

East Midlands Gateway Phase 2 (EMG2)

Document DCO 6.16/MCO 6.16

ENVIRONMENTAL STATEMENT

Main Statement

Chapter 16

Utilities

October 2025

16

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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16. Utilities

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16.1. Introduction

16.1.1. This Chapter evaluates the significant environmental impacts of the EMG2 Project resulting from the impact on, and supply of, utility services, specifically relating to electricity, gas, potable water and telecommunications. The assessment is based on the project description set out in **Chapter 3: Project Description (Document DCO 6.3/MCO 6.3)**, including the development parameters set out in **Table 3.5**.

16.1.2. In brief, the EMG2 Project comprises three main components as follows:

Table 16.1: 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).

16.1.3. This Chapter should be read in conjunction with the Utilities Assessment Report provided at **Appendix 16A (Document DCO 6.16A/MCO 6.16A)**.

16.1.4. This ES Chapter:

- Describes the baseline conditions currently existing within the boundaries of the DCO Scheme and the MCO Scheme and the surrounding areas.
- Identifies potential diversions and upgrading works required to accommodate and service the DCO Scheme and the MCO Scheme.
- Evaluates the significance of any potential impacts in terms of beneficial/adverse consequences.
- Establishes appropriate mitigation measures for the EMG2 Project, and its component parts, where appropriate.
- Identifies any residual/cumulative impacts.

16.1.5. Sections 16.2 (Scope and Methodology of Assessment), 16.3 (Policy, Guidance and Legislative Context) and 16.4 (Approach to Assessment of Applications) apply to both the DCO Application and the MCO Application.

16.1.6. In recognition that this Chapter forms part of a single ES covering both the DCO Scheme and the MCO Scheme, it makes a clear distinction between the component parts and, consistent with the dual application approach, separately assesses the arising impacts as follows:

- Section 16.5 assesses the DCO Application;
- Section 16.6 assesses the MCO Application;
- Section 16.7 assesses the EMG2 Project as a whole.
- Section 16.8 contains an assessment of the cumulative impacts of the EMG2 Project with other existing and, or approved developments using the list of projects identified in **Appendix 21B to Chapter 21: Cumulative Impacts (Document DCO 6.21B/MCO 6.21B)**.

16.1.7. A summary of the effect and their significance is provided in the summary and conclusions section 16.9 at the end of this Chapter.

16.2. Scope and Methodology of the Assessment

Assessment Method

- 16.2.1. This section of the chapter is common to both the DCO Scheme and the MCO Scheme. Information on the existing utilities and services was obtained through consultation with the relevant statutory undertakers and a review of their asset records where available.
- 16.2.2. The asset records reviewed as part of this assessment include:
- National Grid Electricity Distribution (NGED)
 - UK Power Distribution (UKPD)
 - Cadent Gas Networks
 - ESP Gas
 - Severn Trent Water (STW)
 - Openreach
 - Virgin Media
 - Vodafone
 - Mast Data
- 16.2.3. Information relating to new supply arrangements for the proposed development in relation to points of connection, the identification of offsite upgrade and/or reinforcement requirements have been provided by the incumbent statutory undertakers.
- 16.2.4. The incumbent statutory undertakers are as follows:
- NGED
 - UKPD
 - Cadent Gas Networks
 - Severn Trent Water
 - Openreach
- 16.2.5. In respect of new utility supplies to serve the EMG2 Project, and its component parts, the capacities have been estimated based on the proposed usage of the buildings and the requirement for EV charging. This information has been provided to the incumbent statutory undertakers as the basis to determine new supply and offsite reinforcement requirements.
- 16.2.6. Statutory undertakers have provided an assessment of the anticipated reinforcement and/or upgrading works required to their networks together with the potential diversions necessary to facilitate the construction of the EMG2 Project, and its component parts. This information has been used to determine the potential impact of the EMG2 Project on the relevant utilities.

PINS Scoping

- 16.2.7. The Scoping of this Assessment has been informed through the ES Scoping with PINS (**Document DCO 6.1D/MCO 6.1D**), a summary of which as relevant to this chapter is provided in **Table 16.2** below together with how matters have been addressed.

Table 16.2: Scoping Opinion comments and commentary

Originator	Summary of Scoping Opinion Comments	Response to Comments
PINS ID 3.0.5	The inspectorate considers there to be potential for clashes with existing utilities infrastructure and assessment should be scoped in to the ES.	Utilities has been scoped into the ES as requested by PINS and the information has been provided through this Chapter demonstrating the due diligence work undertaken to determine any clashes with existing utilities infrastructure and the required mitigation, protection or diversion works.

Assessment Methodology

- 16.2.8. The assessment process reflects that described generally in **Chapter 1: Introduction (Document DCO 6.1/MCO 6.1)**. The following scale of significance is used where an impact is identified:
- Major – Loss of resource and/or quality and integrity of resource; sever damage to key characteristics or elements,
 - Moderate – Loss of integrity or partial loss of attribute,
 - Minor – Minor impact/loss of attribute
 - Negligible – Insignificant impact to attribute
- 16.2.9. The level of significance of an effect will be determined through professional judgement of factors such as the scale or sensitivity of the receptor and the magnitude of the impact (the amount of change). The level of significance is also determined with reference to planning policy, best practice guidance and relevant contextual factors. The significance of an effect is determined using the matrix in **Table 16.3** below in line with the approach laid out in **Chapter 1: Introduction (Document DCO 6.1/MCO 6.1)**. The matrix looks at the interaction between receptor sensitivity and impact magnitude.
- 16.2.10. Effects that are Moderate or greater in significance are considered to be significant in EIA terms for utilities.

