East Midlands Gateway
Phase 2 (EMG2)

Document DCO 6.22/MCO 6.22

ENVIRONMENTAL STATEMENT

Main Statement

Chapter 22

Summary and Conclusions

October 2025

22

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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22. Summary and Conclusions

Contents

22.1. Introduction

22.1.1. This Environmental Statement (ES) has been prepared to accompany applications made by SEGRO Properties Limited (DCO Applicant) and SEGRO (EMG) Limited (MCO Applicant), (together referred to in the ES as 'SEGRO' or the 'Applicant'), relating to a second phase of East Midlands Gateway Logistics Park (EMG1).

22.1.2. EMG1 is a nationally significant infrastructure development comprising a rail freight terminal and warehousing. It was authorised by The East Midlands Gateway Rail Freight Interchange and Highway Order 2016 (SI 2016/17) (the EMG1 DCO) and is substantially complete.

22.1.3. This second phase is referred to as the EMG2 Project and the following overarching terms have the same meaning: 'East Midlands Gateway 2', 'EMG2'; or 'the Proposed Development'. It comprises the following three main components:

Table 22.1: The EMG2 Project Components

Main Component	Summary of Component	Works Nos.
DCO Application made by the DCO Applicant for the DCO Scheme		
EMG2 Works	Logistics and advanced manufacturing development located on the EMG2 Main Site south of East Midlands Airport and the A453, and west of the M1 motorway. The development includes HGV parking and a bus interchange. Together with an upgrade to the EMG1 substation and provision of a Community Park.	DCO Works Nos. 1 to 5 including relevant Further Works as described in the draft DCO (**Document DCO 3.1**). DCO Works Nos. 20 and 21 including relevant Further Works 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.	DCO Works Nos. 6 to 19 including relevant Further Works as described in the draft DCO (**Document DCO 3.1**).
MCO Application made by the MCO Applicant for the MCO Scheme		
EMG1 Works	Additional warehousing development on Plot 16 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**).

22.1.4. The Applicant has made two concurrent applications for the EMG2 Project. The first application is for a Development Consent Order (referred to as the DCO Application) for the DCO Scheme comprising both the EMG2 Works and the Highway Works. The second application is for a Material Change Order to the existing EMG1 DCO (referred to as the MCO Application) for the MCO Scheme.

22.1.5. Notwithstanding the differentiation in terms of applications, given the integrated nature of the EMG2 Project, the DCO Scheme and MCO Scheme have been subject to a single EIA undertaken in accordance with the requirements of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (EIA Regulations). The findings of the assessment are reported in this ES which has been prepared in accordance with Regulation 14 as informed by Schedule 4 and Regulation 22 of the EIA Regulations.

22.2. Scope and Methodology

22.2.1. In accordance with Regulation 10 of the EIA Regulations, an EIA Scoping Request which is provided as **Appendix 1C** to this ES (**Document DCO 6.1C/MCO 6.1C**) was submitted on 14 August 2024 to seek the Secretary of State's opinion as to the scope, and level of detail, of the information to be provided in this ES.

22.2.2. On 24 September 2024, PINS adopted a Scoping Opinion (**Document DCO 6.1D/MCO 6.1D**) on behalf of the Secretary of State which advised that the areas of potential significance requiring consideration in this ES are:

- Landscape and visual (including the effects of lighting);
- Ecology and biodiversity;
- Traffic and transport;
- Air quality;
- Noise and vibration;
- Flood risk and drainage;
- Cultural heritage;
- Agriculture and soils;
- Climate change;
- Socio-economic;
- Materials and waste;
- Population and human health;
- Ground conditions;
- Material assets (utilities);
- Minerals safeguarding; and
- Vulnerability to major accidents and disasters.

22.2.3. The only matter identified by PINS which has subsequently been scoped out of this assessment is minerals safeguarding. This is a result of additional consultation carried out with the minerals planning authority (Leicestershire County Council) which has resulted in agreement with the authority that after reviewing all necessary information, the matter can be fully scoped out (see **Appendix 14K**, **Document DCO 6.14K/MCO 6.14K**).

22.2.4. The remaining environmental factors have been the subject of an EIA and the findings are reported in **Chapters 5-21** (**Documents DCO 6.5-6.21/MCO 6.5-6.21**) of this ES.

22.2.5. The general approach to each chapter is to set out the scope and methodology employed to carry out the assessment and the policy and legislative context within which the assessment has been prepared. Each chapter then includes a separate assessment of the DCO Scheme, the MCO Scheme and the EMG2 Project as a whole. The only exceptions to this standardised approach are in Chapters 6 and 15. As further explained in **Chapter 6:**

Traffic and Transportation (**Document DCO 6.6/MCO 6.6**), the traffic modelling for the DCO Scheme also includes the MCO Scheme traffic. As regards **Chapter 15: Agriculture and Soils** (**Document DCO 6.15**) this includes no separate assessment of the MCO Scheme because it does not utilise any agricultural land and therefore was scoped out.

22.2.6. Each of the assessments takes into consideration the baseline conditions for each of the environmental factors before identifying the nature, scale and significance of the likely impacts, in terms of positive, neutral and negative (or adverse) effects. The initial assessment of effects takes into account any embedded mitigation. The only exception to this is **Chapter 6: Traffic and Transportation** (**Document DCO 6.6/MCO 6.6**) which initially excludes the Highway Works mitigation package in its assessment in order to establish and justify the mitigation that is required from the current highways baseline. In relation to negative/adverse effects, the assessment establishes the significance of such impacts and determines what, if any, mitigation measures should be introduced to avoid, prevent, reduce, or offset those effects. Taking the combined embedded and additional mitigation measures into account, each assessment identifies any residual impacts and determines their significance.

22.2.7. Chapter 22 provides a summary of the residual impacts identified within Chapter 5-20 (**Documents DCO 6.5-6.21/MCO 6.5-6.21**) and is based on the methodology employed within those chapters.

22.2.8. These topic-based assessments satisfy the requirements of Regulation 14(2)(b) and 14(2)(c), and Schedule 4 of the EIA Regulations.

22.2.9. Cumulative impacts of the EMG2 Project with other existing and approved developments are also assessed in each thematic chapter and the cumulative impacts are then reported in **Chapter 21: Cumulative Impacts** of this ES **(Document DCO 6.21/MCO 6.21)**.

22.2.10. The ES and supporting technical information has been prepared by a team of specialists appointed by the Applicant. In line with Regulation 14(4)(b) a statement outlining the relevant expertise and qualifications of the appointed project team is included with the ES at **Appendix 1E** (**Document DCO 6.1E/MCO 6.1E**).

22.3. Site and Surroundings

22.3.1. The EMG2 Project is located in the district of North West Leicestershire on land close to East Midlands Airport (EMA) as shown on the Location Plans submitted in support of the DCO and MCO Applications (**Document DCO 2.1** and **Document MCO 2.1)**.

DCO Application Site (EMG2 Works and Highway Works)

The EMG2 Works

22.3.2. The EMG2 Works has three sub-component sites, comprising the EMG2 Main Site, the Community Park and a small pocket of land at EMG1 for the proposed substation upgrade.

EMG2 Main Site

22.3.3. The EMG2 Main Site comprises land immediately south of EMA and to the east of the village of Diseworth. It is located immediately west/north-west of J23A of the M1 motorway and approximately 3km south of J24 of the M1.

22.3.4. It extends to approximately 87.6ha and currently comprises undeveloped, predominantly arable, land with hedgerows and trees dividing the various fields. The topography is generally sloping towards the south and overall has a significant fall of approximately 35m from its north eastern boundary to its south eastern boundary. An unclassified single-track road with an unbound gravel surface, known as Hyam's Lane, dissects the EMG2 Main Site from south-west to north-east. It is bound by hedgerows to both sides. A public right of way (footpath references L45/L46) generally follows the route of Hyam's Lane. There are overhead power cables crossing the western fields in a north to south direction and there is also a drain to the south-east.

22.3.5. The EMG2 Main Site is bound to the north by Ashby Road (A453) with EMA beyond. Donington Park Motorway Services Area and a small copse of trees is located immediately adjacent to the north-east. Wooded areas and an area of mixed scrub surround the services and boundary to the east. To the south-east lies the A42 and the M1, parts of the strategic road network. To the south is Long Holden, another unclassified road which stops at the A42 boundary to the east. To the south-west is the village of Diseworth. The historic core of Diseworth is designated as a conservation area and includes individually listed buildings.

22.3.6. The surrounding context to the EMG2 Main Site is heavily influenced to the north and east by the existing commercial development including EMA and associated infrastructure, the motorway services and Pegasus Business Park. To the south and east the context is more rural except for the urbanising influence of the A42 to the south east.

Community Park

22.3.7. The land for the Community Park extends to approximately 14.3ha and currently comprises undeveloped, predominantly arable, land with hedgerows and trees dividing the various fields. It is located immediately to the west of the EMG2 Main Site and east of Diseworth.

Substation

22.3.8. The DCO Application also includes a small pocket of land of 1,576 sq.m within the existing EMG1 site which is presently occupied by a sub-station compound and adjoining amenity grassland.

Highway Works

22.3.9. The principal areas of land required for the Highway Works are:

- A section of the M1 motorway northbound from before J23a to J24, alongside the northbound off-slip to J24 and alongside the A50 where it joins with J24. This section of the M1 comprises a dual four lane carriageway with hard shoulders and a central reservation with crash barriers, and adjoining areas of existing landscaping.
- A section of the A50 eastbound where it links to J24, to the east of the M1 southbound.

22.3.10. Other areas of land required for the Highway Works are areas of existing highway along the A453. This includes areas of land at the entrance to EMA, areas where the proposed access to the EMG2 Main Site will be formed, land at Finger Farm roundabout, land alongside the A453 between the EMG2 Main Site and EMG1, and land at the existing entrance to EMG1. Further areas of land include the route of Long Holden to the south of the EMG2 Main Site, sections of Hyam's Lane, together with the route of Footpath L57 to the east of EMG1.

MCO Application Site

22.3.11. The land required for the MCO Scheme is located within the EMG1 site which has the benefit of the EMG1 DCO. Specifically, it 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 EMG1 DCO;
- An area of open ground 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 6.08 ha and is currently unused. It is referred to in this ES as Plot 16;
- Existing highway land where the access to EMG1 will be improved; and
- Operational land and small areas of landscaping within and adjacent to the existing public transport interchange and site management building at the EMG1 site entrance.

22.4. Project Description

22.4.1. The following section describes the three component parts that make up the EMG2 Project. It firstly looks at the DCO Scheme and its two components that are the subject of the DCO Application (i.e. the EMG2 Works and Highway Works). It then provides a description of the MCO Scheme.

DCO Scheme (EMG2 Works and Highway Works)

EMG2 Works

22.4.2. The EMG2 Works comprise a comprehensive logistics and advanced manufacturing development together with supporting and co-located office and other ancillary functions. The development is defined in Schedule 1 of the draft DCO (**Document DCO 3.1**) and comprises the following elements within the EMG2 Main Site:

- Construction of logistics and advanced manufacturing development and ancillary buildings (DCO, Works No. 1) – a maximum of 300,000 sq.m. of floorspace (GIA) overall, with an additional allowance of 200,000 sq.m. in the form of internal mezzanines across the site. The development will primarily comprise logistics buildings with up to 20% of the floorspace capable of being used for advanced manufacturing;
- Construction of road infrastructure (DCO, Works No. 2) – provision of new estate roads and footways/cycleways within the EMG2 Main Site;
- Construction of bus interchange (DCO, Works No. 3) – purpose-built bus interchange at the site entrance to the EMG2 Main Site off the A453;
- Construction of HGV parking (DCO Works No. 4) – a secure, dedicated, HGV parking area (of approximately 95 spaces) and construction of amenity buildings for HGV Drivers to meet the needs of HGVs visiting the EMG2 Main Site or EMG1; and
- Provision of hard and soft landscaping (DCO Works No. 5) – structural landscaping areas including new and retained landscaped features. A significant landscaped earthwork mound is proposed on the western and southern part of the site. The landscape areas would include SuDS features.

