

**East Midlands Gateway
Phase 2 (EMG2)**

Document DCO 6.15/MCO 6.15

ENVIRONMENTAL STATEMENT

Main Statement

Chapter 15

Agriculture and Soils

October 2025

15

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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15. Agriculture and Soils

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15.1. Introduction

15.1.1. This Chapter considers the potential for significant environmental effects upon soil resources, agricultural land quality and agricultural land users arising from the EMG2 Project. 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** of that chapter.

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

Table 15.1: 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).

15.1.3. In the case of agriculture and soils, the only aspect of the EMG2 Project which is relevant is the EMG2 Works component of the DCO Application, apart from the small area of land within the EMG2 Works that is proposed for a sub-station upgrade. This Chapter relates therefore solely to the EMG2 Main Site and the Community Park elements of the EMG2 Works, both of which currently comprise agricultural land.

- 15.1.4. The Highway Works within the DCO Application, and the EMG1 Works which forms the MCO Application are scoped out as they contain either hardstanding or land that provides no agricultural land resource.
- 15.1.5. This Chapter therefore solely relates to the DCO Application and not the MCO Application.
- 15.1.6. This Chapter is supported by the following appendices:
- Soils and Agricultural Land Quality Report (**Appendix 15A**) (**Document DCO 6.15A**);
 - EMG2 Works Land Ownership Plan (**Appendix 15B**) (**Document DCO 6.15B**); and
 - Soil Resource Management Plan (**Appendix 15C**) (**Document DCO 6.15C**).

15.2. Scope and Methodology of the Assessment

15.2.1. The approach to the assessment of effects on soils and agriculture has been developed over a number of years with reference to a number of sources of published guidance including:

- ICE (2019) Environmental Impact Assessment Handbook¹;
- IEMA Guide (2022). A New Perspective on Land and Soil in Environmental Impact Assessment²;
- DMRB (2019) LA109 Geology and Soils³;
- Environment Agency (2023) LCRM⁴; and
- Natural England (2012) TIN049 ALC⁵.

15.2.2. Reflecting this guidance and in formulating the approach to assessment in this chapter, 'moderate' and 'major' effects are those regarded as significant. Impacts of a project can be: adverse, causing negative impacts on a receptor; beneficial, resulting in advantageous or positive impacts on a receptor; or negligible. They are further explained in the sections below.

Agricultural land

15.2.3. Assessment of the effects of development on the agricultural land resource focus on potential losses of Best and Most Versatile land (ALC land Grade 1 to Subgrade 3a). This is in line with guidance in the National Planning Policy Framework (2024) (NPPF) and National Planning Practice Guidance (2024) as set out further within Section 3 of this Chapter. The broad principles and justifications for the approach taken are as follows:

- i. Lower quality land is not afforded protection from development in the planning system of England and Wales and therefore losses of lower quality land are not considered significant, regardless of the magnitude of loss.
- ii. ALC Grade 1 (excellent) and Grade 2 (very good) quality land is relatively scarce both nationally and regionally and is regarded as very high sensitivity. Subgrade 3a (good) quality land is more common but sits within the Best and Most Versatile Category, this land is regarded as high sensitivity.
- iii. The critical threshold for significance is considered to be 20 ha. This is based on thresholds set out in the Schedule 4, paragraph (y) of the Town and Country Planning (Development Management Procedure) (England) Order 2015 which only requires Natural England to be consulted (on behalf of the Secretary of

¹ Carroll, B., Fothergill, J., Murphy, J., & Turpin, T. (2019). Environmental Impact Assessment Handbook. ICE Publishing

² Institute of Environmental Management & Assessment (IEMA). (2022). A New Perspective on Land and Soil in Environmental Impact Assessment. IEMA

³ Highways England (2019) LA 109 Geology and Soils (formerly Design Manual for Roads and Bridges, Volume 11, Section 3)

⁴ Environment Agency. (2023). Land Contamination Risk Management (LCRM).

