East Midlands Gateway
Phase 2 (EMG2)

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ENVIRONMENTAL STATEMENT

Volume 2 Technical Appendices

Appendix 9A

# Preliminary Ecological Appraisal

July 2025



09

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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## East Midlands Gateway 2

## ES Appendix 9a

# PRELIMINARY ECOLOGICAL APPRAISAL

June 2025

**FPCR Environment and Design Ltd**
Registered Office: Lockington Hall, Lockington, Derby DE74 2RH
Company No. 07128076. [T] 01509 672772 [E] mail@fpcr.co.uk [W] www.fpcr.co.uk



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# 1.0 INTRODUCTION

1.1 FPCR Environment & Design Ltd. were commissioned by SEGRO PLC to undertake a preliminary ecological appraisal on the EMG2 Scheme (detailed below). This document should be read in conjunction with the other ecological documents prepared for this Environmental Statement application which includes the Environmental Statement itself, protected species reports for badgers[1], bats[2], birds[3], invertebrates[4], riparian mammals[5], and reptiles[6], the shadow Habitat Regulations Assessment for the River Mease SAC[7], and Biodiversity Net Gain (BNG) calculations[8].

## 1.2 Site Location and Context

1.3 The proposed second phase to EMG1 (known as EMG2), comprises of three interrelated component parts as follows, and collectively they are referred to as 'the Scheme':

- **Main Site** (herein referred to as 'the Site') – A new warehousing and manufacturing employment park located south of East Midlands Airport and the A453, and west of the M1 motorway. This part of the site falls within the 'East Midlands Airport and Gateway Industrial Cluster' (EMAGIC) site, which forms part of the East Midlands Freeport designated by the Government in 2022;
- **Highways Works** – Highways works to the strategic road network including improvements at Junction 24 of the M1 motorway and the road network interacting with that junction; and
- **EMG1 Works** – Additional warehousing together with works to increase the permitted height of the cranes at the rail-freight terminal, improvements to the EMG1 public transport interchange and site management building.

1.4 Surrounding land-use is dominated variously by grassland and arable field compartments bordered by hedgerows and scattered mature trees, with Diseworth village to the south-west of the Site.

### Development proposals

1.5 The location of the Scheme is described in Chapter 2 of the ES for the Site with reference to its various component parts. In brief, the majority of new build development will be on the Main Site. The remaining components of the proposals are located on land within EMG1 and on land required for off-site highway improvements.

1.6 In brief, the proposals for the Scheme are as follows:

- **Main site-** a maximum of 300,000sq.m (approximately 3.23 million sq.ft) (GIA) of warehousing and manufacturing floorspace (GIA), with additional 100,000sq.m in the form of internal mezzanine space;
- **Highway Works**- new highway infrastructure and works to the existing highways network- including a new off-slip lane from the M1 northbound at J24 to provide a direct link to the A50

[1] FPCR (2024) EMG2 Appendix 9b: Badger Report
[2] FPCR (2024) EMG2 Appendix 9c: Bat Report
[3] FPCR (2024) EMG2 Appendix 9d: Bird Report
[4] FPCR (2024) EMG2 Appendix 9e: Invertebrate Report
[5] FPCR (2024) EMG2 Appendix 9f: Otter and Water Vole Report
[6] FPCR (2024) EMG2 Appendix 9g: Reptile Report
[7] FPCR (2024) EMG2 Appendix 9h: Shadow Habitat Regulations Assessment – River Mease SAC
[8] FPCR (2024) EMG2 Appendix 9i: Biodiversity Net Gain Report

westbound, widening of the A50 eastbound link at Junction 24 and other related works and traffic management measures; and

- **EMG1 works-** a maximum of 25,000sq (approximately 269,000 sq. ft) (GIA) of additional warehousing on land known as Plot 16, with an additional 5,000 sq. m in the form of internal mezzanine space. In addition, it is proposed to undertake freight handling and efficiency improvements at the existing rail freight terminal by way of increases to the maximum permitted height of gantry cranes by 4m to 24m overall; together with works to expand the management suite building and public transport interchange enhancements.

## Legislation

1.7 The national policy and legislation most relevant here are:

- The Conservation of Habitats and Species Regulations ("The Habitats Regulations") (Amendment) 2017 in relation to the European Protected Species (EPS) great crested newt, (GCN), bats (all species) and dormouse; and European protected sites i.e. Special Areas of Conservation (SAC), Special Protection Areas (SPAs) and internationally protected "Ramsar Sites" (collectively known as "Natura 2000 sites"). Annex II bat species are of particular relevance in relation to SACs designated for bats.
- The Wildlife and Countryside Act 1981 (WCA) (as amended) in relation to all wild birds (including Schedule 1 species), other animals (notably Schedule 5 species), flora (those listed in Schedules 8 and 9) and Sites of Special Scientific Interest (SSSI);
- Protection of Badgers Act 1992;
- Natural Environmental and Rural Communities (NERC) Act 2006 in relation to various priority species and habitats;
- Hedgerow Regulations 1997 made under Section 97 of the Environment Act 1995;
- National Planning Policy Framework (NPPF) (2024);
- Local Nature Reserves (LNR) as designated most recently by the NERC Act 2006;
- Non-statutory protected local sites including County Wildlife Sites (CWS), Sites of Importance for Nature Conservation (SINC), Local Wildlife Sites (LWS) and Ancient Woodland Inventory (AWI) sites;
- Local Biodiversity Action Plans (LBAP); and
- Birds of Conservation Concern (BoCC).

## 2.0 METHODOLOGY

2.1 In order to compile existing baseline information, relevant ecological information was requested from both statutory and non-statutory nature conservation organisations including:

- Multi Agency Geographic Information for the Countryside (MAGIC);
- Biological records requested from the Leicestershire & Rutland Environmental Records Centre (LRERC), Derbyshire Biological Records Centre (DBRC), and Nottinghamshire Biological and Geological Record Centre (NBGRC).

2.2 Further inspection of colour 1:25,000 OS base maps (www.ordnancesurvey.co.uk) and aerial photographs from Google Earth (www.maps.google.co.uk) was also undertaken in order to provide additional context and identify any features of potential importance for nature conservation in the wider countryside.

2.3 The search area for biodiversity information was related to the significance of sites and species and potential zones of influence, as follows:

- 15km around the Scheme Order Limits for sites of International Importance (e.g. Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Ramsar sites, extended to 20km for international sites which support birds with extended foraging distance, i.e. wintering geese/ swans, and 30km for international sites where bats are a notifying feature.2km for sites of National or Regional Importance (e.g. Sites of Special Scientific Interest (SSSIs);
- 2km for European protected species records (e.g. The Conservation of Habitats and Species Regulations 2017, SCHEDULE 2);
- 1km for sites of Local or County Importance or statutory sites such as Local Nature Reserves (LNRs), Priority Habitats and Ancient Woodland; and
- 1km for other species records (e.g. protected, or Section 41 NERC species of principal importance and notable species).
- Scheme/adjacent – listed habitats of principal importance (HPI) under the NERC Act

2.4 When assessing data, species data were filtered to include records from the previous twenty years only.

### Extended Phase 1 Habitat Survey

2.5 During the site design process, various site parameters, including the red line boundary, have been subject to multiple revisions, and additional surveys were conducted to reflect these changes.

2.6 Initial field surveys were conducted on the EMG2 Main Site on 22nd February and 20th April 2022 and updated on 13th June 2024. The additional areas in the updated site boundary were surveyed 3rd July, 4th July, 5th July, 10th July, 6th August and 14th November 2024. Survey methods followed the extended Phase 1 Survey (JNCC, 2010) technique and UKHab methodology (Butcher et al., 2020) as recommended by Natural England. This involved a systematic walk over of the site to classify the broad habitat types and identify any Habitats of Principal Importance (HPI) for the conservation of biodiversity as listed within Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006. Habitats were broadly mapped in the field using an OS base map.

2.7 Where ecologically notable features / habitats were identified, target notes and species lists were compiled for individual areas and assessments of abundance were made using the DAFOR scale. Vascular plant nomenclature follows Stace (2019). Whilst the species lists collected should not be regarded as exhaustive, sufficient information was gained during the survey to enable classification and assessment of broad habitat types and identify features likely to be of interest.

2.8 A River Condition Assessment (RCA) was conducted by accredited MoRPh field surveyors on 31st January 2023 and reviewed on 17th October 2024. Data was recorded using the RCA information system and interpreting RCA indicators and scores for baseline and post-intervention scenarios. The levels of 'in-watercourse' and 'riparian' encroachment were also assessed following guidance provided in the DEFRA Statutory Biodiversity Metric User Guide and Technical Supplement.

**Invasive Plants, Notifiable Weed Species and Other Notable Flora**

2.9 Consideration was given as to the presence of invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) (WCA 1981) and the presence of any notable weeds including those covered under the Weed Act 1959 (where population is significant enough to be considered injurious).

# 3.0 RESULTS

## Desk Study

3.1 The locations of designated sites and protected and notable species records discussed in the following section are illustrated in Figures 1a and 1b and Figures 2a, 2b, and 2c respectively.

### Statutory Designations

3.2 One internationally designated site of nature conservation interest was identified within the search area. River Mease, Special Area of Conservation (SAC), was located 14km from the Site boundary.

3.3 One nationally designated site of nature conservation interest was identified within 2km of the Site boundary. Lockington Marshes, Site of Species Scientific Interest (SSSI) was located 1.2km from the Site boundary.

3.4 These are detailed in Table 1a below.

**Table 1a: Statutory Designated Sites within relevant search area**

| Site | Designation | Location (Distance and Orientation from Site) | Summary Description |
|---|---|---|---|
| Lockington Marshes | Site of Special Scientific Interest (SSSI) | 1.2km | The site comprises one of the largest remaining areas of willow carr woodland in Leicestershire and a diverse complex of wetland habitat supporting an important invertebrate fauna with many nationally scarce species |
| River Mease | SSSI, Special Area of Conservation (SAC) | 14km | Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation for which the area is considered to support a significant presence. *Cobitis taenia* for which this is one of only four known outstanding localities in the United Kingdom. *Cottus gobio* for which this is considered to be one of the best areas in the United Kingdom. *Lutra lutra* for which the area is considered to support a significant presence. *Austropotamobius pallipes* for which the area is considered to support a significant presence. |

### Non-statutory Designations

3.5 Consultation with the Leicestershire and Rutland Environmental Records Centre (LRERC) identified 80 sites of local conservation importance within 1km of the Site. These are detailed in Table 1b below.

**Table 1b: Non-statutory Designated Sites within 1km of the Site**

| Site | Designation | Distance from Site | Summary Description |
|---|---|---|---|
| Long Lane Willows | Local Wildlife Site (LWS) | 377 | Mature trees - 2 Salix fragilis. |
| Ratcliffe Bridge willow | Local Wildlife Site (LWS) | 731 | Mature tree - Salix fragilis. |
| Kegworth Bridge Hedge & Willows | Local Wildlife Site (LWS) | 782 | Red Data Book species in hedgerow and 3 mature trees - Salix fragilis. |
| Long Lane Mature Trees | Local Wildlife Site (LWS) | 793 | Mature trees - 4 Salix fragilis. |
| River Soar , Loughborough Meadows to Trent | Local Wildlife Site (LWS) | 883 | This stretch of the River Soar, which for much of its length forms the county boundary with Leicestershire, runs through farmland and a number of villages in south Nottinghamshire. In places it retains many of its natural features with gentle meanders and low banks running through pastures, but it has also been subject to flood control and navigational measures with cuts, stretches of canalisation and locks in places. |
| Lockington (EMG) Oak 143 | Candidate Local Wildlife Site (cLWS) | 0 | Oak of dbh 1370mm - poor condition |
| Diseworth Donington Park Services M1 J23A ash trees | Candidate Local Wildlife Site (cLWS) | 0 | 2 large Ash trees in hedgerow; not measured due to basal growth |
| M1 J23A Donington Park Services grassland and scrub | Candidate Local Wildlife Site (cLWS) | 0 | Rough unmanaged but species-rich grassland, plus scrub, marsh and new plantation. GCNs recorded in 2015, Grass Vetchling in 2020 |
| Lockington (EMG) Oak 145 | Candidate Local Wildlife Site (cLWS) | 9 | Oak with dbh 2150mm |
| Lockington (EMG) Oak 144 | Candidate Local Wildlife Site (cLWS) | 31 | Oak with dbh 1450mm |
| M1/A50 Junction Ponds and Grassland | Candidate Local Wildlife Site (cLWS) | 80 | Mesotrophic grassland, pond; Persicaria bistorta, Schoenoplectus tabernaemontani, Typha angustifolia, Menyanthes trifoliata, Anthemis cotula (probably planted) |
| The Dumps | Candidate Local Wildlife Site (cLWS) | 108 | Secondary mixed woodland around narrow steep-sided valley; stream with moss covered boulders, bedrock, waterfall, earth cliffs. Good fern communities. |