22.4.3. Further elements within the EMG2 Works are as follows:

- Modification and extension of the EMG1 substation (DCO, Works No. 20) – provision of a new switch room and switchgear which will be housed within an extended substation compound to accommodate a third circuit and increase capacity of the sub-station to 54 MVA in order to meet the power requirements at the EMG2 Main Site. New underground cables will be installed running from the upgraded substation within EMG1 to a new substation within EMG2 along the A453.
- Creation of a Community Park (DCO, Works No. 21) – this comprises the four field parcels closest to Diseworth (which extend to approximately 14.3ha). The Community Park will provide separation between the EMG2 Main Site and Diseworth

by creating a ‘green wedge’. It will remain open and reserved for informal public access, biodiversity enhancements and surface water drainage attenuation.

22.4.4. In order to respond to occupier demand and the evolving requirements of industry, it is essential that flexibility is built into the proposals. Accordingly, the principles of the ‘Rochdale Envelope’ have been followed for the EMG2 Works in line with the advice contained in Planning Inspectorate’s Advice Note Nine: Using the ‘Rochdale Envelope’ (July 2018). Put simply, using the ‘Rochdale Envelope’ means defining the parameters within which the construction and operation of the proposed development would be undertaken, as opposed to a fixed design. The parameters for the EMG2 Works are defined at Table 3.5 included within **Chapter 3: Project Description** of this ES (**Document DCO 6.3**) and the key development principles are shown on the Parameters Plan (**Document DCO 2.5**).

22.4.5. Whilst the DCO Application does not seek approval for the layout or design detail, an Illustrative Masterplan is submitted as part of the application (**Document DCO 2.6**). It shows how the EMG2 Works could be developed in accordance with the Parameters Plan (**Document DCO 2.5**) to appropriately respond to the site conditions and requirements of future occupiers.

22.4.6. A Design Approach Document (**Document DCO 5.3**) has been prepared and submitted with the DCO Application. It sets out the key design principles that will guide the detailed proposals for individual buildings when they come forward in line with the DCO requirements and will ensure consistency in approach in the design and appearance of the buildings.

Highway Works

22.4.7. A package of highways works is proposed including access to the EMG2 Main Site, substantial improvements around J24 of the M1 as well as more minor works on the local highways network and pedestrian/cycle route enhancements. The Highway Works are defined in Schedule 1 of the draft DCO (**Document DCO 3.1**) and comprise the following works (DCO Works No. 6-19):

- A453 access junction works to the EMG2 Main Site (DCO Works No. 6) – vehicular access from the A453 via a new arm off the Hunter Road roundabout;
- Hyam’s Lane works (DCO Works No. 7) – works include the provision of signage at the junction of Hyam’s Lane with Grimes Gate and resurfacing works along Hyam’s Lane to provide a shared use cycle track;
- Works to the M1 northbound (DCO Works No. 8) – provision of new M1 northbound exit to the A50 and associated improvements to gantries/signage, signals and roadmarkings on the M1;
- Construction of link road from the M1 northbound to the A50 westbound (DCO Works No. 9) – construction of a new free-flow link road from the M1 northbound at J24 to provide a direct link to the A50 westbound, which will cross over the A453;
- Works to the A50 westbound (DCO Works No. 10) – A50 westbound merge alterations to accommodate new link road;

- Works to the link road from the M1 southbound and A50 eastbound to M1 Junction 24 (DCO Works No. 11) – widening of the A50 eastbound link at J24 and other related works and traffic management measures in this location;
- Works to the west side of the M1 Junction 24 roundabout and A453 northbound approach (DCO Works No. 12a) – 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 remove the segregated left-turn lane from the A453 northbound to the A50 westbound;
- Works to the east side of the M1 Junction 24 roundabout and A453 southbound approach (DCO Works No. 12b) – signing and lining amendments on the east side of the J24 roundabout itself and the A453 southbound approach;
- A6 Kegworth Bypass/A453 Junction Improvements (DCO, Works No. 13) – works described in Schedule 1 of the draft DCO (Document DCO 3.1)) to provide increased junction capacity;
- Construction of the Active Travel Link between the EMG1 access junction and the A453 west of Finger Farm roundabout (DCO Works No. 14) – provision of a new shared use cycle track alongside the A453 up to EMG1 connecting EMG1 and EMG2 Main Site for pedestrians and cyclists;
- Provision of an uncontrolled crossing of the A453 at the East Midland Airport signalised access junction (DCO Works No. 15);
- Works to M1 northbound signage on the approach to M1 Junction 23A (DCO Works No. 16) – changes to the signage on the M1 northbound before J23A to sign the A50 via the new M1 J24 link road rather than via J23A as at present;
- Works to Long Holden (DCO Works No. 17) – works to connect Long Holden to the new public rights of way constructed within the EMG2 Main Site, and to control vehicular access to Long Holden;
- Works to the A42/A453 Finger Farm roundabout (DCO Works No. 18) – widening to the A453 westbound exit and the provision of new and replacement signage; and
- Upgrade to public footpath L57 to a cycle track (DCO Works No. 19) – improvement works to PROW L57 to the west of EMG1 between Diseworth Lane and the edge of Castle Donington at Eastway to upgrade this route to cycle track standards.

22.4.8. The Highway Works will be carried out in general accordance with the details shown on the Highways Plans, General Arrangement, Sheet 1-4 (**Documents DCO 2.8A-2.8D**), the Highways Plans, Long Sections, Sheet 1-4 (**Documents DCO 2.10A-2.10D**), the Highway Plans Cross Sections, Sheet 1-3 (**Documents DCO 2.9A-2.9C**), the A453 Bridge Plan (**Document DCO 2.11**) and Access and Rights of Way Plans, Sheet 1-2 (**Documents DCO 2.4A and 2.4B**). The limits of deviation for the Highway Works are set out at Article 4 of the draft DCO (**Document DCO 3.1**) and listed at Table 3.5 at **Chapter 3: Project Description** of this ES (**Document DCO 6.3**).

Construction processes and timescales

22.4.9. For the purposes of this ES, it is anticipated that the general construction programme for the DCO Scheme will be phased over a 4.25-year period. It is anticipated that the earthworks would commence in Q3 2027 and will take some 18 months to complete (in three phases). The earthworks will create all the development plateaus, as well as providing the mounding and the ground works for the strategic landscape and drainage infrastructure. From Q1 2028, as and when individual plateaus are completed, works will commence to construct buildings. Delivery of the buildings will ultimately be market driven and will therefore be built out depending upon occupier requirements and market conditions, and timed to maximise the benefit of the Freeport incentives. It is anticipated that construction of both the on-site and off-site infrastructure and the construction of buildings will be completed by the end of 2031.

22.4.10. The construction of the DCO Scheme will be managed through a Construction Environmental Management Plan (CEMP) provided as **Appendix 3A** to the ES (**Document DCO 6.3A**). The CEMP outlines measures to ensure compliance and adherence to safe and sustainable construction practices and sets out the controls that will be adopted during construction to minimise any adverse environmental effects (for example, noise, dust, lighting, ecology, surface water run-off, foul water disposal and soil management).

22.4.11. Phase-specific construction environmental management plans (P-CEMP) will be prepared for each works package in accordance with the principles set out in the CEMP and submitted for approval pursuant to Requirement 11 of the draft DCO (**Document DCO 3.1**).

MCO Scheme

22.4.12. The proposals comprise changes within EMG1 including the following elements:

- Construction of a new rail-served warehouse building with a maximum floorspace of 26,500 sq.m. and additional allowance of 3,500 sq.m. of mezzanine space on land adjacent to the rail-freight terminal referred to as Plot 16 (MCO, Works No. 3A) together with associated access (MCO, Works No. 5A) and landscaping (MCO, Works No. 6A);
- Alterations to the maximum permitted height of gantry cranes at the rail freight interchange by 4m, to 24m overall;
- An expansion of the EMG1 Management Suite by the EMG1 site entrance to provide additional break-out space and meeting rooms (MCO, Works No. 3B);
- Enhancements to the Public Transport Interchange including the installation of parking EV charging infrastructure for buses and provision of a drop-off layby next to the existing transport hub (MCO, Works No. 5B and 5C); and
- Provision of a signalised crossing over the EMG1 exit road approach to the access junction to EMG1 (MCO, Works No. 8A).

22.4.13. The proposed development is defined in the draft MCO (**Document MCO 3.1**) and is shown on the Works Plan (**Document MCO 2.3**). A Parameters Plan has been prepared and included with the application at **Document MCO 2.5**. The application is also accompanied by an Illustrative Landscape Masterplan (**Document MCO 2.6**).

Construction processes and timescales

22.4.14. The EMG1 DCO already contains provisions pursuant to Requirement 11 as set out in Schedule 2 of the EMG1 DCO requiring a further P-CEMP to be submitted for each phase and this will apply to the MCO Scheme. The CEMP will need to adhere to the approved construction management framework plan that was approved for EMG1.

22.4.15. It is anticipated that the general construction programme for the MCO Scheme will be undertaken over a period of approximately 1 year, from around Q1 2027 to Q1 2028. It would run in parallel with the early years of the construction period for the DCO Scheme.

22.5. Reasonable Alternatives

22.5.1. To satisfy the requirements of the EIA Regulations, consideration has been given to reasonable alternatives. This has included a consideration of the 'no development' options, alternative sites and alternative development scenarios and design approaches. These alternatives have not been selected for the following reasons:

- The 'no development' option would not fulfil the aspirations of national, regional and local economic strategies and would result in the loss of the substantial social and economic benefits arising from the EMG2 Project.
- Consideration of the alternative site options to the EMG2 Works did not identify any growth options on land bordering EMG1 or in immediate proximity to it that would be of a sufficient site size, less constrained and/or less likely to give rise to significant environmental impacts.
- It is considered that the chosen EMG2 Project successfully balances a range of environmental and operational considerations based on the constraints and opportunities presented by the application sites. The EMG2 Project has evolved through an iterative process and measures have been embedded into the design to ensure that any adverse environmental impacts are minimised whilst maximising the benefits of the proposals.

22.6. Approach to Assessment of Applications

22.6.1. The ES covers both the DCO Application and the MCO Application (as explained in Section 22.2 and in full within **Chapter 1: Introduction and Scope** (**Document DCO 6.1/MCO 6.1**)). Within each of the assessment chapters a clear distinction has been made between the component parts and, consistent with the dual application approach, an assessment has been carried out of the impacts arising from:

- the DCO Application;
- the MCO Application;
- the DCO Application and the MCO Application together as the EMG2 Project; and
- the cumulative impacts of the EMG2 Project.

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

- An Assessment of the DCO Scheme within Section 22.7;
- An Assessment of the MCO Scheme within Section 22.8;
- An Assessment of the EMG2 Project as a whole, comprising the DCO Scheme and MCO Scheme together, within Section 22.9;
- An Assessment of the EMG2 Project as a whole in combination with other planned development (i.e. the cumulative effects), within Section 22.10; and
- An overall summary and conclusions of the above within Section 22.11.

22.7. Assessment of DCO Application

22.7.1. As set out in Section 1 of this Chapter, and at **Table 22.1**, the DCO Scheme comprises of the following component parts:

- The EMG2 Works: Logistics and advanced manufacturing development located on the EMG2 Main Site together with the provision of a Community Park, HGV parking, a bus interchange, and an upgrade to the EMG1 substation;
- The Highway Works: Works to the highway network: the A453 EMG2 Access Works; the J24 Improvements and works to the wider highway network including active travel works.

Baseline

22.7.2. A brief outline of the baseline position is provided below with a detailed review contained in the individual assessment chapters (Chapters 5-20, **Documents DCO 6.5-6.20**). Where reference is made to the EMG2 Works this generally excludes the proposed substation, except where this is specifically referenced.

22.7.3. With regard to socio-economic characteristics of the area, the study area has seen a growth in population in recent years and is likely to continue growing at a significant rate. The study area has a higher share of high skilled residents compared to the regional and national averages and the economic activity rate, unemployment rate and Jobseekers' Allowance (JSA) claimant rate are all broadly in line with the region and nation. There is a strong existing pool of workers who are employed in the construction, transport and storage and manufacturing sectors. Regarding the industrial and logistics (I&L) market, North West Leicestershire and the wider study area (FEMA) have been consistently supply constrained since 2014. There is a significant shortage of I&L floorspace.

