East Midlands Gateway
Phase 2 (EMG2)

Document DCO 6.6/MCO 6.6

ENVIRONMENTAL STATEMENT

Main Statement

Chapter 6

Traffic and Transportation

August 2025

06

The East Midlands Gateway Phase 2 and Highway Order 202X and The East Midlands Gateway Rail Freight and Highway (Amendment) Order 202X

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6. Traffic and Transportation

6.1. Introduction

6.1.1. This Chapter of the ES assesses the effects of the EMG2 Project on traffic and transportation. It considers any potential environmental effects that could arise on the highway network, which are attributable to changes in predicted traffic flows associated with the EMG2 Project during both the construction and operational phases.

6.1.2. In brief, the EMG2 Project comprises three main component parts as shown in **Table 6.1**.

Table 6.1: Development Proposals Summary

Component	Details	Works Nos.
DCO Application		
EMG2 Works	Logistics and advanced manufacturing development, HGV parking and bus interchange located on the EMG2 Main Site south of East Midlands Airport and the A453, and west of the M1 motorway, comprising 300,000sqm ground floor area of B2/B8 use (assessed as 60,000sqm B2 and 240,000sqm B8 as set out in Section 7 of the TA), plus an allowance for 200,000sqm of B8 mezzanine floorspace	DCO Works Nos. 1 to 5 as described in the draft DCO (**Document DCO 3.1**).
	Together with an upgrade to the EMG1 substation and provision of a community park.	DCO Works Nos. 20 and 21 as described in the draft DCO (**Document DCO 3.1**).
Highway Works	Works to the highway network: the A453 EMG2 access junction works (referred to as the EMG2 Access Works); significant improvements at Junction 24 of the M1 (referred to as the J24 Improvements), works to the wider highway network including the Active Travel Link, Hyam's Lane Works, L57 Footpath Upgrade, A6 Kegworth Bypass/A453 Junction Improvements and Finger Farm Roundabout Improvements, together with other works.	DCO Works Nos. 6 to 19 as described in the draft DCO (**Document DCO 3.1**).
MCO Application		
EMG1 Works	Additional warehousing development on Plot 16 (26,500sqm plus a mezzanine allowance of 3,500sqm) together with works to increase the permitted height of the cranes at the EMG1 rail-freight terminal, improvements to the public transport interchange, site management building and the EMG1 Pedestrian Crossing.	MCO Works Nos. 3A, 3B, 5A, 5B, 5C, 6A and 8A in the draft MCO (**Document MCO 3.1**).

6.1.3. The boundary of these areas is identified on the Location Plans (Order Limits) (**Documents DCO 2.1/MCO 2.1),** whilst the separate components are identified on the Components Plan provided at **Document DCO 2.7/MCO 2.7**.

6.1.4. The potential effects of the EMG2 Project (as described in **Chapter 3 (Document DCO 6.3/MCO 6.3)**) are assessed for both the DCO Application and MCO Application as follows:

i. The DCO Application as set out in Sections 6.6 – 6.8 which includes residual effects following mitigation. The assessment includes the traffic generation from Plot 16 of the EMG1 Works which is within the MCO Application (which is negligible). These sections also therefore deal with the assessment of the DCO and MCO Applications together.

ii. The MCO Application as set out in Section 6.9.

iii. A cumulative assessment of the DCO Application, the MCO Application and other development as set out in Section 6.10.

6.1.5. Since April 2022, extensive pre-application discussions have been held with the 'Transport Working Group' (TWG) consisting of the following key statutory highway authorities to a varying degree, consultant representatives, and project team:

- National Highways (NH – managing the strategic road network)
- Leicestershire County Council (LCC – local highway authority)
- Nottinghamshire County Council (NCountyC)
- Derbyshire County Council (DCountyC)
- Leicester City Council (LCityC)
- Nottingham City Council (NCityC)
- Derby City Council (DCityC)
- Jacobs – National Highways representation
- Integrated Transport Planning – Travel Plan Co-ordinator for EMG1/EMG2
- AECOM – who manage the East Midlands Freeport Model on behalf of LCC
- Representatives from SEGRO (Applicant)

6.1.6. The purpose of forming the TWG was to provide continuous engagement and seek agreement on key aspects of the Transport Assessment (TA) (**Appendix 6A**, **Document DCO 6.6A/MCO 6.6A**) and the environmental assessment, including the traffic generation, assessment criteria and scope, traffic modelling approach and highway design/mitigation. The TWG has also covered sustainable transport related matters, which has fed into the Sustainable Transport Strategy included in **Appendix 6B** (**Document DCO 6.6B**) and Framework Travel Plan in **Appendix 6C** (**Document DCO 6.6C**).

6.1.7. Meetings have been held monthly with the TWG since April 2022 to provide continuous engagement on all aspects of the Transport Assessment. Since September 2024, an additional modelling meeting has been held monthly with the TWG focussing on strategic and detailed transport modelling related aspects of the project. All meetings have been minuted and are appended to the TA (**Appendix 6A**, **Document DCO 6.6A/MCO 6.6A)**. All meeting minutes up to at least June 2025 have been agreed with NH and NCountyC and all meeting minutes up to the end of 2024 have also been agreed with LCC. After the end of

2024, LCC stopped reviewing minutes and subsequently confirmed via email on 3 June 2025 that they *"will not be commenting or formally agreeing the TWG or modelling minutes as indicated in the actions below. These can reasonably remain your recorded record of the collaborative meetings undertaken".* Meetings with the TWG will continue throughout the DCO Examination period if required.

6.1.8. As part of the TA work, four traffic flow scenarios have been tested in Leicestershire's 2019 East Midlands Freeport Model (EMFM), which is a cordoned part of the larger Pan Regional Transport Model (PRTM). The EMFM has a base year of 2019 and is a highway assignment model for the typical morning and evening peak hour periods.

6.1.9. The four traffic flow scenarios are referred to as 'Stage 1A/2A modelling' and 'Stage 1B/2B modelling'. In summary Stage 1 is without the proposed Highway Works designed for the EMG2 Project and Stage 2 includes the proposed Highway Works. The four scenarios comprise the following:

- **Stage 1A modelling** (Proforma v14, Uncertainty Log v7, appended to the TA (**Appendix 6A**, **Document DCO 6.6A/MCO 6.6A**) = 2028/2038 forecast years with and without EMG2 Works (plus Plot 16), including consented and committed sites as well as draft Local Plan allocation sites and full redevelopment of the Ratcliffe on Soar Power Station site, which is authorised by a Local Development Order (LDO) and East Midlands Intermodal Park (EMIP) near A50 Junction 4.
- **Stage 1B modelling** (Proforma v14a, Uncertainty Log v7a, appended to the TA (**Appendix 6A, Document DCO 6.6A/MCO 6.6A**) = 2028/2038 forecast years with and without EMG2 Works (plus Plot 16), including consented and committed sites but excluding the draft Local Plan allocation sites and Ratcliffe on Soar Power Station site redevelopment proposals beyond that which is currently able to proceed under the LDO without further approval and EMIP.
- Stage 2A modelling = as per Stage 1A but with the inclusion of the proposed Highway Works, details of which are presented in Section 6.7.
- Stage 2B modelling = as per Stage 1B but with the inclusion of the proposed Highway Works, details of which are presented in Section 6.7.

6.1.10. The difference between Stage 1A/2A and 1B/2B modelling is the inclusion (1A/2A) or exclusion (1B/2B) of the Ratcliffe Power Station site redevelopment proposals over and above that currently able to proceed without further approval, EMIP and the draft Local Plan allocation sites, which represent the following projects:

- Isley Woodhouse (W1)
- Land North and South of Park Lane, Castle Donington (CD10)
- Land West of Hilltop Farm, Castle Donington (EMP89)
- Land North of J11/M42 (EMP82)
- Land North of Remembrance Way, Kegworth (EMP73)
- Land North of Derby Road, Kegworth (EMP73)

6.1.11. A full list of the assessed sites is provided within the Uncertainty Logs v7 and v7a, both of which are in Appendices 8 and 36 to the TA (**Appendix 6A**, **Document DCO 6.6A/MCO 6.6A**)**.**

6.1.12. The assessment methodologies to be adopted for this ES Chapter and the TA (**Appendix 6A**, **Document DCO 6.6A/MCO 6.6A**) were discussed in detail with the TWG and are set out in Technical Note EMG2-BWB-GEN-XX-RP-TR-0017_TA & ES Chapter Assessment Methodology appended to the TA (in Appendix 17 of the TA (**Appendix 6A**, **Document DCO 6.6A/MCO 6.6A**). It explains why different core scenarios are adopted in the TA and the ES, with the following scenarios adopted for this ES Chapter:

- Stage 1B modelling = core scenario
- Stage 1A modelling = sensitivity test to the core scenario
- Stage 2B modelling = residual scenario
- Stage 2A modelling = cumulative scenario

6.1.13. The reason Stage 1B modelling outputs form the core scenario for the ES Chapter is because the percentage increase in traffic from the EMG2 Works (plus Plot 16) is, for the majority, higher compared to Stage 1A. This is because there is less baseline traffic in Stage 1B because it excludes traffic from the Ratcliffe on Soar redevelopment, EMIP and draft Local Plan allocations. This is evidenced by the sensitivity test presented in in Section 6.6. The Stage 2B modelling outputs, inclusive of the proposed Highways Works, form the residual scenario presented in Section 6.8, with the Stage 2A modelling outputs, inclusive of the proposed Highways Works and Ratcliffe on Soar re-development, EMIP and draft Local Plan sites, forming the cumulative scenario presented in Section 6.10. This is in accordance with Circular 01/2022 and the Institute of Environmental Management and Assessment (IEMA) Guidelines: 'Environmental Assessment of Traffic and Movement' (EATM 2023) and ensures that a robust and complete assessment of the environmental impacts of the EMG2 Project are identified.

6.1.14. For the TA, the position is reversed and the Stage 1A modelling outputs form the core scenario, with Stage 1B modelling outputs forming a sensitivity test. This aligns with the highway authorities interpretation of the TAG M4 guidance. It presents a highly robust assessment from a highway capacity and mitigation perspective because total traffic flows within Stage 1A are higher compared to Stage 1B due to it including the Ratcliffe on Soar re-development, EMIP and draft Local Plan allocations and it does not include much of the highway mitigation which will inevitably be required for those developments. The physical highway mitigation proposed in the TA, is based on the Stage 1A core scenario as requested by the highway authorities although it should be noted that the impacts of the EMG2 Works (plus Plot 16) would also be mitigated if based on the Stage 1B modelling outputs as demonstrated by the sensitivity test set out in Section 6.6).

6.1.15. The ES Chapter will draw and expand on details from the TA (**Appendix 6A**, **Document DCO 6.6A/MCO 6.6A)**. The TA contains more detailed operational analysis of the traffic implications of the EMG2 Project on junction capacity and highway safety, focusing on the network peak periods. The traffic flow data used in this ES Chapter is based on 24-hour Annual Average Daily Traffic (AADT) flows taken from the 2019 EMFM.

6.1.16. The full list of supporting appendices and the corresponding DCO/MCO Document numbers is as follows:

- **Appendix 6A** – Transport Assessment (**Document DCO 6.6A/MCO 6.6A**)
- **Appendix 6B** – Sustainable Transport Strategy (**Document DCO 6.6B**)
- **Appendix 6C** – Framework Travel Plan (**Document DCO 6.6C**)
- **Appendix 6D** – ES Chapter Study Area figure (core assessment) (**Document DCO 6.6D/MCO 6.6D**)
- **Appendix 6E** – 2028 EMFM v/c ratio plots figure (core assessment) (**Document DCO 6.6E/MCO 6.6E**)
- **Appendix 6F** – 2028 EMFM v/c ratio plots figure (residual assessment) (**Document DCO 6.6F/MCO 6.6F**)

6.2. Scope and Methodology of the Assessment

Methodology

6.2.1. This section sets out the methodology for assessing any potential significant environmental effects of the EMG2 Project on the surrounding highway network and local community. It concentrates on the environmental effects in transport terms along the links which could experience a significant change in conditions as a result of the EMG2 Project. Receptors along these links are generally considered to be road users (motorised and non-motorised), properties and residents.

6.2.2. The assessments in this ES Chapter have been undertaken against the IEMA 2023 Guidelines, which supersedes the former 'Guidance Note Number 1: Guidelines on the Environmental Assessment of Road Traffic' (GEART, 1993). The purpose of the IEMA Guidance is to provide a systematic framework for the appraisal of road traffic effects arising from developments.

Assessment of Significance

6.2.3. **Chapter 1: Introduction and Scope** of this ES (**Document DCO 6.1/MCO 6.1**) sets out the general methodology and format of assessment and the various criteria for assessment. The following provides an overview of the assessment of significance relating specifically to traffic and transport.

6.2.4. The significance or importance of an environmental effect is relative to the sensitivity or quantity of a particular type of receptor and the magnitude of change. Therefore, receptors in this assessment are set out in accordance with their importance. **Table 6.2** categorises the traffic and transport receptors.

Table 6.2: Traffic and Transport Receptors

Sensitivity	Example of Receptor
High	Receptors of greatest sensitivity to traffic flow: e.g. schools, colleges, playgrounds, accident black spots, retirement homes, urban/residential roads without footways that are used by pedestrians
Moderate	Traffic flow sensitive receptors e.g. congested junctions, doctors' surgeries, hospitals, shopping areas with roadside frontage, roads with narrow footways, un-segregated cycleways, community centres, parks, recreation facilities
Low	Receptors with some sensitivity to traffic flow: e.g. places of worship, public open space, nature conservation areas, listed buildings, tourist attractions and residential areas with adequate footway provision
Negligible	Receptors with low sensitivity to traffic flows and those sufficiently distant from affected roads and junctions

6.2.5. The scale of impact on receptors are rated as negligible, slight, moderate and substantial. The definition of the scale of impact is summarised in **Table 6.3**.

Table 6.3: Definition of Impact Scale

Scale of Impact	Increase (or decrease) in Traffic	Definition
Substantial	Over 90%	An effect that will be important at borough, county, or regional level. If adverse, this effect could have implications on the decision making process, depending upon the relative importance attached to the issue.
Moderate	Over 60% and up to 90%	An effect that will be important at local level upwards but is unlikely to affect the overall decision making process.
Slight	Over 30% and up to 60%	An effect that may be a local issue but is unlikely to be of importance in the overall decision making process. This effect would nevertheless be relevant in the detailed design of the project.
Negligible	Less than 30%	An effect that is considered not to be significant or to have no influence. This is applicable where there is a neutral effect which is neither positive nor negative.

6.2.6. In summary, the IEMA Guidelines suggest that as a starting point, a 30% change in traffic flow represents a reasonable threshold for including a highway link within an environmental assessment. However, where there is a significant change in the composition of the traffic flow, for example a greater increase in HGVs, a lower threshold may be appropriate. Consideration should however also be given to links with low existing base flows, or a low composition of HGVs, as small increases can cause significant percentage growth which may not cause any material effects in reality e.g. one HGV increasing to two HGVs per day equates to a 100% increase.

6.2.7. The significance of any effect within this assessment is calculated by combining the importance of the receptor (**Table 6.2**) with the scale of impact (**Table 6.3**), through a matrix table, as shown in **Table 6.4**. Those entries highlighted within **Table 6.4** below denote those which could be defined as significant in EIA terms. The significance of each effect will be considered against the criteria within the IEMA Guidelines, as discussed later in this section. However, for many effects there is a need for interpretation and judgement, particularly where baseline traffic flows are low, meaning small increases result in an exacerbated percentage growth that may not always cause adverse effects.

Table 6.4: Methodology for Determining Sensitivity

Receptor Sensitivity	Scale of Impact			
	Substantial	**Moderate**	**Slight**	**Negligible**
High	Substantial	Substantial	Moderate	Slight
Moderate	Substantial	Moderate	Slight	Negligible
Low	Moderate	Slight	Negligible	Negligible
Negligible	Slight	Negligible	Negligible	Negligible

6.2.8. In addition to the impact of significance, this assessment also takes into account whether the environmental effects are:

- Short, medium or long term;
- Direct or indirect; and
- Permanent or temporary.

6.2.9. To determine the environmental effects of the change in traffic flows, a study area must be defined. In accordance with IEMA Guidelines, the following broad rule of thumb should be used as a screening process to limit the extent and scale of the assessment.

- Rule one – *"include highway links where traffic flows will increase by more than 30% (or the number of heavy goods vehicles will increase by more than 30%)"*
- Rule two – *"include highway links of high sensitivity where traffic flows have increased by 10% or more"*.

6.2.10. There is no suggestion that a 10% or 30% increase in traffic will necessarily cause a detrimental effect on the operation or safety of a road or junction or have any moderate to substantial adverse environmental effects. This is because other factors along roads play a part in limiting any effects such as highway geometry, infrastructure, layouts and existing traffic flows. Nevertheless, the 10% or 30% increase are useful points of reference to commence assessment from an ES perspective, noting that an element of judgement is required, particularly for roads with low levels of baseline traffic or HGV compositions.

6.2.11. The IEMA Guideline identifies 'sensitive' links as those which include accident black spots, conservation areas, hospitals, links without footways with high pedestrian flows etc. These characteristics will therefore be used when considering the sensitivity of any links that experience traffic increases of over 10% or 30% with the EMG2 Project in place.

6.2.12. Day to day variation in AADT traffic is typically around 10%, meaning that an increase of less than 10% is unlikely to have any discernible environmental effects and would not require assessment. Therefore, any links experiencing less than a 10% increase in traffic have been disregarded.

Matters to be Assessed

6.2.13. Within the ES study area, the effect of the additional traffic on the following matters identified in the IEMA Guidelines (set out below) will be considered:

- Severance of communities;
- Driver vehicle and passenger delay;
- Non-motorised user delay;
- Non-motorised user amenity;
- Fear and intimidation on and by road users;
- Road user and pedestrian safety; and
- Hazardous/large loads.

6.2.14. The significance of each effect will be considered against the thresholds within the IEMA Guidelines (as set out in **Table 6.4**). However, the IEMA Guidelines state that:

> *"…for many effects there are no simple rules or formulae which define the thresholds of significance and there is, therefore, a need for interpretation and judgement on the part of the assessor, backed-up by data or quantified information wherever possible. Such judgements will include the assessment of the numbers of people experiencing a change in environmental impact as well as the assessment of the damage to various natural resources"*

6.2.15. The magnitude of each potentially significant effect has also been considered, and an assessment has been made, as to whether the EMG2 Project would result in negligible (i.e. no or barely perceptible changes), slight, moderate or substantial effects and whether they would be adverse or beneficial. The criteria used to determine the significance and magnitude of each of the traffic-related environmental effects is based on the advice given in the IEMA Guidelines, as summarised below.

Severance of Communities

6.2.16. Severance is described as *"the perceived division that can occur within a community when it becomes separated by major transport infrastructure".* For example, severance may be affected by an increase in traffic that could create difficulties for people crossing a road or a physical barrier created by infrastructure.

6.2.17. The effects of severance can be applied to motorists, pedestrians or residents. The Department for Transport (DfT) historically set out a range of indicators for determining the significance of severance. Whilst the thresholds no longer feature in DfT guidance, they have not been superseded by subsequent changes to guidance and the following thresholds continue to be adopted.

- 90% - "substantial";
- 60% - "moderate";

- 30% - slight; and
- <10% (+/-10%) – “negligible”.

6.2.18. Whilst the above thresholds are used as a starting point, attention should be given to links where baseline flows are low and so even small increases in traffic from the EMG2 Project result in high percentage increases that may not necessarily have any substantial effects on severance.

6.2.19. Several factors are considered in determining the existing level of severance. These include road width, traffic flow and composition, vehicle speeds and the availability of pedestrian crossing facilities.

Driver Vehicle and Passenger Delay

6.2.20. Delays to existing traffic can occur at several locations within the highway network due to additional traffic generated by a new development. The IEMA Guidelines state that delays are only likely to be significant when the traffic on the network surrounding the development is already at, or close to, the capacity of the system. Therefore, details from the TA will be used to understand the effects of the EMG2 Project on driver delay, as that report contains more detailed analysis on junction capacity, queueing and delays using the 2019 EMFM model and industry standard VISSIM, LinSig and Junctions 11 modelling software.

Non-Motorised User Delay

6.2.21. The assessment of non-motorised user delay serves as a proxy for the delay that other modes of non-motorised users may experience when crossing roads and is closely related to severance. Delays will also depend on the general level of pedestrian activity, visibility and general physical conditions of the EMG2 Project. Given the range of local factors and conditions that can influence pedestrian delay, it is often that delays are more significant in rural areas compared to urban areas.

Non-Motorised User Amenity

6.2.22. Non-motorised user amenity is broadly defined as *“the relative pleasantness of a journey and is considered to be affected by traffic flow, traffic composition and pavement width/separation from traffic”.* The former 1993 IEMA Guidelines suggested that a tentative threshold for judging the significance of changes in pedestrian amenity would be where traffic flows (or HGV component) are halved or doubled. Whilst the 1993 Guidelines have been superseded, the thresholds continue to be used as a starting point for assessments on non-motorised user amenity.

Fear and Intimidation

6.2.23. The scale of fear and intimidation experienced by pedestrians is dependent on the volume of traffic, HGV composition, its proximity to people and the lack of protection caused by factors such as narrow pavement widths, as well as the speed and size of vehicles.

6.2.24. Whilst it is recognised as an important environmental impact, there are no commonly agreed thresholds for estimating these levels of impact. Consequently, a level of judgement needs to be exercised in determining the degree of fear and intimidation, giving special attention to areas where there are likely to be problems, such as high speed sections of road, locations of turning points and inherent lack of protection created by factors such as narrow footways or physical features causing obstructions in the highway.

Road User and Pedestrian Safety

6.2.25. The former 1993 IEMA Guidelines advocated the calculation of road accident rates as an approximation of the potential for road safety impacts i.e. by knowing the current accident statistics and increase in vehicle movements associated with a new development, it is possible to calculate the potential increase in collision rates. The TA has reviewed recent Personal Injury Collision statistics in detail, which will be referred to within the assessment of road user and pedestrian safety.

Hazardous Loads/Large Loads

6.2.26. Where developments are expected to transport dangerous or hazardous loads by road, then this should be recognised within any traffic and movement assessment. Any movement of large (abnormal) loads is regulated by National Highways and is subject to a separate agreement. At this stage, it is unknown whether the EMG2 Project will generate any dangerous, hazardous or abnormal loads, although the total number of HGVs being assessed would remain unchanged and considers all different types. Therefore, no further assessment is undertaken in this ES Chapter with regards to hazardous or large loads.

Geographical Scope

6.2.27. The study area for the ES core scenario has been identified using the Stage 1B modelling outputs from EMFM 2019, which is well validated at link flow level and provides traffic flow outputs in AADT format. The assessment will start by understanding where a 10% increase in AADT flows is expected to occur across all links in the model area and from there any non-sensitive links will be analysed and only included where there is predicted to be a 30% increase in AADT flows. As mentioned, where links carry low levels of baseline traffic, judgement has been made as to whether they require inclusion in the study area.

Temporal Scope

6.2.28. The IEMA Guidelines note that developments may pass through a number of stages, during which the volume and type of traffic may be different, leading to different impacts. For example, traffic generated during the construction phase is likely to be different to the operational phase, meaning an assessment may be required to address different stages of the development.

6.2.29. Traffic flows have been obtained from the EMFM 2019 which tested the impacts of the EMG2 Project during both its peak construction and operational stages. An opening year of 2028 has been adopted for the assessment year, which tested full completion of the development i.e. 530,000sqm of industrial floorspace. This is worst-case from an environmental impact

perspective as it would result in a higher percentage increase in flows compared to baseline conditions.

PINS Scoping

6.2.30. An EIA Scoping Report (**Appendix 1C**, **Document DCO 6.1C/MCO 6.1C**) was produced by Delta Planning in August 2024 seeking confirmation from the Secretary of State on the level of detail to be provided in the ES. It confirmed that 'Traffic and 'Transport' is a key factor that could be an area of potential significance and is therefore to be included in the ES. **Chapter 1: Introduction and Scope** of this ES **(Document DCO 6.1/MCO 6.1)**) covers full details of the EIA Scoping, whilst the following section summarises the transport related matters that are to be considered.

6.2.31. Section 8 of the EIA Scoping Report confirms that the DCO application will be supported by a comprehensive TA in accordance with national guidance and other relevant background documents seeking to demonstrate how the EMG2 Project meets the adopted standards and policy requirements. A Sustainable Transport Strategy and Framework Travel Plan have also been produced by Integrated Transport Planning and form part of the wider mitigation strategy presented in the TA upon which this assessment is based. These documents are included in **Appendix 6B (Document DCO 6.6B)** and **Appendix 6C (Document DCO 6.6C)** respectively.

6.2.32. The Planning Inspectorate, on behalf of the Secretary of State, provided a Scoping Opinion on 24 September 2024, a copy of which is included as **Appendix 1D (Document DCO 6.1D/MCO 6.1D)**. Section 3.3 covers 'Traffic and Transport' and a summary of the Planning Inspectorate's comments, along with the action taken in the ES Chapter to address them is provided in **Table 6.5**.