Table 16.3 Methodology for Determining Significance

Magnitude	Sensitivity		
	High	Moderate	Low
High	Major Adverse / Beneficial*	Major Moderate Adverse / Beneficial*	Moderate Minor Adverse / Beneficial
Moderate	Moderate Adverse / Beneficial*	Moderate Minor Adverse / Beneficial	Minor Adverse / Beneficial
Low	Moderate – Minor Adverse / Beneficial	Minor Adverse / Beneficial	Minor Negligible
Negligible	Negligible	Negligible	Negligible

*These effects are considered significant for the purpose of the EIA Regulations.

Consultation

- 16.2.11. A six-week period of statutory consultation was undertaken between Monday 3rd February 2025 and Monday 17th March 2025. This included the presentation of draft application material for the EMG2 Project, including draft ES Chapters. An additional consultation was undertaken between Tuesday 1st July and Tuesday 29th July on more advanced draft application material, including ES Chapters, which has taken on board comments received to the statutory consultation. **Table 16.4** below summarises the relevant comments received from statutory consultees and provides commentary as required with regard to utilities matters.

Table 16.4: Consultation comments and commentary

Originator	Summary of Consultation Comments	Response to Comments
Statutory Consultation		
GTC	GTC has no existing infrastructure within the vicinity of the order limits and therefore has no objections.	N/A.
Mainline Pipelines Ltd	Mainline Pipelines Limited (MLP) does not wish to make any comments to Statutory Consultation as the MLP pipeline route is outside the red line boundary of the site and therefore does not affect MLP pipeline route.	N/A.

Originator	Summary of Consultation Comments	Response to Comments
National Grid (NGET)	NGET will require an adequate form of Protective Provisions included within the Order. Various guidance given in relation to any new infrastructure and electricity infrastructure on how National Grid energy infrastructure should be considered. NGET expresses interest in further consultation while the impact on National Grid assets is still being assessed.	It is proposed that any new infrastructure will be implemented in accordance with regulatory requirements and the guidance provided by National Grid in relationship to any works which could impact NGET infrastructure assets. Ongoing liaison with National Grid has been established in order to include protective provisions in favour of NGET.
Additional Consultation		
Joint Radio Company obo National Grid	JRC and the developer have previously agreed on mitigation measures to be implemented in order to reduce the impact of the proposed development on the radio link infrastructure operated by the local energy networks (NGED). The changes to the development, including the new building units layout, do not affect the mitigation solution. Therefore JRC do not object to the proposed development as long as these mitigation measures are implemented.	N/A.

Assumptions and Limitations

- 16.2.12. It should be noted that the existing asset records provided by the statutory undertakers are issued for guidance purposes and don't necessarily reflect the 'as-laid' positions of the existing services identified within the search area.
- 16.2.13. The estimated capacities for the EMG2 Project, and its component parts, have been calculated based on the Parameter Plans (**Document DCO 2.5** and **Document MCO 2.5**) and Illustrative Landscape Masterplans (**Document DCO 2.6** and **Document MCO 2.6**) and will need to be reviewed again at the detailed design stage when final site layouts are known.
- 16.2.14. Each statutory undertaker has provided an assessment of the anticipated reinforcement and/or upgrades to their existing network to support the connection of the EMG2 Project. Consultation has been undertaken with the incumbent statutory undertakers (electricity, gas, potable water and telecommunications) who have identified the anticipated points of connection to supply the EMG2 Project.

16.3. Policy, Guidance and Legislative Context

- 16.3.1. This section of the chapter is common to both the DCO Scheme and the MCO Scheme. It summarises the planning and environmental legislation, policies and guidance which are considered relevant to the utilities assessment.

Planning Act 2008

- 16.3.2. Section 127 of the Planning Act 2008 states, in relation to statutory undertakers' land, that:

(1) This section applies in relation to land ("statutory undertakers' land") if—

(a) the land has been acquired by statutory undertakers for the purposes of their undertaking,

(b) a representation has been made about an application for an order granting development consent before the completion of the examination of the application, and the representation has not been withdrawn, and

(c) as a result of the representation the [F1 Secretary of State] is satisfied that—

(i) the land is used for the purposes of carrying on the statutory undertakers' undertaking, or

(ii) an interest in the land is held for those purposes.

(2) An order granting development consent may include provision authorising the compulsory acquisition of statutory undertakers' land only to the extent that the [F2 Secretary of State] is satisfied of the matters set out in subsection (3).]

(3) The matters are that the nature and situation of the land are such that—

(a) it can be purchased and not replaced without serious detriment to the carrying on of the undertaking, or

(b) if purchased it can be replaced by other land belonging to, or available for acquisition by, the undertakers without serious detriment to the carrying on of the undertaking.

(4) Subsections (2) and (3) do not apply in a case within subsection (5).

(5) An order granting development consent may include provision authorising the compulsory acquisition of a right over statutory undertakers' land by the creation of a new right over land only to the extent that the [F3 Secretary of State] is satisfied of the matters set out in subsection (6).]

(6) The matters are that the nature and situation of the land are such that—

(a)the right can be purchased without serious detriment to the carrying on of the undertaking, or

(b)any detriment to the carrying on of the undertaking, in consequence of the acquisition of the right, can be made good by the undertakers by the use of other land belonging to or available for acquisition by them.

16.3.3. Section 138 of the Planning Act 2008 relates to the extinguishment of rights, and removal of apparatus, of statutory undertakers. It states that:

(1)This section applies if an order granting development consent authorises the acquisition of land (compulsorily or by agreement) and—

(a)there subsists over the land a relevant right, or

(b)there is on, under or over the land relevant apparatus.