22.7.4. With regard to transport, the assessment shows that the EMG2 Works lie in a strategic location, immediately adjacent to East Midlands Airport (EMA), East Midlands Gateway (EMG1) and the existing Strategic Rail Freight Interchange (SRFI) and in close proximity to the Strategic Road Network (SRN). In terms of access, the EMG2 Main Site will be accessed from the A453 Ashby Road which connects to the SRN via J23A of the M1. The Highways Works involve works to the M1 Northbound between J23A and 24 alongside the northbound off-slip to J24 and the A50, along the A50/M1 southbound link to J24 and along the A50 westbound link from J24. The assessment has identified three locations where a cluster of Personal Injury Collisions (PICs) has occurred and present a potential safety problem: EMG1 access junction, M1 Junction 24 and A453/The Green.

22.7.5. In respect of the existing noise climate, this has been quantified through the undertaking of a noise survey. This showed that the baseline noise conditions in the areas around the EMG2 Works are generally dominated by road traffic, primarily from the M1, A453, A42 and A50, with aircraft serving East Midlands Airport also contributing. A number of key noise receptors have been identified, specifically near-by residential properties potentially affected by direct noise from the DCO Application and/or from potential increase in traffic noise or construction activities including piling.

22.7.6. As to the air quality baseline, there are two Air Quality Management Areas (AQMAs) in North West Leicestershire District Council, but the EMG2 Works is not located within either of these two AQMAs. Air quality monitoring consisting of a 6-month diffusion tube survey has been undertaken at a number of receptors to establish the background pollutant concentrations for each identified receptor modelling locations. The results indicate that there were no exceedances of the NO2 annual mean objective at various strategic locations near to the EMG2 Works and Highway Works.

22.7.7. Regarding the ecology baseline, the assessment shows that there are no statutory ecological designations within, or immediately adjacent to the EMG2 Works. Within the respective search areas, there is a single site of international conservation importance (River Mease SAC, 13.5km to the south-west at its closest point) and a single nationally designated site (Lockington Marshes SSSI, 1km to north-east). The majority of the habitats within the EMG2 Works site comprise arable field compartments bounded by hedgerows and scattered mature trees. There is one improved grassland field and one semi-improved grassland field compartment and three small areas of standing water. With regard to the Highway Works, the highway land generally comprises hardstanding bounded by a variety of habitats including trees, hedgerows, scrub and grassland. A suite of field surveys was undertaken and recorded evidence of Great Crested Newts (GCN), badgers, and invertebrates within the site. The on-site habitats, and habitats directly adjacent to the EMG2 Works, are potentially used for roosting/nesting and foraging by a range of wildlife including protected species such as bats, badgers, breeding birds, otter, water vole and reptiles.

22.7.8. In terms of landscape character, the assessment considers a series of published landscape studies that vary from the very broad to more localised and site specific scales. At a more localised scale these studies describe a rolling landscape with a mix of rural and urbanising influences, with farmland and scattered woodlands. Where appraised within these studies the landscape within and around the EMG2 Works is generally considered to be of Medium (or 'Moderate') Landscape Sensitivity. The more localised studies also highlight the relationship of the EMG2 Works to Diseworth, as an important consideration in appraising and devising future employment proposals. The County and District wide studies have appraised the landscape of the DCO Application and its localised context and conclude that it is a landscape of medium or moderate sensitivity to new employment development, indicating that it can potentially accommodate this type of development with suitable landscape and visual mitigation and attention to the design and layout proposals.

22.7.9. No national or local landscape designations have been identified within or in close proximity to the DCO Application. The DCO Application also does not lie within a landscape identified in the adopted or draft Local Plan as a 'valued landscape' in the terms of NPPF para 187 (a) and there are no specific landscape quality or value policies or designations covering the DCO Application or its immediate context.

22.7.10. In terms of visual receptors, a number of representative viewpoints were selected by way of a desk top review, followed by site visits and field survey work. The viewpoints were chosen to represent either the typical view of the receptor or view of maximum effect and include residential properties, near-by roads, Public Rights of Way and near-by businesses within an identified Zone of Theoretical Visibility.

22.7.11. With regard to existing lighting, the assessment notes that the area surrounding the DCO Application is a broad mixture of commercial uses, rural settlement and more suburban settlement interspersed with agricultural land. There is a large volume of existing artificial lighting in the area, but this is primarily concentrated on the EMA, its associated infrastructure and the highway network. This existing lighting is visible across the landscape and is affecting the district brightness of the surrounding area.

22.7.12. With regard to built heritage, the baseline review shows that there are no designated heritage assets within the site. Within a 2km search radius, a large number of listed buildings and three conservation areas were identified. However, the vast majority of these built heritage assets are not affected by the DCO Application. Of the designated built heritage assets identified, it is only the Grade II* Church of St Michael and All Angels in the centre of Diseworth, and the Diseworth Conservation Area that are potentially affected.

22.7.13. Regarding the archaeological potential of the site, this was investigated by a geophysical survey followed by trial trenching. Archaeological features potentially associated with the Middle to Late Iron Age, Roman and Post-Medieval period were recorded within the EMG2 Main Site and Community Park with all features considered to be either of no or local significance/sensitivity.

22.7.14. In terms of flood risk and drainage, the assessment identifies existing watercourses and catchments within which the DCO Application is located. Regarding the Highway Works, the works are generally removed from the design event floodplain of the River Trent and River Soar. With regard to the EMG2 Main Site/Community Park, the assessment shows that the Hall Brook flows along a portion of the western boundary and then continues in a south-westerly direction to its confluence with the Diseworth Brook. Diseworth Brook flows from west to east through Diseworth and then flows east passing beneath the A42 and M1 road embankments where it is joined by the Westmeadows Brook and is renamed as the Long Whatton Brook. The Long Whatton Brook continues to flow towards the east where it joins the River Soar.

22.7.15. Whilst the EMG2 Main Site itself is at low risk of flooding, the nearby villages of Diseworth and Long Whatton have experienced a number of recent historical flooding incidents. A number of studies into the flood risk incidents have been commissioned by the LLFA, one of which included the production of an integrated hydraulic model of the catchment. This identified that the flooding to Diseworth is primarily generated by high water levels on the Diseworth Brook. Hall Brook contributes a proportion of the flood flows to the Diseworth Brook, but is not the primary source of flood risk to the village. The flooding in Long Whatton results generally from minor tributaries flowing though the village on their way to meet the Long Whatton Brook. The EMG2 Main Site/Community Park falls across two topographical catchments roughly separated by Hyam's Lane. The northern catchment falls in a westerly direction and towards the Hall Brook, the southern catchment falls in a south-easterly direction and towards the Diseworth Brook.

22.7.16. To understand existing ground conditions, a ground investigation was completed comprising a number of bore holes and trial pits, groundwater and ground gas monitoring, and soil, groundwater and surface water laboratory tests. The soil testing results indicated that all concentrations of contaminants analysed were below the commercial end use assessment criteria. The groundwater monitoring revealed the presence of shallow groundwater in a

number of monitoring locations. Limited exceedances in specific contaminants were identified as part of the groundwater and surface water laboratory tests. The ground gas monitoring concluded that there is no requirement for gas protection measures.

22.7.17. In terms of agricultural land quality and soils, the assessment shows that the EMG2 Main Site/Community Park comprises a combination of soils that vary in drainage. The study site comprises circa 35ha (35%) of better draining land, where coarse loams and fine loams have clay at depth, which is considered to be of higher quality (Grade 1-Subgrade 3a – best and most versatile agricultural land). The remaining 64ha (64%) is poorly draining land comprising heavy soils directly over slowly permeable clays and has been classified as being of moderate quality (Subgrade 3b).

22.7.18. A review was carried out of existing utilities infrastructure which identified a number of overhead and underground electricity cables and poles, gas mains, water main and telecommunication equipment within the DCO Application boundary.

22.7.19. The baseline review with regard to population and human health shows that the majority of health indicators are either comparable to or better than the regional and national averages. This includes indicators such as life expectancy, mortality rate, hospital admissions, mental health statistics, dementia diagnosis, alcohol specific conditions and adult smoking prevalence. The percentage of adults classified as overweight or obese in the district study area has been consistently higher than the regional and national averages and has increased over time.

22.7.20. With regard to materials, the required types and quantities of materials has been considered in light of the availability of materials across the UK which shows that the availability of construction materials in terms of stocks, production or sales remains buoyant. Regarding the availability of waste management facilities, the assessment sets out the current capacity of waste facilities considering landfill, recycling, reuse and/or waste transfer. It shows that the current operational capacity of waste facilities within the expansive study area is 1.30 Metric Tons (Mt) per annum of landfill and 2.95 Mt per annum of recycling, reuse and/or transfer respectively.

22.7.21. The baseline review with regard to climate change considers the local and regional climate and resulting weather patterns and current Green House Gas (GHG) emissions. It shows that the EMG2 Project is located in an area with a warm, relatively dry and sheltered climate compared to the UK as a whole. Rainfall is consistently lower throughout the year than the UK average. Precipitation is predicted to increase during the wettest season and decrease during the driest season in the future. Temperatures are anticipated to increase across the year, both during the coldest and hottest seasons and months. Additionally, humidity is anticipated to increase. These trends will continue and amplify towards the end of the century. With regard to GHG emissions, the existing land uses are considered and include agricultural land for the EMG2 Works, and existing road network, public footpaths, and land adjacent to the road network for the Highway Works. GHG emissions without the EMG2 Project from these land uses are expected to remain similar.

22.7.22. With regard to the assessment of the risk of major accidents and disasters, it is noted that the DCO Application is located adjacent to East Midlands Airport, within the consultation zones for Major Hazard Site H4798 and immediately adjacent to the Donington Park

motorway services including fuel retail. The DCO Application will require the diversion of existing utilities infrastructure.

Impacts and Mitigation

22.7.23. The DCO Application proposals have evolved through an iterative design process involving a series of stages of assessment and engagement, scheme refinement, further assessment and further refinement. This has led to a number of measures targeted at avoiding, reducing or mitigating environmental effects becoming 'embedded' in the proposals.

Embedded Mitigation in respect of the DCO Scheme

22.7.24. The embedded mitigation comprises the following measures:

- Active travel and public transport improvements including the provision of the Active Travel Link and construction of the bus interchange;
- A package of highways works including substantial improvements around J24 of the M1 as well as more minor works on the local highways network;
- Secure, dedicated and private HGV parking area to meet the needs of HGVs visiting the EMG2 Main Site;
- Inclusion of, and proposed phasing and sequencing of works, to install strategic mitigation mounding to the west and south of the development zones providing landscape and visual mitigation, noise attenuation and minimising light pollution;
- Retained and new planting and landscaping including provision of Community Park to mitigate impact on ecology, landscape and visual, and cultural heritage;
- Lighting strategy setting out lighting design consideration to minimise light pollution;
- Location of built development outside of the floodplain and away from watercourses to ensure that there is no loss of floodplain or adverse interruption of flow pathways;
- Provision of, and subsequent maintenance regime for, surface water drainage infrastructure;
- Network reinforcements of electricity infrastructure;
- Creation of a series of development plateaus within the EMG2 Main Site and creation of mounding and landscape proposals based on an earthworks strategy that seeks to achieve a cut and fill balance;
- Buildings designed to minimise Green House Gas (GHG) emissions targeting EPC 'A' rating and minimum of BREEAM 'Excellent' as part of base build specification;
- Installation of solar PVs generating renewable energy for occupiers.

22.7.25. Whilst this iterative design approach aims to minimise environmental effects, it is not possible to avoid impacts altogether. The main potential environmental effects of the DCO Application are briefly summarised below and are set out in full in ES Chapters 5-21 (**Document DCO 6.5-6.21/MCO 6.5-6.21**).

22.7.26. The impacts of the development are best summarised by distinguishing between the generally short-term effects arising from the construction phase, and the medium to longer term effects of the operational (built) phase.

Construction Phase

Potential Impacts of Construction of the DCO Scheme

22.7.27. The construction phase will involve site stripping and earth moving, excavation and site re-profiling to establish development plateaus and provide landscape bunds, the installation of surface water and foul water drainage infrastructure, installation of service trenches, ducts and associated service infrastructure, construction of site access and new roads, construction of new buildings and associated service yards and car parking, landscaping works, and the alterations to, and construction of, new sections of existing public highway infrastructure.

