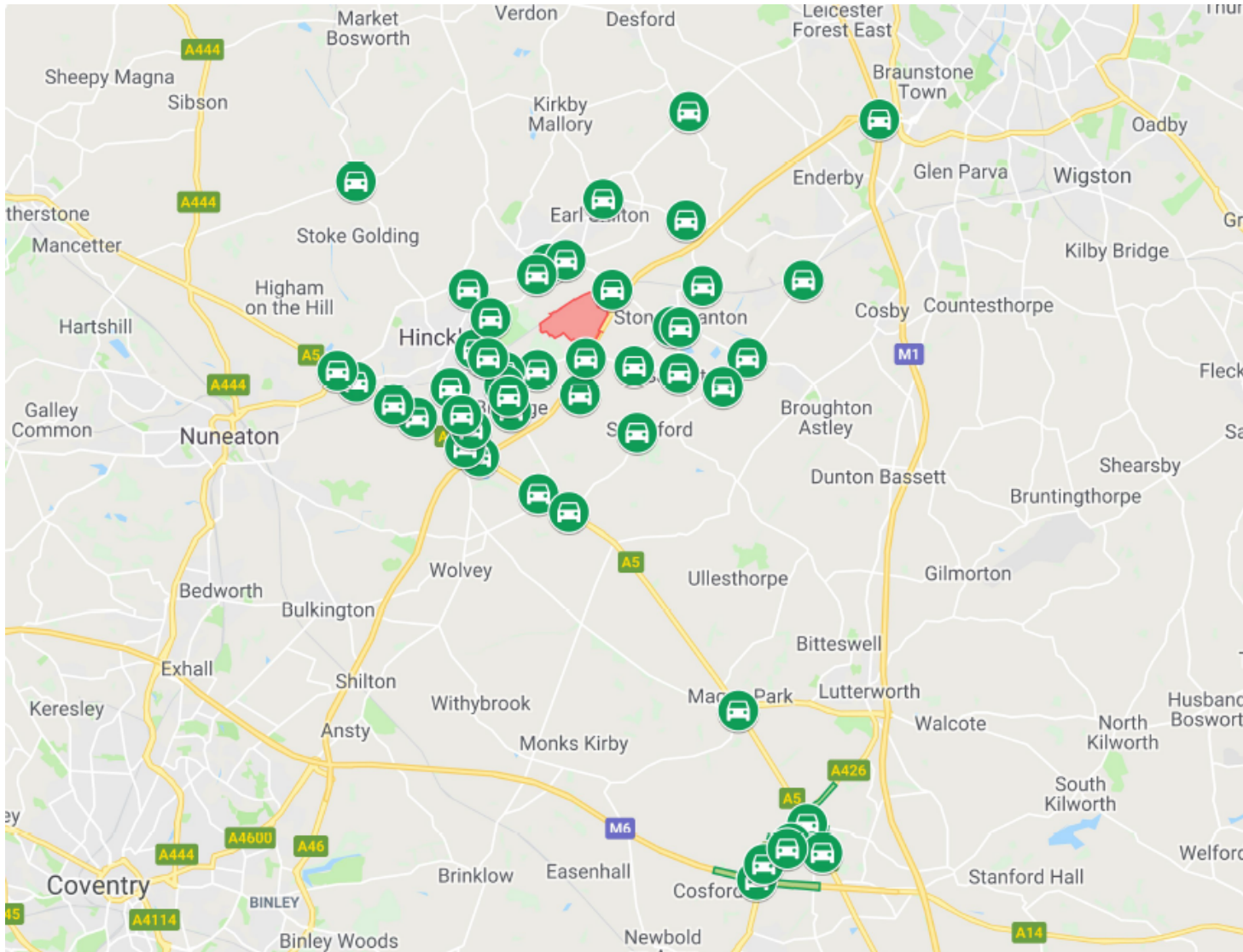


Figure 2.4: Junctions subject to more detailed analysis (and where we have collected survey data)



2.6 HIGHWAYS MODELLING - WHAT IS IT TELLING US?

DB Symmetry is reviewing all locations where an impact may occur and will be seeking to agree which locations require a more detailed analysis with the respective highway authorities. This process involves further detailed analysis, including a detailed review of traffic flow changes, which might indicate a need for more detailed junction capacity modelling.

In reviewing the modelling outputs, it is apparent that the villages of Sapcote and Stoney Stanton will be adversely affected without the intervention of significant infrastructure upgrades. It should be emphasised that these effects would be caused largely by the introduction of the new M69 slip-roads and the resulting diversion of existing background traffic on the road network, rather than trips to and from the HNRFI site itself.

The redistribution of background traffic arises when drivers already on the road network divert from their existing path (e.g. travelling to use M69 Junction 1) to now being able to use M69 Junction 2 instead. The result is both positive and negative, resulting in an increase in traffic in some locations and a reduction in others.

Trip generation

Currently, M69 Junction 2 is underutilised in terms of the volumes of traffic that an ‘all-movements’ grade-separated motorway junction is able to accommodate – the junction has been built to this standard, but currently only has the north-facing slip roads onto the M69. There is spare capacity therefore to accommodate an increase in trips, and the junction is being designed and modelled to accommodate the anticipated changes arising from the HNRFI development proposal and the redistribution of traffic that will follow the introduction of the new south-facing slip roads.

To provide some context, the existing traffic volumes at M69 Junction 2, as well as those at M69 Junction 1 and M69 Junction 3/M1 Junction 21 are provided below.

Current day 12-hour (07:00-19:00) traffic survey volumes:

M69 Junction 1:	44,522 vehicles
M69 Junction 2:	12,888 vehicles
M69 Junction 3/M1 Junction 21:	79,723 vehicles

Outputs from the PRTM model provide us with the information to determine the change in traffic volumes at M69 Junction 2. This includes the two elements discussed above: the HNRFI traffic and redistributed traffic arising from the introduction of the new south-facing slip roads.

The total volume of trips anticipated to use M69 Junction 2 in the future year assessment scenario (2036) is provided below. It’s worth being mindful that the PRTM provides a 24-hour output (rather than the 12 hours discussed above), and includes background traffic growth.

Future year (2036) 24-hour traffic volumes:

M69 Junction 2 (with HNRFI development and with southern slip roads): 51,269
vehicles

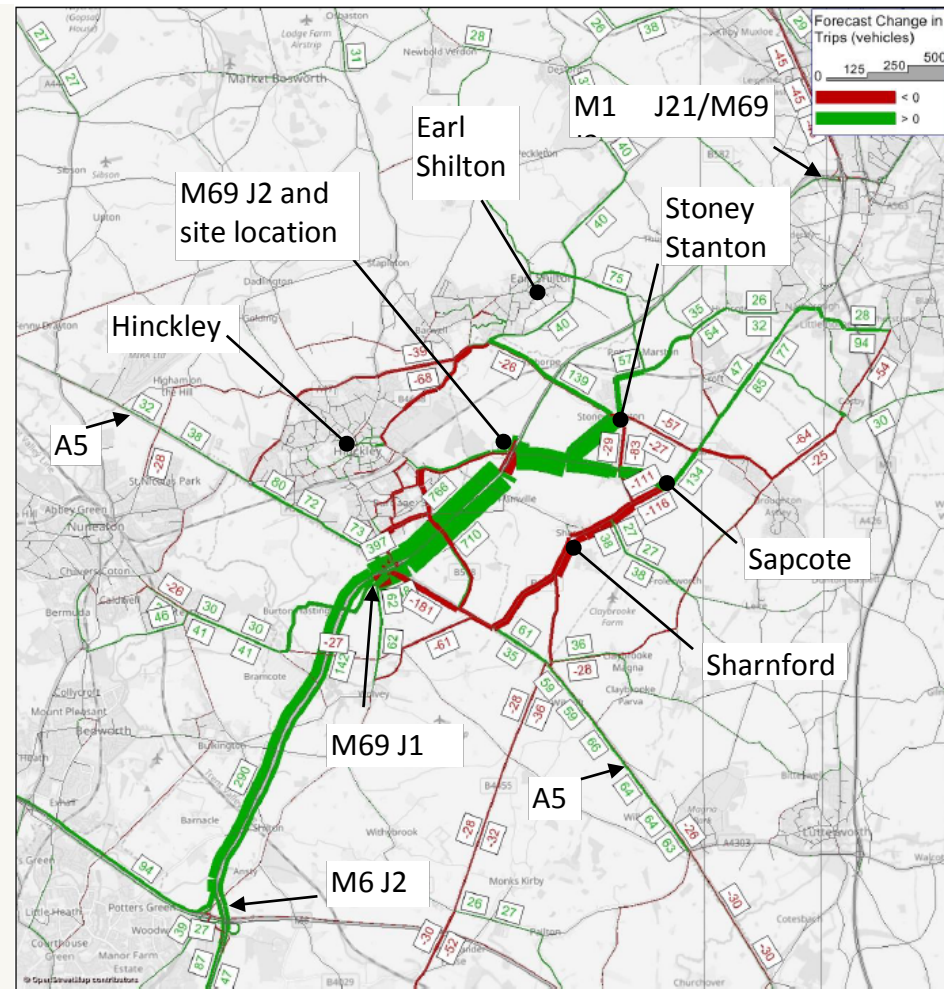
Further details will be provided through the process in respect of turning movements, and assignment across the junction.

Trip distribution

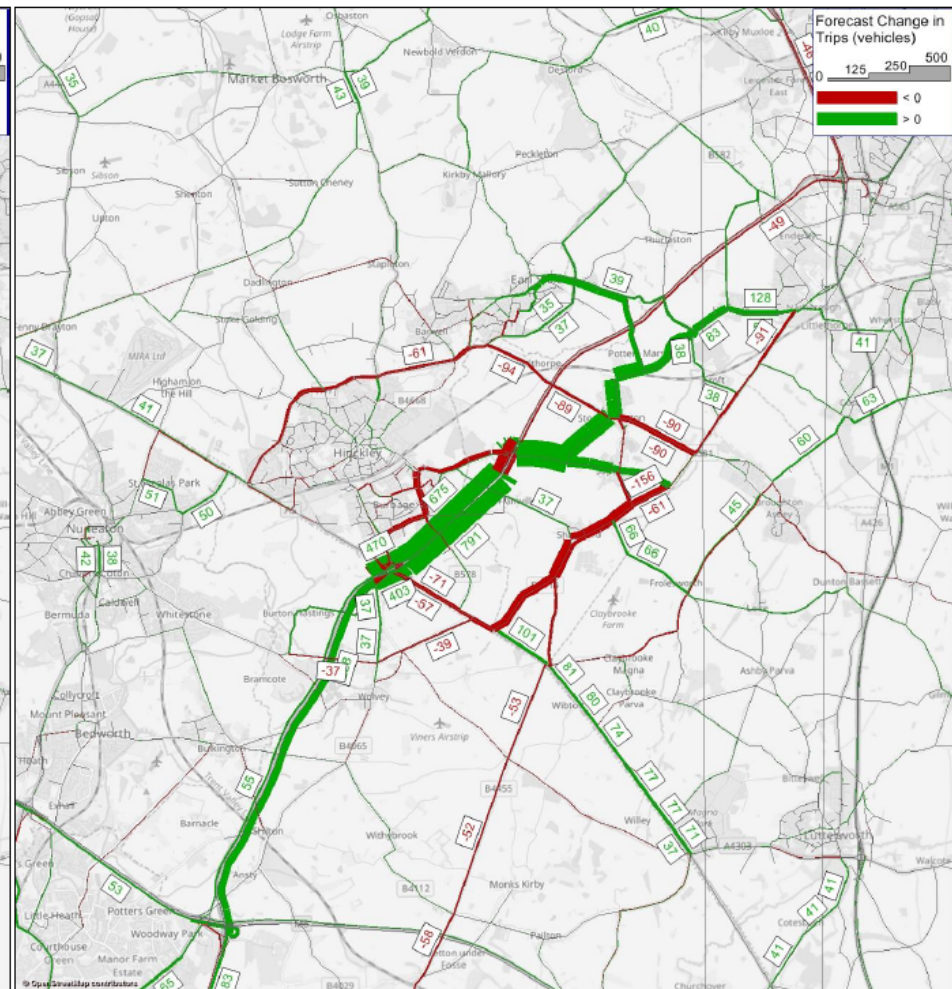
Figure provides an indication of the change in traffic flows arising from the PRTM modelling outputs provided by LCC. This presents the estimated flow changes across the highway network once the HNRFI development site is fully operational, with the new southern slip roads at M69 J2 in place.