Table 6.5: Planning Inspectorate's Scoping Comments and Actions

ID	Reference	PINS Comments	Action Taken
3.3.1	Hazardous/ abnormal loads	The Scoping Report proposes to scope out hazardous / abnormal loads. No details are provided regarding the type of load which will arrive or depart the rail freight terminal. In this absence the ES should include an assessment of this matter	The number of hazardous/abnormal loads cannot be quantified at this stage given construction and operational requirements have not been confirmed. Any hazardous loads would be transported via HGVs and so have been accounted for in the overall HGV numbers assessed as part of the transport modelling work. Whilst the delivery of abnormal loads would normally be planned outside normal working hours, it is possible that some deliveries of major plant and equipment may require special delivery requirements during normal

ID	Reference	PINS Comments	Action Taken
			operating hours. In all instances, such deliveries will be planned with appropriate highway authorities and police and executed in compliance with those requirements as per the requirements of the CTMP a copy of which is contained with the Construction Environmental Management Plan (CEMP) (**Document DCO 6.3A**)
3.3.2	Methodology	The ES should include details of the methodology and guidance that has been followed in undertaking the Transport Assessment. The ES should consider impacts of the development on capacity and operation of the rail network, including the potential impact of increased rail freight movements on environmental matters, for example accidents and safety and indirect effects on passenger rail transport operations and growth.	The methodology undertaken in this TA follows national requirements in Circular 01/2022, the Department for Transports TAG M4, NNNSP and LCC guidance documents. There will be no changes to the number of trains permitted to use the EMG1 rail freight terminal as part of the EMG2 DCO or EMG1 MCO.
3.3.3	Transport Working Group	A record of the meetings and outcomes of the TWG should be appended to the ES, alongside technical notes, reports and drawings.	All minutes from the TWG and modelling meetings are appended to the TA - which is **Appendix 6A** (**Document DCO 6.6A/MCO 6.6A**) to this chapter –references for the associated Technical Notes, reports and drawings are set out in the relevant sections of this ES and TA.
3.3.4	CTMP	The CTMP should be appended and set out proposals for monitoring HGV movements to and from the development.	The CTMP is contained in the CEMP (**Appendix 3A**, **Document DCO 6.3A**) and includes a commitment to monitoring construction traffic numbers and ensuring they fall within the maximum limit specified in the CTMP and HGV Route Plan which have been agreed with NH.
3.3.5	Traffic Modelling	Traffic modelling should be appended taking account of all proposed floorspace and	All details regarding traffic modelling using EMFM, VISSIM, LinSig and Junctions

ID	Reference	PINS Comments	Action Taken
		land uses. The scope of the modelling should be discussed and agreed.	11 are provided in the TA, with the relevant outputs appended. The modelling follows a methodology and scope that has been agreed with the TWG, aside from LCC.
3.3.6	Heavy Goods Vehicle (HGV) Movements	Details of the anticipated number of HGVs should be provided during both construction and operational phases.	The number of HGVs forecast to be generated during the construction and operational stages of development are provided in Section 7 of the TA and have been agreed with the TWG, aside from LCC.
3.3.7	SRN Mitigation	The scope of mitigation works on the SRN should be discussed and where possible agreed with the relevant bodies.	Full details of the highway mitigation on the SRN have been discussed and shared with the TWG. The general arrangements have been designed and tested.
3.3.8	A50 Transport Corridor	The potential effects of the development on the A50 corridor should be included.	The Area of Influence and study area for the TA extends to A50 Junction 1. This junction has been tested for capacity to understand the impacts of EMG2, details of which are provided in Section 10 of the TA. No other part of the A50 corridor to the west falls within the Area of Influence. This means that past A50 Junction 1, impacts from the EMG2 will be minimal and require no further consideration. This position has been agreed with NH.

Statutory Consultation

6.2.33. A six-week period of consultation was undertaken between Monday 3rd February 2025 and Monday 17th March 2025. This included the presentation of draft application material, including a draft Preliminary Environmental Impact Report in the form of an early draft ES chapter and TA as advanced as it could be at that stage. At the time, full transport modelling information was unavailable and was in the process of being finalised.

6.2.34. NH provided formal consultation comments within a letter dated 14th March 2025 confirming their key interest is the M1 motorway, A453, A50 and A42 Trunk Roads but stated that

"National Highways is supportive of the proposed development in principle and acknowledges that mitigation in the area of M1 Junction 24 will be required". SEGRO prepared a letter dated 17 April 2025 responding to NH comments, explaining the work undertaken to date and the next steps and current position with NH on key items, particularly the traffic modelling and proposed highway mitigation.

6.2.35. LCC provided consultation comments by letter dated 13th March 2025 highlighting where there were gaps in the information and what remains outstanding. Delta Planning produced a letter dated 14th April 2025 responding to LCC's comments confirming that, as previously stated, full transport modelling had not been completed prior to the consultation and that a complete ES Chapter and TA would be submitted with the applications. A second letter was subsequently received from LCC on 1st May 2025.

6.2.36. In addition, consultation comments were also received from Leicester City Council, Derby City Council, Long Whatton & Diseworth Parish Council as well as Wings Communities Ltd (known as Protect Diseworth).

6.2.37. Following consideration of the consultation responses a decision was taken by the Applicant to carry out a second consultation (non-statutory) when further information on the highway assessment was available including transport modelling. This was undertaken between the 1 July 2025 and 29 July 2025.

6.2.38. All comments received have been taken into consideration in this ES Transport Chapter and associated TA.

6.3. Policy, Guidance and Legislative Context

Introduction

6.3.1. The following details set out the relevant policies that are specific to traffic and transport.

National Planning Policy Framework 2024

6.3.2. The NPPF requires that all developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment. Paragraph 115 states:

> *"In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:*
>
> *a) "sustainable transport modes are prioritised taking account of the vision for the site, the type of development and its location;*
>
> *b) Safe and suitable access to the site can be achieved for all users;*
>
> *c) The design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code; and*
>
> *d) Any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree through a vision led approach."*

6.3.3. Paragraph 116 of the NPPF goes on to state that:

> *"Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network, following mitigation, would be severe, taking into account all reasonable future scenarios."*

6.3.4. Paragraph 117 of the NPPF examines the transport implications of the development, which should:

> *a) "Give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;*
>
> *b) Address the needs of people with disabilities and reduced mobility in relation to all modes of transport;*

c) *Create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;*

d) *Allow for the efficient delivery of goods, and access by service and emergency vehicles; and*

e) *Be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations."*

National Networks National Policy Statement (March 2024)

6.3.5. The National Networks National Policy Statement (NPS) sets out the need for, and Government's policies to deliver, development of Nationally Significant Infrastructure projects on the national road and rail networks for England. National networks include the railways and the Strategic Road Network.

6.3.6. The National Network faces a number of challenges in terms of maintaining network performance and meeting customer needs. This is triggered by a growing demand and greater reliance on movements using the National Network, which plays a significant role in supporting economic growth. Paragraphs 3.7 and 3.8 of NPS states:

"The government's Levelling Up the United Kingdom White Paper recognises the role that transport can play in boosting productivity, by connecting people to jobs, and businesses to each other, and sets out an ambition to level up transport connectivity. It recognises the role that specific projects on national networks can play in improving connectivity between towns and cities to boost growth."

"Transport infrastructure is a catalyst and key driver of growth, and it is important that the planning and development of infrastructure fully considers the role it can play in delivering sustainable growth, how it can support local and regional development plans and the growth aspirations of local authority areas. This will include exploring options to unlock sites for housing and employment growth made accessible by sustainable transport and the regenerative impact major infrastructure can play in driving renewal, increasing density, as well as creating new places and communities."

6.3.7. Paragraph 3.17 relates to the Governments environmental and net zero policies and states:

"Any national network Nationally Significant Infrastructure Project (NSIP) should seek to improve and enhance the environment irrespective of the reasons for developing the scheme. However, there may be instances where infrastructure interventions are required to bring about improvements to environmental outcomes. Such outcomes might include contributing to net zero targets through, for example, electric vehicle charging, electrification of rail, improvements to air quality through reductions in congestion, or delivering localised environmental improvements to cultural heritage, landscape, or biodiversity."

6.3.8. Paragraph 3.22 sets out the following concluding statement:

> *"The government has, therefore, concluded that at a strategic level there is a compelling need for development of the strategic road and strategic rail networks, and strategic rail freight interchanges (SRFIs) – both as individual networks and as a fully integrated system. The Examining Authority and the Secretary of State should, therefore, start their consideration of applications for development consent for the types of infrastructure covered by this National Policy Statement (NPS) on this basis. The Secretary of State should give substantial weight to considerations of need where these align with those set out in this NPS."*

6.3.9. The NPS sets out a range of measures to help make the best use of capacity on the National Network. Paragraph 3.42 states:

> *"There are interdependencies between the efficient operation of the SRN and its impact on the local road network and vice versa. Effective operation and optimisation of both the SRN and the local road network are essential to achieve the outcomes set by the Transport Decarbonisation Plan. There are a range of measures that can be employed to make the best use of all road capacity (not just the SRN) which may impact upon demand for the SRN. These include:*
>
> - *Promoting journey choice by enabling more active travel and public transport (including buses, coaches and rail) in urban areas whilst not restricting other transport options. The creation of mobility hubs and improving integration between modes through park-and-ride services, cycle parking provision at rail stations, and the coordination of bus / rail timetables, can all contribute.*
> - *Providing genuine choice in transport mode by increasing accessibility to public transport, connecting places and by improving the environment for journeys by active travel, in both urban and rural areas. The government has committed to transforming local transport systems through Bus Back Better strategy and the City Region Sustainable Transport Settlements. In addition, Bus Back Better sets out measures enabling buses to be used by all thereby enhancing levels of accessibility.*
> - *Integrating with spatial planning can support walking, wheeling and cycling or public transport as the natural first choice for journeys. Where developments are located, how they are designed and how well public transport services are integrated has a huge impact on whether people's natural first choice for short journeys is on foot or by cycle, by public transport or by private car. The Strategic Road Network and the delivery of sustainable development Circular 01/2022 establishes how additional spatial considerations in transport decisions can help tackle congestion and support better journeys for all road users.*
> - *Greater deployment of technology can support more effective use of the network. Such technological interventions might include greater use of digital signalling, greater provision of route information to drivers, alternative fuels, self-driving vehicles or digital connectivity.*
> - *Bringing forward maintenance schemes and small-scale enhancements to ensure that the SRN is operating as effectively as possible.*"

6.3.10. Paragraph 3.43 states:

> *"The Transport Decarbonisation Plan recognises the need to base local transport planning on setting the outcome communities want to achieve and provides the transport solutions to deliver those local transport outcomes (vision-led approaches including 'vision and validate,' 'decide and provide' or 'monitor and manage'). However, there are varying challenges that will be presented by certain sites based on their land use, scale and/or location. In some cases, they will not always offset the need to increase capacity. The competing demands for road space will remain or even increase with diversification in the type and number of users, the vehicle they use or where alternative sustainable modes are prioritised."*
>
> *"Whilst the majority of journeys on the SRN will continue to be made by private motor vehicle and over long distances, there may be opportunities to consider how the SRN can assist in delivering sustainable transport interventions or outcomes connecting communities and enabling active travel (where road safety considerations allow). Transport corridors created by the SRN can also be used to support public transport by facilitating coach journeys and park-and-ride schemes, providing vital connections to jobs, international gateways and between our towns and cities. In addition, safe links and movements across the SRN can be incredibly valuable to support better accessibility and connectivity and enhance the local active travel and public transport offer, including in rural areas."*

6.3.11. Paragraph 4.12 refers to Environmental Statement's and states:

> *"A key part of environmental assessment is the consideration of cumulative effects. The applicant should provide information on how the effects of the proposal would combine and interact with the effects of other development, where relevant. For most practical purposes this means that the applicant should consider the impact of other existing and committed developments within an appropriate geographical area and assess the additional impact of their own development…"*

6.3.12. Paragraphs 4.57 and 4.56 consider 'Road Safety' and state:

> *"Highways developments provide an opportunity to make significant safety improvements and significant incident reduction benefits when they are well designed. Some developments may have safety as a key objective, but even where safety is not the main aim of a development, the opportunity should be taken to improve safety, including introducing the most modern and effective safety measures where proportionate. Consideration should also be given to wider transport objectives, including expanding active travel, and creating safe and pleasant walking, wheeling and cycling environments. In developing roads schemes the applicant should have due regard to the needs of drivers and riders and the imperative to ensure road user safety…"*
>
> *"The applicant should undertake an objective assessment of the impact of the proposed development on safety including the impact of any mitigation measures. This should use the methodology outlined in the guidance from Department for Transport's Transport Analysis Guidance and from National Highways. They should*

also put in place arrangements for undertaking the road safety audit process and ensuring their implementation. Road safety audits are a mandatory requirement for highway improvement schemes in the UK (including motorways). Road safety audits are intended to ensure that operational road safety experience is applied during the design and construction process so that the number and severity of collisions is as low as is reasonably practicable."

6.3.13. Paragraphs 5.269 to 5.89 consider 'Impacts on transport networks', including that of Strategic Rail Freight Terminals. Whilst such a facility is not proposed as part of the EMG2 Project, improvements to the existing facility at EMG1 is included for within the MCO. This considers *"the impact of construction on local networks whilst the scheme is being developed, and the impact of the scheme on wider transport networks once it is operational",* considering the following items:

i. *applicants assessment of road and rail developments, including Strategic Rail Freight Interchanges*

ii. *mitigation*

iii. *decision making.*

6.3.14. Of particular relevance are the following key paragraphs which are summarised below:

- *5.271 – consultation of the relevant authorities as appropriate on the assessment of transport impacts*
- *5.273 - applicants should seek to offer an integrated transport outcome, significantly considering opportunities to support other sustainable transport modes, as well as improving local connectivity and accessibility in developing infrastructure*
- *5.274 - the applicant should provide evidence that as part of the project they have addressed any new or existing severance issues and/or safety concerns that act as a barrier to non-motorised users*
- *5.283 - the applicant should provide evidence that the development improves the operation of the network and assists with capacity issues*
- *5.286 - the Examining Authority and the Secretary of State should give due consideration to impacts on local transport networks and policies set out in existing and emerging local plans and Local Transport Plans, during both construction and operation*
- *5.287 - consideration should also be given to whether the applicant has maximised opportunities to allow for journeys associated with the development to be undertaken via sustainable modes*
- *5.288 - Schemes should be developed, and options considered, in the light of relevant policies and plans, both national and local, taking into account local models where appropriate*
- *5.289 - Infrastructure development should recognise the importance of providing adequate lorry parking facilities, taking into account any local shortages, to reduce the risk of parking in locations that lack proper facilities or could cause a nuisance.*

For strategic rail freight interchanges, facilities should serve those drivers using the site in question.

Department for Transport Circular 01/2022

6.3.15. On 23 December 2023, the Department for Transport (DfT) issued new policy within Circular 01/2022 in relation to the SRN. It sets out how the Secretary of State will engage with communities and the development industry to deliver sustainable development whilst safeguarding the primary function and purpose of the SRN in England.

6.3.16. The Circular 01/2022 'Strategic Road Network and the Delivery of Sustainable Development' replaces the policies set out in the DfT Circular 02/2013 of the same title. The policy is intended for all parties involved in development proposals which may result in traffic or other impacts on the SRN. It should be read in conjunction with the NPPF, Manual for Streets, Local Transport Note 1/20 and all other local planning policy documents.

6.3.17. Paragraphs 47 to 52 relate to 'Assessment of Development Proposals' and state:

"47. Where the company is requested to do so, it will engage with local planning authorities and development promoters at the pre-application stage on the scope of transport assessments/statements and travel plans. This process should determine the inputs and methodology relevant to establishing the potential impacts on the SRN and net zero principles that will inform the design and use of the scheme. Development promoters are strongly encouraged to engage with the company to resolve any potential issues and maximise opportunities for walking, wheeling, cycling, public transport and shared travel, as early as possible[footnote 18].

48. Where a transport assessment is required, this should start with a vision of what the development is seeking to achieve and then test a set of scenarios to determine the optimum design and transport infrastructure to realise this vision. Where such development has not been identified in an up-to-date development plan (or an emerging plan that is at an advanced stage[footnote 19]), developers should demonstrate that the development would be located in an area of high accessibility by sustainable transport modes[footnote 20] and would not create a significant constraint to the delivery of any planned improvements to the transport network or allocated sites.

49. A transport assessment for consideration by the company must also consider existing and forecast levels of traffic on the SRN, alongside any additional trips from committed developments[footnote 21] that would impact on the same sections (link or junction) as the proposed development. Assumptions underpinning projected levels of traffic should be clearly stated to avoid the default factoring up of baseline traffic. The scenario(s) to be assessed, which depending on the development and local circumstances may include sensitivity testing, should be agreed with the company; where a scenario with particularly high or low growth is proposed, this should be supported by appropriate evidence. Planned improvements to the SRN or local road network should also be considered in any assessment where there is a high degree of certainty that this will be delivered[footnote 22].

50. An opening year assessment to include trips generated by the proposed development, forecasted growth and committed development shall be carried out to establish the residual transport impacts of a proposed development. For multi-phase developments, additional assessments shall be provided based on the opening of each phase.

51. Where a transport assessment indicates that a development would have an unacceptable safety impact or the residual cumulative impacts on the SRN would be severe, the developer must identify when, in relation to the occupation of the development, transport improvements become necessary.

52. The scope and phasing of necessary transport improvements will normally be defined by the company in planning conditions that seek to manage development in line with the completion of these works. In such circumstances, modifications to the SRN must have regard to the need to future-proof the network, while its delivery may require a funding agreement between the development promoter and the company."

6.3.18. Footnote 21 referenced in Paragraph 49 of the Circular 01/2022 states:

"Where development proposals are consistent with an up-to-date plan or strategy (or where there is no up-to-date plan or strategy), this should include all relevant development that is consented or allocated where there is a reasonable degree of certainty will proceed within the next 3 years and include the full amount of development to be built. Where development proposals are not consistent with an up-to-date plan or strategy, this should include all relevant development that is consented or allocated over the entirety of the plan period. In some instances, due regard should be had to permissions and allocations in neighbouring authorities. The inclusion or exclusion of specific developments should be agreed with the local planning authority at pre-application stage."

IEMA Guidelines: Environmental Assessment of Traffic and Movement

6.3.19. The EMG2 Project triggers the requirement for an EIA. The guidance for Environmental Assessment is set out in the IEMA Guidelines: Environmental Assessment of Traffic and Movement (July 2023).

6.3.20. Paragraph 2.23 states that:

"Different traffic forecasts may have to be produced for each stage, which may also require the estimation of the changing patterns of general traffic levels in order to provide estimates of different baseline conditions. Use should be made of available datasets (e.g. Local Plan Traffic Models, Department for Transport Trip End Model Presentation Program (TEMPro) and National Traffic Model). It may also be necessary to make an assumption with regard to other existing and/or approved projects and forecasted changes in the highway network that could occur over the time period. These assumptions will need to be based on best judgement taken in

consultation with the local planning authority. Any changes in ambient environmental characteristics should also be taken into account."

6.3.21. Paragraph 2.24 of the IEMA Guidelines states:

"Transport Assessments are principally interested in evaluating a situation when traffic flows are at their greatest. This may involve looking at a period sometime in the future when traffic from the project is added to traffic flows on the surrounding network, which has itself increased due to natural traffic growth. Such a situation clearly presents the critical traffic pattern, but the natural increase of traffic will generally have the effect of diluting the environmental impact of a project. The greatest environmental change will generally be when the project traffic is at the largest proportion of the total flow. It is therefore recommended that the environmental assessment should be undertaken at the construction/decommissioning phase, year of opening of the project or the first full year of its operation."

6.3.22. Paragraph 2.29 discusses the baseline assessment and states the following:

"Future baseline and cumulative assessment should not be confused. They are two different considerations within the environmental assessment process. Derived forecast traffic growth (e.g. TEMPro) should be utilised to derive future year baseline traffic conditions. However, discrete projects within the agreed study area that are existing, approved or likely to come forward (where sufficient certainty and relevant information about the project exists) should not be added to the baseline scenario and should be considered in the cumulative scenario. The competent traffic and movement expert should exercise care to ensure:

- *'Double counting' is avoided when applying growth factors to the baseline that may have been influenced by approved projects that are being considered in the cumulative scenario,*
- *The proposed transport model has adequate scope to model cumulative scenarios (as they may differ from those required in the Transport Assessment).*

North West Leicestershire District Council Adopted Local Plan (2021)

6.3.23. The current development plan for the local area is the NWLDC Local Plan, which was formally adopted in 2017 and sets out the strategy for delivering homes, jobs and infrastructure across the district between 2011 and 2031. The Local Plan has been subject to a partial review which was adopted in March 2021.

6.3.24. The role of the Local Plan is to identify the scale of development and allocate sites to meet the development needs of NWLDC in order to achieve the districts vision for growth. Furthermore, the Local Plan seeks to identify key local issues and provide a set of policies to manage change which will be used by decision makers to determine planning applications.

6.3.25. Section 4 sets out the vision for the Local Plan part and states:

> *"Businesses will choose to locate and grow in this area, taking advantage of its excellent location in the centre of the country, close to major road and rail networks and a major international airport. The East Midlands Enterprise Gateway, focussed on East Midlands Airport, Donington Park and the East Midlands Gateway Rail Fright Interchange, will be recognised as a key destination in its own right. This strongly performing economy will be reflected in low unemployment and reduced instances of deprivation."*

6.3.26. The Local Plan sets out 15 objectives to meets its ambitions. These are:

- ***Objective 1*** *- Promote the health and wellbeing of the district's population.*
- ***Objective 2*** *- Support the delivery of new homes balanced with economic growth to provide a stock of housing that meets the needs of the community, including the need for affordable housing.*
- ***Objective 3*** *- Ensure new development is of a high quality of design and layout whilst having due regard to the need to accommodate national standards in a way that reflects local context and circumstances. 21*
- ***Objective 4*** *– Ensure regard is had to reducing the need to travel and to maintaining access to services and facilities including jobs, shops, education, sport and recreation, green space, cultural facilities, communication networks, health and social care.*
- ***Objective 5*** *- Support economic growth throughout the district and the provision of a diverse range of employment opportunities including the development of tourism and leisure.*
- ***Objective 6*** *- Enhance the vitality and viability of the districts town and local centres, with a particular focus on the regeneration of Coalville, in ways that help meet the consumer needs.*
- ***Objective 7*** *- Enhance community safety so far as practically possible and in a way which is proportionate to the scale of development proposed whenever allocating sites for development or granting planning permission.*
- ***Objective 8*** *- Prepare for, limit and adapt to climate change.*
- ***Objective 9*** *- New developments need to be designed to use water efficiently, to reduce flood risk and the demand for water within the district, whilst at the same time taking full account of flood risk and ensuring the effective use of sustainable urban drainage systems (SUDs).*
- ***Objective 10*** *- Conserve and enhance the identity, character and diversity and local distinctiveness of the district's built, natural, cultural, industrial and rural heritage and heritage assets.*
- ***Objective 11*** *- Protect and enhance the natural environment including the district's biodiversity, geodiversity and water environment areas identified for their importance.*

- ***Objective 12*** *- Conserve and enhance the quality of the district's landscape character including the National Forest and Charnwood Forest and other valued landscapes.*
- ***Objective 13*** *- Take account of the need to reduce the amount of waste produced.*
- ***Objective 14*** *- Seek to deliver the infrastructure needs of the area, including Green sustainable development.*
- ***Objective 15*** *- Take full account of the need to safeguard mineral resources including sand and gravel, igneous rock and brickclay.*

6.3.27. Of key importance on the Local Plan is Policy Ec2(2) 'New Employment Sites'. This enables employment development to come forward where evidence indicates an immediate need or demand for additional employment land (B1, B2 and B8) in North West Leicestershire that cannot be met from land allocated in the Local Plan. It states that the Council will consider favourably proposals that meet such identified need in appropriate locations subject to the following key criteria:

- *The site must be accessible or capable of being made accessible by a choice of means of transport, including sustainable transport modes;*
- *The site must have good access to the strategic highway network (M1, M42/A42 and A50) and an acceptable impact on the capacity of that network, including any junctions; and*
- *The site must be shown to be not detrimental to the amenities of any nearby residential properties or the wider environment.*

6.3.28. Section 8 of the NLWDC Local Plan focuses on the 'Economic' ambitions. It states that NWLDC are committed to support the creation of a sustainable local economy. Paragraphs 8.5 and 8.6 state:

> *"The Leicester and Leicestershire Local Enterprise Partnership Strategic Economic Plan identifies five growth areas across Leicester and Leicestershire, two of which are located in the district; the East Midlands Enterprise Gateway and the Coalville Growth Corridor (see Appendix 4)."*
>
> *"The East Midlands Enterprise Gateway is focussed upon a number of existing major economic activities in the north of the district (principally East Midlands Airport, East Midlands Distribution Centre and Donington Park) and potential major employment opportunities associated with the development of a Strategic Rail Freight Interchange (SRFI) west of Junction 24 of the M1 and north of East Midlands Airport (referred to as Roxhill)."*

6.3.29. Policy IF1 sets out how new developments will include the provision of new infrastructure. It states:

> *"Development will be supported by, and make contributions to as appropriate, the provision of new physical, social and green infrastructure in order to mitigate its impact*

upon the environment and communities. Contributions may be secured by means of planning obligations and/or a Community Infrastructure Levy charge, in the event that the Council brings a Charging schedule into effect.

The type of infrastructure required to support new development includes, but is not limited to:

(a) Affordable housing; and

(b) Community Infrastructure including education, health, cultural facilities and other public services; and

(c) Transport including highways, footpaths and cycleways, public transport and associated facilities; and

(d) Green infrastructure including open space, sport and recreation, National Forest planting (either new provision or enhancement of existing sites) and provision of or improvements to sites of nature conservation value; and

(e) The provision of superfast broadband communications; and

(f) Utilities and waste; and

(g) Flood prevention and sustainable drainage.

The infrastructure secured (on or off-site) will be provided either as part of the development or through a financial contribution to the appropriate service provider and may include the long-term management and maintenance of the infrastructure.