22.7.28. Unmitigated, the proposed construction activities could result in the following adverse impacts:

- Increased traffic arising from construction workers travelling to the site, and the transportation of plant and materials and associated noise, dust and dirt, and impact of traffic on residential properties and the pedestrian/cycling environment and consequential effects on human health. An increase in construction traffic has the potential to lead to an increased risk in road accidents;
- Use of construction plant and machinery (including piling) and associated noise and vibration affecting nearby residential properties and heritage assets;
- Removal of vegetation and ecological habitat and resulting loss of foraging and roosting/nesting opportunities for wildlife;
- Potential habitat disturbance and degradation both on-site and indirectly on off-site habitats arising from dust and particulate deposition, local changes in soils, drainage and hydrology and accidental pollution;
- Potential harm or mortality of wildlife using habitats during the construction phase;
- Removal of existing landscape features and vegetation and construction of buildings and new road infrastructure and consequential changes to the character of the landscape;
- Visibility of construction activities and plant movements including associated lighting and resulting impacts on visual amenity and human health;
- Complete, or near complete, removal of archaeological remains;
- Increased risk of surface water flooding as a result of additional and changed distribution of surface water runoff as a result of construction activities, and through compaction of the soil resulting in reduced rate of infiltration and consequential increases in surface water run-off rates and volumes;
- Reduction in water quality resulting from the release of sediments and suspended solid into watercourses;

- Stripping of site topsoil and shallow soils disturbing the natural in-situ strata;
- Potential contamination from spillages or leakages including lubricants, oils, fuel and uncured concrete used during construction;
- Diversion works to existing utilities infrastructure;
- Temporary closures and diversions of public rights of way and resulting health impacts;
- Potential for trespassing and anti-social behaviour and resulting impacts on community safety;
- Consumption of natural and non-renewable resource and associated Green House Gas (GHG) emissions;
- Reduction in landfill capacity as a result of construction waste.

22.7.29. The DCO Application will lead to a number of beneficial impacts during the construction phase. These include:

- Provision of construction employment on-site and indirectly through supply chain benefits and new expenditure introduced to the local economy;
- Circa £90 million gross value added (GVA) to economy

Additional Construction Phase Mitigation in respect of the DCO Scheme

22.7.30. Although it is not possible to completely avoid the impacts of construction, much can be done to manage and reduce such impacts to acceptable levels through a range of additional mitigation measures designed to ensure the development is carried out using best practice construction methods and procedures. A Construction Environmental Management Plan (CEMP) (**Document DCO 6.3A**) has been prepared which outlines the approaches and methodologies to be adopted in order to avoid or minimise any unnecessary effects. This includes:

- Implementation of measures to control the timing and routing of construction traffic, provision for parking for contractor's vehicles and measures to prevent mud from being deposited on the highway. A Construction Traffic Management Plan (CTMP) has been prepared and is included within the CEMP;
- Adherence to specific noise and vibration controls following the principles of Best Practicable Means (BPM) including the careful consideration of phasing of works, selection of appropriate construction methods and equipment, positioning and screening of equipment, restricting hours of construction operations, use of 'white noise' type reversing warnings and implementation of a noise and vibration monitoring regime;
- Adherence to measures to minimise dust and the release of other particulate matters including the careful selection of construction methods and equipment and implementation of dust suppression measures;

- Adherence to measures to protect retained habitat and avoid disturbance of, or harm to, protected species during construction work;
- Adherence to specific measures to reduce lighting impacts of construction activities including restriction of construction hours to reduce nighttime task lighting, use of solid hoarding to contain light spill and careful consideration of construction phasing;
- Implementation of construction phase surface water and foul water management measures including a temporary drainage strategy;
- Implementation of the measures set out in the Silt Management Plan (appended to the CEMP) designed to provide treatment to surface water runoff from the site prior to it being discharged to the downstream watercourses and drainage systems;
- Adherence to measures to protect soil resources ensuring their availability for use in landscaping, and minimising soil disturbance;
- Implementation of measures designed to minimise Green House Gas (GHG) emission of construction activities including in the selection and procurement of construction materials, and in decisions on and operation of construction plant and machinery;
- Adherence to airport safeguarding measures;
- Adherence to all other necessary regulations and guidelines on protecting the health of site workers, the environment and local communities during the construction process.

22.7.31. Phase-specific construction environmental management plans (P-CEMP) will be prepared for each works package in accordance with the principles set out in the CEMP.

22.7.32. In addition to the implementation of the measure set out in the CEMP and associated Construction Traffic Management Plan (CTMP) and Silt Management Plan, the following additional mitigation has been identified and is proposed to be carried out/adhered to during the construction phase:

- Implementation of an employment scheme secured by Requirement 25 of the draft DCO (**Document DCO 3.1**) to provide training and upskilling opportunities;
- Implementation of measures set out in the Site Waste and Materials Management Plan (SWMMP) (**Document DCO 6.18D**) to minimise and manage construction waste and considers the suitability of materials for re-use;
- Targeted programme of archaeological investigation;
- Staged process of ground investigation and risk assessment and implementation of any necessary remedial measures;
- Diversion works to existing utilities infrastructure and installation of new network connections (electricity, gas, portable water and telecoms);
- Implementation of measures set out in the Carbon Management Plan (**Appendix 19E, Document DCO 6.19E/MCO 6.19E**) to minimise Green House Gas (GHG) emissions including the selection of recycled and low carbon construction materials, use of alternative construction plant fuel and plant efficiency improvements.

Residual Impacts of Construction of the DCO Scheme

22.7.33. Following the mitigation described above, the main residual adverse impacts of the construction phase of the DCO Application are identified to be:

- Negligible adverse residual impacts in terms of construction traffic and no significant associated noise and air quality impacts;
- Potential short-term temporary adverse residual noise impact with respect to the Highway Works, likely at night periods;
- Minor-negligible to minor adverse residual impact on retained habitats including trees, veteran trees, hedgerows, ponds and plants;
- Minor adverse residual impact on fauna including skylark and yellow wagtail populations and invertebrates;
- Minor-negligible to minor adverse residual impact on published national, regional and country scale landscape character types/area;
- Major adverse residual impact on landscape of the EMG2 Main Site and immediate context, and minor adverse on Highway Works;
- Minor-moderate to major adverse residual visual impacts on local residents with worst visual effects experienced by residents at the edge of Diseworth and Long Whatton;
- Minor-moderate to major adverse residual visual impacts on footpath users with worst effects experienced by users of Long Holden, Hyam's Lane, stretches of The Cross Britain Way and PROWs to the north-eastern edge and south of Diseworth, and users of the footpath alongside Plot 16;
- Minor to moderate-major adverse residual visual impacts on road users including users of the A453, M1, A42, A6 and minor local roads;
- Up to moderate adverse residual visual impact on other visual receptors including users/visitors to Donington Park Services, Pegasus Business Park and Hilton Hotel and to Breedon-on-the-Hill high point;
- Neutral to slight adverse residual impacts in terms of the visibility of lighting in the landscape during construction and sky brightness;
- Negligible residual impacts on archaeology and on built heritage assets;
- Negligible residual impacts of construction activities on floodplains, surface water quality, foul water flows and ground water quantity and quality;
- Negligible residual impacts on ground conditions;
- Negligible residual impact on soil resources;
- Negligible residual impacts arising from diversion of existing, and installation of new, utilities infrastructure;
- Negligible impacts on human health increasing to minor residual adverse for vulnerable users as a result of changes in air quality, noise and vibration, community safety, changes to the visual environment, access to open space and PROW;

- Negligible residual impacts with regard to the consumption of material resources, disposal and recovery of waste;
- Minor adverse residual impact of Green House Gas (GHG) emissions during construction.

22.7.34. The main beneficial impacts of the construction phase are:

- Minor-moderate beneficial residual impact on construction employment (direct, indirect and induced);
- Major beneficial residual impact on regional and national economic activity as a result of additional Construction GVA;
- Minor-moderate beneficial residual impact on surface water quantity in light of implementation of temporary drainage strategy;
- Minor beneficial residual impact on human health of residents in the study area rising to moderate beneficial for vulnerable receptors as a result of the changes to the socio-economic conditions in the study area.

Likely Significant Environmental Impacts of Construction of the DCO Scheme

22.7.35. In conclusion, the construction phase of the development will result in some significant adverse impacts on landscape and visual receptors. This includes the landscape of the EMG2 Works and its immediate context and visual receptors including residents of some properties at the edge of Diseworth and more distant properties to the south and south-east of the site; users of stretches of the footpath at Hyam's Lane, Long Holden, The Cross Britain Way and some stretches of other PROWs close to the south, north and west of Diseworth; road users of stretches of the A453 (alongside the site), Grimes Gate (leading into Diseworth from the north), The Green (south-east of Diseworth) and the minor roads close to the west of Diseworth; and users of a relatively short stretch of PROW (L112) alongside and close to the southern edge of Plot 16.

22.7.36. The construction phase will also result in significant beneficial impacts on the regional and national economic activity through construction GVA.

Operational Phase

Potential Impacts of Operational Phase of DCO Scheme

22.7.37. Once developed, the EMG2 Main Site will be characterised by a range of logistics and advanced manufacturing and ancillary buildings with mitigation mounding and new areas of open space and landscaping including a Community Park, mainly to the west and south. An extended and modified substation will be located within EMG1. The comprehensive package of Highway Works will have been implemented including significant improvements to Junction 24 of the M1.

22.7.38. The operational development will result in some adverse effects on the environment, but the embedded mitigation outlined above ensures that impacts are avoided, reduced and minimised. The main long-term residual adverse impacts of the operational (built) stage of the DCO Application can be summarised as follows:

- Increased traffic arising from employees commuting to and from the site, and operational HGV traffic and associated effects on air quality and noise;
- Detailed layout and design proposals and occupier-specific operational requirements could potentially fall short of the environmental expectations and standards without further detailed consideration and approval;
- Potential degradation of retained and new habitats by activities of site users such as littering and damage, and from inappropriate management of habitats with resulting detrimental effects on wildlife using these habitats;
- Potential adverse impacts on sensitive habitats from a decrease in air quality as a result of increased traffic generated by the development;
- Recreational use of Community Park and footpath network could lead to potential disturbance to wildlife;
- Completed development at the EMG2 Main Site will form dominant features within the local landscape;
- Views of the completed development with receptors with the clearest views toward the development experiencing the greatest visual impact;
- Without appropriate management and maintenance the installed infrastructure including roads, footpath/cycleways, and surface water and foul drainage infrastructure could degrade or become damaged over time;
- Permanent loss of best and most versatile (BMV) agricultural land at the EMG2 Works;
- Reduced use of agrichemicals, but potential contamination from spillages or leakages and release of pollutants into the local watercourses from on-site activities;
- Provision of new utilities connections;
- Potential for trespassing and anti-social behaviour and resulting impacts on community safety;
- Increased risk to workers at the completed development, damage to building and on-site infrastructure from high temperatures and temperature fluctuations;
- Direct and indirect Green House Gas (GHG) emissions due to the operational energy use within the buildings, road uses emissions from HGV and commuters, and the use of materials for replacement and maintenance activities;
- Generation of waste from the on-site operations.

Additional Operational Phase Mitigation

22.7.39. The impacts of the operational EMG2 Works can be limited, managed and controlled through a series of additional mitigation measures including the following:

- Implementation of an employment scheme with measures targeted to support local people into work facilitating access to mentoring, training and skills development and delivery of workshops and mentor programmes to colleges within the East Midlands;
- Implementation of Sustainable Transport Strategy and Travel Plan measures (**Appendix 6B and 6C, Document DCO 6.6B and 6.6C**) to ensure that future employees have viable and attractive options to walk, cycle, use public transport, car share or use electric vehicles to reach the site;
- Requirement for detailed design approval for fixed plant and substations;
- Use of 'white noise' type reversion warnings;
- Installation of 3m high acoustic fencing along the northern boundary of Zone 5 on the EMG2 Main Site (if required);
- Implementation of Landscape and Ecological Management Plan (LEMP) (**Appendix 9J, Document DCO 6.9J**) which sets out measures to manage and maintain the landscape to the benefit of both the environment and the local community;
- Necessary upgrades to STW foul drainage network;
- Appropriate on-site storage of fuels, lubricants, solvents, chemicals etc. and hazardous materials;
- Active management and maintenance of the estate roads, landscape areas and footpath/cycleways to ensure that any damage/degradation is promptly addressed;
- Implementation of measures set out in the Carbon Management Plan (**Appendix 19E, Document DCO 6.19E/MCO 6.19E**) to minimise Green House Gas (GHG) emissions throughout the lifetime of the development including measure to reduce unregulated building energy use and maximise the use or renewable energy.

