East Midlands Gateway
Phase 2 (EMG2)

Document DCO 6.19E/MCO 6.19E

ENVIRONMENTAL STATEMENT

Volume 2 Technical Appendices

Appendix 19E

Carbon Management Plan

July 2025

19

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

SEGRO.COM/SLPEMG2

SEGRO

SEGRO LOGISTICS PARK

EAST MIDLANDS GATEWAY PHASE 2 (EMG2)

Environmental Statement: Appendix 19E – Carbon Management Plan

794-PLN-ESH-00144
June 2025

rpsgroup.com

Document status

Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
0	First Draft	TM	AP	[Text]	[Text]

Approval for issue

[Name]	[Signature]	June 2025

Prepared by:

RPS

Tomos Murray
Consultant - EIA and Sustainability

101 Park Drive
Milton Park
Abingdon, Oxfordshire OX14 4RY

T +44 1235 821 888
E tomos.murray@rps.tetratech.com

Prepared for:

SEGRO (Properties) Ltd

Ian Rigby
Director, Technical Development, National Markets

Two Friargate
Station Square
Coventry, CV1 2GN

T +44 2475 52 9740
E ian.rigby@segro.com

Contents

Tables

1 INTRODUCTION

1.1 Overview

1.1.1 This appendix to Chapter 19: Climate Change (**Document DCO/MCO 6.19**) forms the Carbon Management Plan for the **EMG2 Project**. It sets out how the Applicant will minimise greenhouse gas (GHG) emissions throughout the lifecycle of the **EMG2 Project**, including from embodied carbon associated with construction materials and activities, and operational emissions associated with building energy use, repair and maintenance, and transport movements.

1.1.2 When considering current guidance and standards, the core objectives of this Carbon Management Plan are as follows:

- To outline the foundations for a strategy through the design evolution of the **EMG2 Project** to embed GHG reduction principles across all delivery stages.
- To reduce the whole life carbon footprint of the **EMG2 Project** as low as reasonably practicable by applying the carbon reduction hierarchy, to promote innovation and carbon reductions.
- To identify GHG hotspots to inform design evolution.
- The appointed Principal Contractor, informed by this Plan, will actively identify and pursue carbon reduction opportunities and mitigate carbon risks through all means as part of the integrated **EMG2 Project** development.

1.2 Scope

1.2.1 This Carbon Management Plan illustrates the design considerations made by the Applicant to date to reduce GHG emissions, along with further opportunities which will be considered through the next stages of the **EMG2 Project** lifecycle. Measures committed to as part of the **EMG2 Project** design (embedded mitigation measures) have been listed separately to further mitigation measures, in order to enable the assessment of effects presented in Chapter 19: Climate Change (**Document DCO/MCO 6.19**).

1.2.2 The Plan follows the requirements of the National Networks National Policy Statement (Department for Transport, 2024), which states:

'Having regard to current knowledge, a carbon management plan should be produced as part of the Development Consent Order submission and include:

- *Whole Life Carbon assessment for the project*
- *an explanation of the steps that have been taken to drive down the carbon impacts of the project*
- *how construction and operational emissions and, where applicable, emissions from maintenance activities, have been reduced as much as possible using the carbon reduction hierarchy (e.g., as set out in PAS2080) (recognising that in the case of road projects while the developer can estimate the likely emissions from road traffic, it is not solely responsible for controlling them)*
- *whether and how any residual carbon emissions will be (voluntarily) offset or removed using a recognised framework (any offsetting of emissions should not be included in the Whole Life Carbon Assessment headline figures)*
- *where there are residual emissions, the level of emissions and the impact of those on any relevant statutory carbon budgets'*

1.2.3 The GHGs considered in this Plan are those in the 'Kyoto basket' of global warming gases expressed as their CO_2-equivalent (CO_2e) global warming potential (GWP), listed within Annex A of the Kyoto Protocol (an international treaty to limit and reduce GHGs). This is denoted by CO_2e units in emissions factors and calculation results. GWPs used are typically the 100-year factors in the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (IPCC, 2021) or as otherwise defined for national reporting under the United Nations Framework Convention on Climate Change.