For the avoidance of doubt, green indicates an increase in trips, and red indicates a reduction in trips, attributed to the redistribution of background traffic (this is a direct output from LCC's PRTM modelling process, and DBS have been unable to change the colouring of this system).

Figure 2.5: Forecast change in traffic flows on local roads following a full development of the HNRFI. Green indicates an increase in trips and red a reduction in trips, with the thickness of lines indicating the predicted volumes of traffic gained or lost.



Map contains Ordnance Survey data © Crown copyright and database right 2018
 Figure 3.39: Forecast Flow Change between “w. development, w. scheme” and “w/o. development, w/o. scheme” Scenarios, 2036 AM Peak



Map contains Ordnance Survey data © Crown copyright and database right 2018
 Figure 3.40: Forecast Flow Change between “w. development, w. scheme” and “w/o. development, w/o. scheme” Scenarios, 2036 PM Peak

Notable locations where a reduction in traffic is anticipated include:

- Burbage
- Sharnford
- A47 west of Hinckley
- M69 Junction 1 circulatory
- A5 east of M69 Junction 1

Notable locations where an increase in traffic is anticipated are:

- Sapcote
- Stoney Stanton
- M69 motorway (south of Junction 2)
- Rural areas/lanes to the north

The traffic flow changes within the local area is presented in Figures 2.6-2.9. These show the changes in movements during the morning (AM) and evening (PM) peak hours within the local roads through the eastern villages of Sapcote/Stoney Stanton, and to the north west of the site along the A47 and through Barwell/Earl Shilton.

The 'base' flows (referred to as WoDWoS – *without development, without slip-roads*) is presented in green text, and the '+ development' flows (referred to as WDWS – *with development, with slip-roads*) is presented in orange text.

For example:

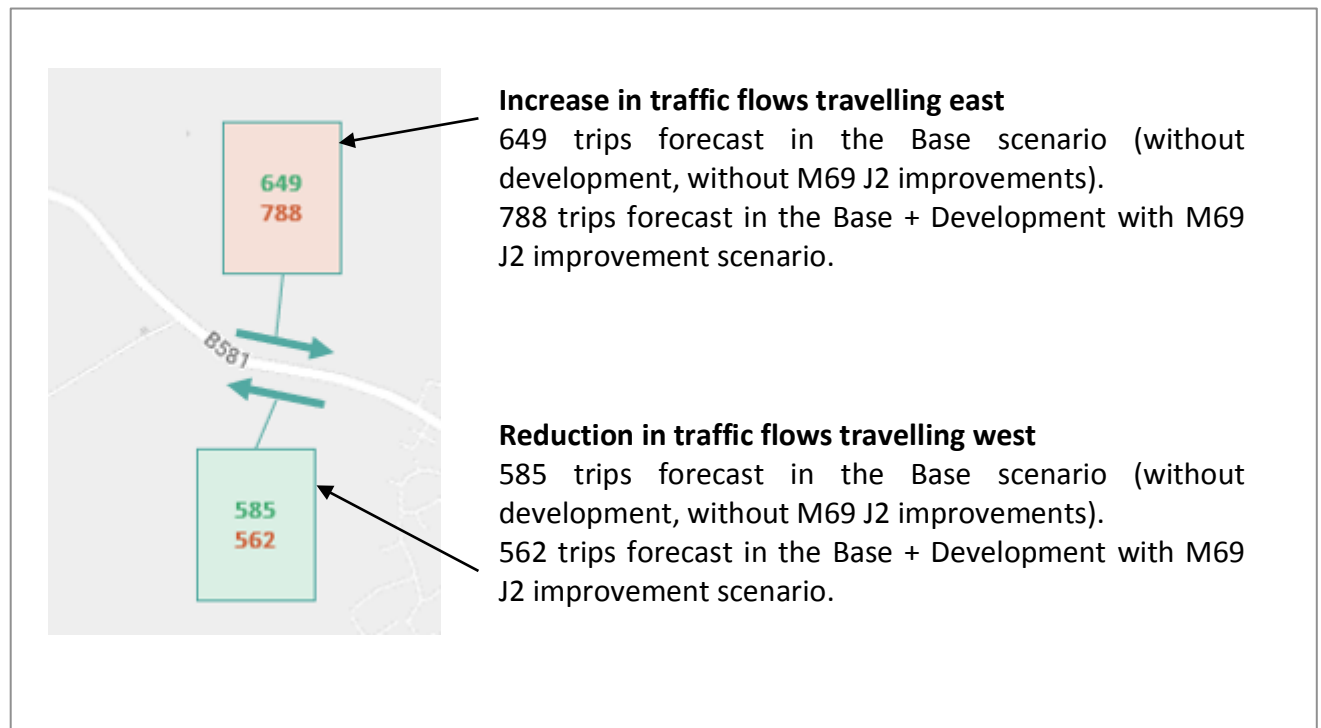


Figure 1.6: Traffic flow changes in the area around the eastern villages of Sapcote and Stoney Stanton during the 2036 AM peak

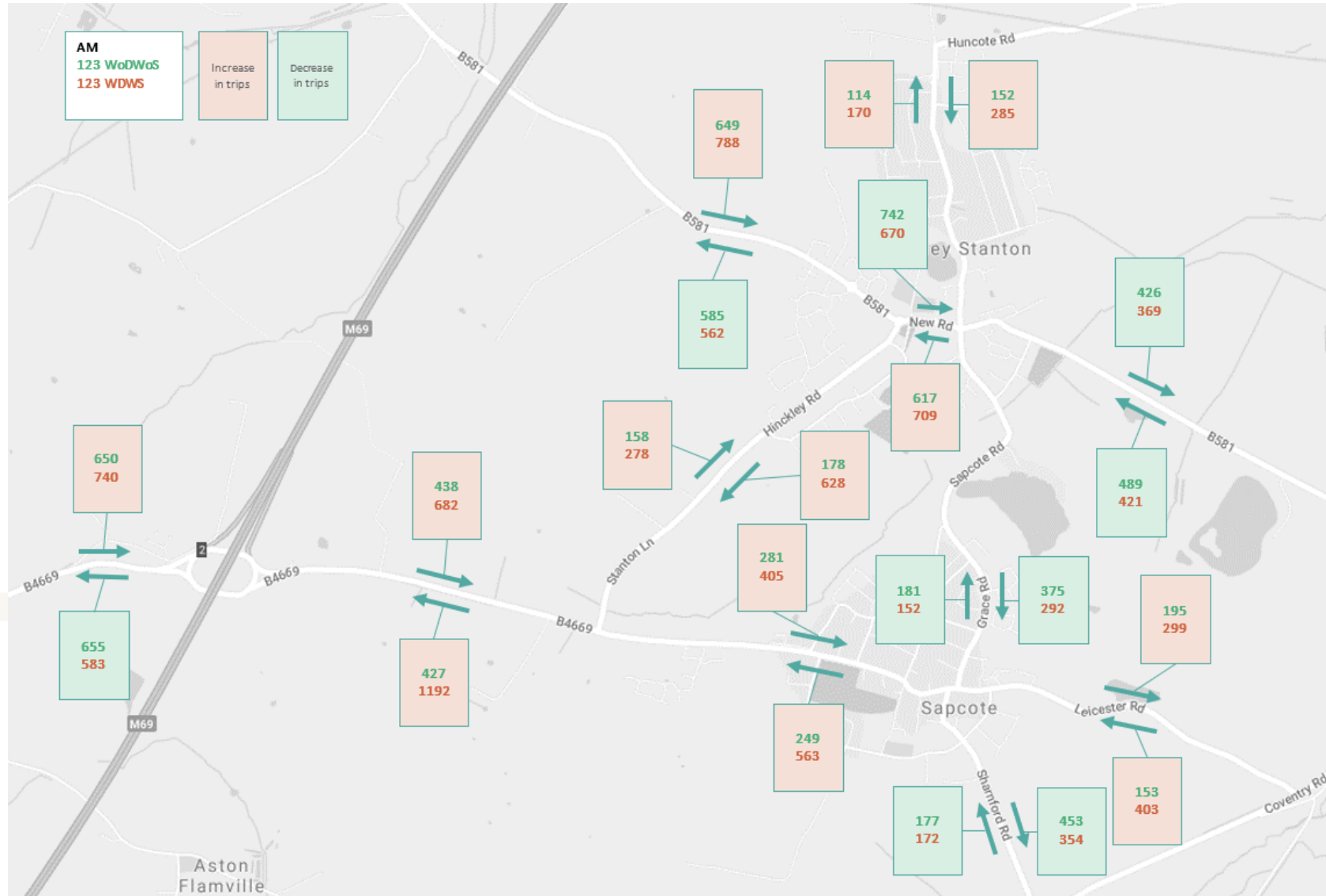


Figure 2.7: Traffic flow changes in the area around the eastern villages of Sapcote and Stoney Stanton during the 2036 AM peak