Residual Impacts of Operational Phase of the DCO Scheme

22.7.40. With the above mitigation in place, the long-term residual impacts of the operational (built) stage of the development can be summarised as follows:

- Negligible transport impacts in terms of non-motorised user amenity, and fear and intimidation. Negligible to slight adverse residual impact on severance on some of the assessed links with the exception of Nottingham Road in Kegworth were a moderate adverse residual impact was identified;
- No significant residual impact on noise or vibration;
- No significant residual impact on air quality for human receptors;
- Minor-moderate adverse (reversible) impact on Lount Meadows SSSI and Oakley Wood SSSI;
- Negligible to minor adverse residual impact on veteran trees and hedgerows;

- Negligible residual impacts on fauna;
- Minor adverse (reversible) residual impact on Tonge Gorse Ancient & Semi Netural Woodland;
- Negligible to minor adverse residual impact on published national, regional and country scale landscape character types/area;
- Moderate-major adverse residual impact on landscape of the EMG2 Main Site/Community Park 15 years after completion once the proposed and conserved planting and habitats have matured. The residual landscape impact of the Highway Works will be minor adverse;
- Up to moderate adverse impacts on local residents with worst visual effects experienced by residents at the edge of Diseworth and Long Whatton and to the south and east of the EMG2 Main Site. There will be a moderate-major residual visual impact on Bleak House, to the north of Diseworth.
- Minor-moderate to moderate-major adverse residual visual impacts on footpath users with worst effects experienced by users of Hyam's Lane, stretches of The Cross Britain Way and PROWs to the north-eastern edge and south of Diseworth;
- Minor to minor-moderate adverse residual visual impacts on road users including users of the A453, M1, A42, A6 and minor local roads;
- Up to minor-moderate adverse residual visual impact on other visual receptors including users/visitors to Donington Park Services, Pegasus Business Park and Hilton Hotel and to Breedon-on-the-Hill high point;
- Neutral to slight adverse residual impacts in terms of the visibility of lighting in the landscape and sky brightness;
- Negligible-minor adverse residual impact of EMG2 Works on Diseworth Conservation Area and minor-moderate adverse impact on Church of St Michael and All Angels;
- Negligible residual impacts of operational development on floodplains, foul water flows and minor-negligible impact on ground water quality;
- Negligible residual impacts on ground conditions;
- Major adverse effect resulting from the loss of agricultural land at the EMG2 Works site;
- Negligible impacts on human health (increasing to minor residual adverse for vulnerable users) from changes in noise/vibration. Minor adverse residual impacts on human health from changes in transport, access and connections, and from changes in diet and nutrition;
- Negligible residual impacts with regard to the consumption of material resources and disposal of waste with residual impact on recovery of waste considered to be minor adverse;
- Minor adverse residual impact of Green House Gas (GHG) emissions during operation;

- Negligible residual impact in terms of climate resilience during operation and maintenance.

22.7.41. The EIA has identified a number of significant beneficial long-term impacts of the DCO Scheme on the socio-economic conditions of the area as follows:

- Creation of long-term high quality employment opportunities across a range of occupations for residents within the study area, both at the EMG2 Main Site and in the wider jobs market. This results in a moderate to major beneficial residual impact on operational employment (direct, indirect and induced);
- Provision of new logistics and advanced manufacturing floorspace will help to address the significant shortfall in the supply of land for Industrial and Logistics (I&L) in the Functional Economic Market Area (FEMA). This results in a major beneficial residual impact on businesses within the I&L sector;
- Operational development will contribute to the regional and national economy by generating gross value added (GVA) and through new Business Rates Income to North West Leicestershire. This results in a major beneficial residual impact on regional and national economic activity;
- Reduction in the journey time for drivers, particularly along the M1, A50 and A453 corridor, resulting in a major beneficial impact on driver vehicle and passenger delay.

22.7.42. A number of other beneficial residual long-term impacts have also been identified. These can be summarised as follows:

- Creation of upskilling and training opportunities which will support unemployed and economically inactive local residents in the study area to return into work and reduce local skills gaps, and will provide learning and skills development throughout employees careers. This results in a negligible residual impact on skills and the labour force;
- Minor beneficial impacts to severance on the A453 opposite EMG2 Main Site with the introduction of the Toucan crossing;
- Minor beneficial transport impacts in terms of severance with regard to some of the assessed links including Hemington Lane and Main Street in Lockington and Ryecroft Road in Hemington;
- Minor beneficial transport impact on non-motorised user delay following the provision of crossing facilities on the A453 and associated footway/cycleway improvements;
- Minor beneficial impacts to non-motorised user amenity with the Active Travel infrastructure and PRoW improvements, particularly along Hyam's Lane which will form an extension of the National Cycle Route;
- Minor-negligible beneficial residual impacts on retained habitats including trees, ponds and plants, and on Diseworth Brook Tributary;
- Minor-moderate beneficial residual impact on surface water quantity and quality;
- Minor beneficial residual impact on human health arising from the improved access to open space and public rights of way;

- Minor beneficial residual impact on human health of residents in the study area rising to moderate beneficial for vulnerable receptors as a result of the changes to the socio-economic conditions in the study area.

Likely Significant Environment Impacts of Operational Phase of the DCO Scheme

22.7.43. In conclusion, the operational phase of the development will result in some significant environmental impacts. This includes both significant adverse impacts on landscape and visual receptors and the loss of agricultural land, and significant beneficial socio-economic benefits.

22.7.44. In terms of significant adverse landscape and visual effects, these include impacts on the landscape of the EMG2 Works and its immediate context and visual receptors including residents at a single property (Bleak House) to the north of Diseworth, users of stretches of the PROWs at Hyam's Lane, The Cross Britain Way and some stretches of other PROWs close to the south, north and east of Diseworth.

22.7.45. Regarding the significant beneficial socio-economic effects, these include the operational on-site employment and support for employment opportunities in the wider labour market, the impacts on I&L businesses resulting from an increase in available supply and the impact on regional and national economic activity through the GVA and additional Business Rate Income generated by the EMG2 Works.

22.8. Assessment of MCO Application

22.8.1. As set out in Section 1 of this Chapter, and at **Table 22.1**, the MCO Scheme comprises of the EMG1 Works which in summary provide for additional warehousing development within Plot 16 of the EMG1 site 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.

Baseline

22.8.2. For a number of environmental aspects considered in the ES, the baseline position is the same for both the DCO Application and MCO Application, primarily due to the size of the study area. This includes the baseline for socio-economic, population and human health, climate change, and waste and materials. The baseline with regard to these environmental aspects is not repeated here.

22.8.3. With regard to transport matters, similarly to the DCO Application, the site is located in a highly accessible and strategic location. The MCO Scheme will be accessed via the existing EMG1 site. As with the DCO Application, three locations have been identified as having a potential road safety problem, including the EMG1 access junction.

22.8.4. With regard to the existing noise climate, similarly to the DCO Application, the baseline conditions around the MCO Scheme are dominated by road traffic. Background noise levels have been established with regard to a number of sensitive receptors in the local area including the Hilton Hotel and residential properties at Lockington and Kegworth.

22.8.5. Regarding air quality, the MCO Scheme is not located in an AQMA. The air quality monitoring has shown that the background pollutant concentrations for the identified receptor modelling locations has not exceeded the nitrogen dioxide annual mean objective.

22.8.6. In respect of the ecology baseline, the assessment shows that there are no statutory ecological designations within, or immediately adjacent to the MCO Scheme. The MCO Scheme falls within the Impact Risk Zone (IRZ) for the Lockington Marshes SSSI and Attenborough Gravel Pits SSSI. King Street Plantation, a potential historic Local Wildlife Site (pLWS), lies on the edge of the MCO Scheme. The majority of the habitats on the northern part of the MCO Application site comprise bare ground, neutral and modified grassland and SUDS features. The remainder of the site comprises existing road and rail infrastructure and developed land with some scattered trees and hedgerows. A suite of field surveys was undertaken and concluded that the habitats present provide very limited suitability for foraging by local wildlife.

22.8.7. With regard to landscape character, the assessment notes that the MCO Application site and immediate context is dominated by the existing EMG1 rail freight interchange and adjoining major road infrastructure and the EMG1 buildings. The north-western part of the MCO Application site, including Plot 16, currently comprises bare ground and grassland, with an existing mound and establishing planting on its western edge. All were formed and established as part of the existing EMG1 development. The site also includes part of the existing rail freight interchange, which occupies a substantially lowered (or ‘sunken’) position within the existing EMG1 development. This area is dominated by existing rail infrastructure,

concrete hard standing, stored containers and an associated office building. In this context, the assessment concludes that the MCO Application site is of low/medium landscape value and able to accommodate the type of development proposed.

22.8.8. In terms of visual receptors, a number of representative viewpoints were selected by way of a desk top review, followed by site visits and field survey work. The viewpoints were chosen to represent either the typical view of the receptor or view of maximum effect and include residential properties, near-by roads, Public Rights of Way and near-by businesses within an identified Zone of Theoretical Visibility.

22.8.9. With regard to existing lighting, the MCO Scheme is located within an area with a large volume of existing artificial lighting which is visible across the landscape and is affecting the district brightness of the surrounding area.

22.8.10. Regarding the cultural heritage baseline, the assessment shows that there are five Scheduled Monuments within the 2km study area of the MCO Application boundary. These assets will be unaffected due to the lack of any visual, functional and known historic connection or association. The MCO Scheme is close to the village of Lockington, which is designated as a conservation area and includes a number of listed buildings, but the conservation area is wholly screened from the site by the substantial landscape bund to the north-west of the MCO Scheme. To the east of the MCO Scheme is the town of Kegworth with its historic core designated as a conservation area. There are some glimpsed views across the MCO Scheme to the spire to the Church of St Andrew (Grade II*) in the centre of Kegworth from some parts of the landscape bund to the north-west of the site. The archaeology of the MCO Application site was fully investigated as part of the EMG1 DCO and archaeological features have been preserved in-situ underneath the north-west landscape bund at EMG1.

22.8.11. In terms of flood risk and drainage, the assessment shows that the MCO Scheme is located entirely within Flood Zone 1, and it is significantly removed from the local watercourse networks. While the Environment Agency's mapping identifies a potential surface water flood risk within the site, this data does not reflect the drainage infrastructure that is already in place at EMG1 to manage surface water flood risk.

22.8.12. Regarding existing ground conditions, the ground investigation completed for the EMG1 DCO was reviewed with regard to the MCO Scheme. The soil testing undertaken as part of the previous site investigation indicated that all concentrations of contaminants analysed were below the commercial end use assessment criteria. No contaminants were identified as part of the groundwater laboratory tests. Based on previous ground gas monitoring within the site, the use of a gas resistant membrane was recommended.

22.8.13. A review was carried out of existing utilities infrastructure which identified possible points of connection to the electricity, gas, water and telecommunications network.

22.8.14. With regard to the assessment of the risk of major accidents and disasters, it is noted that the MCO Scheme is located adjacent to East Midlands Airport and within the consultation zones for Major Hazard Site H4798.

Impacts and Mitigation

Embedded Mitigation in respect of MCO Scheme

22.8.15. Similarly to the DCO Application, the MCO Application has also been subject to an iterative design process which has led to the inclusion of the following embedded mitigation measures as part of the proposals:

- Retained and new planting and landscaping to mitigate impact on ecology and landscape and visual;
- Lighting strategy setting out lighting design consideration to minimise light pollution;
- Provision of, and subsequent maintenance regime for, surface water drainage infrastructure;
- Buildings designed to minimise Green House Gas (GHG) emissions targeting EPC 'A' rating and minimum of BREEAM 'Excellent' as part of base build specification;
- Installation of solar PVs generating renewable energy for occupier(s) at Plot 16.

22.8.16. Whilst this iterative design approach aims to minimise environmental effects, it is not possible to avoid impacts altogether. The main potential environmental effects of the MCO Scheme are briefly summarised below.

22.8.17. The impacts of the development are best summarised by distinguishing between the generally short-term effects arising from the construction phase, and the medium to longer term effects of the operational (built) phase.