1.2.4 This Plan considers GHG emissions from the Applicant's own direct and indirect activities (Scope 1 and 2 GHG emissions), and value chain (Scope 3) activities of suppliers and customers. These emissions are not separated out by defined scopes (scopes 1, 2 or 3) in the strategy. Roles and responsibilities are set out in section 1.4, which sets out the Applicant's ability to directly reduce emissions, or engage with its value chain to indirectly reduce emissions.

1.2.5 GHG emission reduction measures have been considered in the context of a life cycle assessment (LCA) approach, broken down into the following LCA phases in line with RICS (2023) guidance:

- Materials and construction (A1-A5).
- Operations and maintenance (B1-B8).

1.2.6 Decommissioning emissions (LCA stages C1-C4) have been excluded from the scope of this Carbon Management Plan. The **EMG2 Project** is intended to be a permanent development, and consideration for decommissioning at this stage would be hypothetical in nature (as set out in **Chapter 3: Proposed Development, DCO/MCO Document 6.3**). Further, there would likely be negligible end-of-life emissions associated with plant use on site, disassembly activities and material transport, given anticipated decarbonisation of the construction industry in line with UK net zero goals. Materials used to construct the **EMG2 Project** will be recycled at the end of their lifetime wherever possible, through the specification of recyclable and recycled materials for the buildings and infrastructure. This not only prevents materials from being sent to landfill, but also reduces the need for extraction of primary materials. Material which cannot be recycled might be incinerated or used to produce energy from waste. Decommissioning management items are therefore not addressed further.

1.3 Guidance and Standards

1.3.1 The following standards and guidance have been used to inform the preparation of this Plan:

- PAS 2080 – Carbon Management in Buildings and Infrastructure (BSI, 2023).
- Institute of Environmental Management and Assessment (IEMA) Guide: Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance (IEMA, 2022).

PAS 2080

1.3.2 There are multiple technical requirements in the PAS 2080:2023 technical standard when considering GHG reduction in logistics and infrastructure projects. Key considerations include:

- Following the PAS 2080 carbon reduction hierarchy (set out in Figure 1.1, below), which includes the following:
  - **Avoid**: *align the outcomes of the project and/or programme of work with the net zero transition at the system level and evaluate the basic need at the asset and/or network level. This may include exploring alternative means for satisfying the need for whole life performance while not constructing a new asset/network or reusing / retrofitting / repurposing existing ones.*
  - **Switch**: *assess alternative solutions and then adopt one that reduces whole life emissions through alternative scope, design approach, materials, technologies for operational carbon reduction, among others, while satisfying the whole life performance requirements. This may also include employing innovative models that optimize the balance between capital, resource use, operational and user efficiency of an asset / network.*
  - **Improve**: *identify and adopt solutions and techniques that improve the use of resources and design life of an asset/network, including applying circular economy principles to assess materials/products in terms of their potential for reuse or recycling after end of life. This includes efficiency measures for the use stage of an asset / network, and is not limited to material resources and other design and construction efficiencies. In identifying appropriate low-carbon solutions, priority should be given to solutions that promote network and system decarbonization as far as possible.*

- Implementing a carbon management process to help an organisation meet the requirements of PAS 2080 when delivering assets and/or programmes of work.
- Quantifying, assessing and reporting a scheme's carbon emissions to inform scheme development and overall asset management.
- Engaging with other value chain members, as early as possible, in a collaborative way to identify whole life low carbon solutions, including the selection of relevant low carbon materials and products, innovative design solutions and construction methods.
- Defining the specific carbon management actions to be undertaken, and the key strategies and approaches to implement the culture and behaviour changes necessary for delivering carbon reduction, specifically:
  - collaborative working across the value chain;
  - implementing the carbon reduction hierarchy when identifying potential opportunities to reduce carbon; and
  - raising major carbon challenges to design development and construction planning, where key carbon risks are identified.

1.3.3 This Plan follows a data collection and analysis methodology which adheres to the requirements of the PAS 2080 standard. The Plan assesses carbon use for the whole lifecycle of the **EMG2 Project** and promotes embodied carbon management and commitment to achieving carbon reductions.