| Site | Designation | Distance from Site | Summary Description |
|---|---|---|---|
| Hemington Meadow | Candidate Local Wildlife Site (cLWS) | 116 | Mesotrophic grassland |
| Castle Donington Oak 1 | Candidate Local Wildlife Site (cLWS) | 139 | Mature tree |
| Diseworth Brook | Candidate Local Wildlife Site (cLWS) | 151 | Small river or stream |
| Hemington Pasture Ash 2 | Candidate Local Wildlife Site (cLWS) | 188 | Mature tree |
| Castle Donington Grassland | Candidate Local Wildlife Site (cLWS) | 211 | Mesotrophic grassland |
| Hemington Grassland | Candidate Local Wildlife Site (cLWS) | 229 | Mesotrophic grassland |
| Castle Donington Pasture | Candidate Local Wildlife Site (cLWS) | 229 | Mesotrophic grassland; Agrostis vinealis, Isolepis setacea |
| Hemington Pasture Ash 5 | Candidate Local Wildlife Site (cLWS) | 229 | Mature tree |
| Hemington Pasture Ash 6 | Candidate Local Wildlife Site (cLWS) | 240 | Mature tree |
| West Meadow Brook | Candidate Local Wildlife Site (cLWS) | 256 | Small river or stream |
| Long Whatton Meadow 2 | Candidate Local Wildlife Site (cLWS) | 260 | Mesotrophic grassland |
| Castle Donington Oak 2 | Candidate Local Wildlife Site (cLWS) | 277 | Mature tree |
| Hemington Pasture Ash 4 | Candidate Local Wildlife Site (cLWS) | 302 | Mature tree |
| Diseworth Brook - Woodland | Candidate Local Wildlife Site (cLWS) | 312 | Wooded stream |
| Castle Donington Pasture Woodland & Stream | Candidate Local Wildlife Site (cLWS) | 332 | Deciduous woodland in steep ravine with stream over bedrock. Small remnant of species-rich grassland - not known if still has value |
| Diseworth Brook Oak | Candidate Local Wildlife Site (cLWS) | 334 | Mature tree |

| Site | Designation | Distance from Site | Summary Description |
|---|---|---|---|
| Hemington Pasture Oak 2 | Candidate Local Wildlife Site (cLWS) | 344 | Mature tree |
| Hemington Pasture Oak 1 | Candidate Local Wildlife Site (cLWS) | 349 | Mature tree |
| Hemington Wet Grassland | Candidate Local Wildlife Site (cLWS) | 353 | Wet grassland |
| Hemington Grassland | Candidate Local Wildlife Site (cLWS) | 375 | Mesotrophic grassland, scrub, woodland; Trifolium striatum |
| Long Whatton Meadow | Candidate Local Wildlife Site (cLWS) | 386 | Mesotrophic grassland |
| Diseworth Brook Ash 2 | Candidate Local Wildlife Site (cLWS) | 397 | Mature tree |
| Hemington Pasture | Candidate Local Wildlife Site (cLWS) | 437 | Mesotrophic grassland |
| Castle Donington row of Crack Willows and an Oak off Carnival Way | Candidate Local Wildlife Site (cLWS) | 440 | Row of 5 large crack willows, all over 1000mm diameter, plus one Oak of 1140mm diameter |
| Long Whatton Woodland | Candidate Local Wildlife Site (cLWS) | 454 | Woodland |
| M1/A50 Junction Pond | Candidate Local Wildlife Site (cLWS) | 455 | Pond; Schoenoplectus tabernaemontani, Menyanthes trifoliata |
| Hemington Pasture | Candidate Local Wildlife Site (cLWS) | 458 | Mesotrophic grassland |
| A453 Viaduct Grassland | Candidate Local Wildlife Site (cLWS) | 509 | Mesotrophic grassland; Medicago arabica. Goes under flood viaduct. |
| Warren Lane Pond | Candidate Local Wildlife Site (cLWS) | 540 | Pond |
| Soar Bank Drain | Candidate Local Wildlife Site (cLWS) | 566 | Small river or stream |
| Castle Donington Gothic House Lime | Candidate Local Wildlife Site (cLWS) | 626 | Large-leaved lime of over 4m girth, within a large, mature garden |
| River Soar (W bank) south of A453 | Candidate Local Wildlife Site (cLWS) | 627 | Large river |

| Site | Designation | Distance from Site | Summary Description |
|---|---|---|---|
| Veteran Ash 2 West End | Candidate Local Wildlife Site (cLWS) | 666 | Mature tree |
| Castle Donington Grassy Scrub | Candidate Local Wildlife Site (cLWS) | 712 | Patchwork of species-rich mesotrophic grassland amongst developing scrub and young woodland; probably on long-established spoil associated with airport. Scrub and two ponds, one with Potamogeton natans |
| Soar Bank White Willow | Candidate Local Wildlife Site (cLWS) | 728 | Mature tree |
| Veteran Ash 3 West End | Candidate Local Wildlife Site (cLWS) | 738 | Mature tree |
| Land E of Netherfield Lane | Candidate Local Wildlife Site (cLWS) | 940 | Mesotrophic grassland and scrub, with 19 LWS indicator species recorded. |
| Kegworth Derby Rd Oak | Potential Local Wildlife Site (pLWS) | 80 | Large English Oak (1.32m diameter, 4.2m girth), but currently without significant dead wood features. |
| Hemington Pasture Ash 1 | Potential Local Wildlife Site (pLWS) | 130 | Mature tree |
| Hemington Pasture Ash 3 | Potential Local Wildlife Site (pLWS) | 238 | Mature tree |
| Diseworth Brook Ash 1 | Potential Local Wildlife Site (pLWS) | 335 | Mature tree |
| Lockington Quarry extension hedgerow and ditch | Potential Local Wildlife Site (pLWS) | 364 | Hedgerow |
| Lockington Quarry Oak | Potential Local Wildlife Site (pLWS) | 441 | Large Oak, a fraction short of LWS size criterion at 3.72m girth. |
| Long Whatton Meadows Ash 4 | Potential Local Wildlife Site (pLWS) | 679 | Mature tree |
| Lockington Warren Lane hedge | Potential Local Wildlife Site (pLWS) | 690 | Several species-rich hedges, all 'important' under HRegs; not surveyed to LWS criteria, but with 4/5 species per sample 30m, 8-12 species overall; with ditches, old layers, standards |
| Hemington Scrubby Grassland | Potential Local Wildlife Site (pLWS) | 697 | Mesotrophic grassland |

| Site | Designation | Distance from Site | Summary Description |
|---|---|---|---|
| Veteran Ash I West End | Potential Local Wildlife Site (pLWS) | 732 | Mature tree |
| Ratcliffe Lane Hedge 1 | Potential Local Wildlife Site (pLWS) | 791 | Hedgerow |
| Ratcliffe Lane Pasture and Stream | Potential Local Wildlife Site (pLWS) | 851 | Mesotrophic/acid indicator species |
| Ratcliffe Lane Willow 1 | Potential Local Wildlife Site (pLWS) | 857 | Mature tree |
| Castle Donington Swan River verge | Potential Historic Local Wildlife Site (pLWS.hist | 0 | No recent survey data - not known if the site still has value |
| Castle Donington Charnock Hill grassland | Potential Historic Local Wildlife Site (pLWS.hist | 0 | No recent survey data - not known if the site still has value |
| King Street Plantation | Potential Historic Local Wildlife Site (pLWS.hist | 0 | No recent survey data - not known if the site still has value |
| Pond | Potential Historic Local Wildlife Site (pLWS.hist | 0 | No recent survey data - not known if the site still has value |
| The Paddock - Semi-improved grassland | Potential Historic Local Wildlife Site (pLWS.hist | 92 | No recent survey data - not known if the site still has value |
| Diseworth Green Lane NW of village | Potential Historic Local Wildlife Site (pLWS.hist | 102 | No recent survey data - not known if the site still has value |
| Lockington Park | Potential Historic Local Wildlife Site (pLWS.hist | 129 | No recent survey data - not known if the site still has value |
| Stream | Potential Historic Local Wildlife Site (pLWS.hist | 248 | No recent survey data - not known if the site still has value |
| Long Mere Lane - Hedgerow | Potential Historic Local Wildlife Site (pLWS.hist | 428 | No recent survey data - not known if the site still has value |

| Site | Designation | Distance from Site | Summary Description |
|---|---|---|---|
| Hedgerow | Potential Historic Local Wildlife Site (pLWS.hist | 542 | No recent survey data - not known if the site still has value |
| Mixed plantation | Potential Historic Local Wildlife Site (pLWS.hist | 584 | No recent survey data - not known if the site still has value |
| Stream along edge of arable field | Potential Historic Local Wildlife Site (pLWS.hist | 648 | No recent survey data - not known if the site still has value |
| Hedgerow | Potential Historic Local Wildlife Site (pLWS.hist | 740 | No recent survey data - not known if the site still has value |
| Ash Spinney | Potential Historic Local Wildlife Site (pLWS.hist | 790 | No recent survey data - not known if the site still has value |
| Stream | Potential Historic Local Wildlife Site (pLWS.hist | 805 | No recent survey data - not known if the site still has value |
| His Lordships woodland | Potential Historic Local Wildlife Site (pLWS.hist | 862 | No recent survey data - not known if the site still has value |
| River Soar and floodplain habitats | Potential Historic Local Wildlife Site (pLWS.hist | 874 | No recent survey data - not known if the site still has value |
| Long Whatton Brook | Potential Historic Local Wildlife Site (pLWS.hist | 899 | No recent survey data - not known if the site still has value |

**Protected/Notable Species**

3.6 Table 2 details records of European Protected species returned by the LRERC for within 1km of the application site.

**Table 2: Records of European Protected Species within 2km of the Site from 2000 onwards**

| Species | Conservation Status | Number of Records | Distance from Site to Nearest Record |
|---|---|---|---|
| **Mammals** | | | |
| Otter *Lutra lutra* | LBAP, CHSR, NERC, W&CA Sch5 | 7 | 1834m North-East |
| **Bats** | | | |
| Brown long-eared bat *Plecotus auritus* | LBAP, CHSR, W&CA Sch5, NERC | 49 | 17m North-East |
| Common pipistrelle *Pipistrellus pipistrellus* | LBAP, CHSR, W&CA Sch5 | 99 | 17m North-East |
| Daubenton's bat *Myotis daubentonii* | LBAP, CHSR, W&CA Sch5 | 11 | Within SK4727 |
| Leisler's bat *Nyctalus leisleri* | LBAP, CHSR, W&CA Sch5 | 4 | 298m North-East |
| *Myotis* bat species *Myotis sp.* | LBAP, CHSR, W&CA Sch5 | 43 | 65m North-East |
| Nathusius's pipistrelle *Pipistrellus nathusii* | LBAP, CHSR, W&CA Sch5 | 9 | 1131m North-East |
| Natterer's bat *Myotis nattereri* | CHSR, W&CA Sch5 | 2 | 318m North-East |
| Noctule bat *Nyctalus noctula* | LBAP, CHSR, W&CA Sch5, NERC | 62 | 65m North-East |
| *Nyctalus* bat species *Nyctalus sp.* | CHSR, W&CA Sch5 | 14 | 298 North-East |
| Pipistrelle bat species *Pipistrellus sp.* | LBAP, CHSR, W&CA Sch5 | 17 | 17m North-East |

| Species | Conservation Status | Number of Records | Distance from Site to Nearest Record |
|---|---|---|---|
| Serotine bat *Eptesicus serotinus* | LBAP, CHSR, W&CA Sch5, NERC | 2 | Within SK4726 |
| Soprano pipistrelle *Pipistrellus pygmaeus* | LBAP, CHSR, W&CA Sch5, NERC | 62 | 65m North-East |
| Unidentified bat species *Chiroptera sp.* | LBAP, CHSR, W&CA Sch5 | 19 | 313m North-East |
| Whiskered bat *Myotis mystacinus* | LBAP, CHSR, W&CA Sch5 | 2 | 273m North-East |
| **Amphibians** | | | |
| Great crested newt *Triturus cristatus* | W&CA Sch5, NERC, CHSR | 23 | Within Site Boundary |

**Key to Conservation Status:** CHSR – The Conservation of Habitats and Species Regulations 2017 (as amended), NERC – Natural Environment and Rural Communities Act 2006, W&CA – Wildlife and Countryside Act 1981 (as amended), LBAP – Local Biodiversity Action Plan.