Construction Phase

Potential Impacts of Construction of the MCO Scheme

22.8.18. The construction activities associated with the MCO Scheme are significantly less substantial than construction activities within the DCO Scheme. The principal activities involve the provision of surface and foul water infrastructure, installation of service trenches, ducts and associated service infrastructure; construction of internal access to Plot 16 and construction of buildings and associated services yards and parking areas, landscaping and the erection of gantry cranes within the existing rail freight interchange.

22.8.19. Unmitigated, the proposed construction activities could result in the following adverse impacts:

- Increased traffic arising from construction workers travelling to the site, and the transportation of plant and materials and associated noise, dust and dirt, and impact of traffic on residential properties and the pedestrian/cycling environment and consequential effects on human health;
- Removal of vegetation and ecological habitat and resulting loss of foraging and roosting/nesting opportunities for wildlife;

- Potential habitat disturbance and degradation both on-site and indirectly on off-site habitats arising from dust and particulate deposition, local changes in soils, drainage and hydrology and accidental pollution;
- Potential harm or mortality of wildlife using habitats during the construction phase;
- Removal of existing vegetation and construction of new buildings and higher gantry cranes and consequential changes to the character of the landscape;
- Minor encroachment into archaeological remains currently preserved in-situ under existing landscape bund;
- Visual intrusion of construction activities onto Church of St Andrews (Grade II*) in Kegworth given its relatively elevated position;
- Visibility of construction activities and plant movements including associated lighting and resulting impacts on visual amenity and human health;
- Increased risk of surface water flooding as a result of additional and changed distribution of surface water runoff as a result of construction activities, and through compaction of the soil resulting in reduced rate of infiltration and consequential increases in surface water run-off rates and volumes;
- Reduction in water quality resulting from the release of sediments and suspended solid into watercourses;
- Stripping of site topsoil and potentially shallow soil excavation disturbing the natural strata;
- Potential contamination from spillages or leakages including lubricants, oils, fuel and uncured concrete used during construction;
- Temporary closures and diversions of public rights of way and resulting health impacts;
- Potential for trespassing and anti-social behaviour and resulting impacts on community safety;
- Consumption of natural and non-renewable resource and associated Green House Gas (GHG) emissions;
- Reduction in landfill capacity as a result of construction waste.

Additional Construction Phase Mitigation in respect of the MCO Scheme

22.8.20. Construction activities for the MCO Scheme will be regulated by a phase-specific CEMP which will adhere to the construction management framework plan approved for EMG1. That plan sets out measures to manage and maintain the landscape for the benefit of the environment and the local community.

Residual Impacts of Construction of the MCO Scheme

22.8.21. Following the mitigation described above, the residual adverse impacts of the construction phase of the MCO Scheme are identified to be:

- No significant adverse residual impacts in terms of construction traffic and associated noise and air quality;
- Negligible-minor adverse residual impact on published national, regional and country scale landscape character types/area;
- Minor-moderate adverse residual impact on landscape of the MCO Scheme site and immediate context;
- Minor-moderate to moderate adverse visual residual impacts on local residents to the north-western edge of Kegworth, north of Kegworth and to the east of the site;
- Minor-moderate to moderate-major adverse visual residual impacts on footpath users with worst effects experienced by users of the PROW alongside the MCO Scheme and in particular Plot 16;
- Minor to minor-moderate adverse residual visual impacts on users of roads approaching/around Jct 24;
- Up to minor-moderate adverse visual impact on other visual receptors including users/visitors to Hilton Hotel;
- Neutral to slight adverse residual impacts in terms of the visibility of lighting in the landscape during construction and sky brightness;
- Negligible adverse residual impact on the archaeological resources and on built heritage assets;
- Negligible adverse residual impacts of construction activities on floodplains, surface water quality, foul water flows and ground water quantity and quality;
- Negligible adverse residual impacts on ground conditions;
- Negligible residual impacts arising from installation of new utilities infrastructure;
- Negligible impacts on human health increasing to minor residual adverse for vulnerable users as a result of changes in air quality, noise and vibration and to the visual environment;
- Negligible adverse residual impacts with regard to the consumption of material resources, disposal and recovery of waste;
- Minor adverse residual impact of Green House Gas (GHG) emissions during construction.

22.8.22. The main beneficial impacts of the construction phase are:

- Negligible-minor beneficial residual impact on construction employment (direct, indirect and induced); and
- Moderate beneficial residual impact on regional and national economic activity.

Likely Significant Environmental Impacts of Construction of the MCO Scheme

22.8.23. The only likely significant effect identified by the EIA is the temporary visual impact of the MCO Scheme on users of a relatively short stretch of PROW (L112), alongside and close to the southern edge of Plot 16 (and the existing EMG1 mounding to the west).

Operational Phase

Potential Impacts of Operational Phase of the MCO Scheme

22.8.24. Once developed, the site will be characterised by additional warehousing at Plot 16, higher gantry cranes at the rail freight terminal, an improved public transport interchange and extended site management building.

22.8.25. The development will result in some adverse effects on the environment, but the embedded mitigation outlined above ensures that impacts are avoided, reduced and minimised. The main long-term residual adverse impacts of the operational (built) stage of the MCO Application can be summarised as follows:

- Increased traffic arising from employees commuting to and from the site, and operational HGV traffic and associated effects on air quality and noise. Operational traffic from the MCO Scheme on its own would not result in any adverse or substantial environmental impacts and does not trigger the need for an EIA from a traffic and transport perspective;
- Potential degradation of retained and new habitats by activities of site users such as littering and damage, and from inappropriate management of habitats with resulting detrimental effects on wildlife using these habitats;
- Changes to the landscape and views towards the development;
- Potential contamination from spillages or leakages and release of pollutants;
- Direct and indirect Green House Gas (GHG) emissions due to the operational energy use within the buildings, road uses emissions from HGV and commuters, and the use of materials for replacement and maintenance activities;
- Generation of waste from the on-site operations.

Additional Operational Phase Mitigation in respect of MCO Scheme

22.8.26. The impacts of the operational MCO Scheme can be limited, managed and controlled through a series of additional mitigation measures including the following:

- Adherence to the Landscape and Environmental Management Plan (LEMP) approved for EMG1 which sets out measures to manage and reduce the environmental impacts of construction at EMG1;
- A phase-specific CEMP will be produced pursuant to Requirement 11 as set out in Schedule 2 of the EMG1 DCO;

- Adherence to the Strategic Transport Strategy and Travel Plan that operates for EMG1.

Residual Impacts of Operational Phase of MCO Scheme

22.8.27. With the above mitigation in place, the long-term residual impacts of the operational (built) stage of the development can be summarised as follows:

- No significant residual impact on noise or vibration or air quality for human receptors;
- Negligible residual impact on published national, regional and country scale landscape character types/area;
- Minor adverse residual impact on landscape of the MCO Scheme site 15 years after completion once the proposed and conserved planting and habitats have matured;
- Minor adverse impacts on local residents at the north-western edge of Kegworth and north of Kegworth and east of the site;
- Minor to minor-moderate adverse residual visual impacts on footpath users with worst effects experienced by users of the PROW alongside the MCO Scheme site and in particular Plot 16;
- Minor adverse residual visual impacts on users of roads approaching/around Jct 24;
- Up to minor adverse visual impact on other visual receptors including users/visitors to Hilton Hotel;
- Neutral to slight adverse residual impacts in terms of the visibility of lighting in the landscape once development is operational and on sky brightness;
- Negligible residual impacts on built heritage assets;
- Negligible residual impacts of operational development on surface water quantity and quality and foul water flows, and negligible-minor on groundwater quality;
- Negligible residual impacts on ground conditions;
- Negligible residual impacts on human health increasing to minor residual adverse for vulnerable users from changes in noise/vibration, community safety and to the visual environment;
- Negligible adverse residual impacts with regard to the consumption of material resources and disposal of waste with residual impact on recovery of waste considered to be minor adverse;
- Minor adverse residual impact of Green House Gas (GHG) emissions during operation;
- Negligible residual impact in terms of climate resilience during operation and maintenance.

22.8.28. The EIA has identified a number of beneficial long-term impacts of the MCO Scheme as follows:

- Moderate beneficial residual impact on regional and national economic activity;

- Minor-moderate beneficial residual impact on operational employment (direct, indirect and induced);
- Negligible beneficial residual impact on skills and the labour force;
- Minor beneficial residual impact on businesses within the I&L sector;
- Minor beneficial residual ecology impact on King Street Plantation;
- Negligible-minor residual impact on ground water quality as result of surface water drainage including pollution control measures;
- Minor beneficial residual impact on human health of residents in the study area rising to moderate beneficial for vulnerable receptors as a result of the changes to the socio-economic conditions in the study area.

Likely Significant Environmental Impacts of Operational Phase of MCO Scheme

22.8.29. A significant residual environmental impact has been identified by the EIA with regard the MCO Scheme's impact on regional and national economic activity resulting from the gross value added (GVA) and additional Business Rate income generated by the development.

22.9. Assessment of EMG2 Project

22.9.1. As set out in Section 1 of this Chapter, and at **Table 22.1**, the EMG2 Project as a whole is the combination of the DCO Scheme and the MCO Scheme which are considered at Sections 22.7 and 22.8 of this Chapter.

Baseline

22.9.2. The baseline conditions for the EMG2 Project as a whole do not differ from the descriptions included at Section 22.7 in respect of the DCO Application and at Section 22.8 for the MCO Application and are therefore not repeated here.

Impacts and Mitigation

Construction

22.9.3. When the DCO Scheme and MCO Scheme are considered together as the EMG2 Project, there are no additional impacts, or changes in the significance of the identified effects, to those already discussed at Section 22.7 and Section 22.8 above.

Operation

22.9.4. When the DCO Scheme and MCO Scheme are considered together as the EMG2 Project, there are no additional impacts, or changes in the significance of the identified effects, to those already discussed at Section 22.7 and 22.8 above.

22.10. Cumulative Impacts

22.10.1. An assessment has been undertaken of both intra-project effects, the combination of individual effects from a development on a particular receptor; and inter-project (cumulative) effects, the impacts from other developments together with the EMG2 Project.

Intra-project effects (combined effects)

22.10.2. In respect of in-combination (intra-project) effects, the main sensitive receptors to consider are residents who are affected, both adversely and beneficially, by a number of potential impacts. The main impact interactions relate to health and these are considered at **Chapter 17: Population and Human Health** (**Document DCO 6.17/MCO 6.17**) of this ES. Ecology and biodiversity is another key consideration with in-combination effects forming an inherent part of the assessment set out at **Chapter 9: Ecology and Biodiversity** (**Document DCO 6.9/MCO 6.9**). The consideration of in-combination effects within the individual assessment chapters did not identify any significant residual in-combination effects. No additional in-combination effects have been identified by the overarching assessment undertaken in **Chapter 21: Cumulative Impacts** of this ES (**Document DCO 6.21/MCO 6.21**).

Inter-project effects (cumulative effects)

22.10.3. In relation to inter-project effects, the assessment shows that the EMG2 Project in combination with other identified developments will result in cumulative effects (both adverse and beneficial) with regard to impacts on socio-economic, transport and associated noise and air quality, ecology, landscape and visual, lighting, and waste and materials. However, the assessment at **Chapter 21: Cumulative Impacts** (**Document DCO 6.21/MCO 6.21**) concludes that these cumulative impacts do not necessitate additional mitigation beyond the measures already included as part of the EMG2 Project.

22.11. Conclusions

22.11.1. The assessment has identified that there would be a range of both adverse and beneficial impacts associated with the construction and operational phases of the DCO Scheme (EMG2 Works and Highway Works) and the MCO Scheme (EMG1 Works).

22.11.2. The majority of the adverse impacts of the construction and operational phase would be negligible or minor adverse, but some significant adverse impacts have been identified for both the DCO and MCO Application proposals as further set out below.

DCO Application

Construction Phase

22.11.3. The DCO Scheme would result in significant adverse construction effects on the following landscape and visual receptors.

- Landscape of the EMG2 Works (excluding the substation) and its immediate context;
- Residents of some properties at Diseworth, principally on its north-eastern edge (including some properties on Grimes Gate, Hyam's Lane, Cheslyn Court, Clements Gate and Langley Close);
- Residents of a small number of relatively more distant properties, principally to the south and south-east of the EMG2 Main Site/Community Park (including on The Green and Dry Pot Lane);
- Users of stretches of the following Public Rights of Way (PROW) and tracks: Hyam's Lane, Long Holden, The Cross Britain Way and some stretches of other PROW close to the south, north and west of Diseworth;
- Users of stretches of the following roads: A453 (alongside the site), Grimes Gate (leading into Diseworth from the north), The Green (south-east of Diseworth) and the minor roads close to the west of Diseworth; and
- Users of a relatively short stretch of PROW (L112), alongside and close to the southern edge of Plot 16 (and the existing EMG1 mounding to the west).