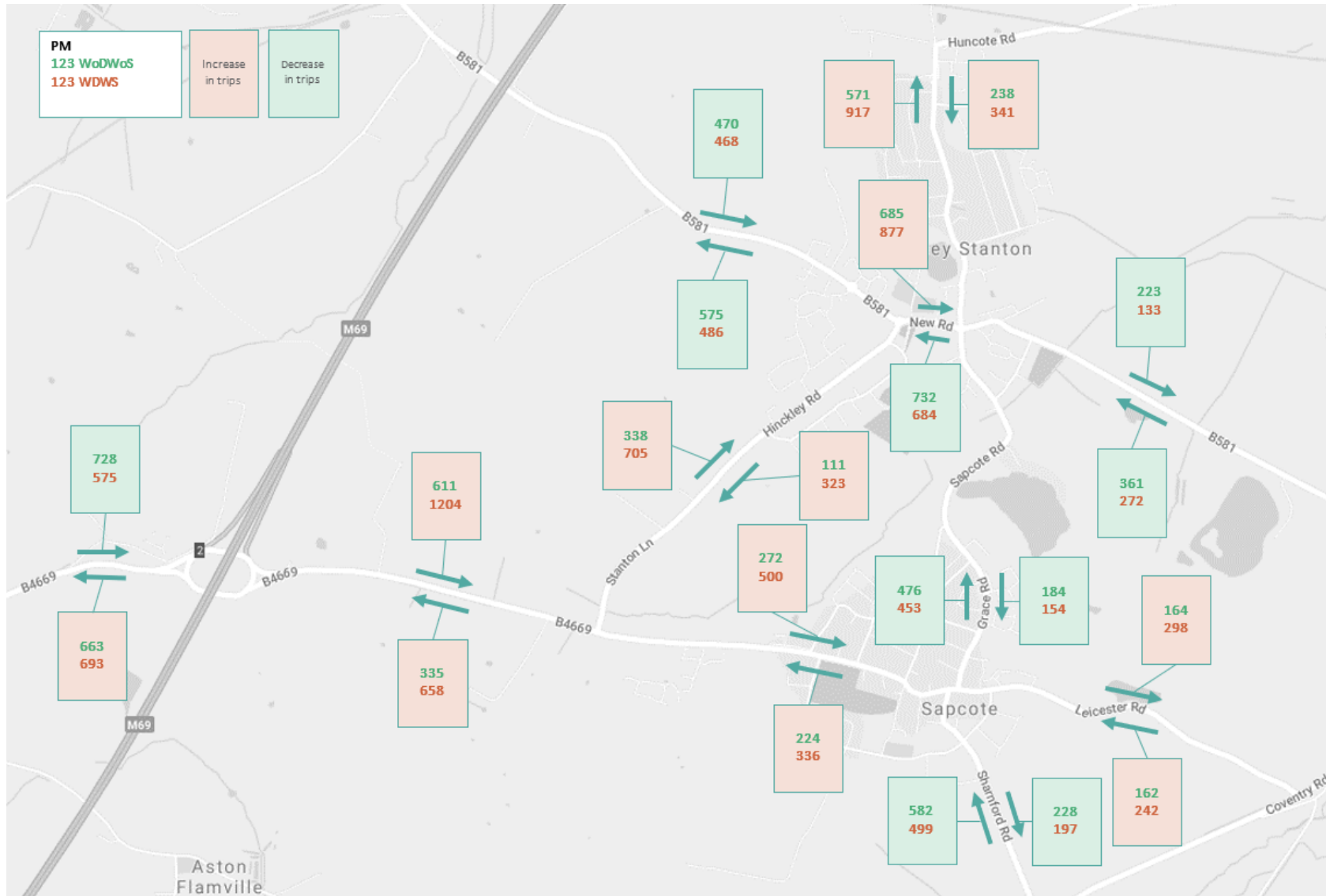


Figure 2.8: Traffic flow changes in the area in the eastern villages of Sapcote and Stoney Stanton during the 2023 AM peak

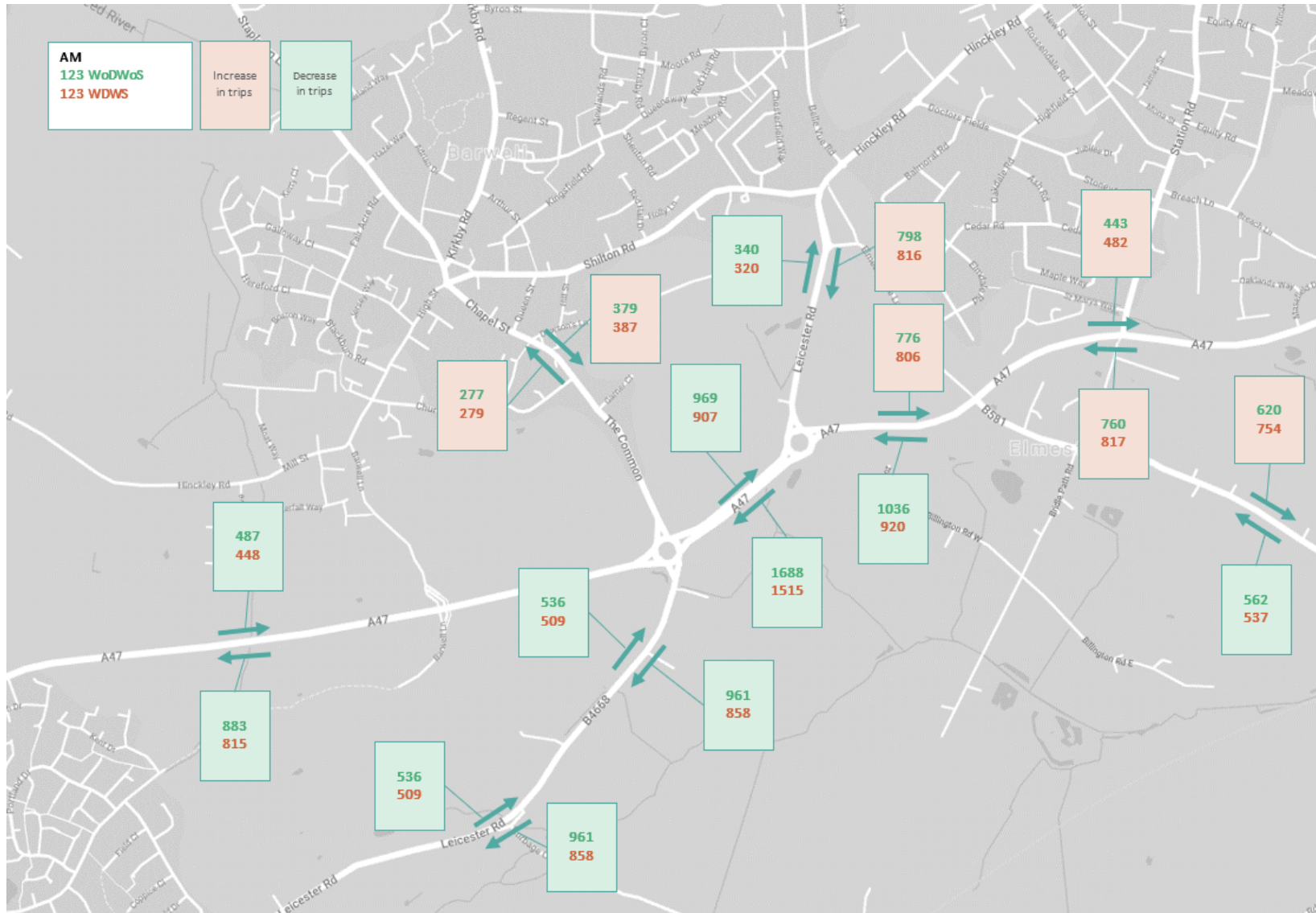


Figure 2.9: Traffic flow changes in the area in the eastern villages of Sapcote and Stoney Stanton during the 2036 PM peak

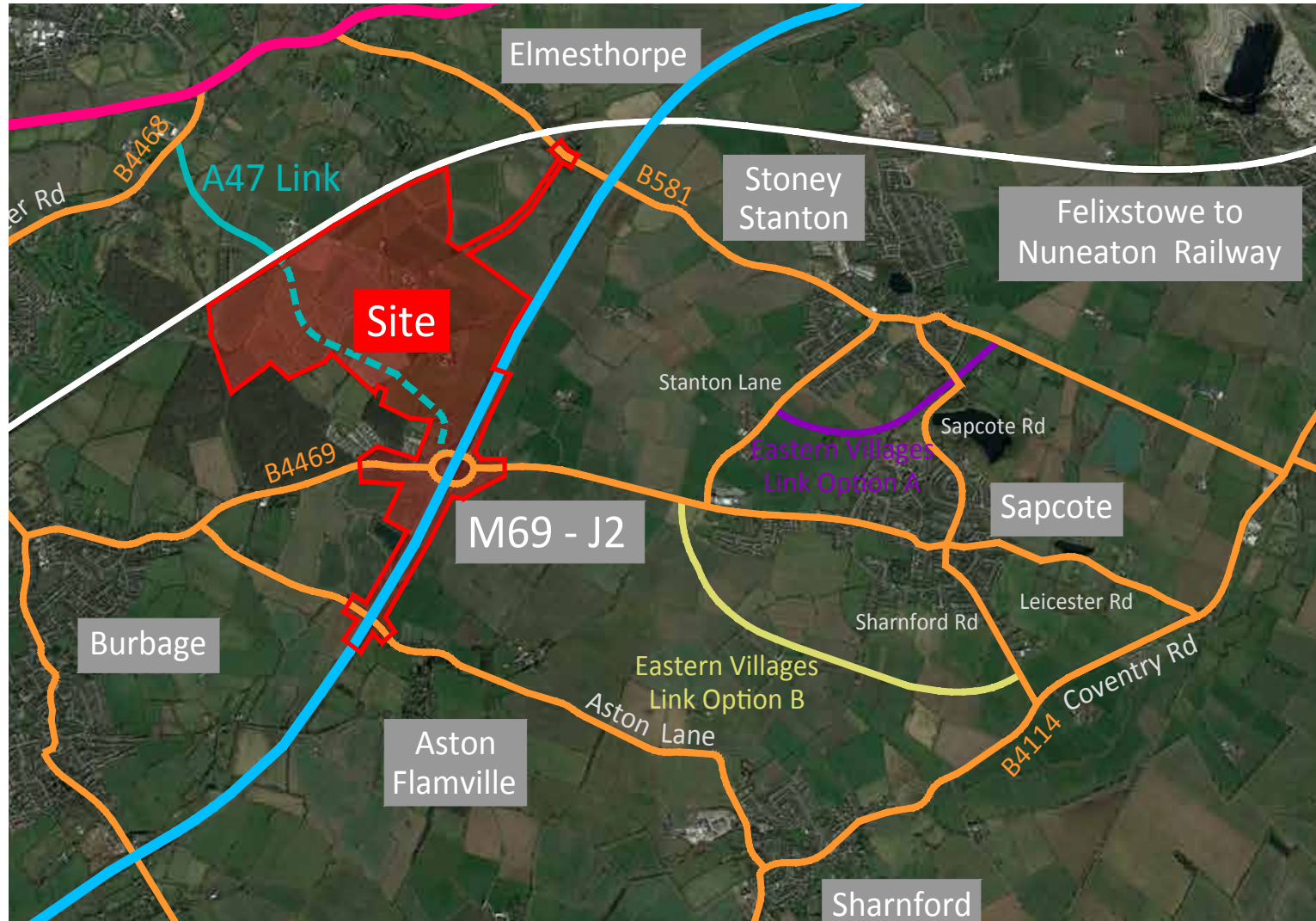


2.7 MITIGATION OPTIONS

In order to mitigate the predicted adverse traffic effects in Sapcote, Stoney Stanton and the rural areas to the north, DB Symmetry is considering the provision of new link roads. The purpose of these links is to divert traffic away from sensitive or congested areas and encourage the use of main roads rather than journeys on rural routes.