(2)“Relevant right” means a right of way, or a right of laying down, erecting, continuing or maintaining apparatus on, under or over the land, which—

(a)is vested in or belongs to statutory undertakers for the purpose of the carrying on of their undertaking, or

(b)is conferred by or in accordance with the electronic communications code on the operator of an electronic communications code network.

(3)“Relevant apparatus” means—

(a)apparatus vested in or belonging to statutory undertakers for the purpose of the carrying on of their undertaking, or

(b)electronic communications apparatus kept installed for the purposes of an electronic communications code network.

(4)The order may include provision for the extinguishment of the relevant right, or the removal of the relevant apparatus, [F1 only if the Secretary of State is satisfied that the extinguishment or removal is necessary for the purpose of carrying out the development to which the order relates]

National Networks National Policy Statement

16.3.4. The National Networks National Policy Statement (NNNPS) (Department for Transport, 2024) sets out the UK Government's policy for the delivery of nationally significant road and rail networks. The NNNPS however has no regard to the protection and works to utility assets and the associated statutory undertakers.

16.4. Approach to Assessment of Applications

16.4.1. In recognition that this chapter forms part of a single ES covering both the DCO Scheme and the MCO Scheme (as explained in Section 16.1 and in full within **Chapter 1: Introduction and Scope**) it makes a clear distinction between the component parts and, consistent with the dual application approach, assesses the impacts arising from the DCO Scheme and MCO Scheme separately and then together as the EMG2 Project in combination. An assessment of the cumulative impacts of the EMG2 Project with other existing and, or approved developments, has also been completed using the list of projects identified in **Appendix 21B to Chapter 21: Cumulative Impacts (Document DCO 6.21B/MCO 6.21B)**.

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

- An assessment of the DCO Scheme within Section 16.5;
- An assessment of the MCO Scheme within Section 16.6;
- An assessment of the EMG2 Project as a whole, comprising the DCO Scheme and MCO Scheme together, within Section 16.7;
- An assessment of the EMG2 Project as a whole in combination with other planned development (i.e. the cumulative effects), within Section 16.8; and
- An overall summary and conclusions of the above within Section 16.9.

16.5. Assessment of DCO Application

16.5.1. As set out in Section 1 of this Chapter, and at **Table 16.1**, 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 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.

Baseline Conditions

16.5.2. This section describes the baseline conditions to the DCO Scheme (and the surrounding areas as appropriate), further details on the existing utility constraints can be found within the Utilities Assessment Report provided as **Appendix 16A (Document DCO 6.16A)**.

Electricity

16.5.3. A detailed review of the NGED asset record information has been undertaken, based on our assessment the following assets have the potential to be either directly or indirectly affected.

16.5.4. On-site apparatus within the EMG2 Works is as follows:

- The NGED asset record indicates there are existing overhead 11kV high voltage (HV) cables and poles which run adjacent to the western order limits of the DCO Scheme.
- The NGED asset record indicates there are existing underground 11kV (HV) and low voltage (LV) cables which enter the DCO Scheme order limits from the A453 Ashby Road and run through the DCO Scheme before terminating within Donington Park Services.
- The NGED asset record indicates there are existing overhead 11kV (HV) cables and poles which run along the southern order limits of the DCO Scheme.

16.5.5. On-site apparatus within the Highway Works is as follows:

- The NGED asset record indicates there are existing underground 11kV (HV) cables running down the verges on the northern and southern sides of the A453 Ashby Road.
- The NGED asset record indicates there are existing underground 11kV (HV) and LV cables on the northern and southern sides of the roundabout on A453 Ashby Road.
- The NGED asset record indicates there are existing underground 11kV (HV) cables which run along the southern and western sides of Finger Farm Roundabout.

- The NGED asset record indicates there are existing underground 11kV (HV) cables which run across the A6 Kegworth Bypass / A453 junction.
- The NGED asset record indicates there are existing underground 11kV (HV) and LV cables which run along the verge on the western side of the A50.
- The NGED asset record indicates there are existing underground 11kV (HV) and LV cables which run across the junction with the A453 and J24.

16.5.6. A detailed review of the UKPD asset record information has been undertaken, based on our assessment the following assets have the potential to be either directly or indirectly affected by the construction of the DCO Scheme.

- The UKPD asset record indicates there are existing underground 11kV (HV) cables to the west of the existing roundabout adjacent to EMG1 near the bus interchange.

Gas

16.5.7. A detailed review of the Cadent Gas Networks asset record information has been undertaken, based on our assessment the following assets have the potential to be either directly or indirectly affected by the construction of the DCO Scheme.

16.5.8. On-site apparatus within the EMG2 Works is as follows:

- The Cadent Gas Networks asset record indicates there is an existing underground 125mm Polyethylene (PE) medium pressure (MP) gas main which enters the EMG2 Main Site from the A453 Ashby Road and runs through the EMG2 Main Site before terminating within Donnington Park Services.

16.5.9. On-site apparatus within the Highway Works is as follows:

- The Cadent Gas asset record indicates there is an existing 250mm PE Medium Pressure (MP) gas main running down the carriageway of the A453 Ashby Road.
- The Cadent Gas asset record indicates there are existing 315mm PE and 125mm PE Medium Pressure (MP) gas mains within the existing roundabout on A453 Ashby Road.
- The Cadent Gas asset record indicates there is an existing 315mm PE Medium Pressure (MP) gas main which runs near to the A6 Kegworth Bypass / A453 junction.
- The Cadent Gas asset record indicates there is an existing 6inch SI Low Pressure (LP) gas main which runs along the verge on the western side of the A50.
- The Cadent Gas asset record indicates there is an existing 27inch ST Medium Pressure (MP) gas main which runs along the verge on the western side of the A50.
- The Cadent Gas asset record indicates there is an existing 24inch DI Medium Pressure (MP) gas main which runs along the verge on the western side of the A50.
- The Cadent Gas asset record indicates there is an existing gas governor positioned in the verge on the western side of the A50.