22.11.4. The construction of the DCO Scheme would, however, also have significant beneficial impacts on regional and national economic activity.

Operational Phase

22.11.5. With regard to the operational phase of the DCO Scheme, significant environmental effects, both adverse and beneficial have been identified in the ES.

22.11.6. The operation of the DCO Scheme would have the significant adverse long-term effects as follows:

- Landscape of the EMG2 Works (excluding the substation) and its immediate context;

- Significant adverse visual impacts on:
    - Residents of a single property (Bleak House) to the north of Diseworth; and
    - Users of stretches of the following Public Rights of Way (PROW) and tracks: Hyam's Lane, The Cross Britain Way and some stretches of other PROW close to the south, north and east of Diseworth.
- Permanent loss of best and most versatile (BMV) agricultural land at the EMG2 Works site.

22.11.7. The operational phase of the EMG2 Works will, however, also result in significant beneficial impacts. These include:

- Operational on-site employment and support for employment opportunities in the wider labour market,
- Significant beneficial impacts on I&L businesses resulting from an increase in available land supply;
- Impact on regional and national economic activity through the GVA and additional Business Rate Income generated by the EMG2 Works.

MCO Application

Construction Phase

22.11.8. The construction of the MCO Scheme would also result in some temporary significant visual impacts, but these are limited to users of a relatively short stretch of PROW, alongside and close to the southern edge of Plot 16 (and the existing EMG1 mounding to the west). No other significant construction impacts have been identified in the ES with regard to the MCO Scheme.

Operational Phase

22.11.9. A significant beneficial residual environmental impact has been identified by the EIA on regional and national economic activity through the GVA and additional Business Rate Income generated by the MCO Scheme. No other significant environmental impacts of the operational phase of the MCO Scheme have been identified in the ES.

Comparison with ES for EMG1 DCO

22.11.10. Upon completion of the assessment of the likely significant environmental effects identified for the MCO Scheme in this ES, the effects identified have been compared with the environmental impacts identified in the ES which accompanied the EMG1 DCO. This is included as a comparison table at the end of this Chapter (**Table 22.2**).

22.11.11. **Table 22.2** shows that a moderate-major adverse residual impact on a short stretch of PROW (L112) is the only additional significant construction impact.

22.11.12. With regard to the operation of the MCO Scheme, **Table 22.2** shows that the moderate beneficial residual impacts of the MCO Scheme on regional and economic activity

(significant in EIA terms) is in addition to the significant socio-economic benefits already delivered as part of EMG1. Apart from these significant socio-economic effects, no other new or additional significant environmental effects of the operational phase of the MCO Scheme have been identified.

EMG2 Project

Construction Phase

22.11.13. When the DCO Application and MCO Application are considered together as the EMG2 Project, there are no additional impacts, or changes in the significance of the identified effects, to those already discussed above.

Operational Phase

22.11.14. When the DCO Application and MCO Application are considered together as the EMG2 Project, there are no additional impacts, or changes in the significance of the identified effects, to those already discussed above.

Table 22.2: Review of MCO ES Assessment against EMG1 DCO ES Assessment

EMG1 DCO (SI 2016/17)		MCO Application
ES Chapter	**Summary and conclusions**	
Chapter 1: Introduction	This chapter of the EMG1 ES provides introduction to the Environmental Statement submitted with the EMG1 DCO Application.	An introduction to the EMG2 ES is included at **Chapter 1: Introduction and Scope** (**Document MCO 6.1**).
Chapter 2: Development Proposals	This chapter of the EMG1 ES provides a description of the development site and the proposals. EMG1 DCO Order Limits covered all the land necessary to deliver a Strategic Rail Freight Interchange (SRFI) together with the landscaping and highway works associated with the SFRI. The EMG1 development comprised: • An intermodal freight terminal including container storage and HGV parking; • Rail served warehousing and ancillary service buildings; • A new rail line connecting the terminal to the Castle Donington branch freight only line; • New road infrastructure and works to the existing road infrastructure; • Demolition of existing structures and structural earthworks to create development plots and landscape zones; • Strategic landscaping and open space, including alterations to public rights of way and the creation of new publicly accessible open areas; • Bus interchange The EMG1 DCO requires the authorised development to be carried out within the parameters shown and described on the Parameters Plans (certified Document 2.10).	The MCO Application Site is described at **Chapter 2: Site and Surroundings** (**Document MCO 6.2**) and a description of the MCO Scheme is included at **Chapter 3: Project Description** (**Document MCO 6.3**) of the EMG2 ES. The land required for the MCO Scheme is located within the EMG1 site which has the benefit of the EMG1 DCO. It only covers a small part of the original EMG1 site including: • operational land within the rail-freight terminal where higher gantry cranes are proposed; • an area of open ground adjoining the rail freight terminal (circa 6.08ha) which was utilised during the construction of EMG1 for temporary surface water storage ponds whilst drainage works were completed, but is currently unused. Within this area (referred to as Plot 16), a new rail-served warehousing building is proposed together with associated access, drainage and landscaping; • existing highway land where a pedestrian crossing at the EMG1 access will be provided; and • operational land and small areas of landscaping within and adjacent to the existing public transport interchange and site management building at the EMG1 site entrance to accommodate enhancement to the public transport interchange and an expansion of the EMG1 management suite. A Parameters Plan (**Document MCO 2.5**) has been prepared and submitted with the MCO Application

EMG1 DCO (SI 2016/17)		MCO Application
ES Chapter	**Summary and conclusions**	
		which establishes the key principles for the proposed MCO Scheme. The MCO Application is also accompanied by an Illustrative Landscape Masterplan (**Document MCO 2.6**).
Chapter 3: Planning Policy	This chapter of the EMG1 ES provides an overview of the planning and other policy context for the EMG1 proposal.	Within the EMG2 ES, relevant policy and guidance is covered within the individual assessment chapters (**Documents MCO 6.5-6.20**).
Chapter 4: Socio-economic Aspects	This chapter of the ES provides an assessment of the likely socio-economic aspects of the proposed development. It concludes that the EMG1 proposals would generate employment benefits at both construction and operational phases. The construction stage would result in minor beneficial effects on employment levels. The operational phase would result in major beneficial effect arising from the creation of jobs, improved skills and qualification levels and Gross Value Added (GVA). A key outcome of the EMG1 is the implementation of a public transport strategy providing links between the proposals and areas with a high population density and improving access to EMA.	The EMG1 SRFI has now been substantially delivered and the employment benefits during construction and operation have now been realised. The EMG1 public transport strategy has been successfully delivered. The MCO Scheme will provide additional socio-economic benefits not previously identified. **Chapter 5: Socio-Economic** of the EMG2 ES (**Document MCO 6.5**) provides an assessment of these benefits, concluding that the construction of the MCO Scheme would result in negligible-minor beneficial residual impact on construction employment (direct, indirect and induced) and moderate beneficial residual impact on regional and national economic activity. The beneficial long-term impacts of the MCO Scheme are considered to be a moderate beneficial residual impact on regional and national economic activity, minor-moderate beneficial residual impact on operational employment (direct, indirect and induced); negligible beneficial residual impact on skills and the labour force; and minor beneficial residual impact on businesses within the I&L sector.
Chapter 5: Landscape and Visual Effects	This chapter of the EMG1 ES describes and evaluates the effect of the proposed development on the landscape and visual resources and amenity of the site and its surroundings.	**Chapter 10: Landscape and Visual** of the EMG2 ES (**Document MCO 6.10**) provides an assessment of the likely environmental effects of the MCO Scheme in respect of landscape and visual matters.

EMG1 DCO (SI 2016/17)		MCO Application
ES Chapter	**Summary and conclusions**	
	The local landscape assessment undertaken identifies the landscape within and surrounding the site as including areas of Low and Medium landscape condition and value. It concludes that much of the site landscape is relatively weak in terms of local landscape character, although it does include some positive features (e.g. King Street Plantation and The Dumps mature woodlands). The proposals include the creation of a significant landscape framework stretching around the site with extensive landscape areas located around the north, west and east of the SRFI site area. It includes significant mounding and planting to visually screen the built development from Lockington, Hemington and Castle Donington and other nearby viewpoints to the north and west of the site. The assessment concluded that the most notable landscape effects would arise from direct changes to the landscape character of the site. Visually, the most notable effects would occur for a small proportion of properties and positions on the edges of the four surrounding settlements and for users of the public rights of way within or immediately surrounding the site, particularly for those footpaths that currently cross the site and will require realignment. The identified residual impacts on these public rights of way during construction are up to major adverse with impacts reducing to moderate-major adverse during the operation phase for the worst affected footpath routes.	The landscape character of the site and immediate context has substantially changed since the ES for the EMG1 DCO was prepared following the substantial completion of the SRFI and associated landscape proposals including the significant mounding and planting. The MCO Application site is now dominated by the existing EMG1 SRFI, but also includes open grassland and drainage attenuation features and significant mounding formed as part of the EMG1 development, in addition to existing and emerging woodland. As identified at Chapter 10, the only likely significant landscape and visual effects arising from these MCO Scheme will be for users of a relatively short stretch of PROW, alongside and close to the southern edge of Plot 16 (and the existing EMG1 mounding to the west). This likely significant effect will only arise for these users during the construction stage and upon completion of the development (Year 0). There will be no likely significant residual landscape and visual effects arising from the MCO Scheme (Year 15).
Chapter 6: Ecology and Nature Conservation	This chapter of the EMG1 ES provides an ecological assessment of the DCO proposals based on a series of ecological surveys undertaken in 2012 and 2014. The assessment showed that some habitats of ecological interest would be lost, but that retention of existing habitat (including King Street Plantation) and the establishment of significant new habitat would result in	**Chapter 9: Ecology** of the EMG2 ES (**Document MCO 6.9**) provides an assessment of the likely environmental effects of the MCO Scheme in respect of ecology. The MCO Application site has substantially changed since the EMG1 DCO was granted. The majority of the habitats on the northern part of the MCO Application site comprise bare ground, neutral

EMG1 DCO (SI 2016/17)		MCO Application
ES Chapter	**Summary and conclusions**	
	a development that is neutral or of minor benefit to the majority of ecological receptors.	and modified grassland and SUDS features. The remainder of the site comprises existing road and rail infrastructure and developed land with some scattered trees and hedgerows. As identified at Chapter 9, the MCO Scheme will not result in any significant environmental impacts (adverse or beneficial). The only residual impact identified is a minor beneficial impact on King Street Plantation as a result of the supplementary planting and management proposed within the MCO Application site along the boundary with King Street Plantation which will promote dense edge habitats and improve resilience to any disturbance and pollution incidents.
Chapter 7: Geology, Soils and Groundwater	This chapter of the EMG1 ES considers the potential environmental impacts of the proposals upon the geology, soils and groundwater beneath the site. It also presented an assessment of existing impacts from contaminated soils on human health. The assessment concluded that the EMG1 DCO proposals would result in negligible residual impacts.	**Chapter 14: Ground Conditions** of the EMG2 ES (**Document MCO 6.14**) provides an assessment of any potential environmental effects relating to the existing ground conditions, geological setting, hydrogeology and land contamination aspects of the MCO Scheme. This chapter utilises the ground investigation information completed for the EMG1 DCO. This showed that all concentrations of contaminants analysed as part of the soil testing were below the commercial end use assessment criteria. No contaminants were identified as part of the groundwater laboratory tests. Based on previous ground gas monitoring within the site, the use of a gas resistant membrane was recommended. The assessment concludes that all residual environmental effects will be negligible and therefore not significant.
Chapter 8: Water Resources and Drainage	This chapter of the EMG1 ES provides an assessment of the potential environmental impacts relating to flood risk and drainage.	Part of the MCO Application site was utilised during the construction of EMG1 for temporary surface water storage ponds whilst drainage works were completed.