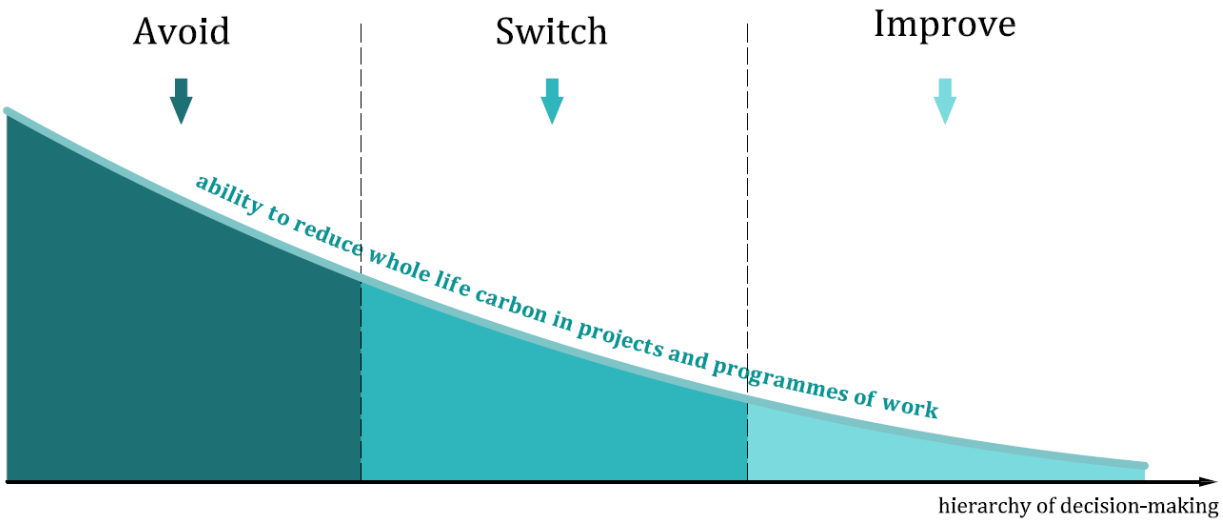

Figure 1.1: The PAS 2080 Carbon Reduction Hierarchy. Reproduced from Figure 5 of BSI (2023)

IEMA Guidance on Greenhouse Gas Emissions and Evaluating their Significance

1.3.4 The ability to reduce whole life GHG emissions in projects reduces as the design and implementation of a project progresses. This makes it important that emissions reduction measures are considered from the outset or at the earliest practical point of design.

1.3.5 The need to ensure that GHG mitigation measures are implemented does not end at the pre-application Environmental Impact Assessment (EIA) stage, but extends after consent has been granted for a project, and remains throughout the project lifetime.

1.3.6 The IEMA GHG Management Hierarchy provides a priority for reducing GHG emissions: eliminate, reduce, substitute and compensate. The IEMA (2022) GHG in EIA Guidance provides a variation of these steps for practitioners in EIA to follow to identify opportunities that direct GHG mitigation action for a project:

- *'Do not build: evaluate the basic need for the proposed project and explore alternative approaches to achieve the desired outcome/s;*
- *Build less: realise potential for re-using and/or refurbishing existing assets to reduce the extent of new construction required;*
- *Design clever: apply low carbon solutions (including technologies, materials and products) to minimise resource consumption and embodied carbon during the construction, operation, user's use of the project, and at end-of-life;*
- *Construct efficiently: use techniques (e.g., during construction and operation) that reduce resource consumption and associated GHG emissions over the life cycle of the project; and*
- *Offset and remove emissions: as a complementary strategy to the above, adopt off-site or on-site means to offset and/or sequester GHG emissions to compensate for GHG emissions arising from the project.'*

1.4 SEGRO's Commitments and Policies

1.4.1 SEGRO recognises that the world faces a climate emergency and is committed to playing its part in tackling climate change, by limiting global temperature rise to less than 1.5 degrees, in tandem with growth in its business and the wider economy.

