East Midlands Gateway
Phase 2 (EMG2)

Document DCO 6.23/MCO 6.23

ENVIRONMENTAL STATEMENT

Volume 1 Main Statement

Non-Technical Summary

July 2025

NTS

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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SEGRO

1. Introduction

1.1. This Non-Technical Summary (NTS) provides a summary of the Environmental Statement (ES) prepared to accompany applications made by SEGRO Properties Ltd and SEGRO (EMG) Ltd, (referred to in the ES as 'SEGRO' or the 'Applicant'), relating to a second phase of East Midlands Gateway Logistics Park (EMG1).

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.

1.3. This second phase is referred to as 'East Midlands Gateway 2' or 'EMG2' or the **'EMG2 Project'**. In brief it comprises three main components:

Main Component	Details	Works Nos.
DCO Application/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. Together with an upgrade to the EMG1 substation and provision of a community park.	DCO Works Nos. 1 to 5 as described in the draft DCO. DCO Works Nos. 20 and 21 as described in the draft DCO.
Highway Works	Works to the highway network: the A453 EMG2 access junction works; significant improvements at Junction 24 of the M1 (referred to as the J24 Improvements) and works to the wider highway network including active travel works.	DCO Works Nos. 6 to 19 as described in the draft DCO.
MCO Application/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 access works.	MCO Works Nos. 3A, 3B, 5A, 5B, 5C, 6A and 8A in the draft MCO.

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** component and the **Highway Works** component. The second application is for a Material Change Order to the existing EMG1 DCO (referred to as the MCO Application) for the **EMG1 Works** component.

1.5. Notwithstanding the differentiation in terms of applications, given the integrated nature of the **EMG2 Project**, all component parts 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 the ES which

has been prepared in accordance with Regulation 14 as informed by Schedule 4 and Regulation 22 of the EIA Regulations.

2. Scope and Methodology

2.1. In accordance with Regulation 10 of the EIA Regulations, an EIA Scoping Request which is provided as **Appendix 1C** to the 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 the ES.

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 the 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.

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 all necessary information is now available to be able to conclude that the matter can be fully scoped out.

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 the ES.

2.5. Each chapter sets out the scope and methodology employed to carry out the assessment and the policy and legislative context within which the assessment has been prepared. It then considers

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. In relation to negative/adverse effects, the assessment establishes the significance of such impacts and determines what, if any, mitigation measures can be introduced to avoid, prevent, reduce, or offset those effects. Taking any identified mitigation measures into account, each ES chapter identifies any residual impacts and determines their significance. These topic-based assessments satisfy the requirements of Regulation 14(2)(b) and 14(2)(c), and Schedule 4 of the EIA Regulations.

2.6. As the **EMG2 Project** incorporates both a DCO Application and a MCO Application, each chapter of the ES makes, (where possible), a clear distinction between the component parts, assessing the impacts arising from the DCO Scheme and MCO Scheme separately and then together as the **EMG2 Project**. Cumulative impacts of the **EMG2 Project** with other existing and approved developments are also assessed in each thematic chapter and cumulative impacts are then reported in **Chapter 21: Cumulative Impacts** of the ES **(Document DCO 6.21/MCO 6.21)**.

2.7. 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)**.

3. Site and Surroundings

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 (EMG2 Works and Highway Works)

EMG2 Works

3.2. The **EMG2 Works** has three sub component sites, comprising the EMG2 Main Site, the Community Park and land at EMG1 for the proposed substation upgrade.

EMG2 Main Site

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.

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.

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.

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

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

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

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

- Along 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.
- Widening the A50 eastbound link to J24, to the east of the M1 southbound, from two lanes to three lanes.

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 (EMG1 Works)

3.11. The MCO Application comprises land at EMG1 within the order limits 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 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.

4. Project Description

4.1. The following section describes the three component parts that make up the **EMG2 Project,** firstly looking at the two components that are the subject of the DCO Application (i.e. the **EMG2 Works** and **Highway Works**), before providing a description of the **EMG1 Works** comprised within the MCO Application.

DCO Application (EMG2 Works and Highway Works)

EMG2 Works

4.2. The proposed development comprising the **EMG2 Works** is for 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 terminal 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.