EMG1 DCO (SI 2016/17)		MCO Application
ES Chapter	**Summary and conclusions**	
	It concludes that following the implementation of the proposed mitigation measures, no significant residual environmental effects will remain. During construction, the proposed mitigation measures included a temporary surface water management system including ditches/ponds for temporary on-site attenuation.	The proposed foul and surface water drainage infrastructure for EMG1 has now been delivered. The MCO Scheme will utilise and connect into this existing infrastructure and, where required, provide upgrades and additional drainage infrastructure as outlined at **Chapter 13: Flood Risk and Drainage** of the EMG2 ES (**Document MCO 6.13**) and associated appendices. Chapter 13 shows that the MCO Scheme is located entirely within Flood Zone 1, and it is significantly removed from the local watercourse networks. No additional mitigation will therefore be required. As part of the MCO Scheme, surface water drainage infrastructure will be provided to manage the quantity of runoff from the operational phase of the development and impacts on surface water quality. A temporary surface water drainage strategy will be implemented to manage surface water runoff from the construction phase of the MCO Scheme until such time that the new drainage infrastructure has been completed. The assessment concludes that there are not expected to be any significant residual environmental impacts on flood risk and drainage during the construction and operational phase of the MCO Scheme.
Chapter 9: Noise and Vibration	This chapter of the EMG1 ES provides a noise assessment for the construction and operation of the proposed development. It shows that noise will be emitted by equipment and vehicles used during construction, and plant, train movements and other vehicles during operation of the development. Noise levels from operation of the development were predicted from those locations around the site most likely to be affected by noise. To manage noise during construction, noise mitigation measures were	**Chapter 7: Noise and Vibration** of the EMG2 ES (**Document MCO 6.7**) considers the potential noise and vibration impacts that may arise from the construction and operation of the MCO Scheme. With regard to construction of the MCO Scheme, all construction activities will be undertaken in accordance with the Construction Management Framework Plan approved for EMG1 DCO, and a phase specific CEMP. With this mitigation in place, no significant adverse environmental impacts as a

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	included within a Construction Management Framework Plan. With regard to operational noise, the assessment concluded that the proposed development will be within levels deemed, by national guidance, to be acceptable for such developments, and that the overall affects are likely to be barely perceptible following the implementation of the proposed mitigation measures, such as the screening provided by the landscaping, but also due to the distances involved between the proposed development and the majority of receptors.	result of construction noise are predicted. Following the substantial completion of EMG1, the baseline noise conditions have changed from those considered during the EMG1 DCO and now include the existing operations at the SRFI but, as shown in Chapter 7, the baseline noise conditions are dominated by road traffic. When considering operational noise from the MCO Scheme in the context of the existing noise levels, including current operations at EMG1, no significant adverse environmental effects of operational noise associated with the MCO Scheme are predicted.
Chapter 10: Air Quality	This chapter of the EMG1 ES described the potential air quality impacts. The assessment shows that the proposed EMG1 scheme will change traffic flows across a relatively large network. These changes will lead to an imperceptible or small change in concentrations of PM10 and PM2.5 at existing receptors, and the impacts will be negligible. In the case of nitrogen dioxide, the development will lead to significant changes in concentrations across the network, with the potential for large changes in some locations. However, it has been concluded that the development will lead to a negligible or beneficial impact at most receptors. Potentially significant adverse impacts were predicted in a number of limited locations in 2020 including a solitary property north of the A50, a small number of properties close to the M1 in Long Whatton, the staff accommodation of the Hilton hotel, some properties at the western end of Kegworth closest to the M1, and a few properties along Church Road in Lockington. Beneficial impacts are predicted throughout the village of Castle Donington and through most of Kegworth, as well as along the M1 north of Junction 24A. The	**Chapter 8: Air Quality** of the EMG2 ES (**Document MCO 6.8**) considers the likely significant environmental effects on local air quality. The assessment shows that the construction of the MCO Scheme has the potential to pose a nuisance but that by adopting the recommend mitigation measures in the Construction Management Framework Plan approved for the EMG1 DCO and a phase-specific CEMP any such emissions and their potential effect on the surrounding area will be minimised and no significant nuisance effects are therefore expected. The operational traffic and associated air quality impacts of the MCO Scheme have been assessed as part of the EMG2 Project. Traffic impacts of the MCO Scheme have not been considered in isolation as 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 a separate assessment. The assessment of the operational air quality impacts of the EMG2 Project overall are considered not to be significant.

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	assessment showed that the scheme would help in removing the need for three of North West Leicestershire's AQMAs. The overall operational air quality impacts of the development on human receptors was therefore judged to be slight to moderate beneficial. The assessment concluded that the increase in rail movements associated with the development would have a negligible impact on air quality. On a regional and strategic scale it was is anticipated that the proposed development would have a beneficial impact on air quality by reducing the overall emissions generated through transport of goods from the UK's ports to the East Midlands.	The MCO Scheme included alterations to the existing rail freight interchange which will improve the efficiency of the operations. It will not result in any additional rail movements and there are no operational air quality impacts arising from this element of the MCO Scheme.
Chapter 11: Cultural Heritage	This chapter of the EMG1 ES presents a description of the heritage and archaeological baseline conditions and considers the potential effects of the development on these assets. The assessment considered that, without mitigation, a small number of designated heritage assets would be adversely affected by the proposed development including the Medieval settlement remains at The Wymeshead (a Scheduled Ancient Monument) and a Listed milepost within the northern part of the application site. Design mitigation measures were incorporated into the Parameters Plan to protect, preserve, manage and enhance these heritage assets including additional tree planting to block views between the eastern end of the Kegworth Bypass and the Medieval settlement remains at The Wymeshead and the relocation of the Listed milepost. With these mitigation measures in place the residual environmental effects were considered to be negligible to minor adverse and therefore not significant in EIA terms. The assessment concluded that proposed development would result in negligible impacts on the Lockington Conservation Area and Kegworth Conservation Area.	**Chapter 12: Cultural Heritage** of the EMG2 ES (**Document MCO 6.12**) shows that there are five Scheduled Monuments within the 2km study area of the MCO Application boundary. These assets will be unaffected by the MCO Scheme due to the lack of any visual, functional and known historic connection or association. The MCO Scheme is close to the village of Lockington, which is designated as a conservation area and includes a number of listed buildings, but the conservation area is wholly screened from the site by the substantial landscape bund to the north-west of the MCO Scheme installed as part of EMG1. To the east of the MCO Scheme is the town of Kegworth with its historic core designated as a conservation area. There are some glimpsed views across the MCO Scheme to the spire to the Church of St Andrew (Grade II*) in the centre of Kegworth from some parts of the landscape bund to the north-west of the site. The assessment concludes that the MCO Scheme will result in negligible impacts on the listed church. The archaeology of the MCO Application site was fully investigated as part of the EMG1 DCO and

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	The archaeological assessment concluded that the application site has a potential for prehistoric, Iron Age, Roman, Saxon, Medieval, Post-Medieval and Modern archaeological remains and that an extensive programme of trial trenching would therefore be required.	archaeological features have been preserved in-situ underneath the north-west landscape bund at EMG1. The MCO Scheme will encroach into the area where archaeological features have been preserved in-situ by a short distance with the majority retained underneath the existing landscape bund resulting in a minor to negligible adverse effect. It is proposed to off-set the physical loss of the buried archaeological remains through their preservation by record.
Chapter 12: Lighting	This chapter of the EMG1 ES outlines and assesses the external lighting strategy and proposed approach to external artificial lighting and control. The assessment includes proposed external lighting proposals designed to minimise glare and general light pollution whilst still maintaining safety and security to the site. The assessment concluded that the implementation of the lighting strategy would ensure that the proposed development meets the criteria for an 'area of low district brightness' which is consistent with typical village or relatively dark outer suburban locations as defined by standards contained within guidance from the Institute of Lighting Professionals.	The EMG1 lighting strategy was implemented as part of the EMG1 development. **Chapter 11: Lighting** of the EMG2 ES (**Document MCO 6.11**) shows that the MCO Scheme is located within an area with a large volume of existing artificial lighting which is visible across the landscape and is affecting the district brightness of the surrounding area. New lighting is proposed as part of the MCO Scheme and a lighting strategy has been prepared which will be implemented to minimise any lighting impacts. The MCO Scheme benefits, to a degree, from the mitigation mounding and landscaping provided as part of EMG1 and with the implementation of the lighting strategy, the MCO Scheme is predicted to result in some minor increase in sky brightness compared to the baseline resulting in neutral to minor adverse residual lighting effects on the identified receptors.
Chapter 13: Traffic and Transport	This chapter of the EMG1 ES assesses the likely significant effects created by the changing transport conditions introduced by the EMG1 Scheme. Unmitigated the scheme would have significant impacts, and recognising this, the EMG1 DCO Application include a comprehensive package of highway works and improvements	EMG1 has been substantially completed and this has included the implementation of the comprehensive package of highway works and improvements and the delivery of the sustainable travel measures. **Chapter 6: Traffic and Transportation** of the EMG2 ES (**Document MCO 6.6**) shows that the

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	including sustainable transport measures which will ensure that the proposed development does not result in any significant adverse effects. Once operational, the development was expected to generate between 950 and 1,210 vehicle trips per hour at peak times, of which around 280 would be heavy goods vehicles. The highway improvements proposed would, however, remove a substantial number of vehicles from M1 Junction 24 at peak hours, providing new capacity which would greatly reduce congestion. Traffic resulting from the completed development was shown to be mitigated by the proposed highway improvements to be funded and implemented as part of the development. It was concluded that the EMG1 proposals would result in a permanent beneficial impact of major significance in general traffic impact terms.	MCO Scheme would result in a small increase in peak hour traffic, estimated at 53 two-way trips in the morning peak and 67 two-way trips in the evening peak hour. The MCO Scheme 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 is concluded that there would be no substantial environmental impacts generated by the MCO Scheme on any part of the network. The MCO Scheme includes enhancements to the existing Public Transport Interchange by way of the installation of EV charging infrastructure for buses and provision of a drop-off layby adjacent to the transport hub. A signalised pedestrian crossing over the EMG1 exit road approach to the access junction to EMG1 is proposed to be installed to connect to the drop-off layby. This will further enhance the accessibility of not just the MCO Scheme, but wider EMG1 development, by sustainable transport modes.
Chapter 14: Agricultural Land Quality	The majority of the EMG1 DCO application site comprised agricultural land and as national planning policy seeks to protect best and most versatile quality land, this chapter of the EMG1 DCO application provided an assessment with respect to agriculture and soil resources.	Following the delivery of EMG1, the MCO Application site no longer contains any agricultural land or soil resources, and this aspect was therefore scoped out of the EMG2 ES.
Chapter 15: Cumulative Effects	This chapter of the EMG1 ES considers a number of committed development projects which together with EMG1 could give rise to cumulative environmental impacts including Land adj. 90 Ashby Road in Kegworth; Park Lane at Castle Donington, East Midlands Distribution Centre at Castle Donington; and Land north and south of Park Lane at Castle Donington. With the exception of the consented housing development at Ashby Road	**Chapter 21: Cumulative Impacts** of the EMG2 ES (**Document MCO 6.21**) consider the cumulative impacts of the EMG2 Project together with other developments. The cumulative impact of the MCO Scheme is not considered separately. The residential development on land adj. 90 Ashby Road in Kegworth was not considered further as it was below the applied threshold.

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	in Kegworth, the other committed schemes are located away from the proposed development site and physically separate from it, and as such will not have cumulative environmental effects in terms of landscape character or visual, ground contamination, drainage, flood-risk, or lighting. The assessment concluded that there is the potential for some cumulative visual effects associated with the residential development on land adj. 90 Ashby Road in Kegworth. This development together with EMG1 would result in a further, albeit relatively limited, urbanisation of the overall landscape adjacent to this stretch of the M1 motorway.	The EMG2 Project will result in cumulative effects (both adverse and beneficial), but the assessment concludes that these cumulative impacts do not result in any additional significant residual effects to those already identified. No additional mitigation measures beyond the measures already included as part of the EMG2 Project are required.
n/a	n/a	The EMG2 ES considers a number of environmental aspects that were not considered as part of the ES for the EMG1 DCO. This includes the consideration of: • Utilities (Chapter 16, **Document MCO 6.16**) • Population and Human Health (Chapter 17, **Document MCO 6.17**) • Materials and Waste (Chapter 18, **Document MCO 6.18**) • Climate Change (Chapter 19, **Document MCO 6.19**) • Major Accidents and Disasters (Chapter 20, **Document MCO 6.20**)