3.7 Appendix A details records of protected/notable species returned by the LRERC for within 1km of the application site. Ten records were returned on the Site itself.

## Survey Results - Habitats/Flora

3.8 A detailed description of each habitat type is described below with the location of each habitat type illustrated in Figure 3: Phase 1 Habitat Plan. Grassland botanical species lists are included in Appendix B.

### Main Site

Trees

3.9 Mature and semi-mature trees were present throughout the Site, mainly in association with hedgerows. Tree species typically included: ash *Fraxinus excelsior*, English Oak *Quercus robur*, field maple *Acer campestre*, crack willow *Salix fragilis* and sycamore *Acer pseudoplatanus*. These trees are in various states of decline and maturity.

Broadleaved Woodland

3.10 The western Site boundary was bordered by a woodland block, comprising ash, hawthorn, blackthorn, dog rose, elder and elm with an understory comprising common couch, bramble, common nettle and cow parsley.

Scrub – Dense/Continuous and scattered

3.11 Dense hawthorn, willow, elder *Sambucus nigra* scrub was present in association with pond P1 and pond P3 (Appendix B – Photographs 1-2).

Other Neutral Grassland

3.12 One semi-improved neutral grassland field was present within the Site. It had a sward height of 5-40cm dominated by Yorkshire fog *Holcus lanatus*, with locally dominant red fescue *Festuca rubra* and perennial ryegrass *Lolium perenne*, abundant creeping thistle *Cirsium arvense*, red clover *Trifolium pratense* and ribwort plantain *Plantago lanceolata*, locally abundant bristly oxtongue *Helminthotheca echioides* and frequent spear thistle *Cirsium vulgare* and common ragwort Jacobaea vulgaris. Wild carrot *Daucus carota*, red clover *Trifolium pratense* and black medic *Medicago lupulina* were also present amongst the sward (Appendix B – Photograph 3). The northern section of the other neutral grassland parcel had a covering of scattered ash saplings.

Modified Grassland

3.13 One improved horse grazed field was present within the Site boundary. It had a sward height of 5-15cm dominated by perennial ryegrass, with abundant crested dog's-tail *Cynosurus cristatus,* locally abundant common chickweed *Stellaria media* and frequent cock's-foot *Dactylis glomerata*, annual meadow-grass *Poa annua* and creeping buttercup *Ranunculus repens.*

3.14 A small area of modified grassland was located to the south-west of the Site amongst an arable field. Grass species included cock's-foot, Yorkshire fog, false oat grass *Arrhenatherum elatius* and meadow foxtail *Alopecurus pratensis*. Forbs were common and widespread species indicative of higher nutrient levels including creeping thistle, spear thistle, hogweed *Heracleum sphondylium*, curled dock *Rumex crispus* and white clover *Trifolium repens*.

Tall Ruderal/Forb

3.15 Two areas of tall ruderal vegetation were present in association with an area of bare ground in the centre of the Site. Species recorded included bramble, common dandelion, cocksfoot and common nettle (Appendix B – Photograph 4). A strip of tall forb vegetation was present along the northern boundary of the most westerly arable field. Species included dominant common nettle with false oat grass, hogweed, creeping thistle and cow parsley also present.

Standing Water

3.16 Three ponds (P1-P3) were present on Site.

3.17 Pond (P1) was seasonal pond located just north of Hyam's Lane in the south western corner of a field compartment. It was approximately 5 x 8m in size, and was bounded by a small group of crack willow trees. The pond lacked any aquatic vegetation.

3.18 Pond (P2) is a field pond adjacent to the south side of a hedgerow between Hyam's Lane and the A453. It comprised a steep banked pond 20 x 5m in size bounded by dense bramble scrub (Appendix B – Photograph 5).

3.19 Pond (P3) was located adjacent to Donington Park Services. It comprised a wet depression, with a small rectangular area of open water at its centre. Inundation vegetation was limited to reed canary grass *Phalaris arundinacea*, with lesser burdock *Arctium minus*, great willowherb *Epilobium hirsutum* and cow parsley *Anthriscus sylvestris* also present. The pond was surrounded by scattered scrub. Pond P3 is listed as a potential (historic wildlife site), however does not meet criteria 10 to qualify as an LWS.

Arable

3.20 The remainder of the Site comprised a mixture of recently ploughed arable field compartments and arable fields planted with winter wheat, with narrow grassy margins (1-2m), dominated by common couch *Elytrigia repens*, with locally abundant creeping bent *Agrostis stolonifera,* ivy *Hedera helix* and cleavers *Gallium aparine* and frequent/locally frequent cock's-foot, perennial sow-thistle *Sonchus arvensis*, cow parsley, great willowherb, lesser celandine *Ficaria verna*, hard rush *Juncus inflexus* and green alkanet *Pentaglottis sempervirens* (Appendix B – Photographs 7-8).

Hedgerows

3.21 There were 60 hedgerows present on the Main Site.

3.22 No hedgerows were considered to be species-rich; however, all comprised at least 80% native woody species and therefore qualify as Habitats of Principal Importance (HPI) under S41 of the NERC Act.

3.23 Seven hedgerows (H4 & H5, H11a, H11b, H18a, H36, H42a and H42b) met the secondary criteria for consideration as LWS, however they did not meet the overarching criteria required under the habitat diversity selection route[11].

3.24 Summary details are presented in Table 3.



10 Guidelines for the selection of Local Wildlife Sites in Leicester, Leicestershire and Rutland. 2011. 4th edition. Available at https://www.leicestershire.gov.uk/sites/default/files/field/pdf/2016/8/22/Guidelines_LWS_0.pdf

11 Guidelines for the selection of Local Wildlife Sites in Leicester, Leicestershire and Rutland. 4th edition. 2011.

**Table 3: Hedgerow descriptions – Main Site**

| Hedgerow Number | Hedgerow Type | Length (m) | Main Canopy Species | BNG Condition |
|---|---|---|---|---|
| H1a | Native Hedgerow – Associated with Bank or Ditch | 237 | Birch, blackthorn, field maple, hawthorn, ash | Good |
| H1b | Native Hedgerow – Associated with Bank or Ditch | 202 | Hawthorn | Good |
| *H2* | Native Hedgerow – Associated with Bank or Ditch | *172* | Hawthorn, elder, dogrose | Good |
| H3 | Native Hedgerow – Associated with Bank or Ditch | 174 | Hawthorn, ash, blackthorn, elder | Good |
| *H4 & H5* | Native Hedgerow – Associated with Bank or Ditch | *323* | Hawthorn, crab apple, ash, blackthorn, field maple, elder, dogrose | Good |
| H6 | Native Hedgerow – Associated with Bank or Ditch | 190 | Ash, hawthorn, blackthorn, elder | Good |
| H7 | Native Hedgerow – Associated with Bank or Ditch | 234 | Hawthorn, ash, dogrose, blackthorn, English oak, elm, elder | Good |
| H8a | Native Hedgerow | 91 | Ash, blackthorn, hawthorn, dogrose | Good |
| H8b | Native Hedgerow | 110 | Elder, hawthorn, blackthorn | Good |
| H8c | Native Hedgerow – Associated with Bank or Ditch | 96 | Hawthorn, ash, elder | Good |
| H9 | Native Hedgerow – Associated with Bank or Ditch | 156 | Dogrose, hawthorn, elder, blackthorn | Good |
| H10 | Native Hedgerow – Associated with Bank or Ditch | 236 | Elder, hawthorn, ash, blackthorn, dogrose, English oak | Good |

| Hedgerow Number | Hedgerow Type | Length (m) | Main Canopy Species | BNG Condition |
|---|---|---|---|---|
| H11a | Native Hedgerow – Associated with Bank or Ditch | 80 | Hawthorn, blackthorn, ash, dogrose, garden privet | Good |
| *H11b* | Native Hedgerow – Associated with Bank or Ditch | *201* | Hawthorn, dogrose, wild privet, blackthorn, elder, ash | Good |
| H11c | Native Hedgerow – Associated with Bank or Ditch | 522 | Hawthorn, dogrose, field maple, elder, blackthorn | Good |
| H11d | Native Hedgerow – Associated with Bank or Ditch | 104 | Hawthorn, elder, blackthorn, elm | Good |
| H12 | Native Hedgerow – Associated with Bank or Ditch | 212 | Hawthorn, crab apple, ash, dogrose, elm, field maple | Good |
| H13 | Native Hedgerow | 45 | Blackthorn, hawthorn, holly, elder, oak, ash | Good |
| H14a | Native Hedgerow | 181 | Hawthorn, ash | Good |
| *H14b* | Native Hedgerow – Associated with Bank or Ditch | *389* | Blackthorn, hawthorn, ash, dogrose, sycamore | Good |
| *H15* | Native Hedgerow | *94* | Hawthorn, ash, dogrose, elder, field maple | Good |
| H16 | Native Hedgerow | 134 | Hawthorn | Moderate |
| H17a | Native Hedgerow | 158 | Hawthorn, ash | Good |
| H17b | Native Hedgerow | 220 | Hawthorn, elder, oak | Good |
| *H18a* | Native Hedgerow – Associated with Bank or Ditch | *159* | Hawthorn, ash, dogrose, elm, blackthorn | Good |
| *H18b* | Native Hedgerow – Associated with Bank or Ditch | *206* | Hawthorn, dogrose, field maple, ash, blackthorn | Good |

| Hedgerow Number | Hedgerow Type | Length (m) | Main Canopy Species | BNG Condition |
|---|---|---|---|---|
| *H18c* | Native Hedgerow – Associated with Bank or Ditch | *196* | Ash, hawthorn, blackthorn, field maple, dogrose | Good |
| H19a | Native Hedgerow | 139 | Hawthorn, dogrose, ash | Good |
| H19b | Native Hedgerow | 122 | Blackthorn, field maple, hawthorn, ash, dogrose | Good |
| H20a | Native Hedgerow – Associated with Bank or Ditch | 153 | Hawthorn, dogrose, English oak | Good |
| H20b | Native Hedgerow – Associated with Bank or Ditch | 337 | Hawthorn, ash, dogrose | Good |
| H21 | Native Hedgerow – Associated with Bank or Ditch | 235 | Hawthorn, ash, dogrose | Good |
| H22 | Native Hedgerow – Associated with Bank or Ditch | 315 | Ash, hawthorn, dogrose, field maple, elder | Good |
| H23 | Native Hedgerow | 248 | Elder, hawthorn | Good |
| H24 | Native Hedgerow – Associated with Bank or Ditch | 420 | Hawthorn, ash | Good |
| H25 | Native Hedgerow – Associated with Bank or Ditch | 291 | Hawthorn, dogrose | Good |
| *H26a* | Native Hedgerow – Associated with Bank or Ditch | *174* | Field maple, hawthorn, ash, dogrose, elder, blackthorn | Good |
| H26b | Native Hedgerow | 252 | Ash, hawthorn, elder | Good |
| H27 | Native Hedgerow – Associated with Bank or Ditch | 182 | Hawthorn, field maple, blackthorn | Good |
| H28a | Native Hedgerow – Associated with Bank or Ditch | 189 | Elder, hawthorn, ash, dogrose | Good |

| Hedgerow Number | Hedgerow Type | Length (m) | Main Canopy Species | BNG Condition |
|---|---|---|---|---|
| H28b | Native Hedgerow – Associated with Bank or Ditch | 218 | Blackthorn, hawthorn, elder, dogrose | Good |
| H29 | Native Hedgerow – Associated with Bank or Ditch | 232 | Hawthorn, dogrose, elm, blackthorn, elder | Good |
| H30 | Native Hedgerow – Associated with Bank or Ditch | 200 | Hawthorn, elder, ash, field maple | Good |
| H31a | Native Hedgerow – Associated with Bank or Ditch | 246 | Hawthorn, ash, elm | Good |
| H31b | Native Hedgerow | 133 | Hawthorn | Good |
| H32a | Native Hedgerow | 198 | Elder, hawthorn, ash, dogrose | Good |
| *H32b* | Native Hedgerow | *184* | Hawthorn, ash, elder, dogrose | Good |
| *H32c* | Native Hedgerow | *186* | Hawthorn, elder, dogrose, English oak | Good |
| *H33* | Native Hedgerow – Associated with Bank or Ditch | *158* | Hawthorn, dogrose, elder, ash | Good |
| *H34* | Native Hedgerow – Associated with Bank or Ditch | *128* | Hawthorn, blackthorn, dogrose, hazel | Good |
| H35 | Native Hedgerow – Associated with Bank or Ditch | 170 | Blackthorn, dogrose, hawthorn, ash, field maple, English oak | Good |
| *H36* | Native Hedgerow – Associated with Bank or Ditch | *150* | Hawthorn, blackthorn, ash, field maple, elm | Good |
| H37 | Native Hedgerow – Associated with Bank or Ditch | 266 | Blackthorn, hawthorn, elder, dogrose, ash | Good |
| H38 | Native Hedgerow | 121 | Hawthorn, elder | Good |

| Hedgerow Number | Hedgerow Type | Length (m) | Main Canopy Species | BNG Condition |
|---|---|---|---|---|
| H39 | Native Hedgerow – Associated with Bank or Ditch | 245 | Field maple, blackthorn, ash, hawthorn, holly | Good |
| *H40a* | Native Hedgerow – Associated with Bank or Ditch | *206* | Elder, hawthorn, ash, blackthorn | Good |
| *H40b* | Native Hedgerow | *159* | Dogrose, hawthorn, elder | Good |
| H41 | Native Hedgerow | 129 | Wayfaring tree, field maple, ash, dogrose, blackthorn, hawthorn | Good |
| *H42a* | Native Hedgerow | *67* | Hawthorn, ash, field maple, blackthorn | Good |
| *H42b* | Native Hedgerow | *72* | Blackthorn, hawthorn, field maple, ash | Good |