- The Cadent Gas asset record indicates there is an existing 600mm ST Medium Pressure (MP) gas main running across the A453 adjacent to J24.

16.5.10. A detailed review of the ESP Gas asset record information has been undertaken, based on our assessment the following assets have the potential to be either directly or indirectly affected by the construction of the Highway Works:

- The ESP Gas asset record indicates there is an existing 315mm PE Medium Pressure (MP) gas main which runs near the existing EMG1 access roundabout, within the Highway Works.

Potable Water

16.5.11. A detailed review of the STW asset record information has been undertaken, based on our assessment the following assets have the potential to be either directly or indirectly affected by the construction of the Highway Works as follows:

- The STW asset record indicates there is an existing underground main which runs across the A453 and terminates into a valve within the grass verge.
- The STW asset record indicates there is an existing 12" DI water main which runs down the verge on the northern side of the A453 Ashby Road.
- The STW asset record indicates there are existing 12" DI and 250mm PE MDPE water mains which run across the existing roundabout on A453 Ashby Road.
- The STW asset record indicates there are existing 300mm DI, 450mm and 225mm PE water mains which run near the A6 Kegworth Bypass / A453 junction.
- The STW asset record indicates there is an existing 125mm PE water main which runs underneath both the A50 and the existing railway track.

Telecommunications

16.5.12. A detailed review of the Openreach asset record information has been undertaken, based on our assessment the following assets have the potential to be either directly or indirectly affected by the construction of the DCO Scheme.

16.5.13. On-site apparatus identified is as follows:

- The Openreach asset record indicates there are existing underground ducts and chambers which enter the EMG2 Main Site from the A453 Ashby Road and run through the EMG2 Main Site before terminating within Donnington Park Services.
- The Openreach asset record indicates there are existing underground ducts which run down the verge on the northern side of A453 Ashby Road.
- The Openreach asset record indicates there are existing underground chambers and ducts which run across the existing roundabout on A453 Ashby Road.
- The Openreach asset record indicates there are existing underground chambers and ducts which run down the verges to the east and north of Finger Farm roundabout

- The Openreach asset record indicates there are existing underground chambers and ducts both within and near the A6 Kegworth Bypass / A453 junction.
- The Openreach asset record indicates there are existing underground chambers and ducts which run along the verge on the western side of the A50.

16.5.14. A detailed review of the Virgin Media asset record information has been undertaken, based on our assessment the following assets have the potential to be either directly or indirectly affected by the construction of the Highway Works as follows:

- The Virgin Media asset record indicates there are existing underground ducts and chambers which run down the verge on the northern side of the A453 Ashby Road.
- The Virgin Media asset record indicates there are existing underground chambers and ducts which run across the existing roundabout on A453 Ashby Road.
- The Virgin Media asset record indicates there are existing underground chambers and ducts which run through the area to the north of the Finger Farm roundabout.
- The Virgin Media asset record indicates there are existing underground chambers and ducts near the A6 Kegworth Bypass / A453 junction.

16.5.15. A detailed review of the Vodafone asset record information has been undertaken, based on our assessment the following assets have the potential to be either directly or indirectly affected by the construction of the Highway Works as follows:

- The Vodafone asset record indicates there are existing underground ducts and chambers which run down the verge on the southern side of the A453 Ashby Road.
- The Vodafone asset record indicates there are existing underground chambers and ducts which run across the existing roundabout on A453 Ashby Road.
- The Vodafone asset record indicates there are existing underground chambers and ducts which in the verge to the north of the Finger Farm roundabout.
- The Vodafone asset record indicates there are existing underground chambers and ducts both within and near the A6 Kegworth Bypass / A453 junction.

16.5.16. A detailed review of the Mast Data asset record information has been undertaken, based on our assessment the following assets have the potential to be either directly or indirectly affected by the construction of the EMG2 Works:

- The Mast Data asset record indicates there is an existing telecoms mast located at the eastern end of Hyam's Lane adjacent to Donnington Park Services. The Mast is encircled by the EMG2 Main Site but is excluded from the Order Limits itself.

16.5.17. Other statutory undertakers were contacted as part of this assessment, however following an initial consultation they have confirmed that their assets are not affected by the DCO Scheme. The companies not affected are as follows:

- Airwave Solution Limited
- Arelion

- BOC Limited
- BPA
- BT Mast Data
- Cemex
- CenturyLink Communications
- CityFibre
- Colt Networks
- CTIL Cornershire
- DIO (MOD abandoned pipelines)
- Drax (Damhead Creek Power Station)
- Eclipse
- EE
- Energy Assets Networks
- ENGIE
- Envoy Asset Management
- ESP Electricity
- ESSAR
- ESSO Petroleum
- euNetworks
- EXA
- Exolum Pipelines
- Fibrenet UK Ltd
- Fibrespan Limited
- Global Crossing UK Ltd
- Gamma Telecom Limited
- Gigaclear plc
- GPSS
- GTC – Electric
- GTC – Fibre
- GTC – Waste
- GTC – Water
- Independent Water Networks
- Inovyn