In negotiating the provision of infrastructure the Council will have due regard to viability issues and where appropriate will require that the applicant provide viability information to the Council which will then be subject to independent verification.

The District Council will work closely with infrastructure providers to ensure inclusion of infrastructure schemes within their programmes, plans and strategies, and delivery of specific infrastructure requirements in conjunction with individual development schemes and the expected timing of development coming forward. The Council will also work with partners and other stakeholders to secure public funding towards infrastructure, where possible."

6.3.30. Policy IF4 relates to 'Transport Infrastructure and New Development'. It states:

"The Council, working with the highway authorities, will ensure that development takes account of the impact upon the highway network and the environment, including climate change, and incorporates safe and accessible connections to the transport network to enable travel choice, including by non-car modes, for residents, businesses and employees. In assessing proposals regard will be had to any Transport Assessment/Statement and Travel Plan prepared to support the application.

New development will be expected to maximise accessibility by sustainable modes of transport, having regard to the nature and location of the development site, and contribute towards improvement of the following where there is a demonstrable impact as a result of the proposed development:

(a) The provision of cycle links within and beyond sites so as to create a network of cycleways across the district, including linkages to key Green Infrastructure;

(b) The provision of public footpath links within and beyond sites so as to enhance the network of footpaths across the district, including linkages to key Green Infrastructure;

(c) The provision of new public transport services, or the enhancement of existing services, to serve new developments so that accessibility by non-car modes to essential services and facilities, such as shops, schools and employment, is maximised.

Where new development has a demonstrable impact upon the highway network contributions towards improvements will be sought commensurate with the impact. The to following specific highway improvements are identified as priorities."

NWLDC Local Plan Substantive Review

6.3.31. NWLDC are currently preparing the New NWLDC Local Plan which will replace the existing Plan and provide a strategic planning direction until 2042. The Plan will address the employment and housing land requirement shortfalls identified in the current Local Plan, in addition to identifying land for future growth. At the time of writing this TA, the Council has produced a draft Local Plan which was the subject of consultation in 2024 and a further consultation in 2025. The submissions made are currently being considered.

6.3.32. The EMG2 Main Site and community park area are provisionally proposed to be allocated in the draft new Local Plan under Policy EMP90 for employment development.

Leicestershire County Council Local Transport Plan 4

6.3.33. LCC published its fourth Local Transport Plan (LTP4) in 2024 which sets out the vision for transport across the county up to 2050 and replaces the former LTP3. The Local Transport Plan includes a framework for how LCC will manage and develop the transport system within Leicestershire and the actions that will be undertaken to deliver the programme.

6.3.34. The LTP4 comprises three phases, the first of which covers the period up to 2030. The LTP Core Document was adopted in November 2024 and sets out the following strategic vision:

"Delivering a safe, connected and integrated transport network which is resilient and well managed to support the ambitions and health of our growing communities, safeguards the environment whilst delivering economic prosperity"

6.3.35. The vision will be supported by five core themes:

- *Enabling Health and Wellbeing*

- *Protecting the Environment*
- *Delivering Economic Growth*
- *Enhancing our Transport Networks Resilience*
- *Embracing Innovation*

6.3.36. The delivery of core themes will be supported by the development of Multi-Modal Area Investment Plans, Focused Strategic and the County Strategic Transport Investment Plan, which will set out the transport solutions that are programmed for the delivery and implementation of LTP4.

6.3.37. Phase 2 of LTP4 will cover the period up to 2040 and is being finalised with expected completion by Spring 2026. So far, development has commenced on the Multi-Modal Area Investment Plans initially prioritising three areas; Market Harborough, Hinckley and South-East Leicestershire.

6.3.38. LCC is also developing two focused strategies as part of Phase two, the first being a Safe, Accessible and Inclusive Transport Network, then will begin work on the second Delivering a Resilient Transport Network.

6.3.39. In addition, LCC will begin work on the development of the County Strategic Transport Investment Plan. This will initially begin with a review of the strategic needs and requirements for the County focused on strategic infrastructure including the SRN and rail network.

6.3.40. Phase 3 of LTP4 will cover the period up to 2050 is due to be completed by Winter 2026. This will set out the monitoring and review progress to identify success of where greater focus is required. It will also set out the Council's approach to a post 2050 vision for the future and 'horizon scanning' to make sure the council is proactive and can adapt the LTP and transport solutions to accommodate travel behaviour change, innovation and changes to national policy and guidance.

6.3.41. LCC published its fourth Local Transport Plan in November 2024, which sets out the vision for transport up to 2050. It helps to promote transport as an enabler on economic, environmental and social objectives by planning for infrastructure and initiatives to help people and goods travel around. It sets out the following strategic vision:

> *"Delivering a safe, connected and integrated transport network which is resilient and well managed to support the ambitions and health of our growing communities, safeguards the environment whilst delivering economic prosperity"*

6.3.42. LTP4 consists of a series of documents that are identified below.

- LTP4 Core Document 2025 - 2040**:** The core document will set out the strategic vision for transport across the County Council. It will also identify the core themes, core policies and how these will be implemented. It will provide an action plan for the development, implementation and review of focused strategies, Multi Modal Area

Investment Plans, County Strategic Transport Investment Plan and provide detail on how the Local Transport Plan will be monitored.

- Focused Strategies**:** A series of focused strategies will be developed to identify and tackle specific challenges and matters related to the transport network. These will include existing strategies such as the Cycling and Walking Strategy and the Road Safety Strategy. In addition, new focused strategies will be developed for topics including freight and logistics, transport network safety and decarbonising the transport network.
- County Strategic Transport Investment Plan: This document will set out the strategic transport investment needs across the county to support the delivery of strategic development sites. As well as identifying needs for investment and capacity enhancement on the Strategic Road Network (SRN) and the rail network building on the Leicester and Leicestershire Strategic Priorities published in November 2020. This will also set out how we continue to support East Midlands Airport and the East Midlands Freeport.
- Multi Modal Area Investment Plans: These will be focused on the local level and set out strategies and investment plans for integrated transport solutions to meet the needs and requirements of our communities. We will also work in partnership with neighbouring authorities where there are cross-boundary transport matters which can be addressed through the development and implementation of the Multi Modal Area Investment Plans
- Monitoring our Success: This will set out the core Key Performance Indicators (KPIs) and Performance Indicators (PIs) which will be used to assess the success of LTP4 and how these will be reported upon.

6.3.43. The LTP4 will be developed in three overlapping phases and will cover the period between 2025 and 2050.

- Phase 1: 2025-2030 - Phase 1 comprises the LTP4 Core Document which will identify the key challenges faced across the county in terms of transport. It sets out the strategic vision for transport, the core themes and policies and how these will be implemented. The LTP4 Core Document provides the strategic case and narrative to aid the development and implementation of the programme for the LTF, and other funding streams, delivering transport solutions across the county.
- Phase 2: 2050-2040 - Phase 2 will be the development and implementation of a series of focused strategies, including freight and logistics and aviation and the development and implementation of a County Wide Strategic Transport Investment Plan and locally focused Multi Modal Area Investment Plans (MMAIPS). These plans will be developed with communities and partners setting out the transport solutions and the programme for delivery and implementation over a five-year period, which meet their needs and requirements, as well as supporting the delivery of new homes and employment opportunities across the county.
- Phase 3 2025-2050 - Phase 3 will set out the monitoring and review processes and progress based on the LTP to identify success or where greater focus is required. It will also set the County Council's approach to a post-2050 vision for the future and

‘horizon scanning’ to ensure that the County Council is proactive and can adapt the LTP and transport solutions to accommodate travel behaviour change, innovation, and changes to national policy and guidance.

6.3.44. LTP4 includes a framework for how LCC will manage and develop the transport system within Leicestershire and the actions that will be undertaken to deliver the programme. LTP4 sets out six core policies, which are set out below:

6.4. Approach to Assessment of Applications

6.4.1. In recognition that this Chapter forms part of a single ES covering both the DCO Application and the MCO Application (as explained in Section 6.1 (Paragraph 6.1.4) and within Chapter 1: Introduction and Scope) it makes a clear distinction between the component parts and, consistent with the dual application approach, it assesses the impacts arising from the DCO Application and MCO Application separately and then together as the EMG2 Project in combination. An assessment of the cumulative impacts of the EMG2 Project with other existing and, or approved developments, has also been completed.

6.4.2. Accordingly, the remaining sections of this Chapter are structured as follows:

- Baseline Conditions in Section 6.5
- An Assessment of the DCO Scheme in Section 6.6 – 6.8 which includes residual effects following mitigation. The assessment includes the traffic generation from Plot 16 of the EMG1 Works which is within the MCO Application (which is negligible). These sections also therefore deal with the assessment of the DCO and MCO Applications together.
- An Assessment of the MCO Scheme in Section 6.9;
- An Assessment of the EMG2 Project as a whole in combination with other planned development (i.e. the cumulative effects), in Section 6.10; and
- An overall summary of effects and conclusions in Section 6.11.

6.5. Baseline Conditions

Site Details

6.5.1. The component parts of the EMG2 Project are described in further detail below to help set the scene with regards to the extent of the existing conditions considered in this section of the ES Chapter.

6.5.2. The EMG2 Project is located in North West Leicestershire District Council's administrative area close to East Midlands Airport. It includes the EMG2 Main Site and Community Park situated south of the airport together with land required for associated Highway Works to the east and north of East Midlands Airport along the A453 and M1 corridors. It also includes land to the north of East Midlands Airport in EMG1 to accommodate the EMG1 Works. The boundary of these areas is identified on the Location Plan (Order Limits) Plans **(Documents DCO 2.1/MCO 2.1)**. The component parts of the proposed development are described in further detail below and set out in **Table 6.1** in the Introduction above.

6.5.3. The EMG2 Main Site and Community Park comprises land immediately south of East Midlands Airport and to the east of the village of Diseworth. This falls within the EMAGIC Freeport designation. It has an area of approximately 102 ha, comprising arable farmland and is located approximately 15 kilometres to the northwest of Loughborough, 25 kilometres to the southeast of Derby and 25 kilometres to the southwest of Nottingham.

6.5.4. The EMG2 Main Site is bound to the north by the A453 Ashby Road, which connects with the SRN via Junction 23A of the M1 (known as Finger Farm roundabout) to the east of the site. Moto Donington services is located immediately adjacent to the northeast corner of the site. The EMG2 Main Site is bisected by Hyam's Lane which is a Public Highway that extends from Diseworth Village in the southwest to the western boundary of the Donington Park services in the northeast.

6.5.5. The principal areas of land required for the Highways Works are:

- Along a section of the M1 motorway northbound between J23A and J24, alongside the northbound off-slip to J24 and the A50 where it connects with J24. This section of the M1 comprises a dual, four lane carriageway with hard shoulders and a central reservation and adjoining areas of landscaping.
- Along the A50 / M1 southbound link to J24. This section currently provides two lanes of traffic within the weaving section to J24.
- Along the A50 westbound link from J24. This has two lanes of traffic and father north joins with the link from the M1 southbound from J24A to then form the A50 dual three lane carriageway.

6.5.6. Other areas of land affected by the Highway Works are within existing public highway on the western side of M1 J24, around the access to the EMG2 Main Site on the A453 and the existing access to EMG1 on the A453. Drawing Number EMG2-BWB-GEN-XX-SK-CH-SK045 contained at Appendix 21 of the TA (**Appendix 6A**, **Document DCO 6.6A/MCO**

6.6A) provides an overview of the proposed Highway Works and the extent of works on the Strategic Road Network and local road network.

6.5.7. The EMG1 Works within the existing EMG1 site located to the north of East Midlands Airport includes:

- Operational land within the Rail Freight Terminal where higher gantry cranes are proposed than those already permitted (but yet to be constructed) under the original EMG1 DCO.
- An area of open land adjoining the Rail Freight Terminal which was utilised during the construction of EMG1 for temporary surface water storage ponds whilst drainage works were completed. These became redundant once the drainage works were completed and have been removed. This area of land extends to 6.08ha and is currently unused. It is referred to as Plot 16.
- Operational land and small areas of landscaping within and adjacent to the existing public transport interchange and site management building at the EMG1 site access.

Highway Safety

6.5.8. A full assessment of existing Personal Injury Collision (PIC) records has been undertaken as part of the TA for the 6-year period covering 1 January 2019 to 23 October 2024. The assessment included the following study area originally accepted by NH and NCountyC (with LCC wishing to see the outcome of the EMFM modelling before they agree to the study area). This is also shown in Figure 8 of the TA in **Appendix 6A** (**Document DCO 6.6A/MCO 6.6A)**. Reference to Junction 1 is missing because it was originally intended that two site access points were to be provided. This has been limited to one now, which retains the reference to Junction 2.

- Junction 2: Site frontage and A453/Hunter Road Roundabout
- Junction 3: Finger Farm Roundabout
- Junction 4: A453/EMG1 access junction
- Junction 5: M1 Junction 24
- Junction 6: A453/East Midlands Airport Signal Junction
- Junction 7: A453/Grimes Gate Priority Junction
- Junction 8: A453/The Green Priority Junction
- Junction 9: A453/East Midlands Airport Roundabout
- Junction 10: A453/Walton Hill Signal Junction (Leicestershire)
- Junction 11: A42 Junction 14 on-slip/Top Brand/Gelscoe Lane Roundabout
- Junction 12: M1 Junction 23
- Junction 13: A50 Junction 1
- Junction 14: M1 Junction 25

- Junction 15: Station Road/Broad Rushes Roundabout
- Junction 16: A453/Kegworth Road dumbbell Roundabouts
- Junction 17: A453/Barton Lane/West Leake dumbbell Roundabouts

6.5.9. A total of 175 PICs were recorded across the study area, of which 125 were classified as slight, 42 as serious and 8 as fatal. The assessment identified the following three locations where a cluster of PICs has occurred and hence a potential safety problem.

- EMG1 access junction – a cluster of PICs have been recorded due to turning movements from the A6 to EMG1 colliding with drivers travelling southbound on the A453. One of the PICs was fatal.
- M1 Junction 24 – a cluster of PICs have been recorded on the M1 northbound off-slip on approach to the roundabout.
- A453/The Green – a cluster of PICs have been recorded due to right turning movements from the A453 west into The Green. This appears to be due to the location of the junction within a dip in the carriageway and potential lack of signage or warnings. Looking at historic Google Street View records, the tourist sign to the 'Queens Head' highlighting a left turn into The Green from the east was obstructed by overgrown vegetation until 2023 and since then there have been no PICs occurring through westbound travelling vehicles. There appear to have been improvements to the warning signs for eastbound vehicles between 2017 and 2020, which appears to have slowed the rate of collisions.

Baseline Survey Information

6.5.10. EMFM 2019 has been used to test the impacts of the EMG2 Project at a strategic level. Whilst EMFM 2023 has recently become available, it was not approved by NH at the time of commission, hence why EMFM 2019 was used. NH has agreed with this approach as set out in their response to the second consultation (non-statutory). LCountyC also agreed with the PRTM 2019 proforma and uncertainty log. EMFM 2019 has gone through a rigorous validation process and was considered acceptable for testing the forecast year scenarios and impacts of the EMG2 Project. The EMFM generates traffic flows across the highway network for each modelled scenario, which are presented in Paragraph 6.1.9.

6.5.11. Prior to AECOM running the 2019 EMFM, the planning data assumptions and uncertainty log details were agreed with all members of the TWG. This ensured that all relevant committed developments and infrastructure schemes were included in the assessment. A full list of committed developments and infrastructure schemes is provided within Uncertainty Logs v7 and v7a, both of which are appended to the TA in **Appendix 6A (Document DCO 6.6A/MCO 6.6A.**

6.6. Assessment of DCO Application – Core Scenario (Stage 1B)

Introduction

6.6.1. This section describes the predicted effects of the EMG2 Works (plus Plot 16) without the proposed Highway Works) against each of the criteria set out at Section 6.2 (6.2.13), using the Stage 1B outputs i.e. the ES core scenario. It assesses traffic from both the operational and construction phases of development. Throughout this Section and Sections 6.7 and 6.8 wherever reference has been made to traffic generation from the EMG2 Works it includes the traffic from Plot 16 (as explained in paragraph 6.6.4 below).

6.6.2. This section provides a description and quantification of any potential effects of the EMG2 Works (including beneficial, negligible/neutral and adverse effects), and an explanation of the potential significance of those effects. Section 6.7 identifies the appropriate highway mitigation and Section 6.8 then considers the residual impacts of the EMG2 Works with the proposed Highway Works in place (Stage 2B modelling outputs). Section 6.9 then identifies the impact of the EMG1 Works alone and Section 6.10 considers the cumulative effects of the EMG2 Project, inclusive of both the proposed Highway Works and traffic from the Ratcliffe on Soar re-development, EMIP and draft Local Plan allocations (Stage 2A modelling outputs).

Change in Traffic Conditions

6.6.3. The extent of the model network area in 2019 EMFM, which covers a significant area across Leicestershire, Leicester City and parts of Derbyshire and Nottinghamshire, is included within Figure 2.1, Page 7 of the AECOM Base Year Model Review documents (Appendix 6 to the TA (**Appendix 6A**, **Document DCO 6.6A/MCO 6.6A**).

6.6.4. The forecast operational traffic flows from the EMG2 Works were presented to the TWG within a separate Technical Note (EMG2-BWB-GEN-XX-RP-TR-0012_Trip Generation Core Assessment, Revision P1) included at Appendix 11 to the TA (**Appendix 6A**, **Document DCO 6.6A/MCO 6.6A**). The figures were based on peak hour flows (as the EMFM 2019 is a peak hour assignment model) but has a methodology to convert the outputs into AADT flows. The peak hour figures have been agreed with the TWG, with the AADT traffic flows uplifted from this agreed basis. This included traffic from the entire EMG2 Project, including EMG2 Main Site and EMG1 Works (Plot 16). All modelling was carried out on that basis i.e. including the traffic flows from all the development including Plot 16.

6.6.5. It should be noted that traffic from Plot 16 alone would be negligible, at circa 53 two-way trips in the morning peak hour and 67 two-way trips in the evening peak hour. This equates to between 5.7% and 6.3% of the total EMG2 Project traffic and on its own would not result in any adverse or substantial environmental impacts and would not trigger the need for an EIA from a traffic and transport perspective. Notwithstanding this Section 6.9 of this Chapter assesses the environmental impacts of the EMG1 Works in isolation.

6.6.6. EMFM modelling outputs were received from AECOM for the entire model network area. The data was input into different layers on GIS to understand where there is expected to be a +10% increase in two-way AADT movements (except for dual carriageways, where one-way AADT movements have been analysed) between the 'without development' and 'with development' scenarios using the Stage 1B modelling outputs. This provides an initial understanding of the maximum study area, assuming all links include sensitive receptors.

6.6.7. **Table 6.6** summarises the forecast operational traffic flows during the 'without development' and 'with development' scenarios and the percentage change. It also highlights whether each link is to be included in the study area and the reasons why. The values are presented as 24-hour AADT flows and provide separate values for total vehicles and HGVs. It should be noted that only links identified as having a +10% increase in AADT flows or HGVs are included in the table. This allows for an understanding of the forecast change in conditions and where further assessment is required to understand the environmental impacts of the EMG2 Works**.**

Table 6.6: 2028 Forecast Year Flow Changes (with/without development – operational traffic, core scenario)

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
1	London Road, Kegworth between A6 and Whatton Road	7,987	0	8,789	0	10.0%	0%	✓	Rule two – sensitive link because of narrow footways
2	The Green, Diseworth (between Lady Gate and Smithy Lane)	5,663	0	6,585	0	16.3%	0%	×	Non-sensitive link in a rural area with no non-motorised user (NMU) demand
3	Hemington Lane east of Hemington	7,165	1	7,973	1	11.3%	0%	✓	Rule two – sensitive link as opposite a playground/ park and residential properties
4	Baroon/ Hemington Hill, Castle Donington	3,937	0	4,583	0	16.4%	0%	✓	Rule two – sensitive link without footways with a NMU demand

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
5	A42 on-slip from Finger Farm	12,047	250	14,708	977	22.1%	290%	✓	Rule one – over 30% increase in HGVs
6	Long Street, Belton	862	0	1,743	0	102%	0%	✓	Rule one – over 30% increase in AADT flows
7	Forest Lane, Belton	2,209	0	2,494	0	12.9%	0%	×	Non-sensitive link in a rural area with no NMU demand
8	Smithy Lane, Long Whatton	5,917	0	6,669	0	12.7%	0%	×	Non-sensitive link in rural area with no NMU demand
9	Grimes Gate/Lady Gate, Diseworth	2,489	26	2,839	26	13.7%	0%	✓	Rule two – sensitive link near a primary school
10	The Green, Diseworth between A453 and unnamed road	10,636	0	12,580	0	18.3%	0%	✓	Rule two – sensitive link close to an accident hot spot
11	Unnamed road south of Diseworth	6,410	0	8,388	0	30.9%	0%	✓	Rule one – over 30% increase in AADT flows
12	Gelscoe Lane east of A42 Junction 14	6,564	0	8,293	0	26.3%	0%	×	Non-sensitive link in rural area with no NMU demand
13	A42 westbound on-slip	2,499	64	2,805	66	12.3%	3.1%	×	Non-sensitive link on the SRN
14	A453 between The Green and Grimes Gate	14,365	574	16,891	527	17.6%	-8.2%	×	Non-sensitive link with no NMU demand
15	Unnamed road between	23,231	28	23,693	41	2.0%	49.7%	×	Non sensitive link. Whilst the percentage

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
	A453 and Castle Donington bypass								increase in HGVs exceeds 30%, the actual increase is low at only 13 daily HGVs, hence negligible impact
16	East Midlands Airport signal access road	9,762	284	11,408	321	16.9%	13.1%	×	Non-sensitive link into the airport
17	A453 between Grimes Gate and East Midlands Airport access	15,226	574	18,633	527	22.4%	-8.2%	×	Non-sensitive link with no NMU demand
18	Hemington Lane west of Lockington	7,070	31	7,894	31	11.7%	0%	×	Non-sensitive link with no NMU demand
19	Main Street, Lockington	7,040	106	7,901	108	12.2%	1.2%	✓	Rule two – sensitive link nearby a primary school
20	A453 between Hunter Road and Finger Farm	25,737	1,095	34,625	3,986	34.6%	264%	✓	Rule one – AADT flows and HGVs exceed 30%
21	Kingston Lane between Kegworth and Kingston on Soar	2,552	0	3,223	0	21.6%	0%	×	Non-sensitive link in a rural area with no NMU demand
22	Finger Farm northbound circulatory	33,549	1,531	38,217	3,090	13.8%	101%	×	Disregarded as on a roundabout circulatory

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
23 & 25	A42 off-slip towards Finger Farm	3,038	204	3,760	644	23.8%	215%	✓	Rule one – over 30% increase in HGVs, albeit the link forms part of the SRN
24	M1 southbound on-slip from Junction 23A	25,720	1,079	25,590	1,501	-0.5%	39.1%	✓	Rule one – over 30% increase in HGVs, albeit the link forms part of the SRN
25	-	-	-	-	-	-	-	✓	See Link 23
26	M1 northbound off-slip at Junction 23A	9,539	221	12,091	582	26.8%	163%	✓	Rule one – over 30% increase in HGVs, albeit the link forms part of the SRN
27	A42 on-slip from Junction 23A	2,507	29	2,617	394	4.4%	1273%	✓	Rule one – over 30% increase in HGVs, albeit the link forms part of the SRN
28	A453 southbound exit at M1 Junction 24	10,316	2,014	10,931	2,623	6.0%	30.2%	✓	Rule one – over 30% increase in HGVs, albeit the link forms part of the SRN
29	A453 between A42 Junction 14 on/off-slip	6,854	202	7,998	207	16.7%	2.4%	×	Non-sensitive link near SRN
30	A42 Junction 14 off-slip	3,150	53	4,099	82	30.1%	55.2%	×	Rule one marginally triggered by total AADT

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
									flow change. The increase in HGVs is negligible at 29 per day and the link is part of SRN
31 & 35	Ambassador Road, East Midlands Airport	325	76	301	110	-7.2%	44.3%	×	Non sensitive link. Whilst the percentage increase in HGVs exceeds 30%, the actual increase is negligible at 33 per day
32	Viscount Road, East Midlands Airport	5,461	110	5,427	144	-0.6%	30.4%	×	Non sensitive link. Whilst the percentage increase in HGVs exceeds 30%, the actual increase is negligible at only 34 HGVs per day
33	Beverley Road, East Midlands Airport	889	18	2,587	18	191%	0%	✓	Rule one – over 30% increase in AADT flows
34	London Road, Kegworth north of Whatton Road	7,041	0	7,832	0	11.2%	0%	✓	Rule two – sensitive link because of narrow footways and NMU demand
35	-	3,150	105	3,140	138	-0.3%	32.1%	×	See Link 31
36	Finger Farm westbound circulatory	4,837	248	8,866	947	83.3%	282%	×	Disregarded as on a roundabout circulatory

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
37	Forest Lane, south of Ashby Road	1,045	0	1,223	0	17.0%	0%	×	Non-sensitive link in rural area
38	M1 southbound off-slip at Junction 23	10,839	734	12,334	857	13.8%	16.7%	×	Non-sensitive link on SRN
39	Castle Donington bypass north of unnamed road	9,778	28	10,227	41	2.6%	49.4%	×	Non sensitive link. Whilst the percentage increase in HGVs exceeds 30%, the actual increase is negligible at 13 HGVs per day
40	A453 northbound entry at M1 Junction 24	9,951	1,380	11,544	1,727	16.0%	25.1%	×	Non-sensitive link on SRN
41	EMG1 access roundabout northbound circulatory	31,498	1,221	32,558	1,895	3.4%	55.1%	×	Disregarded as on a roundabout circulatory
42	A453 between Finger Farm and EMG1 roundabout (southbound)	10,116	463	11,523	1,170	13.9%	152%	✓	Rule one – over 30% increase in HGVs
43 & 53	A453 northbound entry to EMG1 roundabout	27,855	1,325	29,279	2,014	5.1%	51.9%	✓	Rule one – over 30% increase in HGVs
44	A453 between Finger Farm and EMG1 roundabout (northbound)	37,971	1,789	40,803	3,184	7.5%	78.0%	✓	Rule one – over 30% increase in HGVs

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
45	A453 southbound entry to EMG1 access roundabout	10,361	2,014	10,931	2,623	6.0%	30.2%	✓	Rule one – over 30% increase in HGVs
46	Gotham Road east of Kingston on Soar	1,967	0	2,199	0	11.8%	0%	×	Non-sensitive link in rural area with no NMU demand
47	Kegworth Road, Kingston on Soar (east of Kingston Lane)	1,734	0	1,966	0	13.4%	0%	×	Non-sensitive link in rural area with no NMU demand
48	Kegworth Road, Kingston on Soar (north of Kingston Lane)	920	0	1,259	0	36.9%	0%	×	Non-sensitive link. Whilst the AADT flows exceeds 30%, the actual increase is negligible at 339 vehicles per day equating to less than one per minute
49	Finger Farm eastbound entry	13,384	462	18,871	1,831	41.0%	296%	✓	Rule one – over 30% increase in AADT flows and HGVs
50	A453 southbound towards Finger Farm	10,116	463	11,523	1,170	13.9%	153%	✓	Rule one – over 30% increase in HGVs
51	Finger Farm southbound circulatory	16,884	497	23,575	1923	39.6%	286%	×	Disregarded as on a roundabout circulatory
52	Finger Farm westbound exit	12,353	633	15,754	2,154	27.5%	240%	✓	Rule one – over 30%

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
									increase in HGVs
53	-	-	-	-	-	-	-	✓	See Link 43
54	Finger Farm eastbound circulatory	6,769	34	12,054	752	78.1%	2093%	×	Disregarded as on a roundabout circulatory

6.6.8. **Table 6.6** identified a total of 54 links across the entire EMFM model network area where the EMG2 Works are expected to trigger a +10% impact on AADT flows or HGVs. A more detailed analysis of the 54 links was then undertaken to understand the characteristics, sensitivity and predicted change in AADT flows to determine whether each link should be included in the study area for the core scenario. Following this review, a total of 25 links were considered to require further assessment in line with either Rule One or Rule Two of the IEMA Guidelines, with comments provided against those links that have been removed explaining the reasoning why. A number of the 25 links adjoin each other on the same section of the network and share similar characteristics and can therefore be combined when considering the environmental impact against the change in traffic from the EMG2 Works.