1.4.2 One of SEGRO's strategic priorities, as part of its Responsible SEGRO framework, is "Championing Low Carbon Growth". To deliver this ambition, SEGRO is committed to:

- Calculating the embodied carbon of its buildings and driving reductions through improvements to design and material specification. SEGRO will work with its partners and suppliers to find and deliver innovative, low carbon materials and techniques to further reduce the embodied carbon of its developments. SEGRO will embed sustainability in its developments from the design phase, taking a full life-cycle approach.
- SEGRO will cut the carbon emissions from the buildings it operates whilst also challenging and supporting its customers to reduce theirs, furthering their own sustainability objectives and reducing their operating costs. SEGRO will do this by increasing the use of renewable energy across its portfolio through promoting or supplying green energy tariffs, or directly from increasing its solar generation capacity, and by developing innovative energy efficiency and sustainable transport solutions. SEGRO are committed to reducing the carbon intensity of its operational properties by 40% by 2025 (compared to a 2017 baseline).
- SEGRO does not offset emissions today, and its priority will be to eliminate, as far as possible, all embodied and operating carbon emissions across its portfolio, including Scope 3 emissions. To address any residual carbon, SEGRO will research and implement innovative approaches to carbon absorption and offset, using its scale and resources to create local, authentic and effective ways to capture carbon from the air (SEGRO, 2025).

1.4.3 In addition to these overarching commitments, SEGRO has a set of mandatory sustainability requirements for in scope developments. These include:

- Building Information Modelling (BIM) and Life Cycle Assessments (LCA) for developments over 5,000m^2 of delivered lettable area.
- Aim to deliver development projects with an embodied carbon intensity of less than 320 $kgCO_2e/m^2$.
- Complete one design stage and one post completion LCA.
- Deliver all development projects without gas as a space heating fuel. Air source heat pumps or ground source heat pumps (or most appropriate alternative heat source) is the preferred heating source.
- Continue the implementation of Green Leases (subject to local restrictions), which mandate sharing energy data and support the procurement of renewable electricity.

- All new buildings must be capable of taking 100% PV coverage on the roof, with appropriate generation and export metering. Solar installation is able to support customer needs with excess electricity exported to the grid.
- BREEAM New Construction 'Excellent' or equivalent on all new developments over 5,000m^2 (note that the **EMG2 Project** is targeting BREEAM New Construction 'Outstanding') (SEGRO, 2023).

1.5 Roles and Responsibilities

Construction

1.5.1 SEGRO will be responsible for appointing the Principal Contractor, briefing the Principal Contractor on SEGRO's mandatory sustainability requirements, and providing the Principal Contractor with documentation needed to understand and adhere to the detailed requirements of SEGRO's sustainability objectives. Documentation detailing SEGRO's requirements and expectations includes, but is not limited to:

- This Carbon Management Plan
- SEGRO's Mandatory Sustainability Policy
- SEGRO's Life Cycle Assessment (LCA) methodology
- SEGRO's Base Build Specification

1.5.2 The Principal Contractor will be responsible for the delivery of the construction of the **EMG2 Project** in accordance with the aims of this Plan and SEGRO's minimum sustainability requirements. The Principal Contractor will also:

- Ensure all sub-contractors are briefed on the aims of the Plan and sustainability requirements as relevant, and will coordinate the works of each sub-contractor.
- Communicate carbon reduction targets with sub-contractors and material suppliers.
- Engage with sub-contractors and material suppliers to evaluate feasibility of emission reduction measures.
- Include, where appropriate, low carbon procurement criteria to support the selection of material suppliers and sub-contractors who can deliver low carbon solutions.

1.5.3 Contractors will be contractually obligated to apply value engineering and incorporate all mitigation measures listed in Section 2.1 below where feasible, to meet SEGRO's minimum sustainability requirements, including achieving building emission intensity limits set out in paragraph 1.4.3.

Operation and Maintenance

1.5.4 SEGRO will include sustainability criteria within procurement contracts for maintenance and repair contractors, where relevant. It is anticipated that tenants will be under a full repairing and insuring lease and therefore all repairs and maintenance would fall under their responsibility.

1.5.5 Maintenance and repair contractors will be responsible for achieving SEGRO's minimum sustainability requirements.

1.5.6 SEGRO will be responsible for the management of tenant leases (including "green lease" clauses), and for the procurement of energy for SEGRO's own use and for tenants for whom electricity is procured on their behalf. SEGRO will also be responsible for the implementation of the Sustainable Transport Strategy, and providing tenants with sufficient information to make best use of the sustainable transport measures implemented as part of the **EMG2 Project**.