<https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm>

⁵ Natural England (2012) Agricultural Land Classification: Protecting the Best and Most Versatile Agricultural Land, Technical Information Note TIN049

State for the Environment, Food and Rural Affairs) on development that is not in accordance with the development plan and that involves the loss of not less than 20 ha of Grades 1, 2 or 3a agricultural land. Accordingly, a loss of 20 ha or more of Best and Most Versatile Land is always considered significant and is consistent with the IEMA Guide and EIA handbook.

Soils

- 15.2.4. The approach taken accords with the soil functions approach outlined in the IEMA Guide (2022). The key consideration is whether, as a critical finite resource, soils are available in suitable condition and sufficient volume to fulfil their key functions post development. This approach acknowledges that many types of built development generate large surpluses of soil and maximising their function in reuse (e.g. by exporting elsewhere) is not always a more sustainable approach than retaining them on-site with lower function. The key consideration in these circumstances is ensuring sufficient volume of quality soil is retained on site to fulfil proposed after-uses such as landscaping and habitat creation.

Consultation

- 15.2.5. A summary of the PINS **Scoping Opinion (Document DCO 6.1D)** in relation to agriculture and soils and how it has been addressed is set out in **Table 15.2** below.

Table 15.2: Summary of PINS Scoping Opinion Response

PINS ID	Description / Theme	Inspectorate's Comment	How and where addressed?
3.8.1	Impacts on agricultural land from rail freight expansion land and wider highway network improvements	The Scoping Report states that there would be no impact on agricultural land as a result of the proposals for the rail freight expansion land and land required for the highway network. The extent of highways works is subject to review and refinement as the transport assessment is finalised. The Inspectorate agrees that loss of agricultural land is unlikely to occur as a result of the highway network improvements, however, and can be scoped out of further consideration. The Inspectorate notes in the Scoping Report Site Description, paragraph 3.7, however, that the Proposed Development description includes reference to 'undeveloped land' within the area proposed for rail freight	Paragraph 15.1.1 confirms that the Highway Works and the EMG1 Works areas do not contain any agricultural land or soil resources and are therefore scoped out of this assessment. The land to be used for the EMG1 Works is described in Chapter 2: Site and Surroundings which makes clear that it is not agricultural land.

PINS ID	Description / Theme	Inspectorate's Comment	How and where addressed?
		expansion north of East Midlands Airport. No details are supplied of the spatial extent of this undeveloped land nor its current land use. The ES should confirm the current land use for the rail freight expansion, whether it is agricultural land and if so, confirm its classification. Where agricultural land is identified, this should be included in the assessment of effects within the ES.	
3.8.2	Loss of Best and Most Versatile (BMV) agricultural land	The ES should contain a clear tabulation of the areas of land in each BMV classification to be temporarily or permanently lost as a result of the Proposed Development, with reference to accompanying map(s) depicting the grades. Specific justification for the use of the land by grade should be provided. Consideration should be given to explaining the use of BMV land in the Applicant's discussion of alternatives.	The areas of land in each BMV classification to be temporarily or permanently lost as a result of the Scheme are tabulated at Table 15.5 and mapped within Appendix 15A. Consideration of alternatives is set out within Chapter 4 of this ES.

- 15.2.6. 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.
- 15.2.7. The responses received to the statutory consultation exercise are summarised within **Table 15.3** below, accompanied by how the responses have been addressed.

Table 15.3 Statutory Consultation Commentary

Originator	Comment, Description or Theme	How and where addressed
Natural England	NE confirmed ALC survey was robust and has no concerns over the validity of the survey. NE also support use of Technical Information Note 049. The ES and the associated Soil Management Plan need to demonstrate how the ALC grades and soil types will inform soil handling and restoration, setting out the site	Noted.