Ditches

3.25 Dry (inundation) ditches were present throughout the Site in association with the bases of hedgerows (H1a-b, H2-H5, H7, H8c, H9, H10, H11a-d, H12, H14b, H18a-c, H20a-b, H21, H22, H23, H24, H25, H27, H28a-b, H29, H33-H35, H37, H39 and H40a). The ditches were generally between 50-70cm wide and 30-50cm deep, lacking aquatic vegetation, with vegetation limited to common nettle great willowherb and hard rush, suggesting they only hold water after periods of heavy rainfall. As such, these have not been classed as ditches in the BNG assessment as they do not meet the required definition to be assessed in isolation from the hedges

3.26 A shallow field ditch in poor condition runs through the south-east of the site, feeding into an offsite subterranean drainage system. The nature of the channel is clearly straightened to serve as a field ditch. Hydrological monitoring and modelling indicate that the ground water level is generally below the depth of the ditch, and the feature is therefore not fed by ground.

Stream

3.27 Beyond the western boundary, a small tributary of the Diseworth brook runs from north to south. As the stream comes within 10m of the site, it is considered that the associated riparian zone extends into the site redline. The stream appears to be fed from attenuation and drainage features within the East Midlands Airport Complex, with a culverted section crossing under the A453 in the northwest corner of the site. The stream has straightened and reinforced channel sections and was classified as over-deep within the River Condition Assessment, resulting in a final condition score of fairly-poor.

Hardstanding

3.28 The A453 and its associated modified grassland (G4) verges formed the northern extent of the Site.

**Highways Works**

Trees

3.29 Mature and semi-mature trees were present throughout the Site, mainly in association with hedgerows and lines of trees.

3.30 Eight individual trees are located by Ashby Road South of junction 24 of the M1, with and addition two individual trees to the south of that. Four individual trees were present within the roundabout island off Beverley Road along the A53. Nine individual trees were present parallel to H24.

Broadleaved Woodland

3.31 Several areas of broadleaved woodland were associated with Highways infrastructure, largely around the Donington Services roundabout and along the A453 between the Donington Services roundabout and the SEGRO roundabout. Woodland descriptions are provided in Table 4.

**Table 4: Woodland Descriptions - Highways**

| Parcel | Description |
|---|---|
| W1 | Part of a wider section of broadleaved woodland was recorded to the west of the of M1 northbound J23A slip road towards the Donnington Services roundabout. The woodland couldn't be assessed in full due to access restrictions and dense shrub layer. Two age classes of tree were recorded, and the trees appeared to be in good condition. Canopy species included oak and wild cherry, with blackthorn, hawthorn and dog rose present in the understory shrub layer. Bramble was present amongst the ground flora. |
| W2 | Part of a wider section of broadleaved woodland was recorded to the east of the of M1 northbound J23A slip road towards the Donnington Services roundabout. One age class of tree was present with little open space within the woodland. Canopy species included silver birch, wild cherry, field maple, oak and hazel. |
| W3 | A section of broadleaved woodland on an east facing slope to the east of the Donnington Services roundabout. The woodland comprised abundant hawthorn and lime spp., with frequent hazel and occasional wild cherry in the canopy. Beech and ash were rarely recorded in the canopy and the woodland had an understory layer of dog rose and dogwood. |
| W4 | A patch of broadleaved woodland was present in the centre of the roundabout surrounded by an edge of scrub and other neutral grassland. The woodland could not be safely accessed but species included dominant maple spp., occasional ash and rarely present willow spp. |
| W5 | A strip of broadleaved woodland was recorded along the western side of the A453 between the Donnington Services roundabout and the SEGRO roundabout. A dry ditch ran through the centre of the woodland, parallel to the A453. A small stand of the woodland to the west was separated from the larger extent by a vehicle track. Canopy species comprised co-dominant ash and lime spp., with oak, elm, elder and field maple also present. The understorey comprised hawthorn, blackthorn and dogwood. A large amount of rubbish was present alongside the lay-by next to Diner 51. Male ferns, common nettle and harts tongue fern *Asplenium scolopendrium* were recorded amongst the understory, which comprised largely bare ground. |
| W6 | A strip of broadleaved woodland plantation, approximately 7m in width, was present along the eastern side of the A453 between the Donnington Services roundabout and the SEGRO roundabout. Rubbish had been discarded along some of the length where in proximity to the lay-by. Species comprised abundant ash and lime spp., frequent hawthorn and occasional field maple and *Prunus* spp. |

| Parcel | Description |
|---|---|
| W7 | Young broadleaved woodland lined the M1 northbound which sloped up from the motorway to the A453. The woodland was approximately 4-5m in height and had little open space. Species included abundant oak and field maple and frequent hawthorn and blackthorn. |
| W8 | Young broadleaved woodland with a similar composition to W7 continued along the edge of the M1 northbound road. Species comprised abundant oak, frequent wild cherry, occasional hawthorn and rarely present ash. The full extent of the woodland could not be accessed. |
| W9 | A small area of broadleaved woodland was present which connected to a hedgerow running along the M1 northbound. Species included dominant ash with field maple, Norway maple, wild cherry, oak and hawthorn also present. |
| W10 | A section of broadleaved woodland was present along the M1 southbound adjacent to a gantry. This section of woodland could not be accessed. |
| W11 | Broadleaved woodland was present in the western compartment of the M1 J24 roundabout island. Species comprised oak, hazel, wild cherry, sycamore and hawthorn. |
| W12 | A woodland edge which extends slightly into the redline from an area of offsite woodland, to the south-east of the M1 J24 roundabout island. |

Mixed Scrub

3.32 Five parcels of mixed scrub were present along the highways areas. Mixed scrub descriptions are provided in Table 5.

**Table 5: Mixed Scrub Descriptions – Highways**

| Parcel | Description |
|---|---|
| S4 | An area of mixed scrub was present in the roundabout island of the Donnington Services roundabout which provided a gradual edge to the woodland parcel (W4). Species comprised dominated hawthorn and rarely present ash. |

| Parcel | Description |
|---|---|
| S5 | A mixed scrub edge, approximately 4m in height, which developed offsite into woodland was present along the western edge of the Donnington Services roundabout. Species included hawthorn, hazel, dogwood, blackthorn, *Malus spp.,* lime spp., and oak. |
| S7 | Two strips of mixed scrub along the edge of woodland were recorded either side of the public footpath running parallel along the A453. Scrub species included dogwood, hawthorn, blackthorn, field maple, elder and ash. A thin fringe of tall ruderal and forbs including St John's wort *Hypericum* spp. and willowherb were present along the footpath. |
| S10 | An area of mixed scrub adjoins a block of bramble dominated scrub (S9) along the A453 northbound approaching the SEGRO roundabout. The scrub had a well developed edge with scattered scrub and long grassland surrounding the mixed scrub parcel. Species included field maple, *Malus* spp., hawthorn, and bramble. |
| S12 | A block of newly planted mixed scrub was present along the southern side of Remembrance Way (A453). Species included hazel, maple spp., hawthorn, field maple, ash, and bramble. The scrub has a well developed edge with tall grassland and scattered scrub around the edges. |
| S16 | Two areas of mixed scrub were present either side of the northern and southern slip roads for J23a of the M1. These areas of scrub could not be safely accessed during the survey. |

Bramble Scrub

3.33 Six areas of bramble dominated scrub (S6, S8, S9, S13, S14, and S15) were present within the highways boundary. The largest area of bramble scrub was present along the western side of the A453 between the Donnington Services roundabout and the SEGRO roundabout. Other small areas of bramble scrub were largely located within and around the roundabouts.

Other Neutral Grassland

3.34 Several parcels of other neutral grassland were present along road verges and in land between the A453 and the M1. Descriptions of the other neutral grassland habitat are provided in Table 6.

**Table 6: Other Neutral Grassland Descriptions – Highways**

| Parcel | Description |
|---|---|
| G6 | A strip of grassland adjacent to G5 along the A453, was categorised as other neutral grassland due to the presence of species indicative of higher distinctiveness grassland. These included lesser knapweed *Centaurea nigra*, common vetch *Vicia sativa*, wild carrot *Daucus carota*, meadow vetchling *Lathyrus pratensis*, perforate St John's wort *Hypericum perforatum* and a single pyramidal orchid *Anacamptis pyramidalis*. |
| G7 | A section of grassland along the A453, north of the main site, was categorised as other neutral grassland. The grassland had approximately 9 species per $m^2$ and a varied sward height. Scrub and bare ground were absent. Grass species included frequent red fescue *Festuca rubra* and perennial ryegrass *Lolium perenne* with occasional Yorkshire fog *Holcus lanatus* and creeping bent *Agrosits stolonifera*. Forbs included dominant creeping cinquefoil *Potentilla reptans*, frequent common bird's-foot trefoil *Lotus corniculatus*, selfheal *Prunella vulgaris*, black medick *Medicago lupulina*, common ragwort *Jacobaea vulgaris* and white clover *Trifolium repens*, and rarely recorded species including lesser knapweed *Centaurea nigra*, oxeye daisy *Leucanthemum vulgare* and forget-me-not *Myosotis* spp. |
| G9 | Areas of other neutral grassland within and around the services roundabout were similar in terms of characteristics and species composition and therefore assessed as one. Sward height was consistent (>20cm) and no bare ground was present. here was an average of 9 species per $m^2$. Grass species included Yorkshire fog, creeping bent, false oat grass *Arrhenatherum elatius*, red fescue, crested dog's-tail *Cynosurus cristatus* and cock's-foot *Dactylis glomerata*. Forbs included bristly oxtongue *Helminthotheca echioides*, spear thistle, mugwort and field bindweed. A variety of forbs indicative of higher distinctiveness grassland were also present including oxeye daisy, lesser knapweed, yarrow *Achillea millefolium*, wild carrot *Daucus carota*, common bird's-foot trefoil, common mallow *Malva sylvestris*, common centaury *Centaurium erythraea*, hairy tare *Vicia hirsuta* and creeping cinquefoil. |
| G12 | A strip of other neutral grassland with ~8 species per $m^2$ was present on the stretch of the A453 running between the Donnington Services roundabout and the SEGRO roundabout. The grassland was encroached with bramble scrub along the southern sections. Yorkshire fog was the dominant grass species with creeping bent frequent amongst the sward. Forb species included abundant common ragwort, locally abundant bramble and occasional white clover and common bird's-foot trefoil. Lesser knapweed, oxeye daisy, hedge bedstraw *Galium mollugo* and common centuary were rarely observed. |