1.5.7 Tenants will be responsible for complying with "green lease" clauses within leases.

1.6 Methodology

1.6.1 An initial Whole Life Carbon Assessment (WLCA) was undertaken for the **EMG2 Project**, covering the following elements:

- **DCO Application**:
  - **EMG2 Works**, a new multi-unit logistics/industrial development, including buildings and ancillary infrastructure.
  - **Highway Works**, including improvements at Junction 24 of the M1 and the surrounding road network.
- **MCO Application**:
  - **EMG1 Works**, additional warehousing on Plot 16 together with minor works at the rail-freight terminal, improvements to the public transport interchange and site management building.

1.6.2 The WLCA covered all material emissions sources from construction (A1-A5) and operation and maintenance (B1-B8). Detailed methodology and results are set out in **Chapter 19: Climate Change** (**DCO/MCO Document 6.19**) and the accompanying appendices. This WLCA included core design measures committed to as part of the **EMG2 Project**, in line with the approach to assessment of effects in Chapter 19: Climate Change.

1.6.3 The results of the WLCA identified carbon hotspots for the **EMG2 Project** (see Table 2.2 and Table 2.5), which informed a "longlist" of potential further construction and operation emission reduction measures presented to the Applicant's project and design team at a series of design workshops. This longlist was subsequently developed into a shortlist of feasible design and process measures to be carried out by contractors, where feasible. The shortlist is further detailed below in sections 2.1 and 2.2 for inclusion/consideration by contractors and other responsible parties where feasible, and is considered "further mitigation" for the purposes of assessment of effects in **Chapter 19: Climate Change** (**DCO/MCO Document 6.19**).

1.6.4 The WLCA was subsequently updated, showing the likely magnitude of emissions reductions with these emission reduction measures in place. The results of this WLCA can be found in **Chapter 19: Climate Change** (**DCO/MCO Document 6.19**) within the "Residual Effects" section, which informs the residual significance of the **EMG2 Project** on climate change.

1.6.5 Construction, and operation and maintenance GHG reduction opportunities are set out in Section 2.1 and 2.2 below respectively.

1.6.6 As outlined within Section 1.3, GHG reduction opportunities identified below follow the PAS 2080 Carbon Reduction Hierarchy (i.e. avoid, switch and remove), as shown in Figure 1.1. Priority should be given to emissions removal, followed by carbon and energy reductions, and then to substitution measures. Finally, having considered and implemented the above steps, offsetting should be considered as a final point of emissions reduction.

2 EMISSIONS REDUCTION OPPORTUNITIES

2.1 Construction Reduction Opportunities

2.1.1 The majority of construction-related emissions are projected to arise from the "embodied carbon" within materials used to construct the buildings and associated infrastructure. Other construction-related emissions arise from site activities, including transport of materials to site and plant use on site. Table 2.2 below sets out the construction emissions from the initial WLCA (accounting for the embedded design measures in Table 2.1).

Table 2.1: Embedded Design Measures - Construction

Emissions Source	Project Element	Design Measure
Earthworks and Infrastructure	**EMG2 Project**	The **EMG2 Project** design will minimise the need for slope stabilisation by designing shallow (1 in 3 or shallower) slopes across the **EMG2 Project**. As such, no slope stabilisation measures have been specified in the design.
		A cut/fill balance will be achieved. On-site materials (i.e. excavated soils) will be used for bund creation to minimise the requirement for imported materials.

Table 2.2: Initial WLCA Results - Construction

Project Element	Emissions (tCO_2e)	Percentage of total emissions (%)
DCO Application		
Buildings	190,478	88%
Infrastructure	13,886	6%
Construction transport and site activities	11,449	5%
MCO Application		
Buildings	16,781	91%
Infrastructure	1,517	8%
Construction transport and site activities	193	1%

2.1.2 Further emissions reduction measures have been identified in line with the process set out in Section 1.6 above to reduce the **EMG2 Project** emissions, as set out in Table 2.2. These measures are listed in Table 2.3.

2.1.3 It is anticipated that not all of the further reduction measures will be implemented across the **EMG2 Project**, due to impact on cost, delivery programme and local availability of materials, for example. As such, in line with Section 1.4, the Principal Contractor will be responsible for achieving SEGRO's minimum sustainability requirements (including the building emission intensity limits of 320 $kgCO_2e/m^2$) by engaging with the value chain and applying value engineering, incorporating further reduction measures where feasible. Specific responsibilities for contractors, in line with PAS 2080, are to:

- Communicate carbon reduction targets with sub-contractors and material suppliers.
- Engage with sub-contractors and material suppliers to evaluate the feasibility of the emission reduction measures below.
- Include, where appropriate, low carbon procurement criteria to support the selection of material suppliers and sub-contractors who can deliver low carbon solutions.