Originator	Comment, Description or Theme	How and where addressed
	specific mitigation with reference to best practice guidance.	
Natural England	NE advised that they disagree with the initial conclusions on the effect of a loss of 20ha of BMV and that magnitude of impact should follow the ICE (2019) EIA handbook and IEMA guidelines (2022). In this regard NE advised they disagree with the statement that there is no widely accepted assessment criteria and refer to using the approach above. NE also disagree with the initial cumulative impacts assessment which should be considered against the national BMV figure.	The methodology used in this Chapter is robust and finds the loss of 20 ha of BMV land to be significant which is consistent with the IEMA guidelines. The only difference in methodology used is in relation to the magnitudes for the loss of 3b land, which is not found significant because this is not a protected resource in National Planning Policy or in Natural England thresholds. Soil functions are considered as part of soil resources through the ability of soil types to provide habitat/landscapes. The cumulative impact assessment has been undertaken in line with IEMA guidance.
Natural England	NE supports reference to using a Soil Management Plan and provides guidance on what such could contain.	Noted. A Soil Resource Management Plan is included within Appendix 15C (Document DCO 6.15C) and the guidance has been followed in its production.
Natural England	NE notes that the NN NPS should be referenced as relevant policy in addition to NPPF and local plan policy.	This Chapter includes relevant paragraphs from the NN NPS in the policy section at paragraph 15.3.

15.2.8. A period of further (non-statutory) consultation was undertaken in July 2025. This included the presentation of updated draft application material for the EMG2 Project, including updated draft ES Chapters.

15.2.9. One response was received with regard to this Chapter and is summarised within **Table 15.4** below, accompanied by how the response has been addressed.

Table 15.4 Further Consultation Commentary

Originator	Comment, Description or Theme	How and where addressed
Natural England	Natural England advised that although they welcome reference to the guidance on assessing BMV that is now referenced in the draft chapter, they note that there remain multiple instances in the	This Chapter has been reviewed throughout to bring the BMV assessment in line with Natural England's comments.

Originator	Comment, Description or Theme	How and where addressed
	chapter where the proposed methodology doesn't follow the guidance that is listed. This includes the scale of magnitude thresholds, and the downgrading of grade 3a land sensitivity based on its availability in the local area. Therefore, many of the previous comments relating to BMV assessment remain.	

Study Area

- 15.2.10. As noted at Paragraph 15.1.1, this Chapter assesses the effects on soils and agriculture, therefore the study area comprises the EMG2 Works within the DCO Application, apart from the small area of land within the EMG2 Works that is proposed for a sub-station upgrade. The Highway Works within the DCO Application and the EMG1 Works within the MCO Application do not contain any agricultural land or soil resources and are therefore scoped out of this assessment.

Receptor Sensitivity/Value

- 15.2.11. The following section expands on the general significance criteria guidance set out within **Chapter 1: Introduction and Scope** of this ES (**Document DCO 6.1**), but with specific reference to agriculture and soils. This section identifies the criteria that has been used to establish the sensitivity of receptors, magnitude of impact and significance of effect.
- 15.2.12. *Best and most versatile* agricultural land (i.e. Grades 1, 2 and 3a on Ministry of Agriculture, Fisheries and Food's (MAFF) 1988 Agricultural Land Classification (ALC) system) is considered to be a finite national resource, is given special consideration in national policy, and can be considered to be of higher sensitivity than land in Grades 3b, 4 and 5. The best land (Grades 1 and 2) is considered very high sensitivity and Subgrade 3a is considered high sensitivity. The loss of lower quality land is considered of lower sensitivity under the planning system of England and Wales.
- 15.2.13. The assessment of impacts on soil follows a soil functions approach as recommended in the IEMA 2022 Guidance. This approach assesses the effect on one or more soil functions that soils are required to perform. The initial primary function of the soils forming agricultural land is regarded as food and agricultural production, with secondary functions including mitigating flood risk and supporting soil biodiversity.
- 15.2.14. Following land use change as part of a development, the primary soil functions would be expected to change. The nature of these post-development functions is dependent on the type of the development. In this instance it is determined that soil would primarily be required to support plant growth and soil biodiversity (landscaping, gardens, allotments and habitat areas) and to mitigate surface water flooding risk.