6.6.9. The following 11 areas and associated links are included in the study area for this ES Chapter for the core scenario:

i. Links 1 and 34 – London Road, Kegworth
ii. Link 3 – Hemington Lane, east of Hemington
iii. Link 4 – Baroon/Hemington Hill, Castle Donington
iv. Links 5, 23, 24, 25, 26 and 27 – A42/M1 on/off-slips at M1 Junction 23A (Finger Farm)
v. Link 6 – Long Street, Belton
vi. Link 9 – Grimes Gate/Lady Gate, Diseworth
vii. Links 10 and 11 – The Green/unnamed road, Diseworth
viii. Link 19 – Main Street, Lockington
ix. Link 20, 49 and 52 – A453 between Hunter Road and Finger Farm
x. Links 28, 42, 43, 44, 45 and 50 – A453 between Finger Farm and M1 Junction 24
xi. Link 33 - Beverley Road, East Midlands Airport

6.6.10. The locations of the above links are shown in the figure at **Appendix 6D (Document DCO 6.6D/MCO 6.6D)**.

Change in Traffic Conditions (Stage 1A modelling sensitivity test)

6.6.11. To provide evidence to demonstrate that the Stage 1B modelling outputs (core scenario) present a worst-case assessment compared to the Stage 1A modelling outputs (which includes potential local plan allocations, EMIP and the balance of the Ratcliffe Power Station site), a sensitivity assessment has been carried out. This adopts the same methodology as above but using the Stage 1A outputs from EMFM.

6.6.12. **Table 6.7** compares the percentage increase in AADT movements and HGVs along the same 54 links. It highlights any links that are expected to experience a higher percentage increase in traffic compared to the core scenario and whether any additional sensitivity tests are required.

Table 6.7: 2028 Forecast Year Flow Changes (with/without development – operational traffic, Stage 1A)

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Further assessment required?	Comment
		Total	HGV	Total	HGV	Total	HGV		
1	London Road, Kegworth between A6 and Whatton Road	Less than 10% increase							
2	The Green, Diseworth (between Lady Gate and Smithy Lane)	6,129	0	6,806	0	11.0%	0%	×	Percentage change in AADT flow has reduced from 16.3%
3	Hemington Lane east of Hemington	8,684	3	9,661	4	11.2%	34.9%	×	Percentage change in AADT flow has reduced from 11.3%. HGVs only increasing by 1 daily movement
4	Baroon/ Hemington Hill, Castle Donington	4,232	0	4,769	0	12.7%	0%	×	Percentage change in AADT flow has reduced from 16.4%

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Further assessment required?	Comment
		Total	HGV	Total	HGV	Total	HGV		
5	A42 on-slip from Finger Farm	12,394	280	14,703	959	18.6%	242%	×	Percentage change in AADT flow has reduced from 22.1%, HGVs reduced from 290%
6	Long Street, Belton	1,057	0	1,747	0	65.4%	0%	×	Percentage change in AADT flow has reduced from 102%
7	Forest Lane, Belton	Less than 10% increase							
8	Smithy Lane, Long Whatton	Less than 10% increase							
9	Grimes Gate/Lady Gate, Diseworth	Less than 10% increase							
10	The Green, Diseworth between A453 and unnamed road	10,972	0	12,877	0	17.4%	0%	×	Percentage change in AADT flow has reduced from 18.3%
11	Unnamed road south of Diseworth	6,670	0	8,619	0	29.2%	0%	×	Percentage change in AADT flow has reduced from 30.9%
12	Gelscoe Lane east of A42 Junction 14	6,815	0	8,656	0	27.0%	0%	×	Percentage change in AADT only increased by 0.7% from 26.3%, hence minimal difference

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Further assessment required?	Comment
		Total	HGV	Total	HGV	Total	HGV		
13	A42 westbound on-slip	2,617	100	2,890	103	10.4%	2.8%	×	Percentage change in AADT flow has reduced from 12.3%
14	A453 between The Green and Grimes Gate	14,733	558	17,200	541	16.7%	-3.0%	×	Percentage change in AADT flow has reduced from 17.6%. There continues to be a reduction in HGVs
15	Unnamed road between A453 and Castle Donington bypass	23,229	42	23,662	59	1.7%	39.6%	×	Percentage change in AADT flow has reduced from 2.0%, HGVs reduced from 49.7%
16	East Midlands Airport signal access road	11,218	0	12,987	0	15.8%	2.9%	×	Percentage change in AADT flow has reduced from 22.4%
17	A453 between Grimes Gate and East Midlands Airport access	15,789	558	18,948	541	20.0%	-3.0%	×	Percentage change in AADT flow has reduced from 22.4%. There continues to be a reduction in HGVs
18	Hemington Lane west of Lockington	8,565	29	9,539	29	11.4%	0%	×	Percentage change in AADT flow

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Further assessment required?	Comment
		Total	HGV	Total	HGV	Total	HGV		
									has reduced from 11.7%
19	Main Street, Lockington	8,424	105	9,312	105	10.5%	0.3%	×	Percentage change in AADT flow has reduced from 12.2%
20	A453 between Hunter Road and Finger Farm	26,269	1,305	34,786	4,176	32.4%	219%	×	Percentage change in AADT flow has reduced from 34.6%, HGVs reduced from 264%
21	Kingston Lane between Kegworth and Kingston on Soar	Less than 10% increase							
22	Finger Farm northbound circulatory	36,038	1,638	41,722	3,192	15.8%	94.8%	×	AADT flow only increased by 2.0% from 13.8%, hence a minimal change, HGVs reduced from 101%
23 & 25	A42 off-slip towards Finger Farm	3,915	222	4,841	643	23.7%	189%	×	Percentage change in AADT flow has reduced from 23.8%, HGVs reduced from 215%
24	M1 southbound	26,218	1,115	25,952	1,521	-1.0%	36.4%	×	Percentage change in

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Further assessment required?	Comment
		Total	HGV	Total	HGV	Total	HGV		
	on-slip from Junction 23A								AADT flow has reduced from -0.5%, HGVs reduced from 39.1%
25	-	-	-	-	-	-	-	-	See Link 23
26	M1 northbound off-slip at Junction 23A	9,851	252	11,809	587	19.9%	133%	×	Percentage change in AADT flow has reduced from 16.4%. HGV % has reduced from 163%.
27	A42 on-slip from Junction 23A	2,543	28	2,894	372	13.8%	1211%	×	Whilst AADT flow has increased from 13.8%, the link is non-sensitive so does not trigger any assessment. HGV % remains largely unchanged from 1273%
28	A453 southbound exit at M1 Junction 24	9,019	1,960	10,047	2,607	11.4%	33.0%	×	Whilst AADT flow has increased from 6.0%, the link is non-sensitive so does not trigger any assessment. HGVs have slightly increased from 30.2%

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Further assessment required?	Comment
		Total	HGV	Total	HGV	Total	HGV		
									but no change to conclusions
29	A453 between A42 Junction 14 on/off-slip	9,257	363	10,487	371	13.3%	2.3%	×	Percentage change in AADT flow has reduced from 16.7%
30	A42 Junction 14 off-slip	3,103	78	4,071	103	31.2%	31.3%	×	Percentage change in AADT flow increased by only 1.2% from 30.1%. HGV percentage flow decreased.
31 & 35	Ambassador Road, East Midlands Airport	Less than 10% increase							
32	Viscount Road, East Midlands Airport	Less than 10% increase							
33	Beverley Road, East Midlands Airport	1,525	17	2,734	17	79.4%	0%	×	Percentage change in AADT flow has reduced from 191%
34	London Road, Kegworth north of Whatton Road	Less than 10% increase							
35	-	-	-	-	-	-	-	×	See Link 31
36	Finger Farm westbound circulatory	5,910	302	10,934	1,027	85.0%	240%	×	Percentage change in AADT flow has only

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Further assessment required?	Comment
		Total	HGV	Total	HGV	Total	HGV		
									increased by 1.7% from 83.3%, hence a minimal impact that would not change previous conclusions HGVs reduced from 282%
37	Forest Lane, south of Ashby Road	Less than 10% increase							
38	M1 southbound off-slip at Junction 23	Less than 10% increase							
39	Castle Donington bypass north of unnamed road	9,835	42	10,001	58	1.7%	39.6%	×	Percentage change in AADT flow has reduced from 2.6%
40	A453 northbound entry at M1 Junction 24	11,437	1,440	13,269	1,824	16.0%	26.7%	×	Percentage change in AADT flow has remained at 16.0%, with HGV percentage only increasing by 1.6%.
41	EMG1 access roundabout northbound circulatory	32,927	1,394	34,104	2,091	3.6%	49.9%	×	Percentage change in AADT flow has only increased by

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Further assessment required?	Comment
		Total	HGV	Total	HGV	Total	HGV		
									0.2%, hence minimal change
42	A453 between Finger Farm and EMG1 roundabout (southbound)	10,263	512	11,990	1,238	5.5%	16.8%	×	Percentage change in AADT flow has reduced from 13.9%
43 & 53	A453 northbound entry to EMG1 roundabout	29,346	1,403	30,950	2,128	5.5%	51.7%	×	Percentage change in AADT flow has only increased by 0.4%, hence minimal change
44	A453 between Finger Farm and EMG1	39,609	1,915	42,941	3,367	8.4%	75.9%	×	Percentage change in AADT flow has only increased by 0.9% and remains below 10% threshold. HGV percentage has reduced
45	A453 southbound entry to EMG1 access roundabout	9,019	1,960	10,047	2,607	11.4%	33.0%	×	Percentage change in AADT increased from 6.0% but link is non-sensitive. HGV percentage has reduced from before.

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Further assessment required?	Comment
		Total	HGV	Total	HGV	Total	HGV		
46	Gotham Road east of Kingston on Soar	Less than 10% increase							
47	Kegworth Road, Kingston on Soar (east of Kingston Lane)	Less than 10% increase							
48	Kegworth Road, Kingston on Soar (north of Kingston Lane)	2,825	0	3,184	0	12.7%	0%	×	Percentage change in AADT flow has reduced from 36.9%
49	Finger Farm eastbound entry	13,812	568	18,837	1,925	36.4%	239%	×	Percentage change in AADT flow has reduced from 41.0%
50	A453 southbound towards Finger Farm	10,263	512	11,990	1,238	16.8%	142%	×	Percentage change in AADT flow has only increased by 2.9% from 13.9%, hence minimal change that would not affect previous conclusions
51	Finger Farm southbound circulatory	18,304	582	25,637	1,986	40.1%	241%	×	Percentage change in AADT flow has only increased by 0.5% from 39.6%,

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Further assessment required?	Comment
		Total	HGV	Total	HGV	Total	HGV		
									hence minimal change that would not affect previous conclusions
52	Finger Farm westbound exit	12,457	738	15,949	2,251	28.0%	205%	×	Percentage change in AADT flow has only increased by 0.5% from 27.5%, hence minimal change that would not affect previous conclusions
53	-	-	-	-	-	-	-	×	See Link 43
54	Finger Farm eastbound circulatory	8,045	67	13,657	740	69.8%	1005%	×	Percentage change in AADT flow has reduced from 78.1%. Significant reduction in HGV percentage from 2093%

6.6.13. The details in **Table 6.7** confirm that the percentage change in AADT flows and HGVs using the Stage 1A modelling outputs would, for the majority, be lower than Stage 1B modelling outputs. As mentioned above, this is because it excludes traffic from the Ratcliffe on Soar re-development, EMIP and draft Local Plan allocations from the baseline position. There are a small number of links that would experience a slight percentage increase in AADT flows but the difference between the Stage 1B modelling outputs would be negligible and not materially change the assessment undertaken within the core scenario. Therefore, the following section focuses on an assessment of the impacts of the EMG2 Works during the core scenario, using the Stage 1B modelling outputs.

Operational Effects of EMG2 Works (Stage 1B Core Scenario)

6.6.14. The following section assesses the environmental effects of the EMG2 Works against each of the criteria summarised in Section 6.2 (6.2.13). This focuses on the operational effects of the EMG2 Works, which is predicted to generate significantly higher AADT flows compared to the construction phase of the EMG2 Works. Again, this assessment excludes the proposed Highways Works, which is covered separately in Sections 6.8 and 6.10 as part of the residual and cumulative scenarios.

Severance

6.6.15. The IEMA Guidelines suggest that changes in traffic above 30% are likely to result in increased severance, with increases less than this likely to have a negligible impact on severance. The following links would experience a +30% increase in AADT flows or HGVs:

- Links 5, 23, 24, 25, 26 and 27 – A42/M1 on/off-slips at M1 Junction 23A (Finger Farm)
- Link 6 – Long Street, Belton
- Links 11 – unnamed road, Diseworth
- Link 20, 49 and 52 – A453 between Hunter Road and Finger Farm
- Links 28, 42, 43, 44, 45, 50 and 53 – A453 between Finger Farm and M1 Junction 24
- Link 33 - Beverley Road, East Midlands Airport

6.6.16. The remaining links in the study area are forecast to experience less than a 30% increase in either total AADT flows or HGVs and are therefore considered to experience a negligible impact on severance that requires no further consideration.

6.6.17. The links on the A42/M1 on/off-slips at M1 Junction 23A (Links 5, 23, 24, 25 26, 27) would experience a less than 30% increase in total AADT flows, but HGVs are expected to increase by more than 30%. These links are dedicated vehicular routes connecting traffic with the SRN at the M1 and A42 meaning there is no pedestrian or cycle desire line, nor any demand for crossing movements. For this reason, whilst impacts will be permanent, it can be concluded that the receptors have a negligible sensitivity, which would experience a negligible increase in traffic meaning there is a *negligible* scale of impact. Therefore, no mitigation is required.

6.6.18. Link 6 at Long Street in Belton comprises a residential road through the village, which provides footways on both sides bound by residential properties. Long Street also serves the Queens Head Public House and a convenience store at the western side of the road. The EMFM modelling identified a 102% increase in AADT flows, which are predicted to increase from 862 movements without development to 1,743 movements with development, all of which would comprise cars or light vehicles. In terms of peak hour flows, EMFM predicts there will be up to 131 two-way movements during the busier morning peak hour, equating to just over two movements per minute. Whilst the increase would therefore result in a permanent impact to a link with receptors of moderate sensitivity, that could result in a

substantial scale of impact, the future traffic flows would continue to provide regular gaps for people to cross the road without the feeling of severance. For this reason, there would be a *slight* impact and no mitigation is considered necessary.

6.6.19. Link 11 is an unnamed road that extends to the south of Diseworth connecting with Gelscoe Lane near the A42. This is a rural road bound by undeveloped land at both sides with no footway or cycle facilities. It is therefore designed primarily to transport vehicular traffic with little demand for crossing or turning movements other than for vehicular access into the adjacent fields. The development would increase AADT flows by 30.9%, which marginally exceeds the Rule One threshold of 30%. Overall, the receptors on this link have a negligible sensitivity, which would experience a slight, permanent increase in AADT flows, with an overall *negligible* scale of impact. Therefore, no mitigation is required.

6.6.20. Links 20, 49 and 52 extend across the site frontage of the EMG2 Main Site and form sections of the A453 between Hunter Road roundabout and Finger Farm roundabout. This section of the network is expected to experience a 27% to 41% increase in AADT flows and a 240% to 296% increase in HGVs, with actual HGVs increasing by circa 1,400 movements AADT. This section of the network currently has little demand for crossing movements because of the limited amount of development to the south but provides a footway/cycleway along the northern side of the road. The EMG2 Main Site will increase demand for crossing movements at this location for journeys to East Midlands Airport, EMG1 and Kegworth. As a result, it is considered that receptors on this link have a low sensitivity, that could experience a moderate to substantial permanent increase in traffic leading to a *slight* scale of impact. Mitigation is considered in Section 6.7.

6.6.21. Link 33 forms part of Beverley Road within East Midlands Airport. This road is expected to experience a 191% increase in AADT flows, increasing from 889 movements without development to 2,587 movements with development. The road is industrial in nature at approximately 7.3 metres wide and provides footways on both sides. There are also controlled crossings (zebra crossings) which prioritise pedestrians crossing the carriageway. Receptors along Beverley Road are considered to have a negligible level of sensitivity, but could experience a substantial change in traffic, meaning the overall scale of impact could be *slight*. EMFM predicts there will be up to 268 two-way peak hour flows travelling along Beverley Road during the busier morning period, equating to less than 5 two-way trips per minute. As Beverley Road provides controlled crossings and adequate footway provision, it is considered that whilst impacts would be permanent there would be no adverse impact on severance and consequently no requirement for any mitigation.

Driver Vehicle and Passenger Delay

6.6.22. The IEMA Guidelines state that significant effects to driver or passenger delay are likely to occur where junctions/links are close to, or at, capacity. The EMFM 2019 modelling within the TA provides a range of network performance outputs for the 2028 forecast year scenarios, including volume/capacity ratios and flow increases. The figures at **Appendix 6E** (**Document DCO 6.6E/MCO 6.6E**) show the 2028 forecast year volume/capacity ratios during the morning and evening peak hours.

6.6.23. The extracts show that there are expected to be capacity issues on the A453 corridor between the Hunter Road roundabout and M1 Junction 24, including Finger Farm roundabout and the EMG1 access roundabout. This is based on traffic from the EMG2 Works being added to the network without any of the highway mitigation being proposed in the TA, which is considered separately in Section 6.7. This part of the network includes the following links in the study area:

- Links 5, 23, 24, 25, 26 and 27 – A42/M1 on/off-slips at M1 Junction 23A (Finger Farm)
- Link 20, 49 and 52 – A453 between Hunter Road and Finger Farm
- Links 28, 42, 43, 44, 45, 50 and 53 – A453 between Finger Farm and M1 Junction 24

6.6.24. The remaining links across the study area are all expected to operate within capacity and are not subject to any detailed junction capacity modelling within the TA. It can therefore be concluded that these links would experience a *neutral* or *negligible* impact on driver delay without the need for any further assessment or mitigation.

6.6.25. The majority of the links on the A453 up to M1 Junction 24, including EMG1 access and Finger Farm roundabout, are expected to operate with a volume/capacity ratio exceeding 100%, and so are expected to experience congestion and delay. This suggests that the links could be sensitive to additional traffic increases and are predicted to accommodate a significant increase in HGVs at over 200% in certain locations. Therefore, under the existing highway layout, the effects of the EMG2 Works along the A453 corridor on driver and vehicle passenger delay are *substantial* and mitigation is considered in Section 6.7.

Non-Motorised User Delay

6.6.26. The assessment of non-motorised user delay is closely related to severance, meaning delays are likely to occur where AADT flows increase by more than 30%. There are also other factors to consider such as the pedestrian activity, visibility and general physical conditions. The following links are expected to experience a 30% increase in AADT flows or HGVs:

- Links 5, 23, 24, 25, 26 and 27 – A42/M1 on/off-slips at M1 Junction 23A (Finger Farm)
- Link 6 – Long Street, Belton
- Link 11 – unnamed road, Diseworth
- Link 20, 49 and 52 – A453 between Hunter Road and Finger Farm
- Links 28, 42, 43, 44, 45, 50 and 43 – A453 between Finger Farm and M1 Junction 24
- Link 33 - Beverley Road, East Midlands Airport

6.6.27. Links 5 to 27 on the A42/M1 on/off-slips at M1 Junction 23A would experience a less than 30% increase in total AADT flows, but HGVs are expected to increase by more than 30%.

These links form part of the SRN where there are no facilities or demand for pedestrians or cyclists who are forbidden to travel on these roads. Therefore, no further assessment is required.

6.6.28. Similarly Link 11, which is the unnamed road that extends to the south of Diseworth, comprises a rural lane that is bound by undeveloped fields at both sides, with no pedestrian or cycle facilities. The EMFM modelling in the TA predicts this link to operate within capacity and so there should be no material impacts to non-motorised user delay. Consequently, the sensitivity of receptors is negligible, which are expected to experience a slight increase in traffic, with an overall *negligible* scale of impact. Therefore, no mitigation is required.

6.6.29. Link 6 at Long Street in Belton is predicted to experience a 102% increase in AADT flows from 862 movements without development increasing to 1,743 movements with development, all of which would comprise cars of light vehicles. Whilst Long Street has receptors of moderate sensitivity, which could experience a substantial increase in traffic and a *substantial* scale of impact. When converting the AADT flows to peak hour, there is likely to be up to 173 vehicle trips movements per hour, or just less than three movements per minute. Furthermore, the EMFM modelling within the TA has not identified any capacity issues on this part of the network, so there are not expected to be any significant delays to non-motorised users. The main non-motorised user journeys from the residential properties are expected to be to the Queens Head Public House or convenience store, and whilst tied more to severance, would continue to be accessible without any significant delays. Consequently, whilst the scale of impact could be considered *substantial*, there are not expected to be any significant delays and therefore in reality impacts would be *slight* and no mitigation is required.

6.6.30. Links 20, 49 and 52 form sections of the A453 between Hunter Road roundabout and Finger Farm roundabout and are expected to experience a 28% to 41% increase in total AADT movements but a +200% increase in HGVs. A footway/cycleway exists along the northern edge of the A453 between the Hunter Road roundabout and EMG1. The links are considered to have receptors with negligible sensitivity, which could experience a slight increase in traffic, resulting in a *negligible* scale of impact.

6.6.31. The links on the A453 up to M1 Junction 24 including EMG1 access and Finger Farm are expected to experience a less than 30% increase in total AADT flows but a greater than 30% increase in HGVs. The links contain receptors of negligible sensitivity, with a slight increase in traffic predicted and therefore a *negligible* scale of impact. Therefore, no mitigation is considered necessary from a non-motorised user delay perspective.

6.6.32. Link 33 includes part of Beverley Road within East Midlands Airport, which is expected to experience a 191% increase in total AADT flows, which are predicted to increase from 889 movements without development to 2,587 movements with development. Receptors on this link have a negligible sensitivity but could experience a substantial increase in traffic, leading to a *slight* scale of impact. There would be a negligible increase in pedestrians and cyclists, as the demand from the EMG2 Works would be via Diseworth, EMG1, Kegworth and Castle Donington. However, the future traffic flows would equate to up to 268 peak hour trips, or less than 5 two-way trips per minute. The road has existing zebra crossings at multiple

locations with adequate footway provision, which priorities pedestrian crossing movements. Therefore, no mitigation is required.

Non-Motorised User Amenity

6.6.33. Non-motorised user amenity relates to the relative pleasantness of a journey with the former IEMA Guidelines suggesting that significant changes are likely to occur where traffic flows (or HGVs percentages) are halved or doubled. The following links are expected to experience a +50% increase in AADT flows or HGVs.