2.1.4 It should be noted that emission reduction measures for the **Highway Works** are constrained by National Highways requirements for road design. As such, whilst the range of measures in Table 2.3 will be explored where relevant to highways infrastructure, any specific measures must align

with the National Highways design requirements in the "Manual of Contract Documents for Highway Works" (National Highways, 2024) at the time of construction. Any updates made by National Highways to their design requirements will be kept under review; SEGRO aims to use lower carbon materials where they become available for use on the strategic road network. Warm mix asphalt will however be specified across the **Highways Works**.

Table 2.3: Further Reduction Measures - Construction

Emissions Source	Project Element	Reduction Measure
Building Embodied Carbon	**EMG2 Works** and **EMG1 Works** buildings	Use of recycled steel in building structure, including structural steel and steel rebar.
		Use of low carbon concrete in building structure. For example, low to medium strength grade concrete could include recycled cement binders, or ground granulated blast furnace slag (GGBS) as a cement replacement.
		Use of cross laminated timber design rather than steel within office buildings, where feasible.
Infrastructure and Road Materials Embodied Carbon	Whole **EMG2 Project** (noting that the Highway Works material specifications must be in line with the latest National Highways design requirements, as set out in Paragraph 2.1.4).	Warm mix asphalt will be used as preference across the **EMG2 Project**.
		Low carbon concrete and recycled steel will be used where feasible.
		Where feasible, kerbs and pavements will be reduced and provided on one side of internal roads, in particular in areas where there is no frontage.
		Permeable paving/eco grids will be considered for use in parking areas and footways. These would be used in place of concrete or asphalt surfaced areas.
		Recycled plastic pipework for drainage infrastructure will be used in place of pre-cast concrete options where feasible.
		Use of recycled materials within asphalt for parking areas.
		Recycled plastic content would be considered as a bitumen replacement for internal roads and pavements. Basalt geogrid could also be considered in internal road design to reduce the quantity of bitumen required.
		Recycled aggregates, if locally sourced, would be considered for use across the **EMG2 Project**.
Construction Activity Emissions	Whole **EMG2 Project**	Where practicable, pre-fabricated elements would be delivered to the site ready for assembly, which will reduce on-site construction waste and reduce vehicle movements as part of the construction process.
		Construction materials should be sourced locally where practicable, to minimise the impact of transportation.
		Vehicles used in road deliveries of materials, equipment and waste arisings on- and off-site would be loaded to full capacity to minimise the number of journeys associated with the transport of these items.
		All machinery and plant would be procured to adhere with emissions standards prevailing at the time and should be maintained in good repair to remain fuel efficient.
		Use of biodiesel or electric construction plant can provide a significant reduction in construction plant emissions, and the benefits of their use should be evaluated.
		When not in use, vehicles and plant machinery involved in site operations would be switched off to further reduce fuel consumption.
		Where possible, local waste management facilities would be used to dispose of all waste arisings, to reduce distant travelled and associated emissions.

Emissions Source	Project Element	Reduction Measure
		The volume of waste generated would be minimised, and resource efficiency maximised, by applying the principles of the waste hierarchy throughout the construction period. Segregated waste storage should be employed to maximise recycling potential for materials.
		Equipment and machinery requiring electricity would only be switched on when required for use. Procedures should be implemented to ensure that staff adhere to good energy management practices, e.g. through turning off lights, computers and heating/air conditioning units when leaving buildings.
		The use of telematics and/or real-time operator feedback, alongside automatic control for idling, acceleration, and braking; hybrid excavators with energy recovery on the swing system; and GPS precision control for areas/levels/slopes during earth movement to reduce idling time while marking out areas, and to avoid reworking areas, should be considered.

2.2 Operation and Maintenance Reduction Opportunities

2.2.1 The majority of operation and maintenance emissions are projected to arise from the energy use of buildings, and vehicular transport to and from the **EMG2 Project**. Additional emissions arise from the use of energy and materials during periodic maintenance and repair of the **EMG2 Project**. Table 2.5 below sets out the construction emissions from the initial WLCA (accounting for the embedded design measures in Table 2.4[1]).