- 15.2.15. All natural soils are finite resources, but where sites are to be developed, their quality as a resource for reuse varies. Medium and coarse loamy soils are regarded as of higher value for reuse and so of the highest sensitivity, since these soils are most effective at mitigating the effects of flooding and are of highest quality for reuse in gardens and planting schemes (also the most likely to meet British Standards criteria for use at other sites). Lower quality soils, such as sandy or clayey topsoils, are susceptible to damage and less valuable if soil function is lost in this context.
- 15.2.16. Permeable coarse or medium textured subsoils are reusable for planting schemes (e.g. to support tree growth) and have a greater function in mitigating the effects of flooding than heavy and slowly permeable subsoils. In some instances, soils have important properties which make them able to support rare habitats (e.g. species diverse calcareous grassland or lowland heath habitats).
- 15.2.17. Agricultural businesses which have a secure long-term tenancy are more likely to invest resources in land improvement and related infrastructure, in the knowledge that they will receive a return on this investment. Consequently, agricultural businesses operating on land under long term agreements are considered as of greater sensitivity to loss, see **Table 15.5** below.

Table 15.5: Sensitivity/Value Criteria

Sensitivity	Agricultural land	Soil Resource	Land users
Very high	Grades 1, 2	Permeable coarse loamy and medium loamy soils, or other soils capable of supporting valuable habitats.	-
High	Subgrade 3a	Fine textured or sandy topsoils not capable of supporting valuable habitats	Long-term Agricultural Holdings Act tenant.
Medium	Subgrade 3b	Slowly permeable soils	Mixed business farming some owned and some medium- or short- term rented land.
Low	Grades 4 and 5	Damaged or contaminated soils.	Full time owner-occupied farm business that will gain sufficiently from sale of land to be economically unaffected OR agricultural user on a short-term tenancy or licence.
Negligible	Other land	No natural soils	-

Magnitude of Impact

- 15.2.18. The magnitude of impact on topsoil resources assumes that, as a valuable finite resource, the requirement should be to protect topsoils from damage. However, since built

developments often generate large surpluses of topsoil, the primary requirement is considered to be that sufficient topsoil should be protected to complete all on-site landscaping/greenspace requirements (provided the baseline resource is suitable for the proposed uses). Failure to do so is regarded as a major magnitude effect. If all topsoil is protected from damage, the effect is regarded as negligible. As few built developments are likely to require more than 50% of topsoil for reuse, losses below this figure are regarded as minor.

- 15.2.19. In considering the magnitude of impact on compaction, it is important to consider that subsoil compaction under greenspace areas increases flood risk (and is not typically accounted for in sustainable drainage system (SuDS) design). Severe compaction is also likely to adversely affect the success of landscaping/ecological planting schemes. Magnitude is considered as a percentage of the development scheme. Compaction of greater than 10% of the site is considered as major magnitude as it is likely to result in tangible increases in runoff volumes, of a magnitude which could affect the efficacy of SuDS design capacity.
- 15.2.20. The magnitude of impact on best and most versatile agricultural land quality will depend on the amount to be taken by the proposed development. Schedule 4, paragraph (y) of the Town and Country Planning (Development Management Procedure) (England) Order 2015 only requires Natural England to be consulted (on behalf of the Secretary of State for the Environment, Food and Rural Affairs) on development that is not in accordance with the development plan and that involves the loss of not less than 20 ha of grades 1, 2 or 3a agricultural land. Losses of BMV land greater than 20 ha are considered to be significant.
- 15.2.21. In considering the magnitude of the impact on agricultural land users and farm businesses it is necessary to consider what proportion of the land utilised by the business will be taken by the proposed development, whether the farm will remain a viable business after development is complete and how much restructuring might be necessary as a result of the proposed development. Where land is farmed by the owners of the land, and the sale is voluntary (rather than by compulsory acquisition) the effect is considered beneficial, and no further assessment is made. This is also the case where land is leased from the owner for mineral extraction. **Table 15.6** below gives examples of adverse effects of different magnitude.

Table 15.6: Magnitude of Impacts

Receptor	Magnitude			
	High	Medium	Low	Negligible
Soil resource	Loss of >80% of topsoil resources and insufficient topsoil protected for on-site uses. Subsoil compaction of >10% of Site.	Loss or irreversible damage to 50-80% of topsoil resources. Compaction of 5-10% of subsoils.	Loss or irreversible damage to <50% of topsoil resources. Compaction of <5% of subsoils.	Only minor disturbance of soils within the Site.