Two link roads are under consideration, as explained in more detail in the following sections, and as shown indicatively on Figure 2.10 below.

Figure 2.10: Indicative location of the A47 and Eastern Villages link road options



A link from the HNRFI site westwards to the A47

The A47 link will provide a connection through the development site from M69 Junction 2 to Leicester Road, before then connecting to the A47. Design details are to be confirmed but we envisage this route would be a 7.3m wide single carriageway. The route is indicatively shown in Figure 2.11.

The modelling indicates that a demand will exist from north and northwest to travel to M69 Junction 2 to use the new slip roads. Currently, those trips may be travelling along some of the following routes to access the M69 Junction 1 and head south: the A47/A5; through Hinckley; through Burbage; through Sharnford. However, with limited route choices to M69 Junction 2 without the A47 link those trips are expected to divert through Stoney Stanton and Sapcote.

The purpose of the 'A47 Link' is to provide a route that is on the desire-line of those trips originating from the north and north-west, and to encourage the use of main roads (primarily the A47), limiting the need or desire to travel through rural locations and small villages.

In respect of the HGV trips generated by the HNRFI, it is expected that access will continue to be restricted solely to the use of M69 Junction 2.

In effect the A47 link would complete a 'Ring Road' around Hinckley (A5, A47, M69) reducing the need for traffic to route through the town centre and providing increased resilience along the A5, should there be any incidents of 'bridge strike' for example, on the Dodwell bridge.

The southern boundary of this road would need to carefully consider lighting measures, acoustic mitigation and landscaping proposals given its proximity to Burbage Common.

The A47 link will also include pedestrian and cycle provision, improving connectivity by these sustainable means between Hinckley, Barwell and Earl Shilton, and the HNRFI site.

In terms of the benefits, there is potential for the A47 link to reduce traffic volumes in the following locations:

- Stoney Stanton
- Sapcote
- Through Hinckley
- A5 west of M69 Junction 1
- A47 west of Hinckley
- Rural roads north/northeast of Hinckley/Earl Shilton

There is the potential for increased road traffic at the following locations as a result of the A47 Link Road connection:

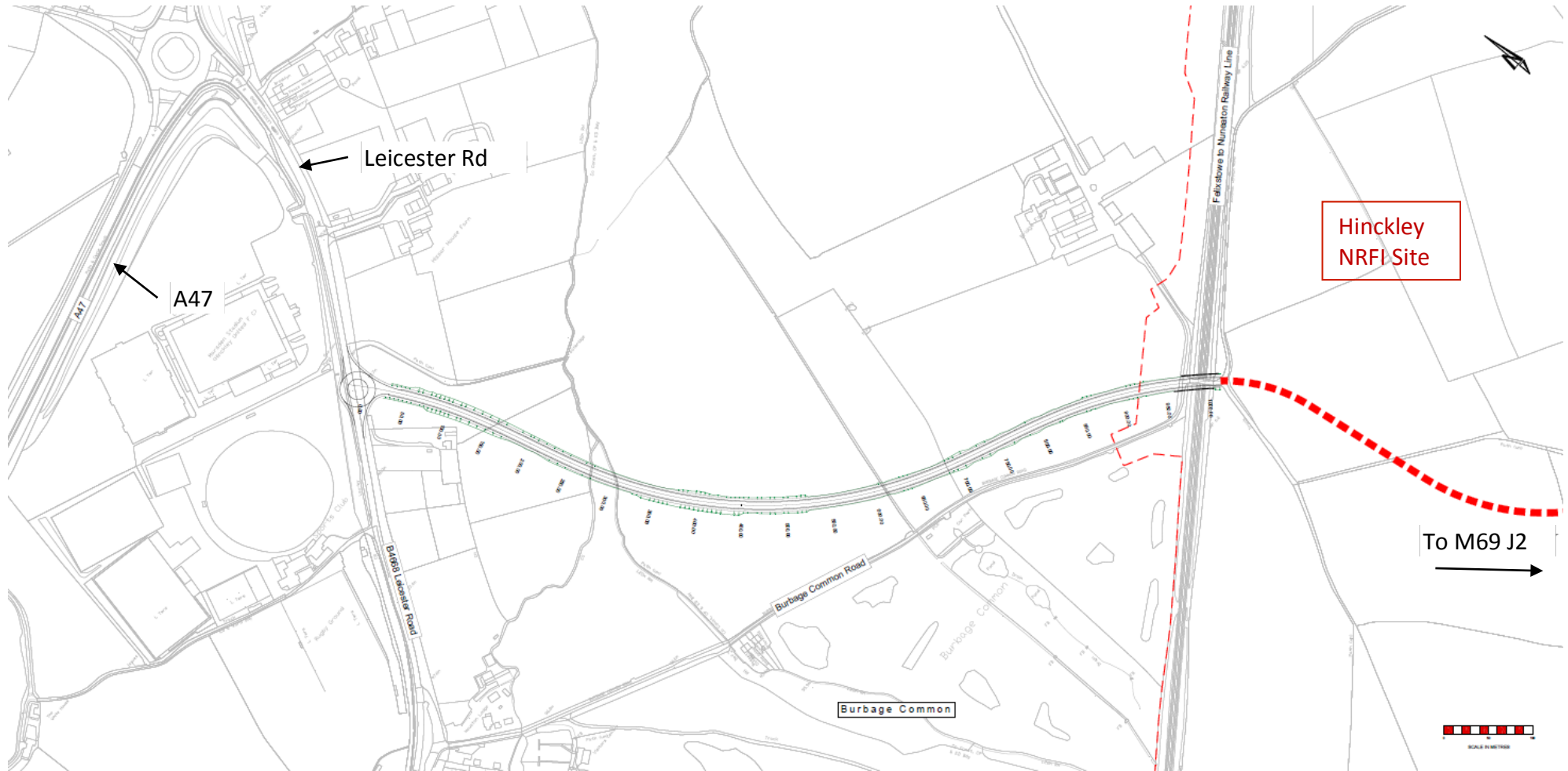
- M69 north and south of Junction 2
- Leicester Road north and south of the new connection to the link road
- Ashby Road/ Barwell Lane/Stonegate Drive

- A47 east and west of the junction with Leicester Road
- The Common (leading towards Barwell)

The strategic modelling will identify changes in traffic flows at the above locations as well as any other locations where a change occurs.

We will be assessing the impacts of those changes, both in terms of vehicle numbers but also in terms of the operational performance of the road network through junction capacity modelling.

Figure 2.11: Indicative A47 link road alignment



Link roads around villages to the east – the Eastern Villages link

Two options are under consideration:

Option A (north) - connecting Stanton Lane with Broughton Road, routing between Stoney Stanton/Sapcote

The Eastern Villages Link: Option A would provide a connection between Hinckley Road (south of Stoney Stanton) and B581 Broughton Road (east of Stoney Stanton). Design details are to be confirmed but we envisage this road would be a 7.3m wide single carriageway. The route is indicatively shown in Figure 2.12.

Currently, two options exist for travelling east-west between M69 Junction 2 and the B4114 Coventry Road, and both are through either of Sapcote or Stoney Stanton. The modelling indicates that the demand to undertake this trip will increase upon implementation of the southern slip roads at M69 Junction 2, with an adverse impact arising within the villages.

The purpose of The Eastern Villages Link: Option A is to provide an alternative route that relieves the village centres, limiting the need or desire to travel through Sapcote or Stoney Stanton.

The boundaries of this link road option would need to carefully consider lighting measures, acoustic mitigation and landscaping proposals given its proximity to existing residential properties in Stoney Stanton and Sapcote.

Subject to demand, this link road option will also include pedestrian and cycle provision, improving connectivity by these sustainable means between Stoney Stanton and Sapcote, and the HNRFI site.

In terms of the benefits, Eastern Villages Link: Options A and B each have the potential to reduce traffic volumes in the following locations:

- Stoney Stanton
- Sapcote
- Rural roads to the north

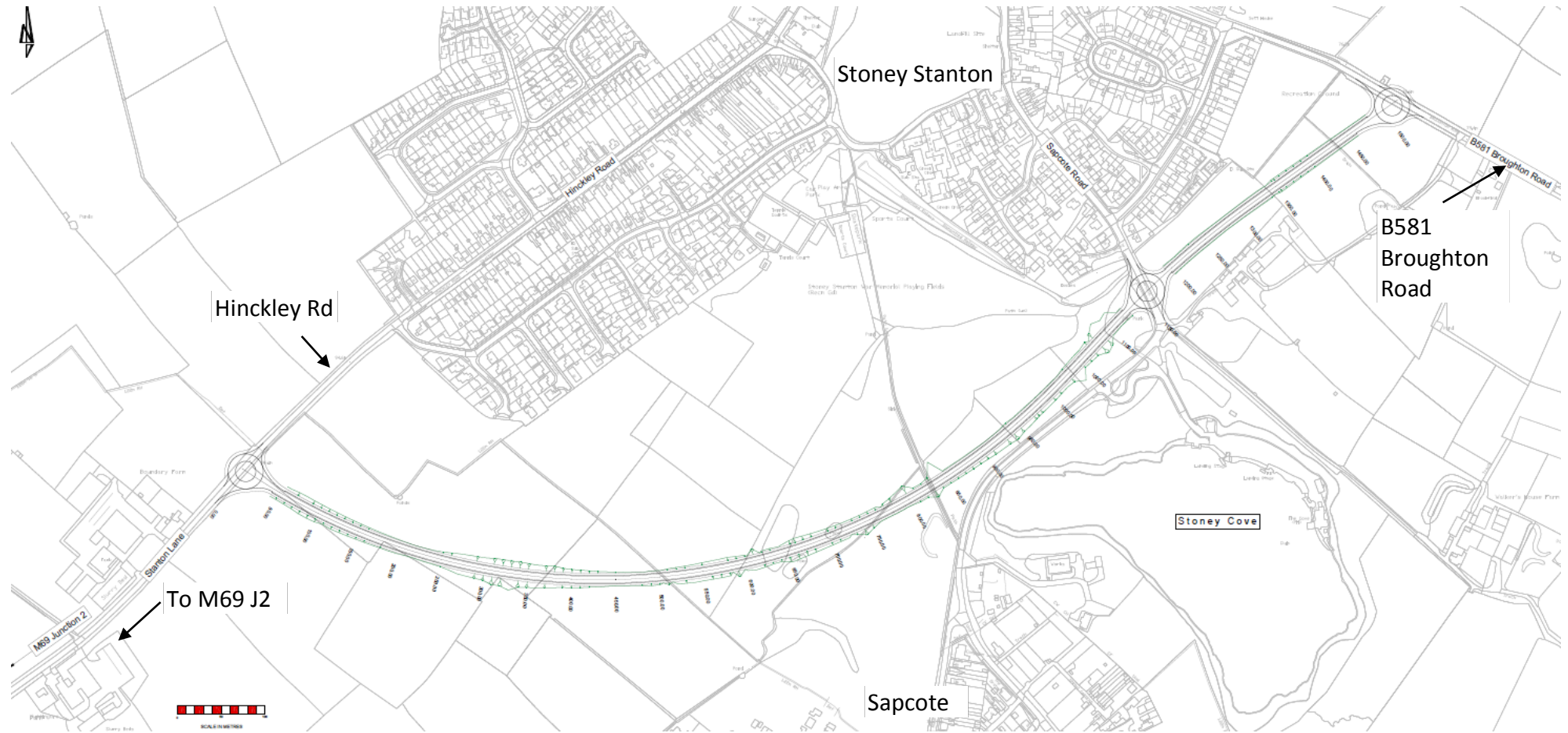
There is the potential for an increase in trips to arise in the following locations as a result of the Eastern Villages Link: Option A

- B4669 Hinckley Road west of M69 Junction 2
- Hinckley Road south of Stoney Stanton
- B581 Broughton Road
- B581 Coventry Road

The strategic modelling will identify any/all changes in traffic flows at the above locations as well as any other locations where a change occurs.