- Interoute Ltd
- Interoute Vtesse Ltd
- Kingston Communications
- KPN International C/O McNicholas Construction Services
- Last Mile
- Leep Utilities
- Local Council Highways
- Local Council S50 Notices
- National Grid Electricity Transmission
- National Grid Gas Transmission
- Neo Networks
- Network Rail
- NY Net
- O2 UK Limited
- Redcentric plc
- Scotia Gas Networks (SGN)
- Sky
- Sota
- SSE Pipelines Ltd
- SSE Water (IWC)
- Tata Communications C/O McNicholas Construction Services
- TFL – London Underground
- Three
- Trafficmaster Plc
- Uniper UK Ltd
- Utility Assets Ltd
- Verizon Business
- Vodafone (formerly cable and wireless)
- Vodafone (formerly Thus Plc)
- Zayo Europe

Potential Impacts

- 16.5.18. This section summarises any potential impacts on the existing utility infrastructure (electricity, gas, potable water and telecommunications) and the impact of installing new supplies as proposed by the DCO Scheme.
- 16.5.19. Mitigation measures are considered embedded as they inherently relate to the need to make arrangements to divert, protect and/or accommodate existing utility infrastructure and ensuring new utility supplies and capacity are available to meet the requirements for each phase as the development is built.
- 16.5.20. Specific requirements for diversionary and/or protections to existing utility apparatus will be progressed at detailed design with the incumbent utility providers following planning consent and as the development phasing progresses. Consideration has been given in the development proposals to the provision of the required easements for future utility services and protective provisions in favour of utility undertakers are included in Schedule 13 of the draft DCO submitted with the DCO Application (**Document DCO 3.1**).

Construction Phase

Electricity

Diversion Works

- 16.5.21. It is anticipated the following existing electricity infrastructure will need to be diverted to facilitate the construction of the DCO Scheme, with appropriate measures taken by NGED and UKPD to maintain security of supply for the existing customers fed from the cables.
- Diversion of the existing on-site overhead and underground 11kV (HV) and LV cables within the EMG2 Works, a formal diversion enquiry will be submitted to NGED as the host distribution network operator.
 - Diversion of the existing underground 11kV (HV) and LV cables within the highway to accommodate the proposed EMG2 Access Works, a formal diversion enquiry will be submitted to NGED as the host distribution network operator (DNO).
 - Diversion of the existing underground 11kV (HV) and LV cables within the highway to accommodate the proposed Highway Works, formal diversion enquiries will be submitted to NGED as the host distribution network operator (DNO) and UKPD as the Independent Distribution Network Operator (IDNO) who own the apparatus.

New Supply

- 16.5.22. Through consultation with NGED as the host distribution network operator, NGED have advised that there is insufficient capacity in the existing local electricity infrastructure to meet the required import supply of 22,000kVA connection to the EMG2 Works without the completion of network reinforcement.
- 16.5.23. The NGED network reinforcement necessary to support the connection is as follows:

- Installation of a new 33,000V IDNO circuit breaker on a new 3-panel switchboard at Toton BSP.
- Diversion of GT interplant cable and the installation of a 33kV busbar interconnector.
- Completion of a 30,000V indoor switchgear termination.

16.5.24. The UKPD network reinforcement necessary to support the connection is as follows:

- Installation of a new 33,000V circuit from the IDNO order limits circuit breaker at Toton BSP to a new 33kV switchboard within the existing primary substation compound of the EMG1 PSS. This is included within the extent of the EMG2 Works on land within EMG1.

Gas

Diversion Works

16.5.25. It is anticipated the following existing gas infrastructure will need to be diverted to facilitate the construction of the DCO Scheme, with appropriate measures taken by Cadent Gas to maintain security of supply for the existing customers fed from the mains.

- Diversion of the existing on-site underground Medium Pressure (MP) gas main within the EMG2 Works, a formal diversion enquiry will be submitted to Cadent Gas Networks as the host Gas Transporter (GT).
- Diversion of the existing underground Medium Pressure (MP) gas mains within the Highway Works to accommodate the proposed EMG2 Access Works, a formal diversion enquiry will be submitted to Cadent Gas Networks as the host Gas Transporter (GT).
- Diversion of the existing underground Medium Pressure (MP) and Low Pressure (LP) gas mains within the highway to accommodate the proposed Highway Works, formal diversion enquiries will be submitted to Cadent Gas Networks as the host Gas Transporter (GT) and ESP Gas as the Independent Gas Transporter (IGT).

New Supply

16.5.26. Cadent Gas Networks have confirmed that the EMG2 Works can be supplied from existing capacity within the local network to support the connection to the EMG2 Works.

16.5.27. Predicted impacts resulting from provision of gas services to the EMG2 Works are as follows:

- The Point of Connections for the EMG2 Works will be provided from the existing 315mm PE and 250mm PE Medium Pressure gas mains within the verge of A453 Ashby Road, it has been confirmed by Cadent Gas Networks that there is sufficient capacity in the existing network to support the connection.

Potable Water

Diversion Works

16.5.28. It is anticipated the following existing underground potable water mains within the highways areas will need to be diverted to accommodate the DCO Scheme, with appropriate measures taken by Severn Trent Water to maintain security of supply for the existing customers fed from the mains.

- Diversion of the existing underground potable water mains within the Highway Works to accommodate the proposed EMG2 Site Works Access Works, a formal diversion enquiry will be submitted to Severn Trent Water (STW) as the host water company.
- Diversion of the existing underground potable water mains within the highway to accommodate the proposed Highway Works, formal diversion enquiries will be submitted to Severn Trent Water (STW) as the host water company.