Agricultural land quality	Irreversible loss of >20 ha of agricultural land.	Irreversible loss of 5-20 ha of agricultural land.	Irreversible loss of 1-5 ha of agricultural land.	Irreversible loss of <1 ha of agricultural land.
Agricultural land user	Full-time farm business rendered unworkable and unviable. The farmer will have to seek alternative means of income.	Reduction in net farm income requiring such that substantial restructuring is required.	Reduction in net farm income that only minor restructuring is necessary.	Minimal effects, such as changed field accesses, not necessitating farm restructuring.

Significance of Effect

- 15.2.22. Significance of effect has been determined with reference to the sensitivity of the asset affected and the magnitude of the impact. **Table 15.7** below provides a matrix to act as a guide to determining significance.
- 15.2.23. The matrix is not intended to mechanise judgement of the significance of effect, but to act as a check to ensure that judgements regarding sensitivity, magnitude of impact and significance of effect are reasonable and balanced to allow for professional judgement. In some cases, the matrix allows a choice of significance of effect when a magnitude of impact and a value are combined. In these cases, the individual attributes of a specific asset, along with any relevant site-specific factors and consideration of other influencing elements, have been taken into account when determining which is the most appropriate significance of effect to apply.
- 15.2.24. Exercising professional judgement, a “significant” effect in terms of the EIA Regulations is considered to be one of moderate significance or above. All effects that are considered to be significant with regard to the EIA Regulations are highlighted with an asterisk in **Table 15.7** below.

Table 15.7: Significance matrix

Magnitude	Sensitivity				
	Very high	High	Medium	Low	Negligible
High	Major*	Major*	Moderate*	Minor	Minor
Medium	Major*	Major*	Moderate*	Minor	Minor
Low	Moderate*	Minor	Minor	Minor	Negligible
Negligible	Minor	Minor	Minor	Negligible	Negligible

Limitations and Assumptions

- 15.2.25. The assessment methodology used in this Chapter has been developed by LRA over a number of years and been found to be robust and agreed as acceptable on many previous proposals and EIAs with consultees and Local Planning Authorities. The approach has been accepted on a number of schemes in Leicestershire most recently including Padge Hall Farm, Hinckley (June 2023). Impact magnitudes for loss of best and most versatile land relate to consultation thresholds in Technical Information Note 049 (TIN049), published by Natural England to provide general guidance. Impact decisions can also be based on the loss of such land in relation to the quantum of best and most versatile land in the local area.

15.3. Policy, Guidance and Legislative Context

- 15.3.1. The following summarises the planning policy and guidance which is considered relevant to this Chapter in relation to the DCO Scheme.

National Policy Statement National Networks (NPS)

- 15.3.2. The National Networks National Policy Statement (NPS) (Department for Transport, 2024) sets out the UK Government's policy for the delivery of nationally significant road and rail networks. It sets out requirements for assessing agricultural land and its mitigation.

- 15.3.3. Paragraph 5.189 states that:

"Applicants should take into account the economic and other benefits of the best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification). Where significant development of agricultural land is demonstrated to be necessary, applicants should seek to use areas of poorer quality land in preference to that of a higher quality. Applicants should also identify any effects, and seek to minimise impacts, on soil health and protect and improve soils, taking into account any mitigation measures proposed. Soil is an important natural capital resource, providing many essential services such as storing carbon (also known as a carbon sink), reducing the risk of flooding, providing wildlife habitats and delivering global food supplies. Guidance on sustainable soil management can be found in Defra's Construction Code of Practice for the Sustainable Use of Soils on Construction Sites."

- 15.3.4. Paragraph 5.190 states:

"The Agricultural Land Classification is the only approved system for grading agricultural quality in England and Wales. If necessary, field surveys should be used to establish the Agricultural Land Classification grades in accordance with the current grading criteria, or any successor to it and identify the soil types to inform soil management at the construction, operation and 91 decommissioning phases in line with the Defra Construction Code. Applicants are encouraged to develop and implement a Soil Resources and Management Plan which could help to use and manage soils sustainably and minimise adverse impacts on soil health and potential land contamination. This is to be in line with the ambition set out in the Environmental Improvement Plan for sustainable management of agricultural soils."