Table 2.4: Embedded Design Measures - Operation and Maintenance

Category	Project Element	Design Measure
Be lean – reduce energy demand through fabric efficiency	**EMG2 Works** and **EMG1 Works** buildings	Building fabric elements and glazing specifications significantly improved to the Building Regulation requirements. Specific thermal U-values for roof and external wall insulation, glazing and doors are set out in SEGRO's Base Build Specification for warehouses and **Appendix 19D: Energy Strategy** (**DCO/MCO Document 6.19D**).
		Energy efficient LED lighting specified throughout the development, all of which to be controlled via Passive Infrared (PIR) sensors. Lighting specifications are set out in SEGRO's Base Build Specification for warehouses and **Appendix 19D: Energy Strategy** (**DCO/MCO Document 6.19D**).
		Reduced air permeability compared to maximum required standards. Specific air-tightness values are set out in SEGRO's Base Build Specification for warehouses and **Appendix 19D: Energy Strategy** (**DCO/MCO Document 6.19D**).
		Specification of efficient heating, ventilation and cooling (HVAC) services and control systems. Air to water source heat pumps are specified across the buildings. Mechanical equipment specifications are set out in SEGRO's Base Build Specification for warehouses and **Appendix 19D: Energy Strategy** (**DCO/MCO Document 6.19D**).
		Buildings will target Energy Performance Certificate (EPC) 'A' rating.
Be clean – consider centralised	**EMG2 Works** and **EMG1**	The inclusion of a site wide heating system was investigated. Potential options at the site included either connection to an area wide low carbon heat distribution

[1] The energy hierarchy – "be lean", "be clean" and "be green" has been considered during design of the **EMG2 Main Site** and **EMG1 Works** buildings, in order to minimise building energy demand and maximise use of decarbonised energy sources. Targeted building fabric and building service efficiencies are provided in SEGRO's Base Build Specification for warehouses. Further details on the application of the energy hierarchy can be found in **Appendix 19D: Energy Strategy** (**DCO/MCO Document 6.19D**).

Category	Project Element	Design Measure
heating and cooling systems	**Works** buildings	network, a site wide heat network or a Combined Heat and Power (CHP) system. It was considered that the installation of either of these options was not practical.
Be green – use of low or zero carbon technologies	**EMG2 Works** and **EMG1 Works** buildings	Installation of solar PV on a minimum of 20% of available roof space.
		The structural design of the buildings allows for 100% of unit roof areas to be covered by solar PV to enable the buildings to be 'future-proofed' should there be additional demand for renewable energy on-site.
		Electric vehicle chargers will be provided. The percentage coverage and charging specifications are set out in SEGRO's Base Build Specification for warehouses.
		No gas will be used for space heating. Air source heat pumps, or most appropriate alternative heat source, have been specified to deliver space heating and hot water.

Table 2.5: Initial WLCA Results - Operation

Project Element	Emissions per Year (tCO_2e)	Percentage of total emissions (%)
DCO Application		
Refurbishment and maintenance	1,286	1%
Energy use	10,824	9%
Transport	111,841	90%
MCO Application		
Refurbishment and maintenance	110	1%
Energy use	409	4%
Transport	9,021	95%

2.2.2 In addition, SEGRO will work with its tenants, suppliers and contractors to further reduce emissions through the operational phase, with roles and responsibilities set out in Section 1.4 above. These further reduction measures are set out in Table 2.6.

Table 2.6: Further Reduction Measures – Operation and Maintenance

Emissions Source	Reduction Measure
Operational Energy Use	SEGRO will purchase certified renewable electricity for SEGRO's own use and for tenants for whom we procure energy on their behalf.
	Where tenants procure their own energy, SEGRO will encourage them to procure certified renewable electricity and track uptake through "green lease" clauses in tenancy agreements.
Operational Transport	A Sustainable Travel Strategy has been prepared, which sets out how sustainable travel will be maximised at the EMG2 Project, to ensure that future tenants have viable and attractive options to walk, cycle, use public transport, car share or use electric vehicles to reach the site. Further details can be found in **Appendix 6E: Sustainable Transport Strategy and Framework Travel Plan** (**DCO/MCO Document 6.6E**).
Refurbishment and Maintenance	SEGRO will include sustainability criteria within procurement contracts for maintenance and repair contractors, where relevant. It is anticipated that tenants will be under a full repairing and insuring lease and therefore all repairs and maintenance would fall under their responsibility. Where substantial refurbishment works take place (e.g. material replacement), the construction emission reduction measures set out in Table 2.3 will apply.