| Parcel | Description |
|---|---|
| G15 | A circle of mown modified grassland was present in the SEGRO roundabout island. The grassland had on average 10 species per $m^2$. SUD1 was present in the centre of the grassland which had not been mown. Species comprised, but were not limited to, abundant perennial ryegrass, frequent white clover, hop trefoil *Trifolium campestre* and lesser trefoil. Yorkshire fog, creeping bent, selfheal and lesser knapweed. |
| G21 | A strip of other neutral grassland was present to the east of the A453 SEGRO roundabout. Sward height was approximately 30cm-70cm with little bare ground present. There were approximately 10 species per$^2$. The western side of the grassland parcel slopes up towards the road. A SUD feature was present in the centre of the grassland. Scattered scrub had been planted over some of the grassland. Grass species included crested dog's-tail, perennial ryegrass, creeping bent, fescue spp., and false oat grass. Forb species included abundant wild carrot, frequent oxeye daisy, occasional yarrow, lesser knapweed and dog rose *Rosa canina*. |
| G35 | Six compartments of other neutral grassland with a similar species composition to G36, were present within and around the junction 24 roundabout. One strip of grassland extended northwards along the M1 southbound J24 sliproad. The grassland had on average 9 species per $m^2$ and a varied sward height with no bare ground or scrub encroachment. The sections within the roundabout island could not be accessed, however, they looked to be a similar composition to the other parcels of G35. In general oxeye daisy was found to be abundant and grass species including Yorkshire fog, red fescue and false oat grass, all frequent amongst the sward. |
| G36 | Two sections of other neutral grassland were present to the east of the junction 24 roundabout, either side of a footpath. The grassland had approximately 10 species per $m^2$. The sward had not been recently mown and bramble scrub had encroached the grassland. False oat grass and cock's foot were co-abundant and oxeye daisy was frequently recorded across the sward. Species indicative of higher distinctiveness grassland including yarrow, wild carrot, common bird's-foot trefoil, and lesser knapweed were also present. |
| G38 | A strip of other neutral grassland was present within the central reservation of the S453 between the SEGRO roundabout and the junction 24 roundabout. The grassland could not be accessed, however, the grassland appeared to have a similar composition to G35. |
| G39 | A strip of other neutral grassland was present along the A50. The sward was dominated by false oat grass, with other species including cock's foot, creeping thistle, bindweed *Convolvulus* spp., hogweed *Heracleum sphondylium*, mugwort *Artemisia vulgaris*, teasel *Dipsacus fullonum*, red clover and yarrow. |

| Parcel | Description |
|---|---|
| G40 | Two strips of grassland were present along the western side of the M1 southbound J24 slip road. The grassland could not be accessed, however, its composition looked similar to that of G35. |

Modified Grassland

3.35 Several areas of modified grassland were present along the highways land. The majority comprised managed areas of amenity grassland around the SEGRO site office and road verges along the A453. Modified grassland descriptions are provided in Table 7.

**Table 7: Modified Grassland Descriptions – Highways**

| Parcel | Description |
|---|---|
| G5 | A strip of modified grassland was present along part of the A453 up until the start of the services roundabout. Species included abundant perennial ryegrass and white clover, with occasional Yorkshire fog, creeping bent, red clover *Trifolium pratense*, meadow buttercup *Ranunculus acris*, and common bird's-foot trefoil. |
| G8 | Two strips of modified grassland were present either side of a path along the Donnington services roundabout. Sward height was varied and scrub was absent. Species included perennial ryegrass, creeping bent, fescue spp., common daisy *Bellis perennis*, bristly oxtongue, white clover, common bird's-foot trefoil and yarrow. |
| G10 | An area of modified grassland was present within the Donnington services roundabout island. |
| G11 | A public footpath comprised modified grassland was present parallel to the A453 linking the Donnington services roundabout to the back of East Midlands Airport. Seven species per $m^2$ were present on average. The sward was short due to foot-fall, however, no bare ground was present at the time of survey. Grass species included abundant perennial ryegrass, occasional Yorkshire fog and frequent creeping bent. Along the edges of the path creeping thistle *Cirsium arvense*, common nettle *Urtica dioica* and willowherb *Epilobium spp.,* were locally frequent-abundant. Along the path, forbs included occasional white clover, selfheal, creeping buttercup *Ranunculus repens* and red bartsia *Odontites vernus*. A single common spotted orchid *Dactylorhiza fuchsia* was present along the side of the path. |

| Parcel | Description |
|---|---|
| G13 | A strip of modified grassland was present along the A453 central reservation between the Donnington services and the SEGRO roundabout. Seven species per $m^2$ were present on average. The grassland was dominated by perennial ryegrass, with creeping bent noted as frequent and timothy as occasional amongst the sward. Forbs included rarely observed common daisy, dandelion *Taraxacum* agg., common ragwort and the occasional yarrow and selfheal. |
| G14 | Three small segments of species poor modified grassland with short sward heights were located around the SEGRO roundabout. Species composition included abundant perennial ryegrass, white clover and lesser trefoil, with occasional sealfheal. |
| G16 | A mown compartment of species poor modified grassland was present to the north of G15 which surrounded SUD2. Species composition was similar to that of G13, with dominant red fescue and abundant white clover. |
| G17 | A small area of species poor modified grassland was present to the west of the SEGRO roundabout. The grassland was dominated by perennial ryegrass with frequent white clover. |
| G22 | A small patch of modified grassland was present split in two by a public footpath to the south-east of the SEGRO roundabout. Species composition was similar to that of G13. |
| G32 | Two strips of species poor modified grassland were present along a path to the west of the junction 24 roundabout. |



Tall Forb

3.36 Two strips of tall forb (TF4) were present along the grass footpath adjacent to the A453 along the boundary of East Midlands Airport. Species included willowherb spp., creeping thistle, common nettle, willow scrub, colt's foot *Tussilago farfara* and hairy tare.

Sustainable Drainage Features

3.37 Three Sustainable drainage systems (SuDS) attenuation features were located within and around the SEGRO roundabout.

3.38 SuDS1 was recorded within the SEGRO roundabout island. The SuDS feature was dry at the time of survey. Species included great reedmace *Typha latifoli*, common reed *Phragmites australis*, Yorkshire fog, great willowherb *Epilobium hirsutum*, and oxeye daisy.

3.39 SuDS2 was located within the central reservation to the north of the SEGRO roundabout had a similar species composition to SuDS1 but with abundant common ragwort. The SuDS feature was dry at the time of survey

3.40 SuDS3 was located within G21, which was dry at the time of survey. The SuDS feature was culverted and then extended into a dry grass dominated ditch which was assessed as other neutral grassland. Species included great reedmace, dock *Rumex* spp., willowherb spp., and willow saplings.

Arable

3.41 A single arable field was located along the highways section of the Site. The field comprised an Italian ryegrass *Lolium multiflorum* ley with other species including mayweed, annual meadow grass *Poa annua*, nettle, spear thistle and white clover present around the margins or sparser areas of ryegrass. Sward height was approximately 20-30cm.

Hardstanding

3.42 Areas of hardstanding comprised a network of roads including large parts of the A453 and associated footpaths.

Hedgerows and Line of Trees

3.43 There were 23 hedgerows and five lines of trees present along the Highways.

3.44 No hedgerows were considered to be species-rich although they all comprised at least 80% native woody species and therefore qualify as Habitats of Principal Importance (HPI) under S41 of the NERC Act.

3.45 Details of hedgerows along Highways areas are presented in Table 8.

**Table 8: Hedgerow Descriptions – Highways**

| Hedgerow Number | Hedgerow Type | Length (m) | Main Canopy Species | BNG Condition |
|---|---|---|---|---|
| H43a | Native Hedgerow | 187 | Not accessed | Good |
| H43b | Native Hedgerow | 476 | Not accessed | Good |
| H44a | Native Hedgerow | 217 | Field maple, hawthorn, ash, blackthorn, dogwood | Moderate |
| H44b | Native Hedgerow | 199 | Field maple, hawthorn, ash, blackthorn, dogwood | Moderate |
| H45 | Native Hedgerow | 143 | Not accessed | Good |
| H46 | Native Hedgerow | 180 | Ash, hawthorn, elder, blackthorn, field maple | Good |
| H47 | Native Hedgerow | 914 | Hawthorn, hazel, wild cherry, field maple, blackthorn, willow spp. | Good |
| H48 | Non-native and Ornamental Hedgerow | 32 | Leylandii | Poor |
| H49 | Native Hedgerow – Associated with Bank or Ditch | 52 | Hawthorn | Moderate |
| H50 | Native Hedgerow | 40 | Blackthorn, hawthorn | Good |
| H51 | Native Hedgerow | 28 | Blackthorn, hawthorn | Good |
| H52 | Native Hedgerow | 409 | Not accessed | Good |

| Hedgerow Number | Hedgerow Type | Length (m) | Main Canopy Species | BNG Condition |
|---|---|---|---|---|
| H55 | Native Hedgerow | 150 | Hawthorn | Moderate |
| H56 | Native Hedgerow | 944 | Hawthorn, elder, field maple, oak | Good |
| H57 | Native Hedgerow | 540 | Hawthorn, wild cherry, elder, ash, maple spp. | Good |
| H58 | Native Hedgerow | 478 | Not accessed | Good |
| H62 | Native Hedgerow | 112 | Hawthorn, *Malus* spp., oak spp., elder | Moderate |
| H63 | Native Hedgerow | 137 | Field maple, hazel, blackthorn, hawthorn, elder, sycamore | Good |
| H64 | Native Hedgerow | 80 | Blackthorn, elder, hawthorn | Good |
| H65a | Native Hedgerow | 73 | Ash, blackthorn, elder, hawthorn | Good |
| H65b | Native Hedgerow | 20 | Ash, blackthorn, elder, hawthorn | Good |
| H66 | Native Hedgerow | 108 | Ash, blackthorn, elder, hawthorn | Good |
| H67 | Native Hedgerow | 126 | Not accessed | Good |
| H68 | Native Hedgerow | 46 | Privet | Poor |
| H69 | Native Hedgerow | 42 | Privet | Poor |
| H70 | Native Hedgerow | 59 | Hawthorn, sycamore | Moderate |
| | | | | |

| Hedgerow Number | Hedgerow Type | Length (m) | Main Canopy Species | BNG Condition |
|---|---|---|---|---|
| LOT1 | Line of Trees | 68 | Blackthorn, ash, lime spp., dogwood, field maple, *Prunus* spp. | Moderate |
| LOT2 | Line of Trees | 144 | Oak spp | Moderate |
| LOT3 | Line of Trees | 44 | Wild cherry, oak spp. | Moderate |
| LOT4 | Line of Trees | 64 | Ash, oak, field maple | Moderate |
| LOT5 | Line of Trees | 482 | Oak spp., hawthorn, willow spp., ash, sycamore, field maple | Moderate |
| LOT6 | Line of Trees | 70 | Hawthorn, *Prunus* spp., holly | Moderate |

**EMG1 Works**

Trees

3.46 Nine small newly planted trees were present within the amenity area around the SEGRO site office.

Mixed Scrub

3.47 Newly planted mixed scrub (S11), still encased in tree guards, had been planted along the access road to EMG1 SEGRO. Scrub species included Prunus spp., Salix spp., hazel, maple spp., and blackthorn. A hedgerow was present along the roadside of the scrub and other neutral grassland, which had been mown, along the other.

Other Neutral Grassland

3.48 Large areas of other neutral grassland were recorded surrounding the rail freight to the east of the EMG1 site and around the SUDs to the north of the EMG1 site. Species were indicative of a recently sown seed mix planted as part of the development of EMG1. Descriptions of each parcel of other neutral grassland are provided in Table 9.