We will be assessing the impacts of those changes, both in terms of vehicle numbers but also in terms of the operational performance of the road network through junction capacity modelling.

Figure 2.12: Indicative Eastern Villages link road: Option A



Option B (south) - connecting Hinckley Road to Sharnford Road, routing south of Sapcote

The Eastern Villages Link: Option B would provide a connection between the B4669 Hinckley Road west of Sapcote and Sharnford Road south of Sapcote. Design details are to be confirmed but we envisage this road would be a 7.3m wide single carriageway. The need for the link and its purpose is as stated in the description of Option A above. The route is indicatively shown in Figure 2.13.

The boundaries of this link road option would need to carefully consider lighting measures, acoustic mitigation and landscaping proposals given its proximity to existing residential properties in Stoney Stanton and Sapcote.

Subject to demand, this link road option will also include pedestrian and cycle provision, improving connectivity by these sustainable means between Sapcote and the HNRFI site.

In terms of the benefits, Eastern Villages Link: Options A and B each have the potential to reduce traffic volumes in the following locations:

- Stoney Stanton
- Sapcote
- Rural roads to the north

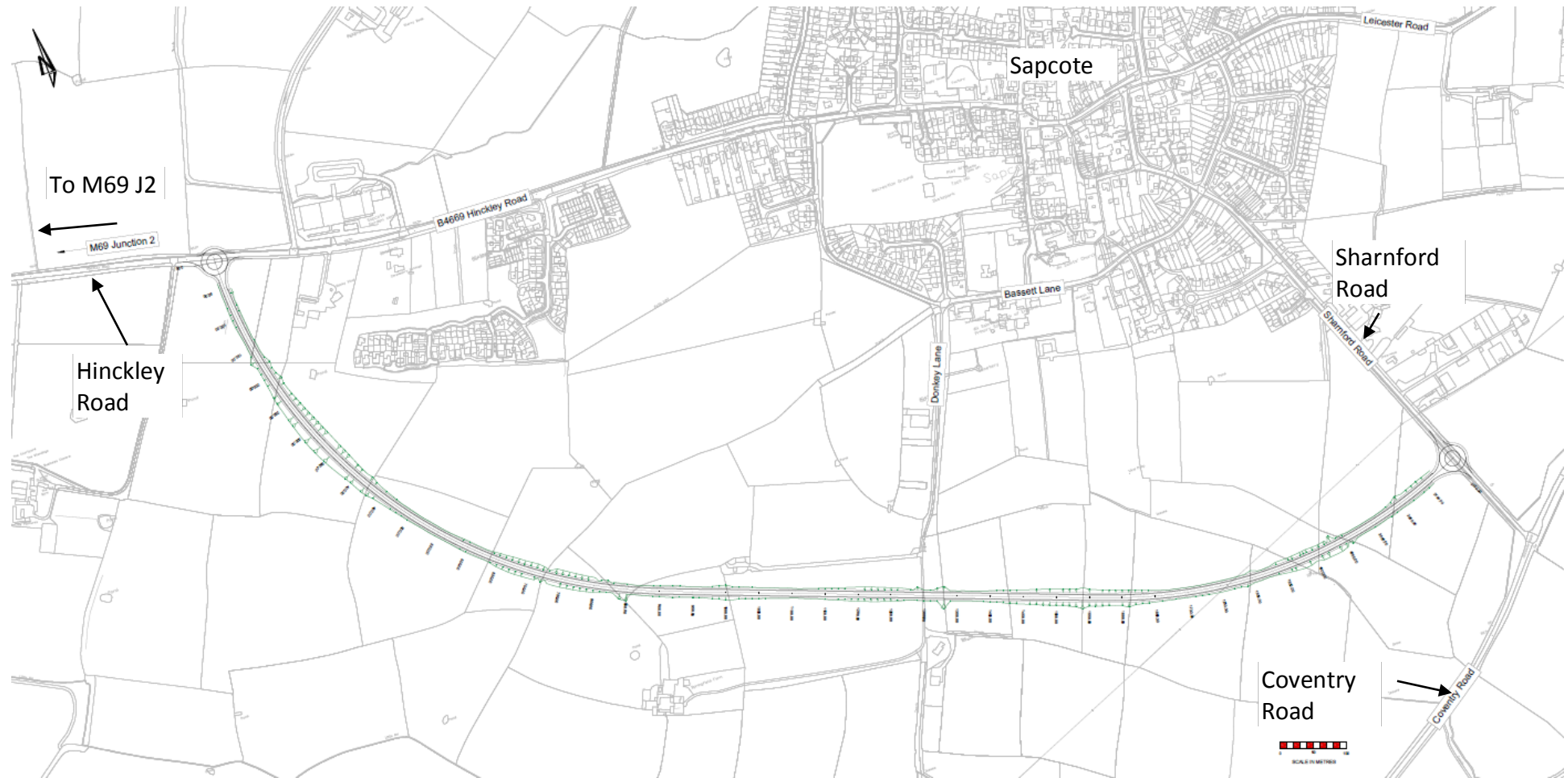
There is the potential for an increase in trips to arise in the following locations as a result of the Eastern Villages Link: Option B

- B4669 Hinckley Road west of M69 Junction 2
- Sharnford Road immediately south of Sapcote (between the connection to the Eastern Village Link: Option B and B581 Coventry Road)
- B581 Coventry Road

The strategic modelling will identify any/all changes in traffic flows at the above locations as well as any other locations where a change occurs.

We will be assessing the impacts of those changes, both in terms of vehicle numbers but also in terms of the operational performance of the road network through junction capacity modelling.

Figure 2.13: Indicative Eastern Villages link road: Option B



Other road improvements

At a local level, if individual junctions require mitigation, examples of what can be done to improve junction performance include the following:

- Changing the junction type (e.g. conversion to a roundabout, or introducing traffic signals)
- Improving lane/driver discipline through road markings/signing
- Adjusting priorities, to ensure that priority is given to the higher traffic flow routes through a junction
- Additional lanes or increased width at give-ways/stop-lines
- Improved signal timings (for signalised junctions), to ensure that ‘green-time’ is allocated according to traffic flow demands
- Improved signal controller software (for signalised junctions) to provide an intelligent and reactive approach to real-time traffic conditions
- Pedestrian and cycling infrastructure improvements

DB Symmetry will be considering all of the above once it has modelled individual junctions and discussed mitigation requirements with the relevant authorities.

We will continue to progress with the Pan-Regional Transport Model (PRTM) modelling process, to ensure that we have identified where any highway impacts occur, and where any potential additional highways mitigation measures are required.

We will also undertake the necessary environmental survey work and assessment of the potential link road options identified to date. Together with the feedback received from this consultation exercise, we hope to have reached final agreement on the full highways mitigation package when we undertake the Formal Consultation in late 2019.

The PRTM will determine the appropriate stage whereby any mitigation is required, fixing the timing of delivery of the associated mitigation and link roads.

2.8 FURTHER ASSESSMENT

Guided by the feedback from the current public consultation, the following further assessment work is proposed.

Detailed junction modelling

- Summer 2019
 - Agreement with the authorities as to which junctions required detailed analysis
 - Detailed data collection (topographical surveys, accident data, highway records) and validation/calibration
 - Detailed junction capacity modelling (standard junction models – if microsimulation modelling is required the timescales for those junctions will differ)

- Presentation of ‘without mitigation’ results
- Identification of which junctions require mitigation
- Autumn 2019
 - Mitigation schemes to be designed, re-assessed, and presented/agreed
 - Further public consultation on refined options (as part of the Formal Consultation stage)

Strategic modelling

- Summer 2019
 - Undertake strategic PRTM modelling of major highway infrastructure upgrades (A47 Link/eastern village link options)
- Autumn 2019
 - PRTM to be re-run ‘with mitigation’ (see also A47 Link Modelling and Eastern Villages Modelling sections)

Three ◆ A47 link: potential environmental effects

3.1 INTRODUCTION

As explained in section one of this report, DB Symmetry is undertaking an environmental impact assessment of its proposals. This section summarises the potential environmental effects of the proposed A47 link road, explains the scope of DB Symmetry’s assessment and highlights some potential environmental mitigation that might accompany the road proposals. It does this under the following headings.

- Road Construction
- Noise
- Air quality
- Landscape
- Ecology
- Heritage

3.2 ROAD CONSTRUCTION

The Environmental Impact Assessment regulations requires that the effects of all phases, including the construction phase, is comprehensively assessed. The road-based effects of the construction phase will therefore be assessed and presented in the Transport chapter of the Environmental Statement.

Whilst the construction phase is temporary, it is recognised that during that period there is potential for road-based traffic to impact on the surrounding area. As such, the potential impacts will be quantified, and a strategy (typically presented as a Construction Traffic Management Plan (CTMP)) will be developed and implemented.

The CTMP would provide details of:

- the routes of construction traffic, with restrictions being applied to sensitive routes/locations
- timing of movements and delivery timetables, with restrictions applied to working during sociable hours only
- on-site measures, such as location of compound, parking, wheel washing facilities
- Access instructions
- Driver instructions

- temporary signage and traffic management schemes
- parking demand/provision
- measures to promote sustainable travel
- Waste management
- Monitoring
- Highway condition surveys

Additionally, a Construction Environmental Management Plan (CEMP) will also be prepared at an appropriate stage. The CEMP covers a much broader range of potential impacts than just Transport, and will consider the following areas:

- People and communities
- Air quality
- Noise and vibration
- Water quality and geological
- Landscape/visual
- Ecology
- Archaeology
- Waste
- Energy
- Materials

3.3 NOISE

Potential environmental effects

The purpose of this A47 link is to divert traffic away from sensitive or congested areas and encourage the use of main roads rather than journeys on rural routes. These effects would be caused largely by the introduction of the new M69 slip-roads and the resulting diversion of existing background traffic on the road network, rather than trips to and from the HNRFI site itself.