- 15.3.5. In relation to mitigation, the NPS states at Paragraph 15.192 that:

"Applicants can avoid, or minimise, the direct effects of a project on the existing use of the proposed site or proposed uses near the site, by the application of good design principles, including the layout of the project and the protection of soils during construction."

National Planning Policy Framework

15.3.6. The National Planning Policy Framework (2024) states in Chapter 15, paragraph 187 that:

"Planning policies and decisions should contribute to and enhance the natural and local environment by:

a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land"

15.3.7. Paragraph 188 states that:

"Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework"

15.3.8. At Footnote 65, the NPPF states that:

"Where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality"

Local Planning Policy

15.3.9. The North West Leicestershire Local Plan 2011-2031 (adopted 2021) is the adopted development plan for the District and the relevant policies are set out below.

15.3.10. Policy En6 states that:

"Development should avoid any unacceptably adverse impact upon soils of high environmental value (for example wetland and other specific soils) and ensure that soil resources are conserved and managed in a sustainable way."

15.3.11. The supporting text at Paragraph 5.40 under Policy S3 – Countryside states:

"Whilst policy seeks to facilitate the diversification of the rural economy, there are also benefits to the protection of the best and most versatile agricultural land. Where appropriate we shall seek the use of areas of poorer quality land in preference to that of agricultural land of a higher quality."

15.4. Approach to Assessment of Applications

- 15.4.1. As explained in full within **Chapter 1: Introduction and Scope (Document DCO 6.1/MCO 6.1)**, a single ES has been prepared covering both the DCO Application and the MCO Application with each chapter assessing the impacts arising from the DCO Application and MCO Application separately and then together as the EMG2 Project in combination.
- 15.4.2. In the case of agriculture and soils, only the EMG2 Works site (excluding the land on which the EMG1 substation is located) currently comprises agricultural land. As explained at Paragraph 15.1.3 of this Chapter, the Highways Works (part of the DCO Scheme) and the MCO Scheme have therefore been scoped out from the assessment of agriculture and soils.
- 15.4.3. The subsequent sections consequently solely relate to the EMG2 Works (excluding the EMG1 substation) and are structured as follows:
- An Assessment of the EMG2 Works within Section 15.5;
 - An Assessment of the EMG2 Works in combination with other planned development (i.e. the cumulative effects), within Section 15.6; and
 - An overall summary and conclusions of the above within Section 15.7.

15.5. Assessment of DCO Application

Baseline Conditions

Soil Resources

- 15.5.1. The land for the EMG2 Works has three main soil types: coarse loams; loamy over slowly permeable soils; and heavy slowly permeable soils. The coarse loamy soils comprise sandy loam topsoil and subsoil that overlie clay at depth and are moderately-freely to imperfectly draining. The loamy and heavy slowly permeable soils overlie reddish dense clay at shallower depth and tend to be less well draining (imperfectly to poorly-draining). Full details of the soil types can be found in the Soils and Agricultural Land Quality Report provided as **Appendix 15A (Document DCO 6.15A)**.

Agricultural Land Quality

- 15.5.2. The agricultural quality of the land for the EMG2 Works is a combination of Grades 1, 2, Subgrade 3a and Subgrade 3b. The land is predominantly limited by wetness constraints. The better draining land where coarse loams and fine loams have clay at depth gives 35.2 ha of higher quality agricultural land, best and most versatile land (Grade 1 – Subgrade 3a). The heavy soils directly over slowly permeable clays comprises 64.2 ha of poorly draining land of Subgrade 3b agricultural quality. Full details can be found in the Soils and Agricultural Land Quality report, **Appendix 15A (Document DCO 6.15A)**. The grade areas are provided in **Table 15.8** below and their distribution is shown on Map 3 in **Appendix 15A (Document DCO 6.15A)**.

Table 15.8: Areas of different land grades

Grade/Subgrade	Area (ha)	% of the land
Grade 1	2.0	2
Grade 2	6.4	6
Subgrade 3a	26.8	27
Subgrade 3b	64.2	64
Non agricultural	0.9	1
Total	100.3	100

Agricultural Land Users

- 15.5.3. There are four landowners of the land for the EMG2 Works (excluding, as indicated above, the EMG1 substation land), hereafter referred to as Landowner 1, Landowner 2, Landowner 3 and Landowner 4 (see **Appendix 15B** for a plan of landownerships) (**Document DCO 6.15B**).