New Supply

16.5.29. Severn Trent Water have confirmed that the EMG2 Works can be supplied from the existing underground 12 inch potable water main in A453 Ashby Road.

16.5.30. Predicted impacts resulting from provision of water services to the proposed development are as follows:

- The Point of Connections for the EMG2 Works will be provided from the existing 12inch potable water main within the verge of A453 Ashby Road.

Telecommunications

Diversion Works

16.5.31. It is anticipated the following existing underground ducts and chambers within the highways areas will need to be diverted to accommodate the DCO Scheme, with appropriate measures taken by Openreach, Virgin Media and Vodafone to maintain security of supply for the existing customers fed from the lines within the ducts. All works will be completed directly by contracts approved and under the framework of the specific network operators, with any specific protection measures clearly specified during the detailed design works following consultation with the relevant network operators.

- Diversion of the existing underground duct network within the highway to accommodate the proposed EMG2 Site Access Works as part of the Highway Works, a formal diversion enquiry will be submitted to Openreach as the host telecoms operator.
- Diversion of the existing underground duct network within the highway to accommodate the proposed Highway Works, a formal diversion enquiry will be submitted to Openreach as the host telecoms operator.
- Diversion of the existing underground duct network within the highway to accommodate the proposed EMG2 Site Access Works, as part of the Highway

Works a formal diversion enquiry will be submitted to Virgin Media as the host telecoms operator.

- Diversion of the existing underground duct network within the highway to accommodate the proposed Highway Works, a formal diversion enquiry will be submitted to Virgin Media as the host telecoms operator.
- Diversion of the existing underground duct network within the highway to accommodate the proposed EMG2 Site Access Works, within the Highway Works, a formal diversion enquiry will be submitted to Vodafone as the host telecoms operator.
- Diversion of the existing underground duct network within the highway to accommodate the proposed Highways Works, a formal diversion enquiry will be submitted to Vodafone as the host telecoms operator.

New Supply

- 16.5.32. The available telecommunications providers within the local area are Openreach, Virgin Media and Vodafone. Provision of a service to the EMG2 Works will require an extension to the existing duct network in the A453 Ashby Road.
- 16.5.33. The options and companies offering telecommunications technologies are significant and range throughout the industry, they are frequently changing and solutions offered and current/future options and opportunities will be fully explored at the detailed design stage.

Operational Phase

- 16.5.34. Once the development is completed, the new utility infrastructure diverted to accommodate the DCO Scheme will be formally adopted by the incumbent statutory undertakers and will remain under their responsibility with regard to future ownership, operation and maintenance.

Mitigation

- 16.5.35. Aside from the embedded mitigation, mitigation of effects will be included during the detailed design phase of the DCO Scheme.
- 16.5.36. Mitigation measures will include:
- Use of applicable design standards (BS, EN, Lloyds);
 - Use of approved plant and equipment;
 - Utilisation of existing service ducts, pipes, cables, plant & equipment;
 - Clash detection and design collaboration to mitigate requirement for diversions; and
 - Utilisation of existing service strips.

Residual Effects

- 16.5.37. Residual effects are those which remain after mitigation measures have been taken into account. As set out above, mitigation measures are considered embedded as they inherently relate to the need to make arrangements to divert, protect and/or accommodate existing utility infrastructure and ensuring new utility supplies and capacity are available to meet the requirements for each phase as the development is built.
- 16.5.38. This section identifies the final residual effects after all mitigation is applied to the DCO Scheme. **Table 16.5** below records the residual effects for the DCO Scheme.

Table 16.5: DCO Application - Residual Effects Assessment

Item	Sensitivity	Magnitude of Change	Significance of Effect
Construction Phase			
Electricity	Low	Negligible	Negligible
Gas	Low	Negligible	Negligible
Potable Water	Low	Negligible	Negligible
Telecommunications	Low	Negligible	Negligible
Operational Phase			
Electricity	Low	Negligible	Negligible
Gas	Low	Negligible	Negligible
Potable Water	Low	Negligible	Negligible
Telecommunications	Low	Negligible	Negligible

- 16.5.39. As none of the residual effects are assessed as being Moderate or higher, these effects of the DCO Scheme are not considered significant.

16.6. Assessment of MCO Application

- 16.6.1. As set out in Section 1 of this Chapter, and at **Table 16.1**, 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 Conditions

- 16.6.2. This section describes the baseline conditions within the MCO Scheme (and the surrounding areas as appropriate), which as set out in **Table 16.1**, comprises the EMG1 Works.
- 16.6.3. The surrounding area is predominantly commercial uses, with rural settlement and agricultural land to the north.
- 16.6.4. On-site apparatus identified within the MCO Scheme is limited to the following:
- Openreach asset records indicate there are existing underground ducts and chambers within the EMG1 Estate Roads;
 - Severn Trent Water asset records indicate there are existing underground mains and service pipes within the EMG1 Estate Roads; and
 - UK Power Distributions asset records indicate there are existing underground 33kV, 11kV & LV mains and service cables within the EMG1 Estate Roads.
- 16.6.5. Cadent Gas asset records indicate there are existing underground Medium Pressure Mains & Services within the EMG1 Estate Roads.

Potential Impacts

- 16.6.6. This section summarises any potential impacts on the existing utility infrastructure (electricity, gas, potable water and telecommunications) and the impact of installing new supplies as proposed by the MCO Scheme.
- 16.6.7. Mitigation measures are considered embedded as they inherently relate to the need to make arrangements to divert, protect and/or accommodate existing utility infrastructure and ensuring new utility supplies and capacity are available to meet the requirements for each phase as the development is built.
- 16.6.8. Specific requirements for diversionary and/or protections to existing utility apparatus will be progressed at detailed design with the incumbent utility providers following planning consent and as the development phasing progresses. Consideration has been given in the development proposals to the provision of the required easements for future utility services and protective provisions in favour of utility undertakers are already included in the EMG1 DCO.