- Links 5, 23, 24, 25, 26 and 27 – A42/M1 on/off-slips at M1 Junction 23A (Finger Farm)
- Link 6 – Long Street, Belton
- Link 20, 49 and 52 – A453 between Hunter Road and Finger Farm
- Links 28, 42, 43, 44, 45, 50 and 43 – A453 between Finger Farm and M1 Junction 24
- Link 33 - Beverley Road, East Midlands Airport

6.6.34. Of these five links, the A42/M1 on/off-slips at Finger Farm are considered to have a *neutral* impact on non-motorised user amenity because they do not allow pedestrian or cycle movements and are designed solely to accommodate vehicular movements. Therefore, no further assessment is considered necessary.

6.6.35. Link 6 at Long Street in Belton is expected to experience a 102% increase in AADT flows from 862 movements without development to 1,743 movements with development, all of which would comprise cars or light vehicles. The nature of the road is typical of a rural village, comprising a narrow street with footways on both sides and direct frontage housing to the rear of the footways. The majority of walking trips are expected to be localised journeys between the housing and the Queens Head Public House or convenience store because of the distance to other settlements further afield. The 102% increase in AADT flows would result in 881 additional AADT movements. During the peak hours, EMFM predicted there to be up to 131 additional trips in either direction which equates to just over two additional vehicles per minute. Therefore, whilst the IEMA thresholds suggest there could be a substantial increase in traffic on a road with receptors of moderate sensitivity, leading to a *substantial* scale of impact, the absolute increase in AADT flows is low. Therefore, there are not expected to be any material impacts on non-motorised user amenity and no mitigation is required.

6.6.36. The links on the A453 across the EMG2 Main Site frontage and up to M1 Junction 24 via Finger Farm and the EMG1 access roundabout are expected to experience a less than 30% increase in total AADT flows, but a high increase in HGVs of over 100% at certain locations and hence double compared to without development flows. Receptors on this link have a negligible sensitivity and there is predicted to be a slight increase in HGVs, with an overall *negligible* scale of impact. However, given the increase in HGVs, mitigation is considered in Section 6.7.

6.6.37. Link 33 along Beverley Road is expected to experience a 191% increase in AADT flows from 889 movements without development to 2,587 movements with development. This part of the network is within East Midlands Airport surrounded by predominantly industrial and commercial development with receptors of negligible sensitivity. Whilst the percentage increase in traffic could be deemed substantial, the receptors are of low sensitivity and so the overall impacts are *slight*. There is predicted to be up to 268 additional two-way peak hour trips on Beverley Road, equating to less than 5 movements per minute. With the existing footway infrastructure and zebra crossings and general activity taking place nearby from the industrial/commercial units and airport, the overall change to the pleasantness of the journey would be small and no mitigation is required.

Fear and Intimidation

6.6.38. Fear and intimidation are often experienced by pedestrians and driven by volume of traffic, HGV composition, vehicle speeds and physical characteristics such as narrow pavements and obstructions.

6.6.39. Links 1 and 34 along London Road in Kegworth are expected to experience a 10% increase in AADT trips from 7,987 movements without development to 8,789 movements with development. All vehicles would comprise cars or light vehicles due to existing weight restrictions in place. The southern part of London Road is more rural providing a footway separated from the carriageway by a verge. Where the road enters the built-up area of Kegworth further north, footways are provided on both sides and directly abut the carriageway and are generally wider at 2 metres at most places. London Road is subject to a 30mph speed limit and the nature of the environment in the vicinity of the road, with direct frontage housing, bus stops and pedestrian activity to the nearby commercial uses helps to control speeds. Overall, whilst there are receptors of moderate sensitivity, there is expected to be a negligible increase in traffic and an overall *slight* scale of impact meaning no mitigation is required.

6.6.40. Link 3 along Hemington Road to the east of Hemington village is expected to experience an 11.3% increase in AADT flows from 7,165 movements without development to 7,973 movements with development, with only one HGV movement. The majority of pedestrian activity takes place at the western end of the link because of the presence of residential properties at the northern side of the road and a park at the southern side of the road. Hemington Primary School is also located nearby but not on the link itself. This section of Hemington Road is subject to a 30mph speed limit, with footways on both sides and is understood to experience on-street parking. Whilst receptors on this link have high sensitivity, there is expected to be a negligible increase in traffic and a *slight* scale of impact overall. With this and given traffic travels at slow speed the impact on fear and intimidation is expected to be slight meaning no mitigation is required.

6.6.41. As Hemington Road extends out of the village to the east, it becomes rural with no direct frontage development and national speed limit restrictions apply. There continues to be a footway along the southern side of the road but activity is significantly reduced because of the lack of development and so whilst the scale of impact on fear and intimidation continues to be *slight*, the actual impacts are lessened. Therefore, no mitigation is required.

6.6.42. Link 4 along Baroon/Hemington Lane connects the villages of Castle Donington and Hemington. At either end, the link is urbanised with direct frontage housing, footways, and small commercial units present. These sections of the link are also subject to 30mph speed limit. There is expected to be a 16.4% increase in AADT flows increasing from 3,937 without development to 4,583 with development. In peak hours, there is expected to be approximately one additional movement per minute in either direction, all of which would comprise cars or light vehicles. Therefore, the scale of impact on fear and intimidation would be *negligible*.

6.6.43. The section of the link in between the villages is rural with no footway provision but remains at a 30mph speed limit. This section is expected to accommodate less pedestrian activity. Overall, there receptors have a moderate sensitivity and would experience a negligible increase in traffic, resulting in a *negligible* scale of impact. Therefore, no mitigation is required.

6.6.44. Links 5 to 27 comprise the on/off-slips at Finger Farm roundabout (M1 Junction 23A) and form part of the SRN designed to carry large volumes of traffic including HGVs. Non-motorised users are not permitted to travel along these routes and therefore it is considered that there is a *neutral* impact on fear and intimidation and no further assessment is required.

6.6.45. Link 6 at Long Street in Belton is expected to experience a 102% increase in AADT flows from 862 movements without development to 1,743 movements with development, all of which would comprise cars or light vehicles. This part of the network provides footways at both sides of the carriageway and is subject to a 30mph speed limit. In terms of peak hours, EMFM predicts there will be up to 131 two-way trips, or just over two additional movements every minute in either direction. Whilst there are some receptors of moderate sensitivity, and the potential for a substantial increase in traffic and *substantial* scale of impact, with traffic travelling at slow speed and the absolute increases being low (all of which would comprise cars of light vehicles), in reality there is not expected to be any adverse impacts on fear and intimidation and therefore no mitigation is required.

6.6.46. Link 9 comprises Grimes Gate, which extends south from the A453 into Diseworth. The northern part of Grimes Gate is rural in nature, absent of footways and largely undeveloped at both sides. Pedestrian activity is therefore low as the main demand is via Hyam's Lane. The southern part of Grimes Gate where it extends into Diseworth becomes more urbanised, with properties along both sides of the road and footway infrastructure along the western side of the road. The speed limit in this section reduces to 30mph from the national speed limit. There is expected to be a 13.7% increase in AADT movements along this link increasing from 2,489 movements without development to 2,839 movements with development, with HGVs remaining unchanged at 26 across a day. The actual increase of 350 movements across an entire day would result in limited impacts in any single hour. Some receptors along this link have a moderate sensitivity, but would experience a negligible increase in traffic, with a *slight* scale of impact overall. Therefore, no mitigation is required.

6.6.47. Links 10 and 11 form The Green and the unnamed road that extend around the western edge of Diseworth and out to the south towards the A42. These roads are rural in nature with no footway provision and are largely undeveloped at both sides. The route accommodates predominantly vehicular traffic with a very low number of pedestrian or cycle

movements. The Green is expected to experience a 30.9% increase in traffic (10,363 movements without development increasing to 12,580 movements with development). The unnamed road is expected to experience an 18.3% increase in traffic (6,410 movements without development increasing to 8,388 movements with development). Overall, receptors have a negligible sensitivity and there is expected to be a slight/negligible increase in traffic, so the overall scale of impact is *negligible*. Therefore, no mitigation is required.

6.6.48. Link 19 along Main Street extends through the northern part of Lockington from its junction with Hemington Lane and out to Derby Road. It provides an alternative route to M1 Junction 24 and connects the villages of Hemington and Lockington. It is largely rural in nature and undeveloped at both sides (except the section in Lockington which serves a small number of residential properties) subject to a 30mph speed limit. It forms part of a wider cycle route connecting settlements including Sawley, Shardlow, Castle Donington and Long Eaton and provides a shared footway/cycleway along one side. Main Street is expected to experience a 12.2% increase in AADT flows from 7,040 movements without development to 7,901 movements with development, including two additional HGVs. There is expected to be a negligible increase in trips affecting receptors of low sensitivity, meaning the overall scale of impact is *negligible*.

6.6.49. The section of the network along the A453 corridor from Hunter Road to M1 Junction 24 and the on/off-slips at M1 Junction 23A are strategic and designed to accommodate large volumes of traffic and high HGV percentages. The A453 corridor provides footway/cycleway facilities that are segregated from the carriageways and connected with signal controlled crossings near the EMG1 access roundabout. The development would increase the composition of HGVs by over 200%, which could be deemed to have a *substantial* scale of impact. Therefore, mitigation is considered in Section 6.7.

6.6.50. Link 33 along Beverley Road in East Midlands Airport provides footways on both sides connected with zebra crossings and subject to a 30mph speed limit. Whilst there is expected to be a 191% increase in AADT flows, which is considered a substantial increase, this would comprise cars or light vehicles and the existing receptors nearby are considered to have a negligible sensitivity to traffic increases. This would therefore result in a *slight* scale of impact which requires no mitigation.

Road User and Pedestrian Safety

6.6.51. A detailed review of the Personal Injury Collision records was undertaken as part of the TA and presented in Technical Note EMG2-BWB-GEN-XX-RP-TR-0015_Highway Safety Position Statement, Revision P1 (appended to the TA in **Appendix 6A** (**Document DCO 6.6A/MCO 6.6A**)). The review concluded that there are three locations with existing safety problems, which are at the following junctions/links:

- EMG1 access junction – a cluster of PICs have been recorded due to turning movements from the A6 to EMG1 colliding with drivers travelling southbound on the A453. One of the PICs was fatal.
- M1 Junction 24 – a cluster of PICs have been recorded on the M1 northbound off-slip on approach to the roundabout. There are no known existing safety issues with

the A50 northbound weaving section from Junction 24 as alluded to during the Public Consultation events.

- A453/The Green – a cluster of PICs have been recorded due to right turning movements from the A453 west into The Green. This appears to be due to the location of the junction within a dip in the carriageway and potential lack of signage or warnings. Looking at historic Google Street View records, the tourist sign to the 'Queens Head' highlighting a left turn into The Green from the east was obstructed by overgrown vegetation until 2023 and since then there have been no PICs occurring through westbound travelling vehicles. There appear to have been improvements to the warning signs for eastbound vehicles between 2017 and 2020, which appears to have slowed the rate of collisions.

6.6.52. At all other locations, whilst there had been isolated PICs occur, there were not considered to be any clusters of PICs that identify any unacceptable safety concerns.

6.6.53. The following links within the study area have therefore been considered in further detail to understand the impacts of the EMG2 Works on road user and pedestrian safety:

- Links 10 – The Green, Diseworth
- Links 28, 42, 43, 44, 45, 50 and 43 – A453 between Finger Farm and M1 Junction 24

6.6.54. Link 10 comprises The Green which extends to the south of the A453 and past the western side of Diseworth. The PIC records identified a cluster of accidents at the A453/The Green junction, which were due to the junction sitting in a dip in the road restricting visibility. Recent signage improvements on the A453 approaching the junction appear to have reduced the rate of PICs. This junction is expected to experience an 18.3% increase in AADT flows from the development, increasing from 10,636 movements to 12,580 movements, all of which would comprise cars or light vehicles because of the existing weight restriction. Given traffic increases on this link are expected to be negligible, and the rate of PICs is reducing, it is considered that there would be a *negligible* scale of impact on road user and pedestrian safety.

6.6.55. The EMG1 access and M1 northbound off-slip at Junction 24 have been identified as having safety problems. It is considered that there could be a high sensitivity of receptors, with a slight increase in traffic, resulting in a *moderate* scale of impact. Mitigation is therefore considered in Section 6.7.

Hazardous/Abnormal Loads

6.6.56. The number of hazardous/abnormal loads cannot be quantified at this stage given construction and operational requirements have not been confirmed. Any hazardous loads would be transported via HGVs and so have been accounted for in the overall HGV numbers assessed as part of the transport modelling work.

6.6.57. Whilst the delivery of abnormal loads would normally be planned outside normal working hours, it is possible that some deliveries of major plant and equipment may require special delivery requirements during normal operating hours. In all instances, such deliveries will be

planned with appropriate highway authorities and police and executed in compliance with those requirements.

6.6.58. As part of transporting hazardous/abnormal loads protocols would be in place to minimise the impacts of deliveries as per the requirements of the Construction Traffic Management Plan (**Document DCO 6.3A/MCO 6.3A**).

Summary

6.6.59. The assessment of operational traffic impacts for the core scenario showed that there are potential impacts at the following locations without the proposed Highway Works.

i. A453 across the EMG2 Main Site frontage – severance

ii. A453 between EMG2 Main Site and M1 Junction 24 – driver delay, non-motorised user amenity and fear and intimidation

iii. M1 northbound off-slip at Junction 24 – fear and intimidation

6.6.60. An assessment of the residual effects, including for the mitigation proposed in the TA, is provided in Section 6.8.

Assessment of Construction Traffic Impacts

6.6.61. The construction phase is estimated to take place between Q4 2026/Q1 2027 and Q3 2031 (approximately 5.5 – 5.75 years). All construction traffic associated with all of the EMG2 Project and therefore inclusive of the EMG2 Works, the EMG1 Works and the Highway Works is included. The methodology adopted to calculate construction traffic numbers is presented within a separate Technical Note (EMG2-BWB-GEN-XX-RP-TR-0013_Construction Traffic Calculations, Revision P4) Appendix 12 to the TA in **Appendix 6A (Document DCO 6.6A/MCO 6.6A)**, which has been agreed with NH and NCC. LCC have been party to the discussions around the methodology and assumptions adopted in the calculations. In addition, the CTMP and HGV Routeing Plan have also been agreed with NH.

6.6.62. **Table 6.8** presents the same assessment and compares the forecast traffic flows during the 'without development' and 'with construction traffic' scenarios as well as the percentage change. It then highlights any links that are expected to experience a 10% increase in AADT flows or HGVs and whether any additional assessment is required further to the operational impacts of the EMG2 Project.

Table 6.8: 2028 Forecast Year Flow Changes (with/without development – construction traffic)

Link ID	Link Name	2028 WoD AADT Flow		2028 with construction traffic AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
27	A42 on-slip from Junction 23A	2,479	28	2,495	54	0.7%	87.8%	×	Percentage increase in flows is smaller than

									operational impacts
54	Finger Farm eastbound circulatory	6,735	34	6,802	62	1.0%	81.1%	×	Percentage increase in flows is smaller than operational impacts

6.6.63. **Table 6.8** shows that there are only two links across the entire network that would experience a 10% increase in AADT flows or HGVs. However, the percentage increase on these two links is less than the impacts of operational traffic shown in **Table 6.6**. Therefore, no further assessment of the construction traffic impacts is considered necessary over and above the assessment of operational impacts in Section 6.6, particularly when noting the effects will be temporary and short-term in nature.

6.7. Assessment of DCO Application – Mitigation Measures

6.7.1. The TA is proposing a range of highway, active travel and public transport improvements to maximise sustainable transport opportunities and reduce the vehicular impacts of the EMG2 Works on the surrounding network. A package of highway works is proposed including site access, substantial improvements around M1 Junction 24, as well as minor works on the local highway network. The proposed highway works are listed below.

- A453/EMG2 Main Site access junction – providing access to the EMG2 Main Site via a new arm from the A453/Hunter Road roundabout (Works No. 6)
- M1 Junction 24 improvements comprising:
    - M1 northbound alterations providing the new northbound exit and associated gantry/signage improvements on the M1 (Works No. 8).
    - M1 northbound to A50 westbound link providing a new free flow link road from the M1 northbound to the A50 westbound at J24. The new infrastructure will bridge over the A453 and includes the A50 westbound merge alterations (Works No. 9 and 10).
    - M1 southbound and A50 eastbound link to J24 widening providing widening of the A50 eastbound link at J24 and other related works and traffic management measures (Works No. 11).
    - Alteration of the west side of the J24 roundabout to provide three lanes from the M1 northbound to A453 northbound through the junction, two lanes from the A453 northbound to the M1 northbound through the junction and removal of the segregated left-turn lane from the A453 northbound to the A50 westbound post feedback from NH (Works No. 12).
    - Signing and lining amendments on the east side of the J24 roundabout and the A453 southbound approach.
- A6 Kegworth Bypass/A453 Junction Improvements providing widening at the EMG1 roundabout to increase junction capacity to better accommodate traffic from the EMG2 Main Site (Works No. 13).
- Works to the A42/A453 Finger Farm roundabout (Works No. 18).
- The proposed Active Travel Works comprise the following key items:
    - Active Travel Link providing a dedicated cycle track alongside the A453 between EMG1 and the EMG2 Main Site.
    - A new shared use footway/cycleway along the length of the EMG2 Main Site estate road providing pedestrian and cyclist access to all units and ensuring they are separated from vehicle and HGV traffic.
    - The existing Public Right of Way L45 which bisects the EMG2 Main Site will become integrated into Hyam's Lane. Hyam's Lane will be resurfaced and upgraded to allow cyclist access.

- A new Toucan crossing point will be installed on the A453 to the east of the Hunters Road roundabout for pedestrians and cyclists to safely cross the A453 to/from EMG2 Main Site, unlocking connections to EMG1, Kegworth and beyond. This has been included for in the EMFM modelling and is examined in further detail below.
- A new shared use cycle track from the Hyam's Lane to the proposed A453 Toucan crossing.
- A new dedicated shared use cycle track north of the new Toucan crossing alongside the A453 to connect the EMG2 Main Site with EMG1 for pedestrians and cyclists as well as improving cycling in the wider area between Kegworth and East Midlands Airport.
- The route along Hyam's Lane, to the Toucan Crossing and then to the EMG1 access junction will form of an extension to the National Cycle Route 15 providing connectivity towards Kegworth and EMG1 to the northeast and Diseworth to the southwest.
- The Hyam's Lane Works will also provide signage at the junction of Hyam's Lane and Grimes Gate and resurfacing works along Hyam's Lane to enhance cycle access.
- A453/East Midlands Airport junction uncontrolled crossing providing pedestrian crossing improvements across the A453 to between the airport and proposed EMG2 community park.
- The upgrade of public footpath L57 which connects Diseworth Lane to the west of EMG1 and Castle Donington for improved connectivity for cyclists from Castle Donington to EMG1 and on to the EMG2 Main Site. Payment was made to LCountyC under the Section 106 agreement for EMG1 for the upgrade works to be carried out by LCountyC however these works have never been implemented.
- A new footpath from the western end of Hyam's Lane and PRoW L45/L46 northwards through the proposed Community Park connecting to the A453 Ashby Road by the Airport access via the western edge of the EMG2 Main Site.
- A new bridleway from the western end of Hyam's Lane and PRoW L45 southwards through the proposed Community Park connecting to Long Holden and PRoW L48. Connecting these two PRoWs will create a valuable new publicly accessible route all the way from PRoW L48 to the airport and will create a loop for use by equestrians;
- A new footpath from the eastern end of Hyams' Lane and PRoW L45 southwards connecting to Long Holden via the eastern edge of the EMG2 Main Site creating a publicly accessible circular route around the southern part of the EMG2 Main Site.
- Restricting access to Long Holden by changing its status from an all-purpose highway to a bridleway which more accurately reflects its character and will allow access to be controlled.

- A new public transport interchange within the EMG2 Main Site accommodating existing public bus services as well as dedicated site-specific shuttle services and electric bicycle parking.

6.7.2. The main active travel improvements include the upgrade of Hyam's Lane public footpath, which extends through the EMG2 Main Site, to allow cycle access, which will form part of an extended National Cycle Route 6 linking Diseworth with EMG2 Main Site, EMG1 and Kegworth. The enhancements to Hyam's Lane will also include re-surfacing and removal of the existing field accesses. Furthermore, improved footway/cycleway facilities are proposed within the EMG2 Main Site and along the northern/western edges of the A453 up to EMG1. A signal controlled Toucan crossing will be provided on the A453 to safely connect the new cycle facility.

6.7.3. The proposed improvements to the active travel links will provide a permanent, beneficial impact that will enhance non-motorised user amenity along these parts of the network with significant benefits to people travelling from Diseworth, Kegworth and Castle Donington in particular.

6.7.4. Feedback was received from LCC on the design information of the highway mitigation by email on 2 July 2025, which confirmed that LCC accept the majority of the information provided. LCC raised a few areas where further work is needed during the technical approval process and the need for further supporting information, such as additional swept paths, approval on departures and confirmation of Stopping Sight Distances. These comments have been taken on board with revised versions of the drawings submitted with the application.

6.8. Assessment of DCO Application – Residual Effects

6.8.1. The residual impacts of the EMG2 Works with the proposed Highway Works summarised in Section 6.7 have been tested in EMFM 2019 (Stage 2B modelling). The proposed Highway Works provide benefits in allowing a larger volume of traffic to be accommodated on the SRN, which causes background traffic to re-assign and alter its journey route because of capacity improvements on the SRN. This therefore results in a different study area being identified based on the same thresholds set out Rules One and Two of the IEMA 2023 Guidelines, when compared to the core scenario assessed in Section 6.6. The following assessment continues to consider the EMG2 Works with the addition of Plot 16, but as set out in paragraph 6.6.5 and Section 6.7, Plot 16 (the MCO application) in isolation would continue to have a negligible impact under the assessment of residual effects. There would be no changes to the previous assessment of construction traffic in Section 6.6 within the residual scenario.

6.8.2. **Table 6.9** compares the 2028 without development flows (Stage 1B) against the 2028 with development, with mitigation flows (Stage 2B) to understand the percentage changes across all links in the EMFM network area. It includes the original list of 54 links and any additional links that are now expected to experience a 10% increase in AADT flows or HGVs as a result of the addition of the highway mitigation. The table analysis the sensitivity of each link and sets out those that require further assessment over and above that undertaken for the core scenario in Section 6.6 and the reasons why.

Table 6.9: 2028 Forecast Year Flow Changes (with/without development – operational traffic, residual scenario)

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
1	London Road, Kegworth between A6 and Whatton Road	7,987	0	9,854	0	23.4%	0%	×	Percentage change in AADT flow has increased from 10.0% in core scenario but no change to conclusions in Section 6.6.
2	The Green, Diseworth (between Lady Gate and Smithy Lane)	5,663	0	6,864	0	21.2%	0%	×	Percentage change in AADT flow has increased from 16.3% in core scenario but no change to conclusions in Section 6.6.

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
3	Hemington Lane east of Hemington	7,165	1	10,114	3	41.4%	182%	×	Percentage change in AADT flow has reduced from 11.3% in core scenario and actual increase in HGVs is small at two per day.
4 & 173	Baroon/ Hemington Hill, Castle Donington	3,937	0	5,021	0	27.5%	0%	×	Percentage change in AADT flow has increased from 16.4% in core scenario but no change to conclusions in Section 6.6.
5	A42 on-slip from Finger Farm	12,047	250	13,693	966	13.7%	286%	×	Percentage change in AADT flow has reduced from 22.1% and HGVs from 290% in core scenario
6	Long Street, Belton	862	0	1,679	0	94.8%	0%	×	Percentage change in AADT flow has reduced from 102% in core scenario
7	Forest Lane, Belton	2,209	0	2,480	0	12.3%	0%	×	Percentage change in AADT flow has reduced from 12.7% in core scenario
8	Smithy Lane, Long Whatton	Less than 10% increase							
9	Grimes Gate/Lady	2,489	26	2,837	26	13.6%	0%	×	Percentage change in AADT flow has

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
	Gate, Diseworth								reduced from 13.7% in core scenario.
10	The Green, Diseworth between A453 and unnamed road	10,636	0	13,050	0	22.7%	0%	×	Percentage change in AADT flow has increased from 18.3% in core scenario but no change to conclusions in Section 6.6.
11	Unnamed road south of Diseworth	6,410	0	8,606	0	34.3%	0%	×	Percentage change in AADT flow has increased from 30.9% in core scenario but no change to conclusions in Section 6.6.
12	Gelscoe Lane east of A42 Junction 14	6,564	0	8,417	0	28.2%	0%	×	Percentage change in AADT flow has increased from 26.3% in core scenario but no change to conclusions in Section 6.6.
13	A42 westbound on-slip	2,499	64	3,062	101	22.5%	57.7%	×	Percentage change in AADT flow has increased from 12.3% in core scenario but no change to conclusions in Section 6.6. There would be a small increase of 35 daily HGVs, which is

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
									negligible and would not change previous conclusions.
14	A453 between The Green and Grimes Gate	14,365	574	17,429	553	21.3%	-3.6%	×	Percentage change in AADT flow has increased from 17.6% in core scenario but no change to conclusions in Section 6.6.
15	Unnamed road between A453 and Castle Donington bypass	23,231	28	23,535	51	1.3%	83.4%	×	Percentage change in AADT flow has reduced from 2.0% in core scenario. There has been a slight increase of 10 additional daily HGVs which is negligible and would not change previous conclusions in Section 6.6.
16	East Midlands Airport signal access road	9,762	284	12,828	508	31.4%	79.0%	✓	Rule one – percentage increase in AADT and HGV flows exceeds 30%
17	A453 between Grimes Gate and East Midlands Airport access	15,226	574	19,107	554	25.5%	-3.6%	×	Percentage change in AADT flow has increased from 22.4% in core scenario but no change to

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
									conclusions in Section 6.6.
18	Hemington Lane west of Lockington	7,070	31	9999	29	41.4%	-5.4%	✓	Rule one – percentage increase in AADT flow exceeds 30%
19	Main Street, Lockington	7,040	106	9,777	106	38.9%	0%	✓	Rule One – percentage increase in AADT flows exceed 30%
20	A453 between Hunter Road and Finger Farm	Less than 10% increase							
21	Kingston Lane between Kegworth and Kingston on Soar	2,552	0	5,667	0	114%	0%	✓	Rule One – percentage increase in AADT flow exceeds 30%
22	Finger Farm northbound circulatory	33,549	1,531	28,550	3,181	-15%	107%	×	Reduction in total AADT flows. Percentage increase in HGVs is negligible from 101% in core scenario so no change to conclusions in Section 6.6.
23 & 25	A42 off-slip towards Finger Farm	3,038	204	3,700	632	21.8%	209%	×	Percentage change in AADT flow has reduced from 23.8% and HGV from 215% in core scenario.
24	M1 southbound	25,720	1,079	18,023	1,518	-30%	40.7%	×	Reduction in total AADT flows.