- 15.5.4. Landowners 1 and 2 own parcels of land to the north of Hyam's Lane, both of whom rent out their land on a short term tenancy agreement to a local farmer (being the former owner of parcel 2).
- 15.5.5. Landowner 3 owns and farms all land to the south of Hyam's Lane.
- 15.5.6. Landowner 4 owns and manages land in the north-east corner of the EMG1 Main Site.

Potential Impacts

Construction Phase

Soil resources

- 15.5.7. The EMG2 Works could potentially result in the loss of all topsoils within the construction area during stripping and stockpiling if not carefully managed. It could also mean that there is insufficient soil resources are available to complete landscaping. These are permanent effects.
- 15.5.8. The proportion of proposed built development is approximately 60% of the total EMG2 Works. The remaining 40% comprises green infrastructure and SUDS attenuation basins. There is a risk that the subsoils of the green infrastructure included within the EMG2 Works surrounding the built development could become compacted through handling and trafficking (40%). Such compaction would adversely affect drainage and would lead to increased surface water flood risk (beyond that mitigated by proposed SUDS schemes). It would also restrict rooting depth and affect the success of proposed planting schemes.
- 15.5.9. The soil resources within the land for the EMG2 Works are considered to be medium sensitivity receptors. The potential loss of all topsoil resources and compaction of 40% of subsoils is a major magnitude. This is a potential major adverse impact of the EMG2 Works.

Agricultural Land Quality

- 15.5.10. The loss of the agricultural land resource will be progressive through construction. The significance of this impact is considered post-completion, at which point all land will be removed from agricultural use (a long term effect).

Agricultural Land User

- 15.5.11. The agricultural land will be sold or compulsorily acquired prior to the construction phase starting. Landowners 1, 2, 3 and 4 are all low sensitivity receptors as owners of land or farm businesses that will receive financial compensation from the acquisition of the land. There are no adverse effects from the acquisition of the land and these receptors are not considered further.
- 15.5.12. The tenant farmer north of Hyam's Lane will lose this land held on a short term tenancy which is low sensitivity due to the nature of the tenancy not offering long term security or investment. The loss of this area will have a negligible affect on the farmer's wider business

following the financial compensation from the acquisition of other land within the EMG2 Works. This is a negligible effect of the EMG2 Works.

Operational Phase

Soil Resources

- 15.5.13. Any adverse impacts caused during construction will be remediated in line with the Soil Resource Management Plan (see paragraph 15.5.15 below) and will result in a negligible effect.

Agricultural Land Quality

- 15.5.14. There will be a medium magnitude loss of 8.4 ha of very high sensitivity Grade 1 and 2 land and a high magnitude loss of 26.8 ha of high sensitivity Subgrade 3a agricultural quality land. This permanent loss of best and most versatile agricultural land equates to a significant major adverse effect of the EMG2 Works.

Mitigation Measures

Soil Resources

- 15.5.15. A site-specific Soil Resource Management Plan (SRMP) has been prepared in accordance with the Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites and is provided as **Appendix 15C** to this ES (**Document DCO 6.15C**). Adherence to the SRMP will protect soil resources ensuring their availability for use in landscaping and maintaining subsoil drainage through preventing compaction. This would be a negligible magnitude effect of only minor disturbance to a medium sensitivity receptor, resulting in a negligible effect of the EMG2 Works.

Agricultural Land Quality

- 15.5.16. There is no on-site mitigation available to offset the loss of agricultural land for built development. Therefore, the only mitigation possible would be to provide the development elsewhere, and this matter is considered in this ES at **Chapter 4: Consideration of Alternatives (Document DCO 6.4)**. Given the scale and locational requirements of such development, it is clear from **Chapter 4** that any alternative site would also involve loss of agricultural land of similar or greater quality.

Agricultural Land Users

- 15.5.17. The landowners will be financially reimbursed through the acquisition of the land. Therefore, no additional mitigation is required or identified.