Construction Phase

Electricity

Diversion Works

- 16.6.9. No diversion works are anticipated and therefore no impacts resulting from diversionary works to the existing electricity infrastructure to facilitate the construction of the MCO Scheme are predicted.

New Supply

- 16.6.10. NGED and UKPD will confirm the connection point for the MCO Scheme. It is anticipated connections will be provided by either the existing UKPD networks within EMG1 DCO Order Limits or from the local NGED electricity network.

Gas

Diversion Works

- 16.6.11. No diversion works are anticipated and therefore no impacts resulting from diversionary works to the existing gas infrastructure to facilitate the construction of the MCO Scheme are predicted.

New Supply

- 16.6.12. A land enquiry was submitted to Cadent Gas Networks to establish if there is sufficient capacity within the local network to support the connection to the MCO Scheme. The confirmed Point of Connection for Plot 16 will be provided from the existing 315mm PE Medium Pressure gas main within the private access road adjacent to the plot. It has also been confirmed that there is sufficient capacity in the network to support the connection.

Potable Water

Diversion Works

- 16.6.13. No diversion works are anticipated and therefore no impacts resulting from diversionary works to the existing water infrastructure to facilitate the construction of the MCO Scheme are predicted.

New Supply

- 16.6.14. A pre-planning enquiry has been submitted to STW to establish if there is sufficient capacity within the local network to support the connection to the MCO Scheme. The Point of Connection for Plot 16 will be provided from the existing 180mm PE water main within the private access road adjacent to the plot. It has been confirmed that there is sufficient capacity in the network to support the connection.

Telecommunications

Diversion Works

- 16.6.15. No diversion works are anticipated and therefore no impacts resulting from diversionary works to the existing telecommunications infrastructure to facilitate the construction of the MCO Scheme are predicted.

New Supply

- 16.6.16. The available telecommunications providers within the local area are Openreach, Virgin Media and Vodafone. Provision of a service to Plot 16 will require an extension to the existing duct network in the private access road adjacent to the plot.

Completed Development

- 16.6.17. Once the development is completed, the utility infrastructure supplied to accommodate the MCO Scheme will be formally adopted by the incumbent statutory undertakers and will remain under their responsibility with regard to future ownership, operation and maintenance.

Mitigation

- 16.6.18. Aside from the embedded mitigation, mitigation of effects will be included during the detailed design phase of the MCO Scheme.
- 16.6.19. Mitigation measures will include:
- Use of applicable design standards (BS, EN, Lloyds);
 - Use of approved plant and equipment;
 - Utilisation of existing service ducts, pipes, cables, plant & equipment;
 - Clash detection and design collaboration to mitigate requirement for diversions; and
 - Utilisation of existing service strips.

Residual Effects

- 16.6.20. Residual effects are those which remain after mitigation measures have been taken into account. As set out above, mitigation measures are predominantly considered embedded as they inherently relate to the need to make arrangements to divert, protect and/or accommodate existing utility infrastructure and ensuring new utility supplies and capacity are available to meet the requirements for each phase as the development is built.
- 16.6.21. This section details the final residual effects after all mitigation is applied to the MCO Scheme as shown in **Table 16.6** below.

Table 16.6: MCO Application - Residual Effects Assessment

Item	Sensitivity	Magnitude of Change	Significance of Effect
Construction Phase			
Electricity	Low	Negligible	Negligible
Gas	Low	Negligible	Negligible
Potable Water	Low	Negligible	Negligible
Telecommunications	Low	Negligible	Negligible
Completed Development			
Electricity	Low	Negligible	Negligible
Gas	Low	Negligible	Negligible
Potable Water	Low	Negligible	Negligible
Telecommunications	Low	Negligible	Negligible

- 16.6.22. As none of the residual effects are assessed as being Moderate or higher, these effects of are not considered significant.

16.7. Assessment of EMG2 Project

- 16.7.1. As set out in Section 1 of this Chapter, and at **Table 16.1**, the EMG2 Project as a whole is the combination of the DCO Scheme and the MCO Scheme which have been assessed in Sections 10.5 and 10.6 of this Chapter

Baseline Conditions

- 16.7.2. The baseline conditions have been described at Section 16.5 in respect of the DCO Scheme and at Section 16.6 for the MCO Scheme.

Potential Impacts

- 16.7.3. The potential impacts of the EMG2 Project as a whole remain as set out at Section 16.5 with regard to the DCO Scheme and at Section 16.6. for the MCO Scheme.

Mitigation Measures

- 16.7.4. Mitigation measures are considered embedded as they inherently relate to the need to make arrangements to divert, protect and/or accommodate existing utility infrastructure and ensuring new utility supplies and capacity are available to meet the requirements for each phase as the development is built.
- 16.7.5. Specific requirements for diversionary and/or protections to existing utility apparatus will be progressed at detailed design with the incumbent utility providers following planning consent and as the development phasing progresses. Consideration has been given in the development proposals to the provision of the required easements for future utility services. With regard to the DCO protective provisions in favour of utility undertakers are included in Schedule 13 of the draft DCO submitted with the DCO Application (**Document DCO 3.1**). With regard to the MCO protective provisions in favour of utility undertakers are already included in the EMG1 DCO.
- 16.7.6. Aside from the embedded mitigation, mitigation of effects will be included during the detailed design phase of the DCO Scheme and the MCO Scheme.
- 16.7.7. Mitigation measures will include:
- Use of applicable design standards (BS, EN, Lloyds);
 - Use of approved plant and equipment;
 - Utilisation of existing service ducts, pipes, cables, plant & equipment;
 - Clash detection and design collaboration to mitigate requirement for diversions; and
 - Utilisation of existing service strips.