2.3 Carbon Removals and Offsetting

2.3.1 The design of the **EMG2 Project** includes substantial landscape planting, including areas of woodland. When managed sustainably, woodland acts as a "carbon sink", sequestering or removing CO_2 from the atmosphere over time. As such, the landscape planting will reduce total lifetime emissions associated with the **EMG2 Project**. The landscape plan, set out within the Environmental Statement, includes an area of approximately 10.8 ha for mixed broadleaf woodland planting.

2.3.2 SEGRO and its contractors will follow the below principles to ensure that the planted woodland will maximise its potential to sequester carbon over the lifetime of the **EMG2 Project** and maximise the climate resilience of the planting:

- Designing and managing the woodland creation in line with a recognised scheme or standard (e.g. the Woodland Carbon Code and the UK Forestry Standard);
- Considering local biodiversity priority species and habitats that are at risk from climate change, and providing such habitat within the landscape planting where feasible;
- Including within the planting mix species that are resilient to changing climatic conditions. For example, broad leaf plants and plants that are more adaptable to arid areas to account for possible periods of drought;
- Consider incorporating planting within and between buildings as a way of providing natural solar shading; and
- A commitment to monitoring and maintenance of landscaping and habitat creation to ensure it establishes and continues to function in changing conditions.

2.3.3 As noted in paragraph 1.4.2, SEGRO does not offset emissions at present, and as such offsets are not considered as part of this Carbon Management Plan.

2.4 Monitoring and Next Steps

2.4.1 The climate change assessment presented within **Chapter 19**: **Climate Change** (**DCO/MCO Document 6.19**) has detailed the initial quantification of GHG emissions associated with the early design considerations of the **EMG2 Project**.

2.4.2 To ensure SEGRO's minimum sustainability requirements as set out in Section 1.4 are followed throughout the detailed design, construction and operation of the **EMG2 Project**, the following monitoring actions will be undertaken:

- Further Life Cycle Assessments (LCAs) will be undertaken during the iterative detailed design process and at practical completion, in line with SEGRO's sustainability policy (see Section 1.4). The Principal Contractor will ensure that a detailed Bill of Quantities (BoQ) is kept, including records of any Environmental Product Declarations (EPDs).
- SEGRO and the Principal Contractor will keep records of the low-carbon design options chosen throughout the detailed design and construction phases of the **EMG2 Project** (detailed in Table 2.3).
- SEGRO and future tenants will keep records of yearly building energy consumption and resultant emissions, and SEGRO will monitor the success of implementation of the travel scheme, as detailed in Table 2.6.
- Emissions associated with the **EMG2 Project** will be publicly disclosed on a yearly basis as part of SEGRO's total corporate Scope 1, 2 and 3 GHG inventory.

2.4.3 SEGRO is committed to the continuous improvement of its environmental performance. As such, this document will be periodically reviewed to ensure that the emissions reduction measures proposed remain fit-for-purpose, and will be updated should SEGRO's sustainability policies change.

3 REFERENCES

British Standards Institute (2023). PAS 2080: Carbon management in buildings and infrastructure.

Department for Transport (2024). National Networks National Policy Statement. Available: https://assets.publishing.service.gov.uk/media/65e9c5ac62ff48001a87b373/national-networks-national-policy-statement-web.pdf Accessed April 2025

IEMA (2022). Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance. 2nd Edition.

IPCC (2021). AR6 Climate Change 2021: The Physical Science Basis. Available: https://www.ipcc.ch/report/ar6/wg1/ Accessed April 2025

Royal Institute for Chartered Surveyors (2023). Whole life carbon assessment for the built environment (2nd Edition). Available: https://www.rics.org/content/dam/ricsglobal/documents/standards/Whole_life_carbon_assessment_PS_Sept23.pdf Accessed April 2025

SEGRO (2025). Responsible SEGRO Framework. Available: https://www.segro.com/responsible-segro

SEGRO (2023). Mandatory Sustainability Policy. Available: https://www.segro.com/about/policies