It is expected that this will translate into potential noise impacts depending on the level of additional noise generated by the increase in traffic flow through villages and noise sensitive rural areas where traffic will not have flowed in significant volumes prior to the new connection to the M69.

Mitigation of potential adverse noise effects will be considered, and modelling will be undertaken to establish the magnitude and significance of noise impacts as a result of the link road, with and without mitigation.

The immediate noise effect as a result of the A47 link road would be the change in character from open agricultural land to an area with a main road passing through it, generating noise that was previously not present. Noise emissions will be minimised by landscaping including embankments and fencing where appropriate. In many cases new noise receptors might be at a

greater distance from noise sources than the majority of existing noise receptors in Hinckley and the villages of Elmesthorpe and Barwell. In the absence of the proposed A47 link the anticipated increased road traffic would be likely to pass directly through these towns and villages

The main potential likely noise effects of the proposed development once completed, irrespective of any mitigation measures, are summarised below.

- Potential noise impacts caused by the A47 link road. This would generally be localised in scale and restricted to the site itself and immediate environs.
- Noise effects on residential dwellings will be minimal. However, it is considered that Burbage Common might experience increased noise as a result of the link road.

The scope of our assessment

The noise impact assessment is considering a wider area than previously established for assessment of the HNRFI development itself. Existing background and residual noise levels at receptors, including Burbage Common, nearest to the proposed link route will be surveyed. These data will enable a baseline model to be produced.

Modelled traffic flow data will be used in accordance with the Department for Transport's Calculation of road traffic noise guidance to establish potential increases in noise at identified receptors in the vicinity of the new routes. There will be an iterative process to review potential link route locations such that noise impacts are mitigated as best as practical by the routing of the road, before any physical mitigation is considered.

Potential Mitigation

Noise mitigation for the link road might include a combination of the following:

- Refinement of route options to minimise road noise.
- Earth bunding and/or barrier provision along the route of the link road to provide noise screening which can then be landscaped.

3.4 AIR QUALITY

Potential environmental effects

The area covering the A47 link is not known to have poor air quality, due to its rural location, with the most significant impacts to air quality coming from road traffic impacts. The potential air quality effects of the A47 link road once completed, irrespective of any measures to try to reduce pollution (mitigation measures), are summarised below:

- Overall the effects are expected to be an improvement over the current situation due to a

reduction in traffic passing through Elmesthorpe or Hinckley to access or cross the M69.

- There are likely to be long-term negative effects on residential receptors on the B4668 Leicester Road, with the size of these effects dependent on anticipated increases in vehicle traffic. The concentrations of pollutants in this area at locations away from roads are documented on national maps and is low. Therefore, levels of air pollution above the air quality standards are unlikely. This will however need to be confirmed at the modelling stage.
- Based on indicative plans, the effects from construction dust will be able to be fully mitigated through an appropriate dust management plan, with implemented measures based on the degree of effect.
- Negative effects on air quality might be felt on the wider network if HGVs use the proposed A47 link road. However due to the mandatory transport routes the site will enforce, lorry movements are anticipated to use the M69 Junction 2 to gain access to/from the site.

The scope of our assessment

The areas serviced by the A47 link are within the scope already covered by the assessment for the HNRFI development.

The effects from construction dust will be assessed in order to determine the appropriate level of mitigation required.

Initial assessment suggests that additional air quality modelling, using data from the highways model, will need to be undertaken to establish the pollution concentrations at receptors along the A47 link due to the addition of the A47 link.

The air quality assessment will be undertaken in accordance with the methodology for the main HNRFI development and based on industry accepted guidelines such as the Institute of Air Quality Management (IAQM), Design Manual for Roads and Bridges (DRMB) and the Local Air Quality management(LAQM) TG16 guidance, which is produced by Defra.

Potential mitigation

Mitigation to reduce any effects could be achieved by ensuring an appropriate setback distance between the road and any ecological or human receptor. If necessary, an appropriate distance would be determined by the above-mentioned modelling assessment.

HGVs using the A47 link routinely have the potential to cause adverse effects. The modelling will be used to determine if this is the case.

3.5 LANDSCAPE

Potential environmental effects

The route of the A47 Link Road is not covered by any statutory landscape designations and will be designed and developed in accordance with national and local landscape planning policy. There are no significant constraints to development in landscape and visual terms. However, development of the site in the manner proposed would alter the character of the landscape in the local area.

Whilst the landscape is not subject to a protective designation, it is crossed by a single public right of way and is visible to a variety of receptors locally. Detractors such as the noise and movement from the M69, A47, B4668 and railway are noted but are not so significant as to 'urbanise' the landscape, which largely retains its rural agricultural character.

The most notable landscape effect as a result of the A47 Link Road would be the change in character from open agricultural land to one which has a main road passing through it. Other potential effects include the removal of sections of hedgerow and occasional individual boundary trees to allow for the link road.

The main potential likely significant landscape and visual effects of the proposed A47 Link Road once completed, irrespective of any mitigation measures, are summarised below:

- Potential adverse landscape impacts would generally be localised in scale and restricted to the immediate environs of the route, particularly where existing woodland and linear tree belts provide visual screening within the wider landscape;
- Change to the character of the landscape of the route through the alteration of land use and the introduction of new temporary and permanent features;
- A permanent, long-term adverse impact on landscape character along the route would occur due to physical impact on landscape, including the introduction of hardstanding, signage, ground remodelling and other associated infrastructure within existing agricultural land. There will also be movement of vehicles and people within the site, and a lighting strategy which will increase the number and intensity of light sources within the site;
- There would be an adverse physical impact on landscape elements and features along the route caused by the localised removal of existing landscape features such as trees and hedgerows; and
- Potential adverse visual and tranquillity effects upon close proximity receptors from Burbage Common Road, the local PRoW network, Burbage Common (Registered Common Land) and Burbage Common and Woods Country Park, adjacent railway line and residential receptors due to visibility of the completed scheme (including built development, traffic and lighting).

The scope of our assessment

The landscape and visual assessment will be undertaken in accordance with the 'Guidelines for Landscape and Visual Impact Assessment' (Third Edition, 2013), published by the Landscape Institute (LI) and the Institute for Environmental Management and Assessment (IEMA).

In compiling the baseline landscape and visual assessment, DB Symmetry will:

- review the planning policy context for the route;
- undertake a desktop study and web search of relevant background documents and maps;
- undertake a field assessment of local circumstances, including a photographic survey of the character and fabric of the route and its surroundings, using photography from a number of representative viewpoints. The field assessment will be undertaken by qualified landscape architects;
- provide an analysis of the likely landscape and visual effects of the proposed A47 link road during construction and operation, which is determined by combining the magnitude of the predicted change with the assessed sensitivity of the identified receptors. The nature of any predicted effects is also identified (i.e. positive/negative, permanent/reversible); and
- provide an analysis of likely cumulative landscape and visual effects.

The lighting impact assessment will be undertaken in accordance with the Institute of Lighting Professionals guidance *ILP Reduction of Obtrusive Light* (ILP, 2011) and *ILP Professional Lighting Guide 04: Guidance on Undertaking Environmental Impact Assessments* (ILP, 2013). This will include the following:

- review of national and local planning policy, legislation and guidance;
- an on-site baseline light survey to understand current illuminance levels, principal lighting sources and any existing light pollution issues;
- indicative lighting modelling to assess the impact of proposed options;
- analysis of baseline conditions against the indicative proposed options to assess cumulative residual effects; and
- recommended light pollution mitigation.

Potential mitigation

Landscape mitigation for the A47 link road might include a combination of the following:

- earth bunding along the route of the link road to soften views and also to assist in addressing local character and the relationship with the wider Elmesthorpe Floodplain Character Area, including the tranquillity of nearby areas;

- provision of planting along routes to assist in filtering and screening views of the proposals. Tree planting may also have air quality benefits;
- provision and enhancement of pedestrian/cycle connections;
- Development of a sensitive lighting strategy which follows key parameters designed to limit light spill such as maximum heights, directional units and specific light sources; and
- Earth bunding and/or acoustic fence provision along the route of the link road to provide noise screening which can then be landscaped to remain characteristic of the Elmesthorpe Floodplain Character Area.

3.6 ECOLOGY

Potential environmental effects

The potential environmental effects of the A47 Link Road on ecological receptors may arise through direct loss of habitat, the severance of important links for wildlife, disturbance during construction and operational phases to protected and notable species or indirect effects such as contaminated run-off, increased deposition of nitrates from air pollution, and lighting impacts.

There are no statutory designated sites that would be directly affected by the A47 link road. There is a single non-statutory designated site, the Burbage Common Road Railway Bridge Potential Local Wildlife Site (pLWS) that could be affected by the A47 link road.

The A47 link road option passes through mainly arable land and a small area of semi-improved pasture. The fields are separated by managed hedgerows with some standard trees and a tree lined stream will also be crossed by the proposed route. There will be the potential for protected and notable species to utilise the habitats present within the route corridor.

The scope of our assessment

The route option baseline assessment will include an updated desk-based study of local environmental records, an extended Phase 1 Habitat survey and a range of protected and notable species surveys following best practice methodology. This will highlight those important habitats and protected and notable species present or likely to be present within the proposed route option. A specific survey of the pLWS will also be undertaken to establish if it would meet the qualifying standards to be regarded as a full Local Wildlife Site (LWS).

Where important habitats or protected or notable species have been identified the information will inform the precise route location to retain and avoid those areas of greatest value where possible.

The proposed route will then be assessed for its potential impacts on habitats and protected species identified as being present, following the appropriate guidelines. The predicted impacts will be identified at the construction phase and during the operational phase of the proposed scheme.

Potential mitigation

Where potential adverse effects on ecological receptors are identified through the assessment, mitigation measures will be incorporated into the design to eliminate, reduce or offset any adverse effects, as appropriate.

Mitigation measures to avoid potential impacts on habitats and protected and notable species, will include provision of similar habitats to those lost or the provision of greater habitat value than those lost where appropriate. Specific mitigation may be incorporated such as displacement, translocation, sensitive timing of works and potentially off-site habitat creation.

If specific species are recorded that will be adversely impacted licences may be required from Natural England prior to works commencing, these will detail the specific mitigation requirements and future management prescriptions to ensure there is no adverse impact on the species conservation status.

3.7 HERITAGE

Potential environmental effects

The potential environmental effects of the A47 Link Road on heritage assets may arise through direct changes to assets themselves, or through changes to their settings.

No designated assets such as scheduled monuments, listed buildings and conservation areas are located within the proposed A47 Link Road alignment, with the nearest such assets located in the cores of the settlements to the north. It is therefore unlikely that any such asset will be adversely affected by the A47 Link Road.