**Table 9: Other Neutral Grassland Descriptions – EMG1**

| Parcel | Description |
|---|---|
| G20 | A compartment of other neutral grassland present to the west of the SEGRO roundabout comprised short sward with no areas of bare ground or scrub. Yorkshire fog and perennial ryegrass were recorded as abundant with creeping bent, red fescue and crested dog's-tail all occasional. Forbs included abundant white clover, locally frequent lesser knapweed, occasional oxeye daisy, locally occasional lady's bedstraw, and rarely recorded common bird's-foot trefoil, wild carrot, yellow wort *Blackstonia perfoliate* and woof ruff *Galium odoratum.* |
| G25 | A large parcel of other neutral grassland was present along the slope surrounding the rail freight. Sward height was generally long (approx. 50cm to 1m) but had pockets of grassland with shorter sward. There was just under 10 species per $m^2$ on average. Bare ground was not present and there was a notable amount of scattered scrub cover which exceeded 5% of the total area. Grass species comprised abundant creeping bent *Agrostis stolonifera*, and Yorkshire fog *Holcus lanatus*, frequent crested dogs-tail *Cynosurus critatus*, locally frequent false oat grass *Arrhenatherum elatius,* and occasional perennial ryegrass *Lolium perenne*. Forbs included a variety of species indicative of higher distinctiveness grassland including locally abundant lesser knapweed *Centaurea nigra*, frequent wild carrot *Daucus carota*, locally frequent lady's bedstraw *Galium verum* and oxeye daisy *Leucanthemum vulgare*, occasional yarrow *Achillea millefolium*, and rarely present common birds-foot trefoil *Lotus corniculatus*, great burnet *Sanguisorba officinalis*, and kidney vetch *Anthyllis vulneraria.* |

| Parcel | Description |
|---|---|
| G26 | An area of grass dominant other neutral grassland was present to the west of G25. Creeping bent was abundant with Yorkshire fog and common couch *Elymus repens* were frequent amongst the sward. Forbs included locally frequent oxeye daisy with perforate St John's worth, red campion and ribwort plantain rare amongst the sward. |
| G27 | An area of grassland amongst G25 was dominated by common bird's-foot trefoil, with frequent black medick *Medicago lupulina* and occasional wild carrot. This compartment was visibly different from G25 and was therefore assessed separately. Forbs dominated and sward height was varied. There was no scrub encroachment and bare ground account for ~5% of ground cover. |
| G28 / G30 / G31 | Two areas of other neutral grassland parcels (G28 +G30) surrounded SUDs features (SUD4, SUD5 and SUD6). Leading to G30, a strip of other neutral grassland with a similar species composition was present along the road (G31) was present Some of the grass had been mown which provided a varied sward height, with patches of bare ground present. There were ~7 species per $m^2$. Yorkshire fog was abundant with frequent perennial ryegrass, fescue *Festuca* spp., and occasional crested dog's-tail. Forbs included locally abundant red clover *Trifolium pratense,* locally frequent wild carrot and tufted vetch *Vicia cracca*, occasional curled dock *Rumex crispus*, ribwort plantain *Plantago lanceolata*, white clover *Trifolium repens* and lesser trefoil *Trifolium dubium* and rarely present lesser knapweed, salad burnet *Sanguisorba minor*, lady's bedstraw and smooth tare *Vicia tetrasperma*. |



Modified Grassland

3.49 Modified grassland was largely present along the roadsides within EMG1 where management had been more intensive. Parcels of grassland that were species poor, or had fewer examples of species indicative of higher distinctiveness grassland, were also categorised as modified grassland. Descriptions for each parcel of modified grassland are provided in Table 10.

**Table 10: Modified Grassland Descriptions – EMG1**

| Parcel | Description |
|---|---|
| G18 / G19 | Two strips of mown species poor grassland were present to the north of the SEGO site offices. Perennial ryegrass was dominant amongst the sward alongside frequent lesser trefoil and occasional white clover. |

| Parcel | Description |
|---|---|
| G29 | A small parcel of modified grassland fenced off as part of a conservation area was dominated by Yorkshire fog and abundant perennial ryegrass. Bent *Agrostis* grass was also abundant amongst the sward. There was <20% of forbs and there was an average of 3 species per $m^2$. Bee hives were present in the western part of the grassland parcel. |
| G32 | A strip of species poor modified grassland was present between the roadside and large area of hardstanding. The grass was mown with a sward height <7cm. Perennial ryegrass was dominant with white clover and lesser trefoil both frequent. |
| G33 | An area of modified grassland, with an average of 5 species per $m^2$, characterised the bund along the north-eastern site boundary. Grass species included abundant Yorkshire fog and frequent perennial ryegrass and creeping bent, and locally frequent false oat grass. Forbs included locally frequent creeping thistle, occasional ribwort plantain and wild carrot, with creeping buttercup *Ranunculus repens*, common vetch *Vicia sativa* and spear thistle *Cirsium vulgare* all rare throughout the sward. |
| G33a | An area of modified grassland with established whip planting was located along the western end of the bund along the north-western boundary, adjacent to G33. The recent whip planting did not account for 75% ground cover and so was defined under UKHab 2.0 as modified grassland with scattered scrub as a secondary code. Sward height was approximately 70cm. Species included dominant Yorkshire fog, abundant red fescue, and rarely present perennial ryegrass, spear thistle, bristly oxtongue *Helminthotheca echioides*, and common ragwort. Established whip species included willow *Salix* spp., hazel *Corylus avellana*, oak *Quercus* spp., silver birch *Betula pendula,* and holly *Ilex aquifolium*. |
| G34 | A patch of modified grassland remained untouched amongst a larger area of bare ground. The grass had an average of 6 species per $m^2$ and a sward height of approximately 20-40cm. Perennial ryegrass was abundant alongside white clover and mayweed *Tripleurospermum* spp. Tufted vetch was frequent amongst the sward with occasional timothy *Phleum pratense*, smooth tare and hairy tare *Vicia hirsuta*. |
| G41 | A small area of modified grassland was present. |

Sustainable Drainage Features

3.50 Three sustainable drainage features (SUDs) were present toward the north of the EMG1 site boundary. Species across SUD4, SUD5, and SUD6 were similar and included common reed *Phragmites australis*, hard rush *Juncus inflexus*, great reedmace *Typha latifoli*, horsetail *Equisetum*

spp., greater willowherb *Epilobium hirsutum*, creeping cinquefoil *Potentilla reptans*, red shank *Persicaria maculosa* and toad rush *Juncus bufonius*.

Ephemeral

3.51 TAn area of ephemeral vegetation (E1) was present in the EMG1 boundary which was present to the south of the EMG1 boundary. Approximately 40-50% of the ground was free of vegetation. Vegetation amongst the areas of bare ground included mayweed, perennial ryegrass, wild radish *Raphanus raphanistrum*, rough meadowgrass *Poa trivialis*, tufted vetch, cock's foot *Dactylis glomerata* and common mouse ear *Cerastium fontanum*.

Artificial Unvegetated-Unsealed Surface

3.52 A large area of artificial unvegetated- unsealed surface (AU1) was present to the south of the EMG1 boundary. Less than 10% vegetation was present in this area and comprised soil disturbed by earth works.

Hardstanding

3.53 Areas of hardstanding comprised the freight exchange in the centre of EMG1, a series of roads connecting the site and the site office and associated carpark to the south of the Site.

Hedgerows

3.54 There were seven hedgerows present within EMG1.

3.55 No hedgerows were considered to be species-rich however all comprised at least 80% native woody species and therefore qualify as Habitats of Principal Importance (HPI) under S41 of the NERC Act.

3.56 Details of hedgerows along Highways areas are presented in Table 11.

**Table 11: Hedgerow Descriptions – EMG1**

| Hedgerow Number | Hedgerow Type | Length (m) | Canopy Species | BNG Condition |
|---|---|---|---|---|
| H53 | Native Hedgerow with Trees | 98 | Elm, small-leaved lime, birch | Moderate |
| H54 | Native Hedgerow with Trees | 211 | Blackthorn, hawthorn, hazel | Moderate |
| H59 | Native Hedgerow | 95 | Not assessed | Good |
| H60a | Native Hedgerow | 16 | Hawthorn, hazel, field maple | Good |
| H60b | Native Hedgerow | 7 | *Prunus* spp. | Good |
| H61 | Native Hedgerow | 166 | Hawthorn, elm, rowan, *Prunus* spp. | Moderate |

## Protected Species

### Amphibians

3.57 Records of GCN, smooth newts, common frogs and common toads were returned as part of the desk study. GCN and smooth newts recorded within the Scheme boundaries.

3.58 The EMG2 Main site provides suitable aquatic habitat for amphibians in field ponds and ditches. Suitable on-site terrestrial habitat is limited, however a network of hedgerows does provide connectivity to off-site habitat. A medium population of GCN have been recorded in ponds located adjacent to the site within the Donington Park Services area. The supporting ecological documentation (Tyler Grange 2024) for the "*Land South of A453*" application (24/00727/OUTM) includes eDNA results confirming GCN presence in on-site pond P2.

3.59 The highways area contained limited areas of suitable terrestrial habitat along hedgerows, woodland, scrub and some restricted areas of tussocky grassland.

3.60 The EMG1 area included a SuDs feature which may provide a seasonal aquatic resource. Areas of suitable terrestrial habitat along hedgerows, woodland, scrub and some restricted areas of tussocky grassland within wider managed areas.

### Badgers

3.61 The scheme provides a mixture of potential seasonal and permanent foraging habitat, as well as suitable habitat to support badger setts. Habitats are generally connected to further suitable habitat in the local area. An assessment of badger activity is provided in the separate badger report (FPCR, 2024).

### Bats

3.62 The scheme provides a range of potential foraging, roosting and commuting habitat. An assessment of bat activity is provided in the separate bat report (FPCR, 2024).

### Birds

3.63 The scheme has potential to support foraging and breeding arable and generalist bird species assemblages. An assessment of bird activity is provided in the separate bird report (FPCR, 2024).

### Invertebrates

3.64 The scheme has potential to a range of invertebrate assemblages. An assessment of invertebrate activity is provided in the separate invertebrate report (Kirby-Lambert, 2024).Otter and Water Voles

3.65 The Site was considered to offer both water vole and otter suitable habitat, namely wet ditches with steep grassy banks, and areas of adjoining scrub and woodland. An assessment of water vole and otter activity is provided in the separate water vole and otter report (FPCR, 2024).

**Reptiles**

3.66 The scheme includes suitable commuting, foraging and refuge habitats for reptiles, however connectivity to wider areas of suitable habitat is limited. An assessment of reptile activity is provided in the separate reptile report (FPCR, 2024).

# 4.0 DISCUSSION AND RECOMMENDATIONS

## Proposals

4.1 The following section provided an evaluation of the existing habitats within the Site boundary. A summary of recommendations for mitigation is also provided.

4.2 The full assessment of impacts on sites of nature conservation interest and habitats is detailed separately in the accompanying ES chapter. The evaluation has been made in the context of relevant statutory and policy protection.

## Designated Sites

### Statutory Designations

4.3 One internation site of conservation importance was identified within 15km of the Site. One national site of conservation importance was identified within 2km of the Site.

### Non-Statutory Designations

4.4 Non-statutory designated sites do not receive statutory protection. They do however receive policy protection (as "Local Sites"), as reflected in the National Planning Policy Framework (NPPF). NPPF suggests that Local Sites can have a fundamental role to play in meeting overall national biodiversity targets and that appropriate weight should be attached to designated sites when making planning decisions.

4.5 Eighty non-statutory designated sites (5 LWS, 44 candidate LWS, 13 pLWS, and 18 pLWS (Historic)) were identified within 1km of the Site. A single candidate local wildlife site and two historic pLWS were present within the Site boundary.

4.6 On-site pond P3 is a potential-historic LWS (11975) within the EMG2 Main Site. This is to be retained along with the majority of surrounding vegetation. Based on the phase 1 survey data, this pond did not meet the requirements to be selected as a LWS published in Leicester, Leicestershire and Rutland Guidance.

4.7 The Donington Park Services Ash Trees (92034) candidate LWS, form part of hedgerow H6, and are referred to as trees T4 and T5. The arboricultural assessment as detailed in the Tree Schedule (FPCR 2022) lists these trees as being of low arboricultural quality with an estimated remaining life expectancy of at least 10 years. This boundary habitat to the adjoining service station is to be retained.

4.8 Castle Donington, Charnock Hill grassland potential-historic LWS (11840) overlaps the boundary of the A453/The Green improvements, which are a component of the Highways Works. The habitat listing for this designation identifies grassland as the main habitat type, but no further details were provided. Aerial imagery shows a grassland field compartment containing a small area of dense scrub-like vegetation and bounded by hedgerows. The area of overlap with the Highway Works boundary is restricted to the existing carriageway, road verges and partial overlap of hedgerows.

4.9 Lockington (EMG) Oak 143 candidate LWS (90888) is recorded as a mature oak of 1370mm DBH in poor condition. The tree sits within a hedgerow that bounds the A50 and would be retained within the A50 West Bound Merge component of the Highway Works.

4.10 The M1 J23A Donnington Park Services Grassland and Scrub (92033) Candidate LWS is located adjacent to the eastern Site boundary. This is an area of mesotrophic grassland and scrub which includes several ponds supporting a population of GCN.

4.11 Castle Donington, Swan River verge potential-historic LWS (11836) lies just north of the boundary of the A453/The Green improvements, which are a component of the Highway Works. habitat information was available for this site, however the name indicates an association with the minor watercourse in this area.

4.12 King Street Plantation potential-historic LWS (11950) is located adjacent to the boundary of the EMG1 Works, within the existing EMG1 development. It is listed as woodland last surveyed approximately sometime between 1980 and 1990 and as an area as deciduous woodland on Defra's Priority Habitats Inventory (England) lists.