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
	on-slip from Junction 23A								Percentage increase in HGVs is negligible from 39.1% in core scenario so no change to conclusions in Section 6.6.
25	-	-	-	-	-	-	-	×	See Link 23
26	M1 northbound off-slip at Junction 23A	9,539	221	11,138	591	16.8%	167%	×	Non-sensitive link and minor percentage increase in HGVs from 163%, so no change to conclusions in Section 6.6.
27	A42 on-slip from Junction 23A	2,507	29	2,554	374	1.9%	1204%	×	Percentage change in AADT flow has reduced from 4.4% and HGVs from 1,273% in core scenario.
28	A453 southbound exit at M1 Junction 24	Less than 10% increase							
29	A453 between A42 Junction 14 on/off-slip	Less than 10% increase							
30	A42 Junction 24 off-slip	3,150	53	3,867	108	22.8%	104%	×	Percentage change in AADT flow has reduced from 30.1% in core scenario. Actual increase in HGV is small on part of the

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
									SRN so no change to conclusions in Section 6.6.
31 & 35	Ambassador Road, East Midlands Airport	Less than 10% increase							
32 & 157	Viscount Road, East Midlands Airport	5,461	110	6,903	329	26.4%	199%	×	Non-sensitive link in an industrial area and actual increase in HGVs is low.
33	Beverley Road, East Midlands Airport	889	18	2,779	17	213%	-2.8%	×	Percentage change in AADT flow has increased from 191% in core scenario but no change to conclusions in Section 6.6.
34	London Road, Kegworth north of Whatton Road	7,041	0	8,951	0	27.1%	0%	×	Percentage change in AADT flow has increased from 11.2% in core scenario but no change to conclusions in Section 6.6.
35	-	-	-	-	-	-	-	-	See Link 31
36	Finger Farm westbound circulatory	4,837	248	6,834	1,030	41.3%	315%	×	Disregarded as on roundabout circulatory
37	Forest Lane, south of Ashby Road	Less than 10% increase							
38	M1 southbound off-slip at Junction 23	10,839	734	12,714	928	17.3%	26.5%	×	Percentage change in AADT flow has increased from

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
									13.8% in core scenario but no change to conclusions in Section 6.6.
39	Castle Donington bypass north of unnamed road	Less than 10% increase							
40	A453 northbound entry at M1 Junction 24	9,951	1,380	18,967	1,831	90.6%	32.7%	×	Non-sensitive link on SRN designed to accommodate high traffic volumes
41	EMG1 access roundabout northbound circulatory	31,498	1,221	25,422	2,097	-19%	71.7%	×	Disregarded as on roundabout circulatory
42	A453 between Finger Farm and EMG1 roundabout (southbound)	10,116	463	11,459	1,245	13.3%	168%	×	Reduction of total AADT flows from 13.9% in core scenario. Whilst there has been a slight increase in percentage HGV from 152% in core scenario, there would be no change to conclusions in Section 6.6.
43 & 53	A453 northbound entry to EMG1 roundabout	27,855	1,325	22,277	2,131	-20%	60.7%	×	Overall reduction in traffic and no change to HGV percentage from 51.9%

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
									hence overall betterment.
44	A453 between Finger Farm and EMG1	37,971	1,789	33,737	3,376	-11%	88.7%	×	Percentage change in AADT flow has reduced from 7.5% in core scenario with no significant increase in HGV percentage from 78% in core scenario
45	A453 southbound entry to EMG1 access roundabout	Less than 10% impact							
46	Gotham Road east of Kingston on Soar	1,967	0	2,971	0	51.0%	0%	✓	Rule one - percentage increase in AADT flow exceeds 30%
47	Kegworth Road, Kingston on Soar (east of Kingston Lane)	Less than 10% impact							
48	Kegworth Road, Kingston on Soar (north of Kingston Lane)	920	0	3,310	0	260%	0%	✓	Rule one – percentage increase in AADT flow exceeds 30%
49	Finger Farm eastbound entry	13,384	462	19,001	1,937	42.0%	319%	×	Percentage change in AADT flow has increased from 41.0% and HGVs from 296% in core scenario but

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
									no change to conclusions in Section 6.6.
50	A453 southbound towards Finger Farm	10,116	463	11,459	1,245	13.3%	168%	×	Percentage change in AADT flow has reduced from 13.9% and HGVs increased from 153% in core scenario but no change to conclusions in Section 6.6.
51	Finger Farm southbound circulatory	16,884	497	20,528	1,995	21.6%	300%	×	Percentage change in AADT flow has reduced from 39.6% and HGVs increased from 286% in core scenario but no change to conclusions in Section 6.6.
52	Finger Farm westbound exit	12,353	633	16,199	2,242	31.1%	254%	×	Percentage change in AADT flow has increased from 27.5% and HGVs from 240% in core scenario but no change to conclusions in Section 6.6.
53	-	-	-	-	-	-	-	-	See Link 43
54	Finger Farm eastbound circulatory	6,769	34	9,073	746	34.0%	2078%	×	Percentage change in AADT flow has reduced from 78.1% and

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
									HGVs from 2093% in core scenario so overall betterment to conclusions in Section 6.6.
60	Unnamed road in EMA to west of Ambassador Road	2,826	28	3,596	92	27.3%	224%	×	Non-sensitive link and actual increase in HGVs is negligible (64 per day)
64	Ambassador Road, EMA	3,150	104	3,911	169	23.2%	199%	×	Non-sensitive link and actual increase in HGVs is negligible (65 per day)
66	Darsway/ Black Lane, Castle Donington	5,568	187	6,656	191	19.5%	2.6%	×	Non-sensitive link with no sensitive receptors
68	-	-	-	-	-	-	-	-	See Link 100
69	Bondgate, Castle Donington	5,589	0	6,959	0	24.5%	0%	×	Non-sensitive link
72	Stocking Lane, south of Breedon	2,769	53	3,369	57	21.6%	7.7%	×	Non-sensitive link in rural area
71	A6 Kegworth bypass	10,178	1,821	13,191	1,975	29.6%	8.4%	×	Non-sensitive link close to SRN
77 & 122	Gracedieu Lane between Belton and Thringstone	3,074	0	3,575	0	16.3%	0%	×	Non-sensitive link in rural area
79	Loughborough Road between Henson's Lane and Ashby Road, Thringstone	3,837	263	4,316	269	12.5%	2.3%	×	Non-sensitive link

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
80	Top Brand, east of Breedon	6,425	259	7,427	267	15.6%	3.1%	×	Non-sensitive link in rural area
82	A453 between EMA signal junction and Hunter Road	17,153	849	19,267	1,024	12.3%	20.7%	×	Non-sensitive link close to SRN
84	Unnamed road between Main Street and Moor Lane, Breedon	3,537	190	4,155	187	17.5%	-2.0%	×	Non-sensitive link in rural area
91	EMG1 roundabout eastbound circulatory	6,080	472	6,995	548	15.1%	16.0%	×	Non-sensitive link near SRN
92/93	M1 northbound towards J23A	43,329	7,342	54,152	7,705	25.0%	4.9%	×	Non-sensitive link on SRN
93	-	-	-	-	-	-	-	-	See Link 92
94	Hilton Hotel Lane near M1 Junction 24	12,239	1,061	14,393	1,415	17.6%	33.3%	×	Non-sensitive link and actual increase in HGVs is low (354 per day)
95	Loughborough Road between Whitwick Moor and Henson's Lane, Thringstone	1,654	133	2,113	137	27.7%	3.4%	✓	Sensitive link with care home and other facilities
96	Charwood Road between Lambert Avenue and Oxford Street, Shepshed	3,187	4	3,994	4	25.3%	0%	×	Non-sensitive link
97	Belton Street, Shepshed	4,303	1	4,930	1	14.6%	0%	×	Non-sensitive link
99	Ashby Road between Main Street, Osgathorpe	6,864	311	7,669	543	11.7%	74.6%	×	Non-sensitive link and actual increase in HGVs is negligible.

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
	and Long Street, Belton								
68, 100 & 126	Ryecroft Road, Hemington	4,260	162	5,894	174	38.3%	7.6%	✓	Rule One – percentage increase in AADT flows exceeds 30%
101	Ashby Road from Hathern Road, Long Whatton to A6 Derby Road	14,898	334	16,433	565	10.3%	69.2%	×	Non-sensitive link and actual increase in HGVs is negligible.
102	Willow Road, Castle Donington industrial park	4,881	32	5,775	46	18.3%	42.0%	×	Non-sensitive link and actual increase in HGVs is small (14 across an entire day)
103	Worthington Lane, south of Breedon	417	0	509	0	22.2%	0%	×	Non-sensitive link in rural area
104	Campion Hill, Castle Donington	5,939	187	7,086	192	19.3%	2.6%	×	Non-sensitive link
105	Hemington Hill, Hemington	3,937	0	5,021	0	27.5%	0%	×	Non-sensitive link
106	Broadhill Road, Kegworth	350	0	445	0	27.2%	0%	×	Non-sensitive link
107	Ashby Road between Forest Lane and Church Street, Belton	662	0	759	0	14.7%	0%	×	Non-sensitive link
108	Trent Lane, Castle Donington between Willow Road and Station Road	2,911	0	3,723	0	27.9%	0%	×	Non-sensitive link

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
109	Warren Lane, Thringstone	293	0	323	0	10.2%	0%	×	Non-sensitive link in rural area
110	Ashby Road between Smithy Lane and Turvey Lane, Long Whatton	10,443	290	11,467	524	9.8%	80.3%	×	Non-sensitive link
111	Ashby Road between Long Street and Forest Lane, Belton	8,748	285	10,024	518	14.6%	81.6%	×	Non-sensitive link
112	Viscount Road west of Ambassador Road, EMA	7,218	15	9,532	299	32.1%	1796%	×	Non-sensitive link
113	Packington Hill, Kegworth	1,680	1	2	1,665	-0.9%	75%	×	Reduction in traffic with only one HGV increase per day
114	Derby Road between Side Ley and Packington Hill, Kegworth	11,952	1	11,433	2	-4.3%	75.7%	×	Reduction in traffic with only one HGV increase per day
115	Park Lane, Castle Donington west of bypass	2,693	40	2,987	41	10.9%	1.5%	×	Non-sensitive link in rural area
116	Park Lane, Castle Donington east of bypass up to The Green	546	0	613	0	12.3%	0%	×	Non-sensitive link
117	Castle Donington bypass north of Trent Lane	7,081	325	6,669	444	-5.8%	36.3%	×	Non-sensitive link with overall reduction in traffic. Actual increase in

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
									HGVs is negligible (119 per day).
118	Ashby Road from Turvey Lane and Hathern Road, Long Whatton	9,398	334	10,428	565	11.0%	69.3%	×	Non-sensitive link and actual increase in HGVs is negligible.
119	A6006 between Trowell Lane and Travell's Hill	19,451	1,045	22,203	1,492	14.7%	42.8%	×	Non-sensitive link and actual increase in HGVs is negligible.
120/ 152	Ashby Road between Top Brand and Main Street, Osgathorpe	7,325	705	8,231	931	12.4%	32.0%	×	Non-sensitive link and actual increase in HGVs is negligible.
121	Rempstone Road, between Top Brand and Gelsmoor Road	7,325	705	8,231	931	12.3%	32.0%	×	Non-sensitive link
122	-	-	-	-	-	-	-	-	See Link 77
123	A6006 between Park Lane, Sutton Bonington and Trowell Lane	13,540	1,046	14,806	1,496	9.3%	43.0%	×	Non-sensitive link and actual increase in HGVs is negligible.
124	Kegworth Road up to Station Road, Kingston on Soar	1,733	0	3,009	0	73.6%	0%	✓	Rule One – percentage increase in AADT flow exceeds 30%
125	Ashby Road between Church Street, Belton and Hallamford Road	11,602	290	12,758	523	10.2%	80.4%	×	Non-sensitive link and actual increase in HGVs is negligible.
126	-	-	-	-	-	-	-	-	See Link 100

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
127 & 142	Melbourne Road between Slade Lane and A453 Walton Hill	7,561	156	8,386	156	10.9%	0%	×	Non-sensitive link in rural area
128 & 129	Station Road Kegworth between Nottingham Road and Kingston Lane	13,999	0	17,730	0	26.7%	0%	×	Non-sensitive link
130, 131 & 175	Derby Road between M1 Junction 24 and Side Ley, Kegworth	24,504	353	25,286	547	3.2%	55.0%	×	Non-sensitive link
131	-	-	-	-	-	-	-	-	See Link 130
132	EMA airport access between A453 roundabout and Airport Jet Parks 2	6,220	150	7,033	314	13.1%	42.7%	×	Non-sensitive link with actual increase in HGVs being negligible (164 per day)
133	Slade Lane between Wilson and Melbourne Road	1,789	0	2,152	0	20.3%	0%	×	Non-sensitive link
134	Blackwell Lane between Melbourne and Wilson	4,967	0	5,624	0	13.2%	0%	×	Non-sensitive link
135	Main Street, Melbourne	2,407	0	3,097	0	28.6%	0%	×	Non-sensitive link
136	Station Road between Kegworth Lane and Station Ter, Kegworth	11,347	0	13,011	0	14.7%	0%	×	Non-sensitive link
137	Ashby Road between Forest Lane	8,983	285	10,120	517	12.6%	81.5%	×	Non-sensitive link and actual increase in

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
	and Church Street, Belton								HGVs is negligible.
138	A6006 Zouch Road between A6 Derby Road and Park Lane, Sutton Bonington	16,469	1,047	17,750	1,497	7.8%	43.1%	×	Non-sensitive link and actual increase in HGVs is negligible.
139	Welsted Road, Castle Donington	4,609	277	5,601	378	21.5%	36.4%	×	Non-sensitive link into new development
140	Ashby Road between Hallamford Road and Smithy Lane	16,350	290	17,845	524	9.1%	80.3%	×	Non-sensitive link and actual increase in HGVs is negligible.
141	Kegworth bypass south of Welsted Road	9,777	28	9,725	51	1.3%	83.4%	×	Non-sensitive link and actual HGV increase is negligible (23 per day)
142	-	-	-	-	-	-	-	-	See Link 127
143	M1 Junction 24 eastbound circulatory	47,267	4,937	51,195	6,534	8.3%	32.4%	×	Non-sensitive link designed to accommodate HGVs.
144 & 156	M1 Junction 24 northbound circulatory	33,121	2,895	39,140	4,175	18.2%	44.2%	×	Non-sensitive link on SRN
145	Kegworth bypass between Welsted Road and Park Lane	8,158	299	7,880	417	-3.4%	39.3%	×	Overall reduction in traffic on non-sensitive link with actual HGV increase negligible (118 per day).
146	-	-	-	-	-	-	-	-	See Link 143
147	A50 to M1 J24A northbound slip road	8,542	406	8,531	636	-0.1%	56.6%	×	Overall reduction in traffic on a non-sensitive link on the

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
									SRN with actual HGV increase negligible (230 per day)
148 & 163	A42 south of M1 Junction 23A	33,885	2,402	35,280	3,313	4.1%	37.9%	×	Small increase in traffic on a non-sensitive link on the SRN which is designed to accommodate HGVs
149	A50 Junction 1 southbound circulatory	13.634	887	15,628	980	14.6%	10.6%	×	Non-sensitive link on the SRN
150	A50 Junction 1 southbound circulatory	16,874	483	18,605	505	10.3%	4.6%	×	Non-sensitive link on the SRN
151	Ashby Road between Main Street and Breedon Lane, Osgathorpe	6,532	311	7,329	543	12.2%	74.6%	×	Non-sensitive link and actual increase in HGVs is negligible.
152	-	-	-	-	-	-	-	-	See Link 120
153	-	-	-	-	-	-	-	-	See Link 108
154	The Green/School Lane, Castle Donington	371	0	431	0	16.1%	0%	×	Non-sensitive link with actual increase in daily movements negligible (60 per day)
155	-	-	-	-	-	-	-	-	See Link 170
156	-	-	-	-	-	-	-	-	See Link 144
157	-	-	-	-	-	-	-	-	See Link 32
158	Nottingham Road, Kegworth	5,462	0	9,019	0	65.1%	0%	✓	Rule One – percentage increase in AADT flow exceeds 30%
159	Talbot Street between Whitwick Moor	3,948	133	4,390	137	11.2%	3.4%	×	Actual increase in total flows is

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
	and Talbot Lane, Thringstone								low with a negligible impact
160	Station Road between Trent Lane and Hillside, Castle Donington	9,094	0	10,504	0	15.5%	0%	×	Non-sensitive link
161	High Street, Kegworth	1,334	2	1,231	4	-7.7%	98.9%	×	Reduction in total flows and an increase of only 2 daily HGVs
162	Pleasant Place, Kegworth	3,166	1	2,908	2	-8.1%	81.6%	×	Reduction in total flows and an increase of only 1 daily HGV
163	-	-	-	-	-	-	-	-	See Link 148
164	Field Street/ Britannia Street, Shepshed	9,560	6	10,640	6	11.3%	0%	×	Non-sensitive link
165	A6006, Zouch	19,971	1,114	20,632	1,536	3.3%	37.9%	×	Non-sensitive link and actual increase in HGVs is negligible.
166	Knighthorpe Road between Deane Street and Carrington Street, Loughborough	4,454	49	4,481	70	0.6%	43.5%	×	Non-sensitive link with no sensitive receptors with a negligible increase in daily HGVs (21 per day)
167	Charnwood Road between Field Street and Lambert Avenue, Shepshed	9,435	7	10,586	7	12.2%	0%	×	Non-sensitive link

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
168	Lambert Avenue, Shepshed	545	0	532	0	15.8%	0%	×	Non-sensitive link
169	Kirkhill, Shepshed	537	1	645	1	20.1%	0%	×	Non-sensitive link
155, 170, 171 & 174	A453 between EMG1 and M1 Junction 24	23,250	1,169	7,878	1,604	-66%	37.2%	×	Non-sensitive link with an overall reduction in traffic
172	Charnwood Road between Lambert Avenue and Weavers Avenue, Shepshed	9,679	7	10,741	7	11.0%	0%	×	Non-sensitive link
173	-	-	-	-	-	-	-	-	See Link 4
175	-	-	-	-	-	-	-	-	See Link 130

Operational Effects of Residual Impacts

Benefits of Proposed Highway Works

6.8.3. Before considering the environmental impacts along the links in the study area for the residual assessment, it is worth noting that the proposed Highway Works would have a number of beneficial impacts in terms of reducing traffic flows on the A453 corridor between the Hunter Road roundabout (EMG2 Main Site access) and M1 Junction 24. The percentage change in traffic flows in **Table 6.9** show that there would be a reduction in AADT flows along links 28, 43, 44, 45 and 53 which is a direct result of the new M1 northbound to A50 free flow link, which diverts traffic away from the A453 corridor. This will therefore provide significant *beneficial* impacts to a variety of environmental factors, including severance, driver and passenger delay, non-motorised user delay, non-motorised user amenity, fear and intimidation and road user and pedestrian safety.

6.8.4. The proposed active travel works along the A453 between EMG2 Main Site and EMG1, including the introduction of a new Toucan crossing at the A453 and uncontrolled crossing at East Midlands Airport, will have permanent *beneficial* impacts on severance, non-motorised user delay, non-motorised user amenity, fear and intimidation and road user/pedestrian safety along a number of links. This includes the A453 corridor between EMG2 Main Site and EMG1, but also in terms of helping limit traffic flows on other local links in Diseworth, Castle Donington, Kegworth and Long Whatton.

6.8.5. The improvements to existing Public Rights of Way, including Hyam's Lane and Long Holden, will result in permanent *beneficial* impacts to non-motorised user delay, non-motorised user amenity, fear and intimidation and road user and pedestrian safety for people travelling on these links. The improvements will also encourage a greater number of employees to travel using sustainable modes, thereby reducing the number of trips by private car, which would result in permanent beneficial impacts to severance and driver vehicle and passenger delay. Full details on the overall benefits from the Sustainable Transport Strategy are included in the Framework Travel Plan in **Appendix 6B (Document DCO 6.6B)** and **Appendix 6C** (**Document DCO 6.6C**) respectively.

6.8.6. The proposed Highway Works, including the active travel improvements will therefore have a number of permanent, beneficial impacts on various environmental factors. In addition, the proposed Highway Works will result in traffic re-assigning along different routes because of capacity increases on the network. The EMFM 2019 modelling shows that the SRN would accommodate an additional 2,067 vehicles during the peak hour periods in 2028 and 2,153 vehicles during the peak hour periods in 2038 (less in the latter because there is more traffic in the network) as a direct result of the proposed Highway Works. This volume of traffic has therefore been removed from the local highway network providing permanent, ***beneficial*** impacts to a large number of more sensitive links. The following roads are expected to experience a reduction in traffic as a result of the proposed highway mitigation.

- A453 between Finger Farm roundabout and M1 Junction 24
- M1 northbound off-slip to Junction 24
- Castle Donington bypass
- Park Lane, Castle Donington
- Ryecroft Road, Hemington
- Hemington Lane, Hemington/Lockington
- Main Street, Lockington
- Derby Road & Hilton Hotel Lane, Lockington
- Breedon Lane & Moor Lane, Tonge
- Talbot Lane & Loughborough Road, Thringstone
- Leicester Road & Loughborough Road, Shepshed
- The Meadows/Glenmore Avenue, Shepshed
- Hathern Road, Long Whatton
- Station Road, Melbourne
- Station Road, Kingston on Soar

Assessment of Residual Impacts (Stage 2B Modelling)

6.8.7. **Table 6.9** identified 10 links that require further environmental assessment from the residual impacts of the EMG2 Project. These links are listed below:

- Link 16 – East Midlands Airport signal access road
- Links 18 & 19 – Hemington Lane and Maon Street, Lockington
- Link 21 – Kingston Lane between Kegworth and Kingston on Soar
- Link 46 – Gotham Road east of Kingston on Soar
- Link 48 – Kegworth Road, Kingston on Soar (north of Kingston Lane)
- Links 68, 100 & 126 – Ryecroft Road, Hemington
- Link 95 – Loughborough Road between Whitwick
- Link 124 – Kegworth Rad up to Station Road, Kingston on Soar
- Link 158 – Nottingham Road, Kegworth

6.8.8. The links identified above are different from those assessed in the core scenario in Section 6.6 because they are triggered as a direct result of the proposed Highway Works. Whilst they will therefore experience an increase in traffic, it should be noted that this is due to larger volumes of traffic using the SRN, which provides wider benefits to other parts of the local road network.

6.8.9. The following section assesses the environmental effects of the EMG2 Project against each of the criteria summarised as Section 6.2. It does so based on the study area identified from the residual impacts, inclusive of the proposed Highway Works, using Stage 2B flows.

Severance

6.8.10. The IEMA Guidelines suggest that changes in traffic above 30% are likely to result in increased severance, with increases less than this likely to have a negligible impact on severance. The following links would experience a +30% increase in AADT flows or HGVs:

- Link 16 – East Midlands Airport signal access road
- Links 18 & 19 – Hemington Lane and Maon Street, Lockington
- Link 21 & 48 – Kingston Lane and Kegworth Road, near Kingston on Soar
- Link 46 – Gotham Road east of Kingston on Soar
- Links 68, 100 & 126 – Ryecroft Road, Hemington
- Link 124 – Kegworth Road up to Station Road, Kingston on Soar
- Link 158 – Nottingham Road, Kegworth

6.8.11. Link 16 at East Midlands Airport provides a footway/cycleway along the eastern side of the road but provides no infrastructure on the western side of the road. There is also no development on the western side of the road meaning no demand for crossing movements. All pedestrians and cyclists are required to travel north further into East Midlands Airport. For these reasons, the scale of impact on severance would be *negligible* and no mitigation is required.

6.8.12. Link 18 at Hemington Lane is rural in nature, undeveloped at both sides for the majority of its length and provides a footway along the southern side of the road only. Whilst there is a pedestrian demand along the road between Lockington and Hemington villages, there is no requirement for people to cross the road. There would also be a reduction in traffic along this link as a result of the proposed Highway Works and therefore a *beneficial* scale of impact on severance.

6.8.13. Link 19 at Main Street is similar to the above and whilst provides a small amount of housing at both sides, only has a footway on the western side of the road within the village itself, which is then transferred to the eastern side of the road when the road extends north out of the village towards Derby Road. There would also be a reduction in traffic along this link as a result of the proposed Highway Works and therefore a *beneficial* scale of impact on severance.