The primary effect of the proposals on the archaeological resource is likely to result from direct truncation and/or removal of any remains during groundworks. However, no significant archaeological remains have been previously identified in proximity to the A47 Link Road alignment.

The scope of our assessment

The cultural heritage baseline assessment will include examination and assessment of available archaeological and historical information to identify known and potential heritage assets within, or in proximity to, the proposed route, undertaken in accordance with best-practice guidance. This will incorporate a programme of investigative fieldwork, which may include geophysical survey and trial trenching, as agreed to be necessary with relevant consultees.

In addition, the assessment will include field visits to all relevant designated heritage assets within an appropriate study area. The assessment will first identify the heritage significance of all relevant assets and thereafter assess the impact of the road proposals on that significance.

Potential mitigation

Where potential adverse effects on heritage assets are identified through assessment, mitigation measures will be incorporated into the design to eliminate, reduce or offset any adverse effects, as appropriate.

Where potential impacts through changes to the setting of designated assets are identified, the implementation of a landscape strategy will seek to limit the identified effects of the proposals.

To mitigate any identified effects on buried archaeological remains, the applicant will carry out any necessary programmes of archaeological mitigation works in advance of construction. This will likely comprise targeted areas of archaeological excavation prior to development carried out under Written Schemes of Investigation (WSI) that conform to recognised standards and guidance and which will have been prepared in consultation with and approved by the Leicestershire County Council archaeological advisor.

Four ◆ Eastern villages link road options: potential environmental effects

4.1 INTRODUCTION

As explained in section one of this report, DB Symmetry is undertaking an environmental impact assessment of its proposals. This section summarises the potential environmental effects of link roads around villages to the east of the proposed HNRFI – referred to as the Eastern Villages link options. The section explains the scope of DB Symmetry’s assessment and highlights some potential environmental mitigation that might accompany the road proposals. It does this under the following headings.

- Road Construction
- Noise
- Air quality
- Landscape
- Ecology
- Heritage

4.2 ROAD CONSTRUCTION

The Environmental Impact Assessment regulations require that the effects of all phases, including the construction phase, are comprehensively assessed. The road-based effects of the construction phase will therefore be assessed and presented in the Transport chapter of the Environmental Statement.

Whilst the construction phase is temporary, it is recognised that during that period there is potential for road-based traffic to impact on the surrounding area. As such, the potential impacts will be quantified, and a strategy (typically presented as a Construction Traffic Management Plan (CTMP)) will be developed and implemented.

The CTMP would provide details of:

- the routes of construction traffic, with restrictions being applied to sensitive routes/locations
- timing of movements and delivery timetables, with restrictions applied to working during sociable hours only
- on-site measures, such as location of compound, parking, wheel washing facilities
- Access instructions
- Driver instructions
- temporary signage and traffic management schemes

- parking demand/provision
- measures to promote sustainable travel
- Waste management
- Monitoring
- Highway condition surveys

Additionally, a Construction Environmental Management Plan (CEMP) will also be prepared at an appropriate stage. The CEMP covers a much broader range of potential impacts than just Transport, and will consider the following areas:

- People and communities
- Air quality
- Noise and vibration
- Water quality and geological
- Landscape/visual
- Ecology
- Archaeology
- Waste
- Energy
- Materials

4.3 NOISE

Potential environmental effects

The purpose of the Eastern Villages link road options is to address the effects of increased road traffic passing through Sapcote and Stoney Stanton. An inherent benefit of the link road options would be to reduce road traffic noise in these villages. However, the link road options will bring road traffic closer to other residential properties and the noise effects need to be identified and understood.

Early indicative modelling of road traffic noise impacts corroborates these findings. However, the specifics in term of magnitude and significance of these noise effects are still being refined and evaluated. Consideration will also need to be given to the effect of natural traffic increases unrelated to the HNRFI development and the addition of the south-facing slip-roads to M69 junction 2.

Mitigation of potential adverse noise effects will be considered, and modelling will be undertaken to establish the magnitude and significance of noise impacts as a result of the link road, with and without mitigation.

The immediate noise effect as a result of the link roads would be the change in character from open agricultural land to an area with a main road passing through it, generating noise that was previously not present. In many cases new noise receptors might be at a greater distance from noise sources than the majority of existing noise receptors in Sapcote and Stoney Stanton. In

the absence of the Eastern Villages link the anticipated increased road traffic would be likely to pass directly through these villages

Previously the anticipated increased road traffic would have passed directly through villages or directly by noise sensitive receptors.

Potential noise impacts caused by the village link roads would generally be localised in scale and restricted to the site itself and immediate environs.

- Option A (north) – a link road connecting Stanton Lane with Broughton Road might result in new noise impacts to receptors on the outskirts of Stoney Stanton and Sapcote.
- Option B (south) – a link road connecting Hinckley Road to Sharnford Road, might result in new noise impacts to receptors on the southern boundary of Sapcote.

The scope of our assessment

The noise impact assessment is considering a wider area than previously established for assessment of the HNRFI development itself. Existing background and residual noise levels at receptors nearest to the proposed link routes will be surveyed. These data will enable a baseline model to be produced.

Modelled traffic flow data will be used in accordance with the Department for Transport's Calculation of road traffic noise guidance to establish potential increases in noise at identified receptors in the vicinity of the new routes. There will be an iterative process to review potential link route locations such that noise impacts are mitigated as best as practical by the routing of the road, before any physical mitigation is considered.

Potential mitigation

Noise mitigation for the village link road might include a combination of the following.

- Refinement of route options to minimise road noise.
- Earth bunding and/or barrier provision along the route of the link road to provide noise screening with landscaping to the structures.

4.4 AIR QUALITY

Potential environmental effects

The proposed link roads are not in an area known to have poor air quality, due to their rural location. There have historically been concerns over air quality in Sapcote as three Air Quality Monitoring (diffusion) tubes were placed in the village to monitor NO₂. Monitoring is only

positioned where the local authority has concerns that Air Quality standards might be breached (effectively a method to monitor pollutant levels and establish if they exceeded the legal limit of 40 ug/m³). These have since been removed by the local authority indicating concentrations in the area were not considered to be of concern at the time. These are however set to be re-introduced due to proposed schemes in the local area.

The main potential air quality effects of the Stoney Stanton link road (Option A) once completed, irrespective of any mitigation measures, are summarised below:

- Overall, air quality would be expected to improve in large portions of Stoney Stanton due to a reduction in traffic that may pass through the village.
- There is the potential for long-term adverse effects on isolated residential receptors that are in the area of the proposed link roads. The number of receptors experiencing noticeable effects is dependent on the exact location of the link. The level of any noticeable effect will be confirmed at the modelling stage.
- A noticeable effect may also be seen at isolated properties on Stanton Lane due to any increased traffic as a result of the link road. With the approximate background NO₂ concentration being low, levels of air pollution above the air quality standards are unlikely. The absolute concentration as well as the level of the effect will not be known until after the modelling stage.
- Based on indicative plans the effects from dust will be fully mitigated through an appropriate dust management plan. With measures dependant on the level of effect, which has yet to be assessed. These effects will be temporary in nature and will not impact on any designated wildlife site.

The main potential air quality effects of the Sapcote link road (Option B2) once completed, irrespective of any mitigation measures, are summarised below:

- Overall, air quality would be expected to improve in large portions of Sapcote due to a reduction in traffic that may pass through the village.
- There is the potential for long-term noticeable effects on residential receptors that are west of where the link road merges back with the B4469 Hinckley Road. There is also the possibility of a noticeable impact if queuing is anticipated due to traffic joining the B4469. The magnitude of this effect is dependent on the anticipated increase in vehicle traffic and queuing times. The level of any noticeable effect will be confirmed at the modelling stage.
- The number of receptors experiencing a noticeable effect on air quality is dependent on the exact location of the link road.
- Based on indicative plans the effects from dust will be fully mitigated through an appropriate dust management plan. These effects will be temporary in nature and will

not impact on any designated wildlife site.

The scope of our assessment

The areas serviced by the Stoney Stanton and Sapcote link roads are within the scope already covered by the assessment for the HNRFI development.

The effects from construction dust will be assessed in order to determine the appropriate level of mitigation required.

Additional modelling, using data from the highways model, would be undertaken to establish the pollution concentrations at receptors due to the operation of the link roads. The results of the modelling would be compared with the operational modelling scenario for the HNRFI development, to determine the effect of the link road options.

The air quality assessment will be undertaken in accordance with the methodology for the main HNRFI development and based on industry accepted guidelines such as the Institute of Air Quality Management (IAQM), Design Manual for Roads and Bridges (DRMB) and the Local Air Quality management(LAQM) TG16 guidance, which is produced by Defra.

Potential mitigation

Mitigation to reduce the effect could be achieved by ensuring an appropriate setback distance between the road and any human receptor.

Dependent on the determined effects, traffic management could be used to reduce queuing time at locations near residential receptors.

4.5 LANDSCAPE

OPTION A

Potential environmental effects

The route of Option A is not covered by any statutory landscape designations and will be designed and developed in accordance with national and local landscape planning policy. There are no significant constraints to development in landscape and visual terms. However, development of the site in the manner proposed would alter the character of the landscape in the local area.

Whilst the landscape is not subject to a protective designation, Option A is crossed by a single public right of way, namely footpath number V51. Local views are informed by busy vehicular corridors and residential development at settlement edges, which serve to urbanise local landscape character.

The most notable landscape effect as a result of the development would be the change in character from open agricultural land to one which has a main road passing through it. Other potential effects include the removal of sections of hedgerow and occasional individual boundary trees to allow for the link road.

The main potential likely significant landscape and visual effects of Option A once completed, irrespective of any mitigation measures, are summarised below:

- Potential adverse landscape impacts caused by the new road between Sapcote and Stoney Stanton, road widening and footway provision between M69 (Junction 2) and the new road, footway upgrade along the B4669 and M69 Junction 2 improvements would generally be localised in scale and restricted to the route itself and its immediate environs, particularly where existing mature vegetation provides visual screening within the wider landscape;
- Change to the character of the landscape of the route through the alteration of land use and the introduction of new temporary and permanent features;
- A permanent, long-term adverse impact on landscape character along the route would occur due to physical impact on landscape, including the introduction of hardstanding, signage, ground remodelling and other associated infrastructure within existing agricultural land. There will also be movement of vehicles and people along the route, and a lighting strategy which will increase the number and intensity of light sources within the site;
- There is potential to affect the landscape setting of villages in close proximity to the site, particularly Sapcote and Stoney Stanton where there is potential intervisibility;
- There would be an adverse physical impact on landscape elements and features along the route caused by the localised removal of existing landscape features such as trees and hedgerows; and
- Potential adverse visual and tranquillity effects upon close proximity receptors from the local PRoW network, B4669, Stanton Lane, Sharnford Road, Coventry Road, B581, residential receptors at Stoney Stanton and Sapcote due to visibility of the completed link road scheme (including built development, traffic and lighting).

The scope of our assessment

The landscape and visual assessment will be undertaken in accordance with the 'Guidelines for Landscape and Visual Impact Assessment' (Third Edition, 2013), published by the Landscape Institute (LI) and the Institute for Environmental Management and Assessment (IEMA).