4.3. Further elements within the **EMG2 Works** are as follows:

- Upgrade 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 33kV in order to meet the power requirements at the EMG2 Main Site.
- Creation of a Community Park (DCO, Works No. 21) – this comprises of the four field parcels closest to Diseworth (which extend to approximately 14.3ha). These fields will remain open and reserved for informal public access, biodiversity enhancements and surface water drainage attenuation.

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' approach have been followed 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 detailed design. The parameters for the development of the EMG2 Main Site and Community Park are set out on Parameters Plan (**Document DCO 2.5**).

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 Main Site and Community Park 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.

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 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

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 are shown on the Components Plan (**Document DCO 2.7**) and the Highways Plans (**Document DCO 2.8**) and comprise the following:

- 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;
- Improvements to the EMG1 access junction (DCO Works No. 13) – widening at the EMG1 roundabout to increase 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, control access and remove redundant field accesses;
- 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.

Construction processes and timescales

4.8. For the purposes of the ES, it is anticipated that the general construction programme for the **EMG2 Works** and the **Highway Works** will be phased over a 5-year period. It is anticipated that the earthworks would commence in Q3 2027 and will take some 18 months (in two phases) to complete to create all the development plateaus, provide 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.

4.9. The construction of the **EMG2 Works** and **Highway Works** 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).

4.10. 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 Application (EMG1 Works)

4.11. 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).

4.12. 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 as **Document MCO 2.5** with the application. The application is also accompanied by an Illustrative Landscape Masterplan (**Document MCO 2.6**).

Construction processes and timescales

4.13. 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 **EMG1 Works**. The CEMP will need to adhere to the approved construction management framework plan that was approved for EMG1.

4.14. It is anticipated that the general construction programme for the **EMG1 Works** will be undertaken over a period of approximately 2 years, from around Q1 2027 to Q1 2029. It would run in parallel with the early years of the construction period for the **EMG2 Works**.

5. Reasonable Alternatives

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.

6. Baseline

6.1. At the outset of the EIA process it is important to set out the baseline (current position) with regard to the issues being assessed.

DCO Application (EMG2 Works and Highway Works)

6.2. 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 exclude the proposed substation, except where this is specifically referenced.

6.3. 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 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.

6.4. 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 proxmity 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.

6.5. 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.

6.6. 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 NO_2 annual mean objective at various strategic locations near to the **EMG2 Works** and **Highway Works**.

6.7. 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.

6.8. 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.

6.9. 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.

6.10. 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.

6.11. 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.

6.12. 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.

6.13. 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 was recorded within the EMG2 Main Site and Community Park with all features considered to be either of no or local significance/sensitivity.

6.14. 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.

6.15. 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.

6.16. 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.

6.17. 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).

6.18. 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.

6.19. 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.

6.20. 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.

6.21. 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.

6.22. 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.

MCO Application (EMG1 Works)

6.23. 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.

6.24. With regard to transport matters, similarly to the DCO Application, the site is located in a highly accessible and strategic location. The **EMG1 Works** 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.

6.25. With regard to the existing noise climate, similarly to the DCO Application, the baseline conditions around the **EMG1 Works** 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.

6.26. Regarding air quality, the **EMG1 Works** are also 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.

6.27. In respect of the ecology baseline, the assessment shows that there are no statutory ecological designations within, or immediately adjacent to the **EMG1 Works**. The **EMG1 Works** fall 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 **EMG1 Works**. The majority of the habitats on the northern part of the **EMG1 Works** 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.

6.28. With regard to landscape character, the assessment notes that the **EMG1 Works** 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 **EMG1 Works**, 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 **EMG1 Works** is of low/medium landscape value and able to accommodate the type of development proposed.

6.29. 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.

6.30. With regard to existing lighting, the **EMG1 Works** are also 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.

6.31. 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 **EMG1 Works** are 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 **EMG1 Works**. To the east of the **EMG1 Works** is the town of Kegworth with its historic core designated as a conservation area. There are some glimpsed views across the **EMG1 Works** 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 **EMG1 Works** 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.

6.32. In terms of flood risk and drainage, the assessment shows that the **EMG1 Works** are 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.

6.33. Regarding existing ground conditions, the ground investigation completed for the EMG1 DCO was reviewed with regard to the **EMG1 Works** site. 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.