6.8.14. Links 21 and 48 along Kingston Lane and Kegworth Road to the west of Kingston on Soar are rural roads with limited footway provision and undeveloped on both sides. There is little demand for pedestrians and cyclists along the road, with limited crossing movements. Whilst there could be up to a 114% increase in AADT flows that could be deemed significant, receptors have a negligible sensitivity, leading to a *slight* scale of impact. With this, and given the minimal demand for crossing, no mitigation is required to address issues of severance along these links.

6.8.15. Link 124 extends to the east from Links 21 and 48 through the centre of Kingston on Soar along Kegworth Road. This road serves predominantly residential properties and small commercial businesses. It provides a footway along the northern side of the road only. There would be a 73.6% increase in AADT flows, increasing from 1,733 movements without development to 3,009 with development, with mitigation all of which would comprise cars or light vehicles. However, receptors have a low sensitivity meaning the scale of impact would be *slight*. With this and given demand for crossing movements is low, no mitigation is required to address issues of severance.

6.8.16. Link 46 comprises Gotham Road which extends out of Kingston on Soar to the east and becomes more rural in nature and undeveloped on both sides. The demand for pedestrian and cycle trips therefore reduces and a footway partially exists along the eastern side of the road only. This link would experience a 51.0% increase in AADT flows equating to approximately 1,000 additional vehicles per day. This comprises a moderate increase, affecting receptors with a negligible sensitivity, resulting in a *negligible* scale of impact. Therefore, no mitigation is required.

6.8.17. Links 26, 100 and 126 comprise Ryecroft Road, starting from the centre of Hemington and extending north up to A50 Junction 1. The southern section of the road in Hemington is within an urban environment and provides footways on both sides fronted by residential properties. However, there are no facilities that generate crossing movements from the residential properties. As Ryecroft Road extends further north, the environment becomes more rural and a footway continues on the western side of the road only and as the road extends out of the village footways are removed completely. There would be a 38.3% increase in traffic which comprises a slight increase affecting a link with a low sensitivity of

receptors, however, the overall traffic numbers would reduce as a result of the proposed Highway Works leading to a *beneficial* scale of impact.

6.8.18. Link 158 comprises Nottingham Road in Kegworth. It is bound by residential properties on its western side and Kegworth Tennis Club and the Village Hall on the eastern side. It also provides bus stops on both sides meaning there is a demand for crossing movements on Nottingham Road between the residential properties, leisure facilities and bus stops. The traffic increases on Nottingham Road are a direct result of the proposed highway works and additional capacity improvements being made at the EMG1 roundabout and A6 Kegworth Bypass, which causes background traffic to re-assign along this road that would otherwise travel elsewhere on the local road network. Whilst there are wider benefits that need considering, there would be a 65.1% increase in traffic on Nottingham Road, which is considered a moderate increase, on a link with receptors to moderate sensitivity, resulting in a *moderate* scale of impact. However, peak hour flows along the Nottingham Road would be up to 420 movements, equating to seven movements per minute on average in either direction. This volume of traffic would continue to provide regular gaps allowing people to cross. Consequently, no mitigation is required to address any issues on severance.

Driver Vehicle and Passenger Delay

6.8.19. The IEMA Guidelines state that significant effects to driver or passenger delay are likely to occur where junctions/links are close to, or at, capacity. The EMFM modelling and TA provides a range of network performance outputs for the 2028 forecast year scenarios, including volume/capacity ratios and flow increases. The figures at **Appendix 6F (Document DCO 6.6F/MCO 6.6F)** show the 2028 forecast year volume/capacity ratios during the morning and evening peak hours.

6.8.20. The EMFM outputs confirm that there are expected to be capacity issues at A50 Junction 1, which Ryecroft Road in Hemington (Link 100) connects with. However, the modelling results presented in Section 10 of the TA confirm that queues on Ryecroft Road are expected to experience a negligible change from the EMG2 Project, increasing from 8.7 pcus to 9.5 pcus in the morning peak hour and reducing from 7.8 pcus to 6.7 pcus in the evening peak hour at the 2028 forecast year. Queues are also not expected to materially change at the 2038 future year. As a result, there is expected to be a *negligible* scale of impact on driver delay on Ryecroft Road.

6.8.21. There are predicted to be capacity problems on the A453 corridor between the EMG2 Main Site access and M1 Junction 24 close to East Midlands Airport access (Link 16). However, these are being addressed by the proposed Highway Works, which will provide capacity and safety benefits to Finger Farm, EMG1 access and M1 Junction 24. The junction modelling results presented in Section 10 of the TA confirm that the East Midlands Airport signal controlled junction would operate within capacity at both 2028 and 2038 future years. Consequently, there should be beneficial impacts on driver delay at most locations, with a *negligible* scale of impact at the East Midlands Airport signal controlled junction.

6.8.22. The VISSIM modelling for the Stage 2B scenario presented in the TA shows that journey times between the A453/Hunter Road roundabout and A453 Remembrance Way via Finger Farm, EMG1 access and M1 Junction 24 would significantly improve as a result of the

proposed highway mitigation. At the 2028 future year the journey time for drivers travelling northbound would reduce by an average of 103 seconds and in the southbound direction reduce by 194 seconds in the morning peak hour. Similarly in the evening peak hour, the journey time for drivers travelling northbound would reduce by 70 seconds and there would be a negligible increase of 5 seconds for drivers travelling southbound. Therefore, there would be a *beneficial* impact on driver delay along the A453 corridor.

6.8.23. The remaining links and associated junctions across the study area are expected to operate comfortably within capacity with the proposed highway mitigation in place and therefore no further assessment of driver delay is considered necessary.

Non-Motorised User Delay

6.8.24. The assessment of non-motorised user delay is closely related to severance, meaning delays are likely to occur where AADT flows increase by more than 30%. There are also other factors to consider such as the pedestrian activity, visibility and general physical conditions. The following links are expected to experience a 30% increase in AADT flows or HGVs:

- Link 16 – East Midlands Airport signal access road
- Links 18 & 19 – Hemington Lane and Main Street, Lockington
- Link 21 & 48 – Kingston Lane and Kegworth Road, near Kingston on Soar
- Link 46 – Gotham Road east of Kingston on Soar
- Links 68, 100 & 126 – Ryecroft Road, Hemington
- Link 124 – Kegworth Rad up to Station Road, Kingston on Soar
- Link 158 – Nottingham Road, Kegworth

6.8.25. Links 16, 18, 19, 21, 48, 46 and 68/100/126 are predominantly rural roads with limited development and infrastructure for non-motorised users meaning pedestrian and cycle activity is limited or non-existent. There is a negligible demand for crossing movements and for journeys by non-car modes. These links are also not expected to experience any significant vehicular capacity issues that could impact non-motorised user delay. Therefore, for the majority there would be a *negligible* scale of impact. A number of links would experience a reduction in traffic a result of the proposed Highway Works (links, 18, 19, 68, 100 and 126) and so there would be a *beneficial* impact on non-motorised user delay.

6.8.26. Link 124 at Kegworth Road extends through the centre of Kingston on Soar. This link is expected to experience an increase of 1,276 movements, from 1,733 trips without development to 3,009 trips with development, with mitigation. During the peak hours, this would equate to up to 152 movements, or just over two movements per minute in either direction. Therefore, whilst crossing demands are low, there would still be gaps for pedestrians to cross the road without significant delay. Consequently, there is expected to be a *negligible* impact and no mitigation is required.

6.8.27. Link 158 comprises Nottingham Road in Kegworth and would accommodate crossing movements between the residential properties and the bus stops, tennis club and village

hall. The EMFM modelling shows there will not be any vehicular capacity issues along this link and the number of non-motorised user trips will remain unchanged. The EMFM model shows that there will be up to 420 peak hour movements along the link, equating to seven movements per minute on average in either direction, which would continue to provide gaps in traffic for people to cross. Consequently, there is expected to be a *negligible* impact on non-motorised user delay and no mitigation is required.

Non-Motorised User Amenity

6.8.28. Non-motorised user amenity relates to the relative pleasantness of a journey with the former IEMA Guidelines suggesting that significant changes are likely to occur where traffic flows (or HGVs percentages) are halved or doubled. The following links are expected to experience a +50% increase in AADT flows or HGVs.

- Link 21 – Kingston Lane between Kegworth and Kingston on Soar
- Link 46 – Gotham Road east of Kingston on Soar
- Link 48 – Kegworth Road, Kingston on Soar (north of Kingston Lane)
- Link 124 – Kegworth Road up to Station Road, Kingston on Soar
- Link 158 – Nottingham Road, Kegworth

6.8.29. Of the remaining links, links 21, 46 and 48 provide no, or limited facilities for non-motorised user journeys and are rural distributor roads designed to primarily accommodate vehicular traffic travelling between settlements. Therefore, the scale of impacts on non-motorised user amenity are *negligible* and no mitigation is required.

6.8.30. Link 124 at Kegworth Road extends through the centre of Kingston on Soar and is expected to experience an increase of 1,276 movements AADT from 1733 movements without development, increasing to 3,009 movements with development, with mitigation. In terms of peak hours, there is expected to be an increase of up to 152 trips in either direction. The village is relatively isolated from other settlements and there is no significant demand for non-motorised user journeys other than between residential properties and the village hall and the church. The increase in hourly movements is low. As a result, whilst traffic increases are considered moderate, receptors have a low sensitivity meaning the overall scale of impact is *slight*. Therefore, no mitigation is required.

6.8.31. Link 158 is along Nottingham Road in Kegworth and serves residential properties as well as the tennis club, village hall and bus stops. There is a pedestrian demand along this road. Traffic flows are expected to increase by 65.1% from 5,462 movements without development to 9,019 movements with development, with mitigation. In terms of peak hour movements, EMFM shows there could be up to 420 movements, or one vehicle every 7 minutes in either direction. The road experiences on-street parking and is subject to a 30mph speed limit. The impacts of one additional vehicle every 7 minutes will have a *negligible* impact on non-motorised user amenity and no mitigation is required.

Fear and Intimidation

6.8.32. Fear and intimidation are often experienced by pedestrians and driven by volume of traffic, HGV composition, vehicle speeds and physical characteristics such as narrow pavements and obstructions.

6.8.33. Link 16 along the East Midlands Airport access road is expected to experience a 31.4% increase in AADT flows (9,762 without development, to 12,828 with development, with mitigation). There is also expected to be a 65.1% increase in HGVs (284 without development, to 508 with development, with mitigation). Pedestrian movements on this link are limited. This road is industrial in nature and serves a number of receptors that have a low sensitivity. Whilst the increase in traffic could be deemed moderate, there would be a *negligible* scale of impact. The majority of uses along this road are industrial or commercial. Footway infrastructure is provided on the eastern side of the road, which whilst narrow in places is separated from the carriageway by a verge. Therefore, the impact on fear and intimidation is low meaning no mitigation is required.

6.8.34. Links 18 and 19 extend through Hemington and out to the north and west. The sections within the village are subject to a 30mph speed limit and where the road extends out of the village the speed limit increases to 60mph (national speed limit). The roads provide 7.5T weight restrictions and does not accommodate any HGVs. There are footways along one side of the road which are free from obstructions. Pedestrian demand is relatively limited, particularly on the sections outside Hemington village. Whilst there would be a 41.4% increase in traffic, this would be car based vehicles travelling at slow speed within the main built-up area. Therefore, the scale of impact on fear and intimidation would be *negligible* and no mitigation is required.

6.8.35. Link 21 at Kingston Lane on the outskirts of Kingston on Soar is a rural road subject to a 60mph speed limit (national speed limit). There is a footway on the western side of the road which narrows in places and is directly against the carriageway. However, pedestrian volumes on the footway are low. Kingston Lane is expected to experience a 114% increase in AADT flows, but all the traffic comprises cars and light vehicles and the road accommodates zero HGVs. Therefore, there is expected to be a *negligible* scale of impact on fear and intimidation.

6.8.36. Link 46 at Gotham Road to the east of Kingston is a rural road subject to a 60mph speed limit (national speed limit). It provides a partial footway on the eastern side of the road adjacent to the carriageway although accommodates limited pedestrian movements. There is expected to be a 51% increase in AADT flows with zero HGVs. When considering the type of vehicles using the road and the volume of pedestrian movements there is considered to be a *negligible* scale of impact on fear and intimidation and no mitigation is required.

6.8.37. Link 48 at Kegworth Road is a rural road subject to a 60mph speed limit (national speed limit) and is absent of footways for most of its length. Traffic using the road comprises cars or light vehicles. Given there are no pedestrian facilities and that no HGVs use the route, it is considered that there is a *negligible* scale of impact on fear and intimidation.

6.8.38. Links 68, 100 and 126 comprise Ryecroft Road to the north of Hemington. The majority of this link is subject to a 30mph speed limit, except from the northernmost part approaching A50 Junction 1 which changes to 60mph (national speed limit). The road is absent of footways so pedestrian demand is low. It also only accommodates cars and light vehicles. Therefore, there is considered to be a *negligible* scale of impact on fear and intimidation.

6.8.39. Link 95 comprises Loughborough Road in Thringstone and serves residential properties as well as care homes and other small commercial units. It is subject to a 30mph speed and provides traffic calming features and footways on both sides. There is expected to be a 27.7% increase in AADT flows and a small increase in HGVs of 3.4% (four additional HGVs per day). There is adequate existing infrastructure for accommodating pedestrians along the road and so when taking into account the change in traffic flows/composition, it is considered that there will be a *negligible* impact on fear and intimidation.

6.8.40. Link 124 is Kegworth Road within Kingston on Soar. It provides a footway on one side of the road and is subject to a 30mph speed limit. There are limited pedestrian movements, and journeys are made primarily to the village hall and church. The additional traffic would all be car based or light vehicles travelling at slow speed. Consequently, it is considered that there will be a *negligible* scale of impact on fear and intimidation.

6.8.41. Link 158 is Nottingham Road in Kegworth which is expected to experience a 65.8% increase in AADT flows. The road provides a footway on both sides and experiences on-street parking. It is subject to a 30mph speed limit and accommodates cars and light vehicles only. The proposed development would not increase the demand for walking trips. Therefore, it is considered that the scale of impact on fear and intimidation will be *negligible*.

Road User and Pedestrian Safety

6.8.42. The detailed Personal Injury Collision records undertaken as part of the TA and presented in Technical Note EMG2-BWB-GEN-XX-RP-TR-0015_Highway Safety Position Statement, Revision P1 Appendix 14 to the TA in **Appendix 6A (Document DCO 6.6A/MCO 6.6A)** showed that there are no safety problems on any of the links assessed as part of the residual assessment. There are however expected to be reductions in traffic on many parts of the network. This includes the M1 northbound off-slip at J24 and the A453 network near Finger Farm, which should therefore improve any existing safety problems. Furthermore, the added capacity benefits at Finger Farm diverts traffic away from The Green to the west of the EMG2 Main Site, resulting in a negligible impact overall. The COBALT Assessment concludes that by 2038 there would be *beneficial* impacts on highway safety at the three locations on the network with existing safety problems.

Hazardous/Abnormal Loads

6.8.43. There would be no change to the hazardous/abnormal loads assessment in Section 6.6 within this assessment of residual impacts.

Summary

6.8.44. The assessment of residual impacts shows that there would be a significant number of benefits as a result of the proposed mitigation. This includes:

- Capacity and highway safety improvements along the A453 corridor between the EMG2 Main Site and M1 Junction 24, including physical works to Finger Farm roundabout, EMG1 roundabout and M1 Junction 24, resulting in beneficial impacts to driver delay and severance.
- Reductions in traffic on the M1 northbound off-slip at Junction 24 as a result of the new free flow link between the M1 northbound and A50, resulting in beneficial impacts to driver delay.
- Reductions in traffic along a significant number of roads on the local highway network due to the capacity improvements on the SRN which would be able to accommodate a higher volume of traffic. This results in beneficial impacts to highway safety, severance, driver delay, fear and intimidation, non-notarised user amenity and non-motorised user delay.
- Active travel improvements including segregated footway/cycleway infrastructure on the A453 between EMG2 Main Site and EMG1 with safe crossing facilities in the form of a Toucan crossing, resulting in beneficial impacts to severance.
- Crossing improvements on the A453 at the East Midlands Airport junction linking with the EMG2 Country Park resulting in beneficial impacts to severance.
- Public Rights of Way improvements including enhancements to Hyam's Lane and Long Holden, which would comprise an extension to National Cycle Route 6, resulting in beneficial impacts to non-motorised user amenity and delay, as well as fear and intimidation.
- A new public transport interchange with associated shuttle service providing convenient access to the site by bus.
- The Sustainable Transport Strategy and targets in the Framework Travel Plan should reduce single occupancy car trips by 216 in the morning peak hour and 274 in the evening peak hour as set out in the TA included in **Appendix 6A** (**Document DCO 6.6A/MCO 6.6A**). Whilst these have not been tested in EMFM, (in order to provide a worst-case assessment of the development impacts), they would have permanent, beneficial impacts on all environmental matters.

6.8.45. Notwithstanding the benefits of the proposed mitigation, a small number of links are expected to experience traffic increases, which is primarily a result of traffic re-assigning towards the SRN. Whilst there are wider benefits overall, an environmental assessment has been undertaken along these additional links, which demonstrates how there would be no substantial impacts that require further mitigation from an environmental perspective. Consequently, the EMG2 Project is considered to meet the policy requirements of Paragraph 5.283 of the NPS and Paragraph 116 of the NPPF.

6.8.46. The assessment of residual traffic impacts showed that there are not expected to be any substantial, adverse impacts that require further mitigation beyond what is being proposed

in the TA. The physical highway improvements proposed in the TA are expected to provide benefits to the operation of the network and assist with capacity issues by increasing the volume of vehicles that are able to be accommodated by the SRN thereby reducing traffic flows on the A453 corridor between the Hunter Road roundabout and M1 Junction 24, as well as other parts of the local road network. This in turn brings a number of environmental benefits such as reducing impacts of severance, driver and passenger delay, non-motorised user amenity and fear and intimidation and meets the policy requirements of Paragraph 5.283 of the NPS and Paragraph 116 of the NPPF and results in permanent, beneficial impacts to the key environmental assessment components.

6.9. Assessment of MCO Application

Introduction

6.9.1. This Section provides an assessment of the environmental impacts of the EMG1 MCO Application. The EMG1 MCO comprise the EMG1 Works and specifically the traffic generated by the 30,000sqm warehousing unit proposed on Plot 16. It assesses whether there would be any environmental impacts from the EMG1 Works in isolation.

Scope and Methodology of the Assessment

6.9.2. The assessment of environmental impacts of the EMG2 Project has been undertaken using modelling outputs from EMFM However, EMFM modelling has not been undertaken of the EMG1 Works in isolation. This is because the peak hour traffic forecasts are small, estimated at 53 two-way trips in the morning peak hour and 67 two-way trips in the evening peak hour, which does not warrant this level of assessment.

6.9.3. The assessment undertaken in this Section therefore adopts a manual approach by comparing 2028 future year traffic flows between the following scenarios:

- 2028 forecast year baseline flows 'without development' using Stage 1B outputs from the EMFM
- 2028 forecast year flows 'with development' using Stage 1B outputs from EMFM and manually assigning traffic from EMG1 Works on top.

6.9.4. Details of the various traffic flow scenarios, including those associated with Stage 1B modelling are provided in Section 6.1 of this Chapter.

6.9.5. The above methodology will provide a robust assessment of the impacts from the EMG1 Works because it excludes any re-routing of baseline traffic around the A453 in the vicinity of EMG1, that could potentially occur if modelled in EMFM.

6.9.6. **Table 6.10** shows the forecast peak hour and daily traffic flows for the EMG1 Works. The peak hour figures were presented in Technical Note EMG2-BWB-GEN-XX-RP-TR-0017 Revision P4 appended to the TA at **Appendix 6A (Document DCO 6.6A/MCO 6.6A)** and the daily numbers have been tested in EMFM as part of the EMG2 Project. The daily numbers were calculated using a factor derived from 2024 survey data recorded at EMG1.

Table 6.10. EMG1 Works Traffic Generation

	Morning Peak Hour (0800 to 0900)	Evening Peak Hour (1600 to 1700)	Daily (24-hours)
Total vehicles	53	67	944
Lights	40	54	696
HGVs	13	13	248

6.9.7. EMFM distributes traffic using an in-built gravity model. The distribution pattern was extracted from EMFM, separating light vehicles from HGVs. This distribution pattern is summarised in **Table 6.11** and has been used to assign the traffic from the EMG1 Works onto the surrounding roads.

Table 6.11. EMG1 Works Traffic Distribution

Route	Light vehicles	HGVs
A50	9%	19%
M1 (N)	7%	14%
A453 (E) towards Nottingham	8%	12%
Hilton Hotel Lane	1%	0%
Derby Road	2%	0%
A6 Kegworth Bypass	10%	4%
M1 (S)	30%	25%
A42	8%	26%
Grimes Gate, The Green east through Long Whatton	2%	0%
Grimes Gate, The Green, Smity Lane	3%	0%
The Green, unnamed road towards A42	9%	0%
A453 (W)	5%	0%
Walton Hill through Castle Donington	8%	0%
EMA	0%	1%
EMG1	2%	1%
Total	**100%**	**100%**

6.9.8. Traffic from the EMG1 Works in **Table 6.10** has been assigned to the network in accordance with the distribution pattern in **Table 6.11**. The resulting traffic assignment (AADT flows and HGVs) is shown in **Table 6.12**. It also includes the total AADT flow increases on the A453 immediately north and south of EMG1, which is where the highest traffic flow increases are expected to occur.

Table 6.12. EMG1 Works Traffic Assignment

Route	Light vehicles	HGVs	Total vehicles
A50	59	47	106
M1 (N)	49	35	84
A453 (E) towards Nottingham	56	29	85
Hilton Hotel Lane	4	0	4
Derby Road	12	0	12
A6 Kegworth Bypass	70	9	79
M1 (S)	209	61	270
A42	52	64	116
Grimes Gate, The Green east through Long Whatton	10	0	10
Grimes Gate, The Green, Smity Lane	17	0	17
The Green, unnamed road towards A42	63	0	63
A453 (W)	31	0	31
Walton Hill through Castle Donington	56	0	56
EMA	0	1	1
EMG1	10	1	11
Total	698	247	945
A453 (north of EMG1)	**180**	**111**	**291**
A453 (south of EMG1)*	**448**	**127**	**575**

**the reason the total of rows 'A453 north and south of EMG1' is less than the overall total is because they exclude traffic towards A6 Kegworth Bypass.*

6.9.9. To understand the percentage increase in AADT flows from EMG1 Works, **Table 6.13** compares 2028 forecast year 'without development' flows from PRTM against the increases from EMG1 Works shown in **Table 6.10** and calculates the percentage change. The 2028 forecast year 'without development' flows have been taken from Section 6.6 of the of this Chapter.

Table 6.13. Change in Traffic Flows

	2028 forecast year 'without development'		EMG1 Works		Percentage change	
Route	**Total vehicles**	**HGVs**	**Total vehicles**	**HGVs**	**Total vehicles**	**HGVs**
A50	100,382	8,615	106	47	0.1%	0.5%
M1 (N)	140,153	17,237	84	35	0.1%	0.2%
A453 Remembrance Way	60,293	6,070	85	29	0.1%	0.5%
Hilton Hotel Lane	12,239	1,061	4	0	0.0%	0.0%
Derby Road, Kegworth	24,504	353	12	0	0.0%	0.0%
A6 Kegworth Bypass	10,178	1,821	79	9	0.8%	0.5%
M1 (S)	136,183	16,609	270	61	0.2%	0.4%
A42	66,967	4,781	116	64	0.2%	1.3%
Grimes Gate, Diseworth	2,489	0	27	0	1.1%	0.0%
The Green, Diseworth	10,636	0	63	0	0.6%	0.0%
A453 opposite EMG2 Main Site	17,153	849	31	0	0.2%	0.0%
Walton Hill to Castle Donington	22,231	28	56	0	0.3%	0.0%
EMA (signal-controlled junction)	9,762	284	1	1	0.0%	0.4%
EMG2	14,155	3,021	11	1	0.1%	0.0%
A453 (north of EMG1)	**337,571**	**33,336**	**291**	**111**	**0.1%**	**0.3%**
A453 (south of EMG1)	**279,576**	**25,572**	**575**	**127**	**0.2%**	**0.5%**

6.9.10. The details show that the additional traffic generated by EMG1 Works would have a negligible impact on the surrounding network, which would equate to a less than 1% impact. Therefore, it can be concluded that there are no links that require an assessment based on the change in traffic movements from EMG1 Works in accordance with IEMA Guidelines, and no further assessment is required as result.

6.9.11. In terms of construction traffic, the assessment undertaken in Section 6.6 inclusive of traffic from the entire EMG2 Project showed how there would be a negligible impact on the network that did not warrant any detailed assessment of the environmental impacts. Construction traffic generations from the EMG1 Works alone would be significantly lower and therefore impacts on the network would be even less.

Summary

6.9.12. The assessment of the environmental impacts of the EMG1 Works in isolation of the wider EMG2 Project has been undertaken by manually assessing the AADT flows and HGVs associated with the EMG1 Works against 2028 forecast year without development flows from EMFM.

6.9.13. The assessment has demonstrated how the traffic from the EMG1 Works alone would not trigger the need for an assessment of environmental impacts on any road in the vicinity of the site in accordance with the requirements of the IEMA Guidelines. Consequently, it can be concluded that there would be no substantial environmental impacts generated by the EMG1 Works on any part of the network.