Residual Effects

- 16.7.8. Residual effects are those which remain after mitigation measures have been taken into account.
- 16.7.9. This section details the final residual effects after all mitigation is applied to the EMG2 Project as a whole, as shown in **Table 16.7** below.

Table 16.7: EMG2 Project - Residual Effects Assessment

Item	Sensitivity	Magnitude of Change	Significance of Effect
Construction Phase			
Electricity	Low	Negligible	Negligible
Gas	Low	Negligible	Negligible
Potable Water	Low	Negligible	Negligible
Telecommunications	Low	Negligible	Negligible
Completed Development			
Electricity	Low	Negligible	Negligible
Gas	Low	Negligible	Negligible
Potable Water	Low	Negligible	Negligible
Telecommunications	Low	Negligible	Negligible

- 16.7.10. As none of the residual effects are assessed as being Moderate or higher, these effects are not considered significant.

16.8. Cumulative Effects

Intra-project effects

- 16.8.1. The intra-project effects have been assessed and are intrinsically incorporated in to the assessment of the impact on utilities. This mainly relates to highways and drainage. In regards to drainage, the assessment of foul water has been included within **Chapter 13: Flood Risk and Drainage (Document DCO 6.13/MCO 6.13)**.

Inter-project effects

- 16.8.2. The inter-project effects have been assessed and determined that due to the nature of utility installation works inter-project effects will be mitigated via liaison with the design consultant team, asset owners and local highways authority to coordinate design works and identified constraints prior to construction commencing. The road space booking, as part of the s.50 application process, will be coordinated alongside collaborative working alongside other contractors.
- 16.8.3. In regards to development sites which are yet to receive planning permission, whilst these proposed developments will undoubtedly require significant reinforcement to the existing network however until the proposal are brought forward it is not possible to consider the cumulative impact of these proposals and the EMG2 Project at this stage.

Conclusions

- 16.8.4. No works have been identified that would result in any intra-project or inter-project likely significant environmental effects.

16.9. Summary of Effects and Conclusions

- 16.9.1. This chapter has identified baseline conditions with regard to potential existing utility (electricity, gas, potable water and telecommunications) diversions and/or protections for the DCO Scheme and MCO Scheme forming the EMG2 Project and an approach to progress such matters as the proposed developments are built out. In recognition that this chapter forms part of a single ES covering both applications, a clear distinction has been made between the component parts and, consistent with the dual application approach, assesses the impacts arising from the applications separately and then together as the EMG2 Project. The cumulative impacts of the EMG2 Project with other existing and, or approved developments has then also been assessed.

Mitigation

- 16.9.2. Mitigation measures are considered embedded as they inherently relate to the need to make arrangements to divert, protect and/or accommodate existing utility infrastructure and ensuring new utility supplies and capacity are available to meet the requirements for each phase as the development is built.
- 16.9.3. Specific requirements for diversionary and/or protections to existing utility apparatus will be progressed at detailed design with the incumbent utility providers following planning consent and as the development phasing progresses. Consideration has been given in the development proposals to the provision of the required easements for future utility services. With regard to the DCO protective provisions in favour of utility undertakers are included in Schedule 13 of the draft DCO submitted with the DCO Application (**Document DCO 3.1**). With regard to the MCO protective provisions in favour of utility undertakers are already included in the EMG1 DCO.
- 16.9.4. Aside from the embedded mitigation, mitigation of effects will be further included during the detailed design phase of the DCO Scheme and the MCO Scheme.
- 16.9.5. Mitigation measures will include:
- Use of applicable design standards (BS, EN, Lloyds);
 - Use of approved plant and equipment;
 - Utilisation of existing service ducts, pipes, cables, plant & equipment;
 - Clash detection and design collaboration to mitigate requirement for diversions; and
 - Utilisation of existing service strips.

Likely Significant Effects

- 16.9.6. The overall residual effects with the mitigation in place are summarised in **Table 16.8** below.

Table 16.8: Overall Residual Effects

	DCO Application Range of effects	MCO Application Range of effects	EMG2 Project Range of effects
Construction	Negligible	Negligible	Negligible
Operation	Negligible	Negligible	Negligible

16.9.7. As can be seen, no effects on utilities are assessed as moderate or above this level. Therefore, the effects of utilities of the two applications, both individually and collectively, are assessed as being not significant.

16.9.8. When considered alongside the cumulative effects of other proposals that have been identified in **Chapter 21: Cumulative Impacts (Document DCO 6.21/MCO 6.21)** the effects are summarised in **Table 16.9** below:

Table 16.9: Cumulative Effects

	DCO Application Range of effects	MCO Application Range of effects	EMG2 Project Range of effects
Construction	Negligible	Negligible	Negligible
Operation	Negligible	Negligible	Negligible

16.9.9. As can be seen, even when the EMG2 Project is assessed together with other existing and or approved developments, no effects on utilities are assessed as moderate or above. Therefore, the effects are assessed as being not significant.

Conclusion

16.9.10. Through the implementation of the Utilities Strategy (which includes all the embedded mitigation) and the additional mitigation measures detailed within this Chapter, there will be no significant effects for the DCO Scheme, the MCO Scheme, or the combined EMG2 Project.