4.13 Lockington Park potential-historic LWS (11952) is found approximately 20m north of the EMG1 Works and 40m west of the A50 West Bound Merge component of the Highways Works. It is listed as woodland last surveyed approximately sometime between 1980 and 1990 and is partially recorded as deciduous woodland on Defra's Priority Habitats Inventory (England) lists.

4.14 The Paddock (11965) potential-historic LWS is found approximately 50m south-west of the EMG2 Main Site on the far side of Long Holden. Defra's Priority Habitats Inventory (England) lists the area as mainly traditional orchard, with some deciduous woodland. No recent survey data was available, however from aerial imagery the site appears to be a largely managed grassland area.

4.15 The remaining sites are considered to be sufficiently distant from the proposed Site, and it is therefore considered that these are unlikely to be impacted by the construction phase. Given the provision of green infrastructure onsite and nature of the development, it is unlikely that the LWS' will be subject to additional visitor pressures once the development is operational.

**Habitats**

4.16 The degree to which habitats receive consideration within the planning system relies on a number of mechanisms, including:

- Inclusion within specific policy (e.g. veteran trees, ancient woodland and linear habitats in NPPF, or non-statutory site designation),
- Identification as a Habitat of Principal Importance for biodiversity under Natural Environment and Rural Communities Act (NERC) 2006 and identification as a Priority Habitat within the local Biodiversity Action Plan (BAP).

4.17 Habitats of greater value on Site include the mature and immature trees, hedgerows, woodlands and aquatic habitats which should be retained, buffered and enhanced within proposals where feasible. Mature trees provide continuity of habitat and offer biodiversity value to a range of bird and invertebrate species. Any tree loss should be mitigated for by suitable replacement planting in a suitable location within the green infrastructure.

4.18 All hedgerows on the main Site are classified as a Habitat of Principal Importance under Section 41 of the NERC Act 2006. No hedgerows were classed as species-rich. Hedgerows provided a network around the Site, offering commuting and foraging habitat for a variety of species.

4.19 Across the Highways and EMG1 Sites, no hedgerows were classed as species-rich. Hedgerows provided a network around the Site, offering commuting and foraging habitat for a variety of species.

4.20 hedgerows should be retained where feasible and enhanced through planting of native shrub and tree planting to improve their structure as wildlife habitat and corridors. Retained hedgerows would benefit from sympathetic management to maximise their value for biodiversity.

4.21 All retained hedgerows and trees will be protected by appropriate fencing based on their calculated Root Protection Areas (RPA) and protected from damage and disturbance during construction through the implementation of best practice standards and recommended guidance and as outlined in any Construction Environmental Management Plan (CEMP) or similar for the lifetime of the construction phase.

4.22 The remaining habitats on the main Site (poor semi-improved and improved grassland, dense scrub and arable) comprised species common and typical of those habitats and were of little intrinsic nature conservation value.

**Biodiversity Net Gain**

4.23 Biodiversity Net Gain (BNG) is an approach to development that leaves biodiversity in a better state than before. Where a development has an impact on biodiversity it encourages developers to provide an increase in appropriate natural habitat and ecological features over and above that being affected in such a way it is hoped that the current loss of biodiversity through development will be halted and ecological networks can be restored.

4.24 The proposed compensation and enhancement measures that will be implemented to off-set impacts and achieve gains for biodiversity are described separately in the separate Biodiversity Net Gain report (FPCR 2024).

**Flora Enhancements**

4.25 In addition to the above, the biodiversity of the Site could be further enhanced by creating log piles from any scrub/trees felled, providing habitat for invertebrates, small mammals and herpetofauna generally. Bespoke mitigation requirement will be detailed in the accompanying species ES chapters.

4.26 New native tree and shrub planting and wildflower/species-rich grassland areas should be incorporated into the green infrastructure proposals, including alongside retained habitats to further enhance their value.

4.27 Preference should be given within the planting scheme to the use of locally native woody species. Planting within built areas may include semi-ornamental and ornamental specimens, with consideration given to those which provide value to wildlife.

## Protected Species

4.28 Principal pieces of legislation protecting wild species are Part 1 of the Wildlife and Countryside Act 1981 (as amended) (WCA) and the Conservation of Habitats and Species Regulations 2017 (as amended). Some species, for example badgers, also have their own protective legislation (Protection of Badger Act 1992). The impact that this legislation has on the Planning system is

outlined in ODPM 06/2005 Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System.

4.29 The presence of protected species is a material consideration in any planning decision, it is essential that the presence or otherwise of protected species, and the extent to which they are impacted by proposals is established prior to planning permission being granted. Furthermore, where protected species are present and proposals may result in harm to the species or its habitat, steps should be taken to ensure the long-term protection of the species, such as through attaching appropriate planning conditions.

4.30 In addition to protected species, there are those that are otherwise of conservation merit, such as Species of Principal Importance for the purpose of conserving biodiversity under the NERC Act 2006. These are recognised in the NPPF, which advises that when determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying a set of principles including:

- If significant harm to biodiversity resulting from a development cannot be avoided, adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- Development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

4.31 Separate technical reports outline the potential implications for development in relation to:

- Badger
- Bats
- Birds
- Invertebrates
- Otter and Water Vole
- Reptiles

**GCN**

4.32 According to research published by Natural England[13], GCN are unlikely to travel in excess of 200-250m from a breeding pond and if the habitats adjacent to the pond are of good quality, the distance travelled from the pond is likely to be reduced. The report states:

4.33 “By far the most captures were recorded within 50 m of ponds and few animals were captured at distances greater than 100 m”

*“Captures on fences (and by other methods) at distances between 100 m and 200 – 250 m from breeding ponds tended to be so low as to raise serious doubts about the efficacy of this as an approach, although a small number of projects did report captures on significant linear features at distances approximately 150 – 200 m from ponds.”*

13 Cresswell and Whitworth, 2004. English Nature Research Report Number 576

4.34 Jehle[14] determined a terrestrial zone of 63m, within which 95% of summer refuges were located. In addition, following the breeding season, Jehle and Arntzen[15] recorded 64% of newts within 20m of the pond edge".

4.35 For the purpose of mitigation licences Natural England classify core terrestrial habitats as those within 50m of a breeding pond, habitats between 50m and 250m are classified as intermediate, and beyond this habitats are classified as distant.

4.36 Two ponds (P1 and P2) will be lost to facilitate proposals. Loss of suitable terrestrial habitats will be restricted to hedgerows, with the majority of the area around ponds being utilised for crop production.

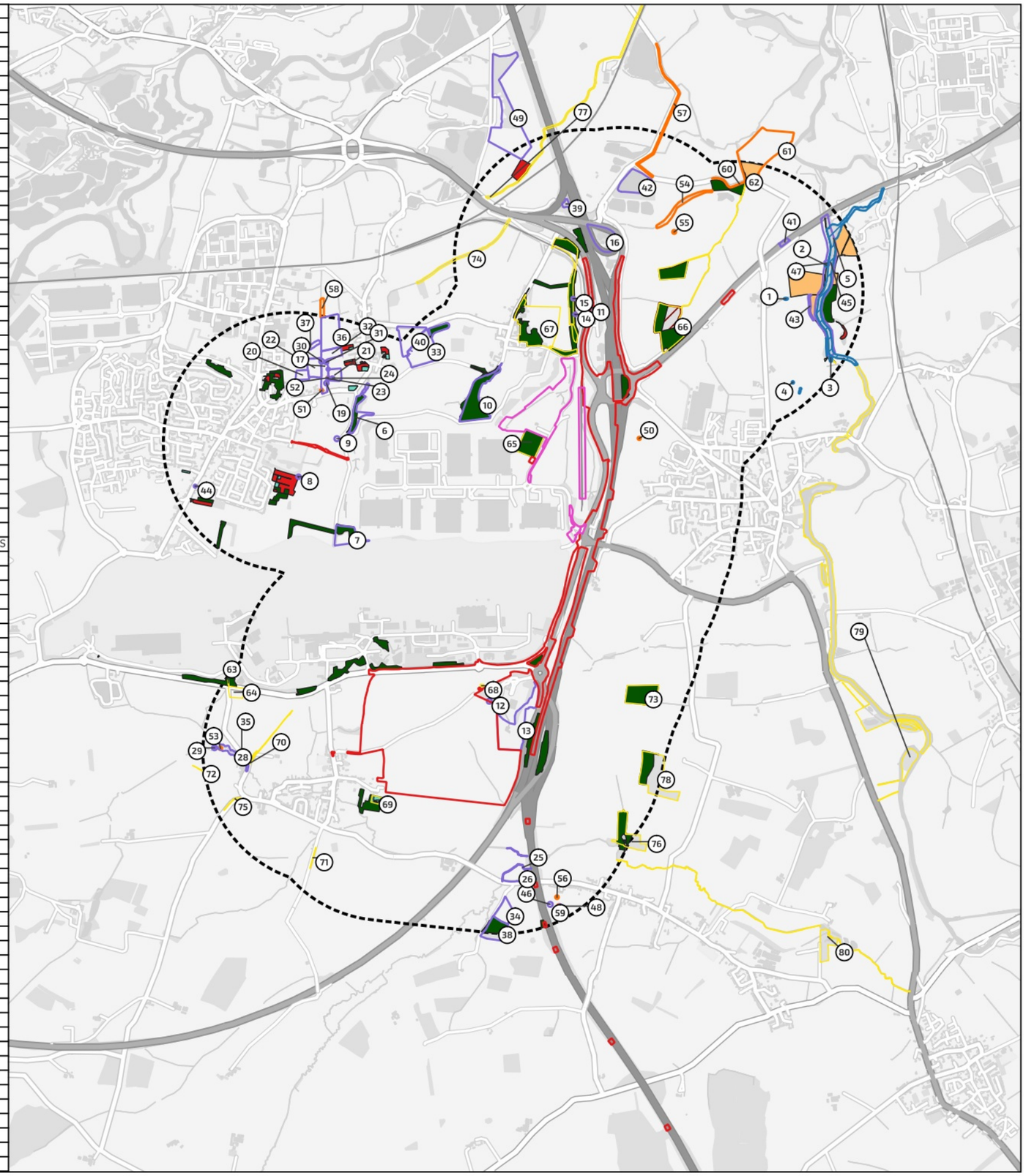
4.37 GCN mitigation will be provided through a District Level Licencing Scheme, an IACPC certificate has been issued by Natural Engalnd.



14 Jehle, R. 2000. The terrestrial summer habitat of radio tracked great crested newts (Triturus cristatus) and marbled newts (Triturus marmoratus). The Herpetological Journal, Volume 10, pp137-142.

15 Jehle, R., Arntzen, J, W. 2000. Post-breeding migrations of newts (Triturus cristatus and T. marmoratus) with contrasting ecological requirements. Journal of Zoology, 251, pp297-306.