6.10. Cumulative Effects

6.10.1. In addition to the ES core scenario (Section 6.6) and residual scenario (Section 6.8), an assessment of the cumulative scenario has also been undertaken that considers the impact of the EMG2 Project against a higher baseline position that includes traffic from the full Ratcliffe on Soar Power Station re-development proposals, EMIP and draft Local Plan allocations using the Stage 2A modelling outputs from EMFM. The full list of developments is included within Uncertainty Log 7 appended to the TA in **Appendix 6A (Document DCO 6.6A/MCO 6.6A)**. **Table 6.14** compares the change in traffic flows between the Stage 1A without development and Stage 2A with development, with the Highway Works and highlights the links that could require further assessment over and above the residual assessment carried out in Section 6.8 if one were to include the additional traffic from Stage 2A (the draft local plan allocations, EMIP and Ratcliffe Power Station albeit without the mitigation which would inevitably accompany such development).

Table 6.14: 2028 Forecast Year Flow Changes (with/without development – operational traffic, cumulative scenario)

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
1	London Road, Kegworth between A6 and Whatton Road	Less than 10% increase							
2	The Green, Diseworth (between Lady Gate and Smithy Lane)	Less than 10% increase							
3	Hemington Lane east of Hemington	Less than 10% increase							
4 & 173	Baroon/ Hemington Hill, Castle Donington	Less than 10% increase							
5	A42 on-slip from Finger Farm	12,394	280	14,995	963	21.0%	244%	×	Percentage change in AADT flow has reduced from 22.1% and HGVs from 290% in core scenario

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
6	Long Street, Belton	1,057	0	1,538	0	45.6%	0%	×	Percentage change in AADT flow has reduced from 102% in core scenario
7	Forest Lane, Belton	Less than 10% increase							
8	Smithy Lane, Long Whatton	Less than 10% increase							
9	Grimes Gate/Lady Gate, Diseworth	2,499	25	2,967	25	18.7%	-3.5%	×	Percentage change in AADT flow has increased from 13.7% in core scenario but no changes to conclusions in Section 6.6
10	The Green, Diseworth between A453 and unnamed road	10,972	0	12,603	0	14.9%	0%	×	Percentage change in AADT flow has reduced from 18.3% in core.
11	Unnamed road south of Diseworth	6,670	0	8,218	0	23.2%	0%	×	Percentage change in AADT flow has reduced from 30.9% in core scenario.
12	Gelscoe Lane east of A42 Junction 14	6,815	0	7,900	0	15.9%	0%	×	Percentage change in AADT flow has reduced from 26.3% in core scenario.
13	A42 westbound on-slip	2,617	100	3,072	100	17.4%	0%	×	Percentage change in AADT flow has reduced from 22.5% in residual scenario in Section 6.8.

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
14	A453 between The Green and Grimes Gate	14,733	558	17,363	548	17.9%	-1.8%	×	Percentage change in AADT flow has increased from 17.6% in core scenario but no change to conclusions in Section 6.6.
15	Unnamed road between A453 and Castle Donington bypass	Less than 10% increase							
16	East Midlands Airport signal access road	Less than 10% increase							
17	A453 between Grimes Gate and East Midlands Airport access	15,789	558	18,901	548	17.9%	-1.8%	×	Percentage change in AADT flow has reduced from 22.4% in core scenario.
18	Hemington Lane west of Lockington	Less than 10% increase							
19	Main Street, Lockington	Less than 10% increase							
20	A453 between Hunter Road and Finger Farm	Less than 10% increase							
21	Kingston Lane between Kegworth and Kingston on Soar	Less than 10% increase							
22	Finger Farm northbound circulatory	36,038	1,638	29,916	3,195	-17.0%	95.0%	×	Reduction in total AADT flows. Percentage change in HGVs has reduced from

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
									101% in core scenario.
23 & 25	A42 off-slip towards Finger Farm	30,133	1,337	22,618	2,153	-25%	61.6%	×	Reduction in total AADT flows. Percentage change in HGVs has reduced from 215% in core scenario.
24	M1 southbound on-slip from Junction 23A	26,218	1,115	18,026	1,517	-31%	36.1%	×	Reduction in total AADT flows. Percentage change in HGVs has reduced from 39.1% in core scenario.
25	-	-	-	-	-	-	-	××	See Link 23
26	M1 northbound off-slip at Junction 23A	9,851	252	12,127	589	23.1%	134%	×	Non-sensitive link and percentage reduction in HGVs has reduced from 163% in core scenario.
27	A42 on-slip from Junction 23A	2,543	28	2,867	373	12.8%	1217%	×	Non-sensitive link and percentage change in HGVs has reduced from 1,273% in core scenario.
28	A453 southbound exit at M1 Junction 24	9,019	1,960	10,030	2,687	11.2%	37.1%	×	Percentage change in AADT flow has increased from 6.0% but link is non-sensitive

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
29	A453 between A42 Junction 14 on/off-slip	Less than 10% increase							
30	A42 Junction 14 off-slip	Less than 10% increase							
31 & 35	Ambassador Road, East Midlands Airport	Less than 10% increase							
32 & 157	Viscount Road, East Midlands Airport	17,758	2,464	20,342	2,833	14.5%	24.2%	×	Non-sensitive link in an industrial area and percentage change in HGVs has reduced from 199% in residual scenario.
33	Beverley Road, East Midlands Airport	1,525	17	2,356	17	54.5%	-0.2%	×	Percentage change in AADT flow has reduced from 191% in core scenario.
34	London Road, Kegworth north of Whatton Road	Less than 10% increase							
35	-	-	-	-	-	-	-	×	See Link 31
36	Finger Farm westbound circulatory	5,910	302	7,307	1,037	23.6%	243%	×	Disregarded as on roundabout circulatory
37	Forest Lane, south of Ashby Road	Less than 10% increase							
38	M1 southbound off-slip at Junction 23	Less than 10% increase							
39	Castle Donington	Less than 10% increase							

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
	bypass north of unnamed road								
40	A453 northbound entry at M1 Junction 24	11,437	1,440	18,330	1,836	60.3%	27.6%	×	Non-sensitive link on SRN designed to accommodate high traffic volumes
41	EMG1 access roundabout northbound circulatory	32,927	1,394	26,441	2,138	-19.7%	53.3%	×	Disregarded as on roundabout circulatory
42	A453 between Finger Farm and EMG1 roundabout (southbound)	10,263	512	12,771	1,249	24.4%	144%	×	Percentage change in AADT flow has increased from 13.3% in core scenario but no change to conclusions in Section 6.6.
43 & 53	A453 northbound entry to EMG1 roundabout	29,346	1,403	22,256	2,132	-24%	52.0%	×	Overall reduction in traffic and no material change to HGV percentage from 51.9% hence overall betterment.
44	A453 between Finger Farm and EMG1	39,609	1,915	35,027	3,381	-11.6%	76.6%	×	Overall reduction in traffic and percentage change in HGVs has reduced from 88.7% in residual scenario.
45	A453 southbound	9,019	1,960	10,030	2,687	11.2%	37.1%	×	Percentage change in

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
	entry to EMG1 access roundabout								AADT flows has reduced from 11.4% in core scenario
46	Gotham Road east of Kingston on Soar	Less than 10% increase							
47	Kegworth Road, Kingston on Soar (east of Kingston Lane)	Less than 10% increase							
48	Kegworth Road, Kingston on Soar (north of Kingston Lane)	Less than 10% increase							
49	Finger Farm eastbound entry	13,812	568	19,526	1,939	41.4%	242%	×	Percentage change in AADT flow has increased from 41.0% and HGVs reduced from 296% in core scenario but no change to conclusions in Section 6.6.
50	A453 southbound towards Finger Farm	10,263	512	12,772	1,249	24.4%	144%	×	Percentage change in AADT flow has increased from 13.9% and HGVs reduced from 153% in core scenario but no change to conclusions in Section 6.6.

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
51	Finger Farm southbound circulatory	18,304	582	22,302	2,000	21.8%	243%	×	Percentage change in AADT flow has reduced from 39.6% in core scenario.
52	Finger Farm westbound exit	12,457	738	17,649	2,257	41.7%	206%	×	Percentage change in AADT flow has increased from 27.5% and HGVs reduced from 240% in core scenario but no change to conclusions in Section 6.6.
53	-	-	-	-	-	-	-	×	See Link 43
54	Finger Farm eastbound circulatory	8,045	67	9,537	746	18.5%	1015%	×	Percentage change in AADT flow has reduced from 78.1% and HGVs from 2093% in core scenario so overall betterment to conclusions in Section 6.6.
60	Unnamed road in EMA to west of Ambassador Road	12,334	1,891	13,949	2,109	13.1%	11.5%	×	Non-sensitive link
64	Ambassador Road, EMA	6,631	262	7,576	268	14.3%	2.2%	×	Non-sensitive link
66	Darsway/ Black Lane, Castle Donington	3,556	188	3,946	188	11.0%	0%	×	Non-sensitive link
68	-	-	-	-	-	-	-	×	See Link 100

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
69	Bondgate, Castle Donington	Less than 10% increase							Non-sensitive link
72	Stocking Lane, south of Breedon	2,868	55	3,368	56	17.4%	2.0%	×	Percentage change in AADT flows has reduced from 21.6% in residual scenario
71	A6 Kegworth bypass	12,334	1,891	13,949	2,109	13.1%	11.5%	×	Percentage change in AADT flows has reduced from 29.6% in residual scenario
77 & 122	Gracedieu Lane between Belton and Thringstone	3,140	0	3,707	0	18.0%	0%	×	Percentage change in AADT flows has increased from 16.3% but no change to conclusions of residual scenario in Section 6.8.
79	Loughborough Road between Henson's Lane and Ashby Road, Thringstone	3,916	265	4,349	269	11.1%	1.4%	×	Percentage change in AADT flows has reduced from 12.5% in residual scenario
80	Top Brand, east of Breedon	6,631	262	7,576	268	14.3%	2.2%	×	Percentage change in AADT flows has reduced from 15.6% in residual scenario
82	A453 between EMA signal	17,740	1,058	19,946	1,047	12.4%	-1.0%	×	Percentage change in AADT flows

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
	junction and Hunter Road								has increased marginally from 12.3% in residual scenario but no changes to conclusions in Section 6.8.
84	Unnamed road between Main Street and Moor Lane, Breedon	3,556	188	3,946	188	11.0%	0%	×	Percentage change in AADT flows has reduced from 17.5% in residual scenario
91	EMG1 roundabout eastbound circulatory	6,382	478	8,287	542	29.8%	13.3%	×	Disregarded as on roundabout circulatory
92/93	M1 northbound towards J23A	44,161	7,698	53,950	7,700	22.2%	0%	×	Percentage change in AADT flows has reduced from 25.0% in residual scenario
93	-	-	-	-	-	-	-	-	See Link 92
94	Hilton Hotel Lane near M1 Junction 24	12,766	1,205	14,751	1,428	15.5%	18.5%	×	Percentage change in AADT flows has reduced from 17.6% in residual scenario
95	Loughborough Road between Whitwick Moor and Henson's Lane, Thringstone	1,740	135	2,116	137	21.6%	1.7%	×	Percentage change in AADT flows has reduced from 27.7% in residual scenario
96	Charnwood Road between Lambert	3,280	4	3,932	4	19.9%	0%	×	Percentage change in AADT flows

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
	Avenue and Oxford Street, Shepshed								has reduced from 25.3% in residual scenario
97	Belton Street, Shepshed	4,152	1	5,089	1	22.6%	-24.7%	×	Percentage change in AADT flows has increased from 14.6% but no changes from 11.4% in residual scenario
99	Ashby Road between Main Street, Osgathorpe and Long Street, Belton	Less than 10% increase							
68, 100 & 126	Ryecroft Road, Hemington	Less than 10% increase							
101	Ashby Road from Hathern Road, Long Whatton to A6 Derby Road	Less than 10% increase							
102	Willow Road, Castle Donington industrial park	Less than 10% increase							
103	Worthington Lane, south of Breedon	Less than 10% increase							
104	Campion Hill, Castle Donington	Less than 10% increase							
105	Hemington Hill, Hemington	Less than 10% increase							

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
106	Broadhill Road, Kegworth	Less than 10% increase							
107	Ashby Road between Forest Lane and Church Street, Belton	Less than 10% increase							
108	Trent Lane, Castle Donington between Willow Road and Station Road	Less than 10% increase							
109	Warren Lane, Thringstone	Less than 10% increase							
110	Ashby Road between Smithy Lane and Turvey Lane, Long Whatton	Less than 10% increase							
111	Ashby Road between Long Street and Forest Lane, Belton	Less than 10% increase							
112	Viscount Road west of Ambassador Road, EMA	Less than 10% increase							
113	Packington Hill, Kegworth	Less than 10% increase							
114	Derby Road between Side Ley and Packington Hill, Kegworth	Less than 10% increase							
115	Park Lane, Castle Donington west of bypass	Less than 10% increase							

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
116	Park Lane, Castle Donington east of bypass up to The Green	Less than 10% increase							
117	Castle Donington bypass north of Trent Lane	Less than 10% increase							
118	Ashby Road from Turvey Lane and Hathern Road, Long Whatton	Less than 10% increase							
119	A6006 between Trowell Lane and Travell's Hill	Less than 10% increase							
120/ 152	Ashby Road between Top Brand and Main Street, Osgathorpe	15,562	1,887	17,469	2,105	12.3%	11.6%	×	Percentage change in AADT flows has reduced from 12.4% in residual scenario
121	Rempstone Road, between Top Brand and Gelsmoor Road	Less than 10% increase							
122	-	-	-	-	-	-	-	×	See Link 77
123	A6006 between Park Lane, Sutton Bonington and Trowell Lane	Less than 10% increase							
124	Kegworth Road up to Station Road, Kingston on Soar	Less than 10% increase							

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
125	Ashby Road between Church Street, Belton and Hallamford Road	Less than 10% increase							
126	-	-	-	-	-	-	-	×	See Link 100
127 & 142	Melbourne Road between Slade Lane and A453 Walton Hill	Less than 10% increase							
128 & 129	Station Road Kegworth between Nottingham Road and Kingston Lane	Less than 10% increase							
130, 131 & 175	Derby Road between M1 Junction 24 and Side Ley, Kegworth	Less than 10% increase							
131	-	-	-	-	-	-	-	×	See Link 130
132	EMA airport access between A453 roundabout and Airport Jet Parks 2	Less than 10% increase							
133	Slade Lane between Wilson and Melbourne Road	Less than 10% increase							
134	Blackwell Lane between Melbourne and Wilson	Less than 10% increase							
135	Main Street, Melbourne	Less than 10% increase							
136	Station Road between Kegworth	Less than 10% increase							

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
	Lane and Station Ter, Kegworth								
137	Ashby Road between Forest Lane and Church Street, Belton	Less than 10% increase							
138	A6006 Zouch Road between A6 Derby Road and Park Lane, Sutton Bonington	Less than 10% increase							
139	Welsted Road, Castle Donington	Less than 10% increase							
140	Ashby Road between Hallamford Road and Smithy Lane	Less than 10% increase							
141	Kegworth bypass south of Welsted Road	Less than 10% increase							
142	-	-	-	-	-	-	-	×	See Link 127
143	M1 Junction 24 eastbound circulatory	Less than 10% increase							
144 & 156	M1 Junction 24 northbound circulatory	Less than 10% increase							
145	Kegworth bypass between Welsted Road and Park Lane	Less than 10% increase							
146	-	-	-	-	-	-	-	×	See Link 143
147	A50 to M1 J24A northbound slip road	Less than 10% increase							

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
148 & 163	A42 south of M1 Junction 23A	19,451	1,888	21,769	2,107	12.3%	11.6%	×	Non-sensitive link on the SRN
149	A50 Junction 1 southbound circulatory	Less than 10% increase							
150	A50 Junction 1 southbound circulatory	Less than 10% increase							
151	Ashby Road between Main Street and Breedon Lane, Osgathorpe	5,976	0	6,723	0	12.5%	0%	×	Non-sensitive link
152	-	-	-	-	-	-	-	×	See Link 120
153	-	-	-	-	-	-	-	×	See Link 108
154	The Green/ School Lane, Castle Donington	Less than 10% increase							
155	-	-	-	-	-	-	-	×	See Link 170
156	-	-	-	-	-	-	-	×	See Link 144
157	-	-	-	-	-	-	-	×	See Link 32
158	Nottingham Road, Kegworth	3,817	0	4,291	0	12.4%	0%	×	Percentage change in AADT flows has reduced from 65.1% from residual scenario
159	Talbot Street between Whitwick Moor and Talbot Lane, Thringstone	3,817	0	4,291	0	12.4%	0%	×	Percentage change in AADT flows has increased from 11.1% in residual scenario but no changes to conclusions in Section 6.8.
160	Station Road between Trent Lane and	Less than 10% increase							

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
	Hillside, Castle Donington								
161	High Street, Kegworth	Less than 10% increase							
162	Pleasant Place, Kegworth	Less than 10% increase							
163	-	-	-	-	-	-	-	×	See Link 148
164	Field Street/ Britannia Street, Shepshed	Less than 10% increase							
165	A6006, Zouch	Less than 10% increase							
166	Knighthorpe Road between Deane Street and Carrington Street, Loughborough	Less than 10% increase							
167	Charnwood Road between Field Street and Lambert Avenue, Shepshed	2,723	0	3,052	0	12.1%	0%	×	Percentage change in AADT flows has reduced from 12.2% in residual scenario
168	Lambert Avenue, Shepshed	Less than 10% increase							
169	Kirkhill, Shepshed	43,358	4,672	36,415	6,160	-16%	31.8%	×	Reduction in total AADT flows
155, 170, 171 & 174	A453 between EMG1 and M1 Junction 24	Less than 10% increase							
172	Charnwood Road between Lambert Avenue and Weavers Avenue, Shepshed	Less than 10% increase							

Link ID	Link Name	2028 WoD AADT Flow		2028 WD AADT Flow		% change		Include in study area?	Comment
		Total	HGV	Total	HGV	Total	HGV		
173	-	-	-	-	-	-	-	×	See Link 4
175	-	-	-	-	-	-	-	×	See Link 130

6.10.2. The details in **Table 6.14** confirm that the percentage change in AADT flows and HGVs using the Stage 2A modelling outputs would be lower than either the Stage 1B core scenario or Stage 2B residual scenario. Those scenarios have been assessed in Sections 6.6 and 6.8 and therefore no further assessment of the cumulative impacts is required.

6.11. Summary of Effects and Conclusions

6.11.1. This ES Chapter has assessed the likely significant effects of the EMG2 Project on the environment with respect to Traffic and Transport. The potential effects of the EMG2 Project are assessed for both the DCO Application and MCO Application as follows:

i. The DCO Application as set out in Sections 6.6 – 6.8 which includes residual effects following mitigation. The assessment includes the traffic generation from Plot 16 of the EMG1 Works which is within the MCO Application (which is negligible). These sections also therefore deal with the assessment of the DCO and MCO Applications together.

ii. The MCO Application as set out in Section 6.9.

iii. A cumulative assessment of the DCO Application, the MCO Application and other development as set out in Section 6.10.

6.11.2. The assessment within this ES has been undertaken in accordance with the Institute of Environmental Management and Assessment (IEMA) Guidelines: Environmental Assessment of Traffic and Movement (July 2023) and covers the following component issues:

- Severance of communities;
- Driver vehicle and passenger delay;
- Non-motorised user delay;
- Non-motorised user amenity;
- Fear and intimidation on and by road users;
- Road user and pedestrian safety; and
- Hazardous/large loads.

6.11.3. Leicestershire's 2019 East Midlands Freeport Model (EMFM), which is a cordoned part of the larger Pan Regional Transport Model (PRTM) has been used to obtain AADT flows to inform the assessment within the ES Chapter based on the following:

- **Stage 1A modelling** (Proforma v14, Uncertainty Log v7, appended to the TA in **Appendix 6A**, **Document DCO 6.6A/MCO 6.6**) = 2028/2038 forecast years with and without EMG2 Works (plus Plot 16), including, consented and committed sites as well as draft Local Plan allocation sites and full redevelopment of the Ratcliffe on Soar Power Station site, which is authorised by a Local Development Order (LDO) and EMIP.
- **Stage 1B modelling** (Proforma v14a, Uncertainty Log v7a, appended to the TA in **Appendix 6A**, **Document DCO 6.6A/MCO 6.6A**) = 2028/2038 forecast years with and without EMG2 Works (plus Plot 16), including consented and committed sites but excluding the draft Local Plan allocation sites and Ratcliffe on Soar Power Station site redevelopment proposals beyond that which is currently able to proceed under the LDO without further approval and EMIP.

- Stage 2A modelling = as per Stage 1A but with the inclusion of the proposed Highway Works, details of which are presented in Section 6.7.
- Stage 2B modelling = as per Stage 1B but with the inclusion of the proposed Highway Works, details of which are presented in Section 6.7.

6.11.4. In accordance with the TA and ES Chapter Assessment Methodology Note EMG2-BWB-GEN-XX-RP-TR-0017, Revision P4 (Appendix 17 to the TA in **Appendix 6A** (**Document DCO 6.6A/MCO 6.6**)), the following scenarios have been adopted in this ES:

- Stage 1B modelling = core scenario
- Stage 1A modelling = sensitivity test of core scenario
- Stage 2B modelling = residual scenario
- Stage 2A modelling = cumulative scenario.

6.11.5. A full audit of the highway network surrounding the site has been undertaken as part of the assessment to identify locations that should be considered sensitive in accordance with IEMA Guidelines. This has been supported by a detailed review of Personal Injury Collision records to ascertain any locations with existing safety problems.

6.11.6. The core scenario using the Stage 1B modelling outputs showed that the operational traffic impacts would be significantly higher than the construction traffic impacts for the EMG2 Project. An assessment of the operational impacts was therefore undertaken across all links/junctions that are expected to experience traffic increases in line with Rules One and Two of the IEMA Guidelines. The core assessment excludes the proposed Highway Works associated with the EMG2 Project. The assessment concluded that the EMG2 Project could result in substantial environmental impacts that require mitigation. This position would remain unchanged with the Stage 1A modelling outputs because the percentage change in traffic is lower compared to Stage 1B resulting in lesser environmental impacts.

6.11.7. A further assessment of the residual impacts using the Stage 2B modelling outputs was undertaken to understand the impacts of the EMG2 Project inclusive of the proposed Highway Works and significant Highway Works at M1 Junction 24 and the A453 corridor between the site access and M1 Junction 24, as well as other active travel improvements and Public Rights of Way improvements. The purpose of these improvements is to increase capacity on the Strategic Road Network and reduce the impact of traffic movements associated with the EMG2 Project.

6.11.8. These improvements are expected to have a number of permanent, beneficial impacts to environmental factors on a number of roads in the vicinity of the site, including both the Strategic Road Network and local road network. Whilst a small number of links would experience an increase in traffic, the residual assessment concluded that the EMG2 Project would not lead to any significant environmental effects. A COBALT Assessment has also been undertaken to understand the impacts of the proposed Highway Works on the rate and severity of collisions. The report concludes that there would be a negligible or beneficial impact on highway safety as a result of the proposed Highway Works across the entire network area by 2038.

6.11.9. Finally, an assessment of the cumulative impacts using the Stage 2A modelling outputs was undertaken to understand the impacts of the EMG2 Project inclusive of the proposed Highway Works and traffic from the draft Local Plan allocations, EMIP and full redevelopment of the Ratcliffe on Soar Power Station site within the baseline. This showed that the percentage impacts of the EMG2 Project would be less compared to the residual scenario (Stage 2B). Therefore, no additional assessment of the cumulative scenario is required.

6.11.10. In summary, this assessment has concluded that the potential environmental effects resulting from the construction and operational phases of the EMG2 Project will mostly be beneficial with no substantial or moderate adverse effects following the implementation of the identified mitigation measures. **Table 6.15** summarises the core operational effects, mitigation and residual effects.

Table 6.15: DCO Application – Summary of Effects, Mitigation and Residual Effects

Assessment Matter	Nature of Effect	Sensitivity Value	Magnitude of Effect	Geographical Importance	Significance of Effect	Mitigation	Residual Effects
Construction							
Construction traffic	Temporary	N/A	N/A	Borough/ District & Local	Negligible	CEMP / CTMP	Negligible
Operational – Core Assessment							
Severance	Permanent	N/A	N/A	Local	Slight	Crossing facility on the A453 at EMG2 Main Site frontage	Beneficial
Driver vehicle and passenger delay	Permanent	N/A	N/A	Local	Substantial	Significant highway improvement at M1 Junction including a new free flow link between M1 NB and A50 WB, as well as other improvement at EMG1 access and Finger Farm.	Beneficial
Non-motorised user delay	Permanent	N/A	N/A	Local	Slight	Crossing facility on the A453 at EMG2 Main Site frontage and associated footway / cycleway improvements	Beneficial
Non-motorised user amenity	Permanent	N/A	N/A	Local	Slight	Improvements to Public Rights of Way to provide better off-road walking and cycling connections including along Hyam's Lane, plus footway / cycleway improvements along the A453 and the EMG1 access	Negligible
Fear and Intimidation	Permanent	N/A	N/A	Local	Slight	Significant highway improvements at M1 Junction 24	Negligible

Assessment Matter	Nature of Effect	Sensitivity Value	Magnitude of Effect	Geographical Importance	Significance of Effect	Mitigation	Residual Effects
						including a new free flow link between M1 NB and A50 WB to reduce traffic flows and HGVs along the A453 corridor	
Hazardous / Abnormal Loads	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Operational – Cumulative Assessment							
The cumulative assessment confirmed that there were no changes to the conclusions of the core assessment summarised above and therefore no further mitigation is required to address any significant environmental effects from the cumulative impacts.							

6.11.11. An assessment has also been carried out of the MCO Application in isolation. This showed that traffic from the MCO Application (development on Plot 16) would have less than a 1% impact on all parts of the highway network. Therefore, the traffic impacts would be negligible and no assessment of the environmental impacts is required for the MCO Application.