In compiling the baseline landscape and visual assessment, db symmetry will:

- review the planning policy context for the site;

- undertake a desktop study and web search of relevant background documents and maps;
- undertake a field assessment of local site circumstances, including a photographic survey of the character and fabric of the site and its surroundings, using photography from a number of representative viewpoints. The field assessment will be undertaken by qualified landscape architects;
- provide an analysis of the likely landscape and visual effects of the proposed link road option during construction and operation, which is determined by combining the magnitude of the predicted change with the assessed sensitivity of the identified receptors. The nature of any predicted effects is also identified (i.e. positive/negative, permanent/reversible); and
- provide an analysis of likely cumulative landscape and visual effects.

The lighting impact assessment will be undertaken in accordance with the Institute of Lighting Professionals guidance ILP Reduction of Obtrusive Light (ILP, 2011) and ILP Professional Lighting Guide 04: Guidance on Undertaking Environmental Impact Assessments (ILP, 2013). This will include the following:

- review of national and local planning policy, legislation and guidance;
- an on-site baseline light survey to understand current illuminance levels, principal lighting sources and any existing light pollution issues;
- indicative lighting modelling to assess the impact of proposed options;
- analysis of baseline conditions against the indicative proposed options to assess cumulative residual effects; and
- recommended light pollution mitigation.

Potential mitigation

- Provision of planting along routes to assist in filtering and screening views of the proposals;
- Provision and enhancement of pedestrian/cycle connections;
- Development of a sensitive lighting strategy which follows key parameters designed to limit light spill such as maximum heights, directional units and specific light sources; and
- Earth bunding and/or acoustic fence provision along the route of the link road to provide noise screening which can then be landscaped to remain characteristic of the Stoney Stanton Rolling Farmland.

OPTION B

Potential environmental effects

The route of Option B is not covered by any statutory landscape designations and will be designed and developed in accordance with national and local landscape planning policy. There are no significant constraints to development in landscape and visual terms. However, development of the site in the manner proposed would alter the character of the landscape in the local area.

Whilst the landscape is not subject to a protective designation, Option B is crossed by a number of public rights of way, namely footpath numbers V38, V39, V27 and V42, and Bridleway number V28. Mature tree and hedgerow cover within the wider landscape, particularly to the south of Sapcote, serve to contain local views and contribute to a sense of rural character to the south. However, in local views, landscape character is informed by busy vehicular corridors and residential development at settlement edges.

The most notable landscape effect as a result of Option B would be the change in character from open agricultural land to one which has a main road passing through it. Other potential effects include the removal of sections of hedgerow and occasional individual boundary trees to allow for the link road.

The main potential likely significant landscape and visual effects of the proposed development once completed, irrespective of any mitigation measures, are summarised below:

- Potential adverse landscape impacts caused by the new road south of Sapcote, road widening and footway provision between M69 (Junction 2 and the new road, footway upgrade along Stanton Lane towards Stoney Stanton and junction improvements at M69 Junction 2, Coventry Road/B581 and Coventry Road/Sharnford Road, would generally be localised in scale and restricted to the route itself and its immediate environs, particularly where existing mature vegetation provides visual screening within the wider landscape;
- Change to the character of the landscape of the site through the alteration of land use and the introduction of new temporary and permanent features;
- A permanent, long-term adverse impact on landscape character would occur due to physical impact on landscape within the site including introduction of hardstanding, signage, ground remodelling and other associated infrastructure within existing agricultural land and adjacent to existing highways. There will also be movement of vehicles and people within the site, a lighting strategy which will increase the number and intensity of light sources within the site;
- There is potential to affect the landscape setting of villages in close proximity to the site, particularly Sapcote, Stoney Stanton, Aston Flamville and Sharnford where there is potential intervisibility;
- There would be an adverse physical impact on landscape elements and features within the

site boundary caused by the localised removal of existing landscape features such as trees and hedgerows; and

- Potential adverse visual and tranquillity effects upon close proximity receptors from the local PRoW network, B4669, Stanton Lane, Coventry Road, B581, residential receptors at Stoney Stanton and Sapcote due to visibility of the completed link road scheme (including built development, traffic and lighting).

The scope of our assessment

The landscape and visual assessment will be undertaken in accordance with the 'Guidelines for Landscape and Visual Impact Assessment' (Third Edition, 2013), published by the Landscape Institute (LI) and the Institute for Environmental Management and Assessment (IEMA).

In compiling the baseline landscape and visual assessment, db symmetry will:

- review the planning policy context for the route;
- undertake a desktop study and web search of relevant background documents and maps;
- undertake a field assessment of local circumstances, including a photographic survey of the character and fabric of the route and its surroundings, using photography from a number of representative viewpoints. The field assessment will be undertaken by qualified landscape architects;
- provide an analysis of the likely landscape and visual effects of the proposed link road option during construction and operation, which is determined by combining the magnitude of the predicted change with the assessed sensitivity of the identified receptors. The nature of any predicted effects is also identified (i.e. positive/negative, permanent/reversible); and
- provide an analysis of likely cumulative landscape and visual effects.

The lighting impact assessment will be undertaken in accordance with the Institute of Lighting Professionals guidance in the manner described under Option A (above).

Potential mitigation

- Provision of planting along routes to assist in filtering and screening views of the proposals;
- Provision and enhancement of pedestrian/cycle connections;
- Development of a sensitive lighting strategy which follows key parameters designed to limit light spill such as maximum heights, directional units and specific light sources; and
- Earth bunding and/or acoustic fence provision along the route of the link road to provide noise screening which can then be landscaped to remain characteristic of the Stoney Stanton

Rolling Farmland.

4.6 ECOLOGY

Potential environmental effects

The potential environmental effects of the Eastern Villages Link Options on ecological receptors are the same as for the A47 Link Road and may arise through direct loss of habitat, the severance of important links for wildlife, disturbance during construction and operational phases to protected and notable species or indirect effects such as contaminated run-off, increased deposition of nitrates from air pollution, and lighting impacts.

There are no statutory designated sites that would be directly affected by the Eastern Villages link road options. There are a number of pLWS present in close proximity to both the southern and northern options proposed. The northern option would pass directly through a pLWS and it will also be assessed to see if it would meet full LWS criteria.

Both routes to the north and south pass through a mixture of arable and pasture fields that are surrounded by hedgerows with standard trees. There are some ditches and streams on both options that would need to be assessed for their value. The northern route would also pass through a small section of woodland. There will be the potential for protected and notable species to utilise the habitats present within the route corridor.

The scope of our assessment

The route options baseline assessment will include an updated desk-based study of local environmental records, an extended Phase 1 Habitat survey and a range of protected and notable species surveys following best practice methodology. This will highlight those important habitats and protected and notable species present or likely to be present within the proposed route option. A specific survey of the pLWS will also be undertaken to establish if it would meet the qualifying standards to be regarded as a full Local Wildlife Site (LWS).

Where important habitats or protected or notable species have been identified the information will inform the precise route location to retain and avoid those areas of greatest value where possible.

The proposed route will then be assessed for its potential impacts on habitats and protected species identified as being present, following the appropriate guidelines. The predicted impacts will be identified at the construction phase and during the operational phase of the proposed scheme.

Potential mitigation

Where potential adverse effects on ecological receptors are identified through the assessment, mitigation measures will be incorporated into the design to eliminate, reduce or offset any adverse effects, as appropriate.

Mitigation measures to avoid potential impacts on habitats and protected and notable species, will include provision of similar habitats to those lost or the provision of greater habitat value than those lost where appropriate. Specific mitigation may be incorporated such as displacement, translocation, sensitive timing of works and potentially off-site habitat creation.

If specific species are recorded that will be adversely impacted licenses may be required from Natural England prior to works commencing, these will detail the specific mitigation requirements and future management prescriptions to ensure there is no adverse impact on the species conservation status.

4.7 HERITAGE

Potential environmental effects

The potential environmental effects of the Eastern Villages Link Road Options on heritage assets may arise through direct changes to assets themselves, or through changes to their settings.

The Eastern Villages Link Road options do not coincide with the location of any designated heritage assets, such as scheduled monuments, listed buildings and conservation areas. The closest such assets are located in the cores of the settlements of Stoney Stanton and Sapcote, indicating a low potential for any adverse effects.

The primary effect of the proposals on the archaeological resource is likely to result from direct truncation and/or removal of remains during groundworks. There is evidence of known prehistoric and Roman activity in the immediate vicinity of Stoney Stanton and Sapcote, which indicates the potential for impacts on comparable remains through the implementation of the Eastern Villages Link Road Options.

The scope of our assessment

The cultural heritage baseline assessment will include examination and assessment of available archaeological and historical information to identify known and potential heritage assets within, or in proximity to, each of the proposed road options, undertaken in accordance with best-practice guidance. This will incorporate a programme of investigative fieldwork, which may include geophysical survey and trial trenching, as agreed to be necessary with relevant consultees.

In addition, the assessment will include field visits to all relevant designated heritage assets within an appropriate study area. The assessment will first identify the heritage significance of all relevant assets and thereafter assesses the impact of the road proposals on that significance.

Potential mitigation

Where potential adverse effects on heritage assets are identified through assessment, mitigation measures will be incorporated into the design to eliminate, reduce or offset any adverse effects, as appropriate.

Where potential impacts through changes to the setting of designated assets is identified, the implementation of landscape strategy will seek to limit the identified effects of the proposals.

To mitigate any identified effects on buried archaeological remains, the applicant will carry out any necessary programmes of archaeological mitigation works in advance of construction. This will likely comprise targeted areas of archaeological excavation prior to development carried out under Written Schemes of Investigation (WSI) that conform to recognised standards and guidance and which will have been prepared in consultation with and approved by the Leicestershire County Council archaeological advisor.

Five ◆ Your feedback and next steps

5.1 WE WELCOME YOUR VIEWS

DB Symmetry is committed to consulting thoroughly with the local community and stakeholders.

The current informal consultation focuses specifically on the main elements of the potential off-site highways works. In addition to its extensive highways modelling work, DB Symmetry places a high value on anecdotal evidence from local residents, business and stakeholders, in order to understand, in detail, how the proposals might affect the local area.

All feedback received will be carefully considered in the coming months, ahead of a full formal consultation on the proposals taking place later this year.

5.2 NEXT STEPS

Highways modelling will continue over the course of the summer, along with additional work on the environmental impact of the proposals. As part of this process, DB Symmetry will carefully consider all of the comments received during the course of this consultation, which will help it to refine its proposals.

As noted, the next stage will be a formal consultation, scheduled to take place late in 2019. This will cover every aspect of the proposals, including highways. The proposals consulted upon later this year will reflect up to date analyses of highways impacts and the proposed package of road improvements, incorporating reflections on feedback received during the course of this informal consultation. It will also set a timescale for delivering the proposed highways mitigation, link roads and other improvements.

The application for a Development Consent Order will follow in summer 2020.