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

6.35. With regard to the assessment of the risk of major accidents and disasters, it is noted that the **EMG1 Works** is located adjacent to East Midlands Airport and within the consultation zones for Major Hazard Site H4798.

7. Impacts and Mitigation

DCO Application (EMG2 Works and Highway Works)

7.1. 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 EMG2 Works and Highway Works

7.2. 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 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 'Outstanding' as part of base build specification;
- Installation of solar PVs generating renewable energy for occupiers.

7.3. 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**).

7.4. 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 EMG2 Works and Highway Works

7.5. 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.

7.6. 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 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.

7.7. 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 Mitigation in respect of EMG2 Works and Highway Works

7.8. 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 hording 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 (included within 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 Gase (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.

7.9. 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.

7.10. 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 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 EMG2 Works and Highway Works

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

- No significant adverse residual impacts in terms of construction traffic and associated noise and air quality;
- Short-term temporary adverse residual impact on noise 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 and ponds;

- 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 which will reduce over time following the establishment and subsequent maturing of the proposed planting and habitats;
- The residual of the **Highway Works** on the site and immediate context will be minor-moderate adverse;
- 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. Impacts will reduce over time as the proposed landscape establishes and matures;
- Minor-moderate to major adverse residual visual impacts on users of public rights of way (PROW) 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 minor 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;
- Neutral 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.

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

- Negligible to minor beneficial residual impact on construction employment (direct, indirect and induced);
- Moderate beneficial residual impact on regional and national economic activity;
- 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 EMG2 Works and Highway Works

7.13. In conclusion, the construction phase of the development will result in some significant adverse impacts, principally on landscape and visual receptors. This includes the landscape of the EMG2 Main Site/Community Park 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 PROWs 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, and 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. These impacts will reduce over time as the landscape establishes and matures. It would result in significant beneficial impacts on regional and national economic activity through construction GVA.

Operational Phase

Potential Impacts of Operational Phase of EMG2 Works

7.14. 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. A upgraded 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.

7.15. The operational development will result in some adverse effects on the environment, but the embedded mitigation outlined above ensure 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 Main Site/Community Park;
- Reduced use of agrichemicals, but potential contamination from spillages or leakages and release of pollutants into the local watercourses;
- 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 Mitigation

7.16. 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 a 'Community Investment Plan' 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 EMG2 Works

7.17. 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 driver vehicle and passenger delay, non-motorised user delay and fear and intimidation. Negligible to slight adverse residual impact in terms of non-motorise user amenity. Negligible to slight adverse residual impact on severance 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;
- Negligible residual impact on retained veteran trees, hedgerows and broadleaved woodland;
- Negligible residual impacts on fauna;
- 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 users of public rights of way (PROW) 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 minor adverse residual impacts in terms of the visibility of lighting in the landscape during construction 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 quantity and quality;
- Negligible residual impacts on ground conditions;
- Moderate adverse effect resulting from the loss of agricultural land at the EMG2 Main Site/Community Park;
- Negligible impacts on human health increasing to minor residual adverse for vulnerable users from changes in air quality, noise/vibration and the visual environment;
- 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.

7.18. The EIA has identified a number of significant beneficial long-term impacts of the DCO Application 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 beneficial residual impact on operational employment (direct, indirect and induced);
- 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 minor beneficial residual impact on skills and the labour force;
- 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 minor to moderate beneficial residual impact on regional and national economic activity as a result of the **Highway Works** and **EMG2 Works** respectively;

- 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.

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

- Minor-negligible beneficial residual impacts on retained habitats including trees and ponds;
- 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.

Likely Significant Environment Impacts of Operational Phase of EMG2 Works

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

7.21. In terms of significant adverse landscape and visual effects, these include impacts on the landscape of the EMG2 Main Site/Community Park 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 west of Diseworth.

7.22. 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 available supply and the impact on regional and national economic activity through the GVA and additional Business Rate Income generated by the **EMG2 Works**.

MCO Application (EMG1 Works)

Embedded Mitigation in respect of EMG1 Works

7.23. 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 'Outstanding' as part of base build specification;
- Installation of solar PVs generating renewable energy for occupier(s) at Plot 16.

7.24. 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 Application are briefly summarised below.