Residual Effects

Soil Resources

- 15.5.18. Adherence to the SRMP as provided at **Appendix 15C** of the ES (**Document DCO 6.15C**) will protect the soil resources and result in negligible effects arising from the EMG2 Works.

Agricultural Land Quality

- 15.5.19. The permanent loss of BMV land remains a significant major adverse effect arising from the EMG2 Works.

Agricultural Land Users

- 15.5.20. The EMG2 Works has a negligible effect to land users / owners.

15.6. Cumulative Impacts

15.6.1. Soil and agricultural land are finite resources and an agreed methodology for the cumulative effects of their loss has not yet been established. It is proposed in the IEMA guidelines that the loss of BMV land is compared to the change in national and regional average land loss over a set period of time. The data for the change in land use over three years (2019-2022)⁶ has been used in **Table 15.9** and **Table 15.10** below. It is estimated that 42% of the agricultural land in England and Wales is BMV quality⁷. The guidance proposes that contribution to more than 1% of the average five year national land loss would be significant, however there is not a database for this yet.

Table 15.9: Regional cumulative losses of undeveloped and agricultural land

	NW Leicestershire			Proposed Development			
Type Of Land Loss	3-yr average undeveloped land loss in NWL (ha)	3-yr average Agricultural land loss in NWL (ha)	3-yr average BMV land loss in NWL (ha)	Area (ha)	Proportion of 3-yr average undeveloped land loss in NWL (%)	Proportion of 3-yr average agricultural land loss in NWL (%)	Proportion of 3-yr average BMV land loss in NWL (%)
Undeveloped	442	-	-	100.3	23%		
Agricultural	-	225	-	99.4		15%	
BMV	-	-	94.5	35.2			37%

Table 15.10: National cumulative losses of undeveloped and agricultural land

	England			Proposed Development			
Type Of Land Loss	3-yr average undeveloped land loss in England (ha)	3-yr average Agricultural land loss in England (ha)	3-yr average BMV land loss in England (ha)	Area (ha)	Proportion of 3-yr average undeveloped land loss in England (%)	Proportion of 3-yr average agricultural land loss in England (%)	Proportion of 3-yr average BMV land loss in England (%)
Undeveloped	48,491	-	-	100.3	0.21%		
Agricultural	-	26,303	-	99.4		0.38%	
BMV	-	-	11,047	35.2			0.32%

15.6.2. The data shows the development of the EMG2 Works will have a significant cumulative effect to the regional BMV land loss (37%). The data shows the EMG2 Works will not have a significant cumulative effect to the national stock of BMV land.

⁶ Live tables on land use change statistics – GOV.UK (www.gov.uk)

⁷ MAFF press notice (1996), based on analysis undertaken in 1994 by ADAS 'Revised statistics for the proportion of ALC grades', for the revised (1988) ALC system.

- 15.6.3. Following mitigation, regarding soil management and principally preventing soil compaction and its potential impacts in relation to drainage, landscaping and ecology, it is considered that there would be no intra-project (combined) effects.

15.7. Summary of Effects and Conclusions

- 15.7.1. This Chapter solely relates to the DCO Application as only the EMG2 Works component of the DCO Application (excluding the land on which the EMG1 substation is situated) includes agricultural land. The Highway Works within the DCO Application, and the EMG1 Works within the MCO Application are scoped out as they contain no agricultural land resource.
- 15.7.2. The assessment concludes there would be a negligible effect on soil resources subject to adherence to the Soil Resource Management Plan (SRMP) at **Appendix 15C** of the ES (**Document DCO 6.15C**) arising from the EMG2 Works.
- 15.7.3. The assessment concludes that there will be a loss of 35.2ha of best and most versatile (BMV) agricultural land. The loss of BMV has been assessed as a permanent significant major adverse effect of the DCO Application arising from the EMG2 Works. There is no on-site mitigation available to offset this loss without fundamentally altering the EMG2 Works.
- 15.7.4. The assessment concludes that EMG2 Works has a negligible effect on the landowners / users of the land on which the EMG2 Works are situated as they will be reimbursed financially through the acquisition of the land.