7.25. 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 EMG1 Works

7.26. The construction activities associated with the **EMG1 Works** are significantly less substantial than construction activities within the DCO Application. 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.

7.27. 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 Mitigation in respect of EMG1 Works

7.28. The MCO Application will adhere to the approved construction management framework plan approved for EMG1 which sets out measures to manage and maintain the landscape to the benefit of both the environment and the local community.

Residual Impacts of Construction of EMG1 Works

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

- No significant adverse residual impacts in terms of construction traffic and associated noise and air quality;
- Negligible adverse impact on King Street Plantation;
- 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 **EMG1 Works** site and immediate context which will reduce over time following the establishment and subsequent maturing of the proposed planting and habitats;
- 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. Impacts will reduce over time as the proposed landscape establishes and matures;
- Minor-moderate to moderate-major adverse visual residual impacts on users of public rights of way (PROW) with worst effects experienced by users of the PROW alongside the **EMG1 Works** site and 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 minor 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 effects on soil resources;
- Neutral 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.

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

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

Likely Significant Environmental Impacts of Construction of EMG1 Works

7.31. The only likely significant effect identified by the EIA is the visual impact of the **EMG1 Works** on 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).

Operational Phase

Potential Impacts of Operational Phase of EMG1 Works

7.32. 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.

7.33. 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 **EMG1 Works** 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 Mitigation in respect of EMG1 Works

7.34. The impacts of the operational **EMG1 Works** 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 EMG1 Works

7.35. 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 King Street Plantation;
- Negligible residual impact on published national, regional and country scale landscape character types/area;
- Minor adverse residual impact on landscape of the **EMG1 Works** 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 users of public rights of way (PROW) with worst effects experienced by users of the PROW alongside the **EMG1 Works** site and 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 minor 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;
- 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.

7.36. The EIA has identified a number of beneficial long-term impacts of the MCO Application on the socio-economic conditions of the area as follows:

- Minor 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 impact on regional and national economic activity
- Negligible-minor residual impact on ground water quality as result of surface water drainage including pollution control measures.

Likely Significant Environmental Impacts of Operational Phase of EMG1 Works

7.37. The EIA has not identified any significant environmental impacts with regard to the operational phase of the **EMG1 Works**.

EMG2 Project (EMG2 Works, Highway Works and EMG1 Works)

Construction

7.38. 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 apart from the socio-economic effects on construction employment which will increase from negligible-minor beneficial to moderate beneficial. No additional mitigation has been identified.

Operation

7.39. 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 apart from the following environmental impacts:

- Beneficial residual impact of operational employment increase from moderate beneficial to moderate-major beneficial;
- Beneficial residual impact on regional and national economic activity increases from moderate to major beneficial.

8. Cumulative Impacts

8.1. 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 effects, the impacts from other developments together with the **EMG2 Project**.

8.2. 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 the 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 the ES (**Document DCO 6.21/MCO 6.21**).

8.3. 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. These cumulative impacts do not necessitate additional mitigation beyond the measures already included as part of the **EMG2 Project**.

9. Conclusions

9.1. 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 Application (**EMG2 Works** and **Highway Works**) and the MCO Application (**EMG1 Works**).

9.2. 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.

DCO Application

Construction Phase

9.3. The **EMG2 Works** 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; and
- 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.

9.4. The construction of the **EMG2 Works** and **Highway Works** would, however, also have significant beneficial impacts on regional and national economic activity.

Operational Phase

9.5. With regard to the operational phase of the DCO Application (**EMG2 Works and Highway Works**), significant environmental effects, both adverse and beneficial have been identified in the ES.

9.6. The operation of the **EMG2 Works** would have the significant adverse long-term effects on the following landscape and visual receptors:

- Landscape of the **EMG2 Works** (excluding the substation) and its immediate context;
- 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 west of Diseworth.

9.7. 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

9.8. The construction of the **EMG1 Works** would also result in some 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 **EMG1 Works**.

Operational Phase

9.9. The operation of the **EMG1 Works** would not result in any significant environmental effects (neither adverse nor beneficial).

EMG2 Project

Construction Phase

9.10. 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 apart from the beneficial socio-economic effects on construction employment which will increase in significance.

Operational Phase

9.11. 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 apart from the beneficial socio-economic effects on operational employment and regional and national economic activity which will increase in significance.