| Label | Name |
|---|---|
| 1 | Long Lane Willows, LWS |
| 2 | Ratcliffe Bridge willow, LWS |
| 3 | Kegworth Bridge Hedge & Willows, LWS |
| 4 | Long Lane Mature Trees, LWS |
| 5 | River Soar, LWS |
| 6 | Castle Donington Pasture, Woodland & Stream, cLWS |
| 7 | Castle Donington Grassy Scrub, cLWS |
| 8 | Castle Donington Oak 2, cLWS |
| 9 | Castle Donington Oak 1, cLWS |
| 10 | The Dumps, cLWS |
| 11 | Lockington (EMG) Oak 143, cLWS |
| 12 | Diseworth, Donington Park Services M1 J23A, ash trees, cLWS |
| 13 | M1 J23A Donington Park Services grassland and scrub, cLWS |
| 14 | Lockington (EMG) Oak 145, cLWS |
| 15 | Lockington (EMG) Oak 144, cLWS |
| 16 | M1/A50 Junction Ponds and Grassland, cLWS |
| 17 | Hemington Meadow, cLWS |
| 18 | Diseworth Brook, cLWS |
| 19 | Hemington Pasture Ash 2, cLWS |
| 20 | Castle Donington Grassland, cLWS |
| 21 | Hemington Grassland, cLWS |
| 22 | Castle Donington Pasture, cLWS |
| 23 | Hemington Pasture Ash 5, cLWS |
| 24 | Hemington Pasture Ash 6, cLWS |
| 25 | West Meadow Brook, cLWS |
| 26 | Long Whatton Meadow 2, cLWS |
| 27 | Hemington Pasture Ash 4, cLWS |
| 28 | Diseworth Brook - Woodland, cLWS |
| 29 | Diseworth Brook Oak, cLWS |
| 30 | Hemington Pasture Oak 2, cLWS |
| 31 | Hemington Pasture Oak 1, cLWS |
| 32 | Hemington Wet Grassland, cLWS |
| 33 | Hemington Grassland, cLWS |
| 34 | Long Whatton Meadow, cLWS |
| 35 | Diseworth Brook Ash 2, cLWS |
| 36 | Hemington Pasture, cLWS |
| 37 | Castle Donington, row of Crack Willows and an Oak off Carnival Way, cLWS |
| 38 | Long Whatton Woodland,cLWS |
| 39 | M1/A50 Junction Pond, cLWS |
| 40 | Hemington Pasture, cLWS |
| 41 | A453 Viaduct Grassland, cLWS |
| 42 | Warren Lane Pond, cLWS |
| 43 | Soar Bank Drain, cLWS |
| 44 | Castle Donington, Gothic House Lime, cLWS |
| 45 | River Soar (W bank) south of A453, cLWS |
| 46 | Veteran Ash 2, West End, cLWS |
| 47 | Soar Bank White Willow, cLWS |
| 48 | Veteran Ash 3, West End, cLWS |
| 49 | Land E of Netherfield Lane, cLWS |
| 50 | Kegworth, Derby Rd Oak, pLWS |
| 51 | Hemington Pasture Ash 1, pLWS |
| 52 | Hemington Pasture Ash 3, pLWS |
| 53 | Diseworth Brook Ash 1, pLWS |
| 54 | Lockington Quarry extension hedgerow and ditch, pLWS |
| 55 | Lockington Quarry Oak, pLWS |
| 56 | Long Whatton Meadows Ash 4, pLWS |
| 57 | Lockington, Warren Lane hedge, pLWS |
| 58 | Hemington Scrubby Grassland, pLWS |
| 59 | Veteran Ash I, West End, pLWS |
| 60 | Ratcliffe Lane Hedge 1, pLWS |
| 61 | Ratcliffe Lane Pasture and Stream, pLWS |
| 62 | Ratcliffe Lane Willow 1, pLWS |
| 63 | Castle Donington, Swan River verge, pLWS.hist |
| 64 | Castle Donington, Charnock Hill grassland, pLWS.hist |
| 65 | King Street Plantation, pLWS.hist |
| 66 | Stream, pLWS.hist |
| 67 | Lockington Park, pLWS.hist |
| 68 | Pond, pLWS.hist |
| 69 | The Paddock - Semi-improved grassland, pLWS.hist |
| 70 | Diseworth Green Lane NW of village, pLWS.hist |
| 71 | Long Mere Lane - Hedgerow, pLWS.hist |
| 72 | Hedgerow, pLWS.hist |
| 73 | Mixed plantation, pLWS.hist |
| 74 | Stream along edge of arable field, pLWS.hist |
| 75 | Hedgerow, pLWS.hist |
| 76 | Ash Spinney, pLWS.hist |
| 77 | Stream, pLWS.hist |
| 78 | His Lordships woodland, pLWS.hist |
| 79 | River Soar and floodplain habitats, pLWS.hist |
| 80 | Long Whatton Brook, pLWS.hist |





**Red Line Boundary**

- Order Limits EMG1 MCO
- Order Limits EMG2 DCO
- 1km Buffer

**Designated Sites**

- Local Wildlife Sites (LWS)
- Candidate Local Wildlife Sites (cLWS)
- Potential Local Wildlife Sites (pLWS)
- Potential Historic Local Wildlife Sites (pLWS.hist)
- Ancient & Semi-Natural Woodland

**Priority Habitats within 1km of the Site Boundary**

- Coastal and floodplain grazing marsh
- Deciduous woodland
- Good quality semi improved grassland
- Lowland fens
- No main habitat but additional habitats present
- Traditional orchard

0 1,000 2,000 m

N

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client
SEGRO Properties Ltd and SEGRO (EMG) Ltd

project
East Midlands Gateway Phase 2 (EMG2)

drawing title
SITE LOCATION & CONSULTATION RESULTS PLAN - DESIGNATED SITES - 1KM SEARCH

| scale @ A3 | drawn | issue date |
|---|---|---|
| 1:35000 | LE / JH | 19/6/2025 |

drawing / figure number
**Figure 1a**

rev
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\\fpcr-fs-01\Projects2\10600\10666\ECO\QGIS\QGIS 2.14\Plans\consultation plans\10666-E-01 Consultation Plan - Designated Sites Oct.24.qgs

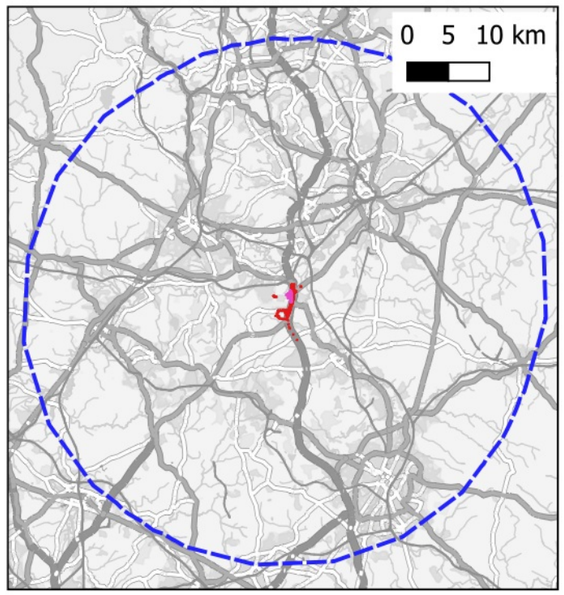
**Red Line Boundary**

- Order Limits EMG1 MCO
- Order Limits EMG2 DCO
- 2km Buffer
- 15km Buffer
- 30km Buffer

**Designated Sites**

- Site of Special Scientific Interest, SSSI
- Special Areas of Conservation, SAC

81 - Lockington Marshes SSSI
82 - River Mease SAC

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0 5,000 10,000 m

client
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project
East Midlands Gateway Phase 2 (EMG2)

drawing title
SITE LOCATION & CONSULTATION RESULTS PLAN - DESIGNATED SITES - 2KM, 15KM, 20KM & 30KM

scale @ A3 1:135000 | drawn LE / SJA | issue date 19/6/2025

drawing / figure number **Figure 1b** | rev -

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## Red Line Boundary

- Order Limits EMG1 MCO
- Order Limits EMG2 DCO
- 2km Buffer

**Bats**

- Brown Long-eared
- Common Pipistrelle
- Daubenton's
- Leisler's
- Myotis sp.
- Nathusius's Pipistrelle
- Natterer's
- Noctule
- Nyctalus sp.
- Pipistrelle sp.
- Serotine
- Soprano Pipistrelle
- Unidentified Bat sp.
- Whiskered

**Herpetofauna**

- Great Crested Newt

**Mammals**

- Otter

**European Protected Species (EPS) within 1km Accuracy**

- Species within SK4830: Myotis sp.; Nyctalus sp.; Noctule; Pipistrelle sp.; Nathusius's Pipistrelle; Common Pipistrelle; Soprano Pipistrelle; Brown Long-eared
- Species within SK4629: Myotis sp.; Daubenton's; Noctule; Nathusius's Pipistrelle; Common Pipistrelle; Soprano Pipistrelle; Brown Long-eared
- Species within SK4829: Myotis sp.; Nyctalus sp.; Noctule; Common Pipistrelle; Soprano Pipistrelle; Brown Long-eared
- Species within SK4628: Myotis sp.; Noctule; Common Pipistrelle; Soprano Pipistrelle
- Species within SK4728: Myotis sp.; Daubenton's; Common Pipistrelle; Soprano Pipistrelle
- Species within SK4527: Myotis sp.; Noctule; Common Pipistrelle; Soprano Pipistrelle
- Species within SK4627: Myotis sp.; Noctule; Common Pipistrelle; Soprano Pipistrelle
- Species within SK4727: Myotis sp.; Daubenton's; Common Pipistrelle; Soprano Pipistrelle
- Species within SK4927: Common Pipistrelle
- Species within SK4526: Myotis sp.; Noctule; Common Pipistrelle
- Species within SK4626: Noctule; Common Pipistrelle; Soprano Pipistrelle
- Species within SK4726: Serotine; Noctule; Common Pipistrelle; Soprano Pipistrelle
- Species within SK4826: Common Pipistrelle; Soprano Pipistrelle; Unidentified Bat sp.
- Species within SK4926: Daubenton's; Common Pipistrelle; Soprano Pipistrelle; Noctule
- Species within SK4925: Daubenton's; Common Pipistrelle; Noctule
- Species within SK4924: Daubenton's; Common Pipistrelle; Soprano Pipistrelle; Noctule
- Species within SK4422: Otter

**European Protected Species (EPS) within 2km Accuracy**

- Species within SK42P: Myotis sp.; Noctule; Common Pipistrelle; Soprano Pipistrelle

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0 1,000 2,000 m

N

client
SEGRO Properties Ltd and SEGRO (EMG) Ltd

project
East Midlands Gateway Phase 2 (EMG2)

drawing title
DESK STUDY RESULTS - DISTRIBUTION OF EUROPEAN PROTECTED SPECIES RECORDS

scale @ A3
1:37500

drawn
LE / SJA

issue date
19/6/2025

drawing / figure number
**Figure 2a**

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## Red Line Boundary

- 1km Buffer
- Order Limits EMG1 MCO
- Order Limits EMG2 DCO

**Aquatic**
- Jenkins' Spire Snail
- Northern River Crangonyx
- Signal Crayfish

**Birds**
- Barn Owl
- Black Redstart
- Black-tailed Godwit
- Brambling
- Bullfinch
- Canada Goose
- Cetti's Warbler
- Cuckoo
- Curlew
- Dunnock
- Egyptian Goose
- Fieldfare
- Garganey
- Goldeneye
- Grasshopper Warbler
- Green Sandpiper
- Greenshank
- Grey Partridge
- Greylag Goose
- Hawfinch
- Herring Gull
- Hobby
- House Sparrow
- Kingfisher
- Lapwing
- Lesser Redpoll
- Linnet
- Little Ringed Plover
- Mandarin Duck
- Marsh Tit
- Mediterranean Gull
- Merlin
- Osprey
- Peregrine
- Pintail
- Quail
- Red Kite
- Redwing
- Reed Bunting
- Ring Ouzel
- Ruff
- Sand Martin
- Skylark
- Song Thrush
- Spotted Flycatcher
- Starling
- Tree Sparrow
- Tundra Swan
- Turtle Dove
- Whimbrel
- Whooper Swan
- Willow Tit
- Wood Sandpiper
- Yellow Wagtail
- Yellowhammer

**Herpetofauna**
- Common Frog
- Common Toad
- Smooth Newt

**Mammals**
- Black Rat
- Hedgehog
- Muntjac
- Polecat
- Hare

**Notable Invertebrates**
- Cinnabar
- Harlequin Ladybird
- Shaded Broad-bar
- Small Heath
- Hairy Dragonfly

**Species Records within 1km Accuracy**
- Species within SK4629: Redwing; Fieldfare; Little Ringed Plover; Swallow; Skylark; Yellowhammer; Reed Bunting; Linnet; Willow Tit; Dunnock; Bullfinch; Starling; Song Thrush
- Species within SK4729: Little Ringed Plover; Swift; House Martin; Swallow
- Species within SK4829: Water Vole; Swift; House Martin; Swallow; Canada Goose
- Species within SK4929: Common Frog; Common Toad
- Species within SK4428: Swift; Swallow
- Species within SK4528: Swallow
- Species within SK4628: Swallow
- Species within SK4828: Skylark; Yellowhammer; American Mink; Swallow
- Species within SK4928: Swallow
- Species within SK4427: Swift; House Martin; Swallow
- Species within SK4527: Swift; Swallow
- Species within SK4827: Swift; House Martin
- Species within SK4927: Swift; House Martin; Swallow; Blood-vein
- Species within SK4426: Swallow
- Species within SK4526: House Martin
- Species within SK4626: Redwing; Fieldfare; Barn Owl; Skylark; Swift; Yellowhammer; Reed Bunting; Swallow; Herring Gull; Hare; Linnet; Dunnock; Bullfinch; Starling; Lapwing
- Species within SK4826: Swift; Hare; House Martin; Swallow
- Species within SK4825: Swift
- Species within SK4424: Swallow; House Martin; Skylark; Yellowhammer; House Sparrow
- Species within SK4524: Harlequin Ladybird; Swallow
- Species within SK4723: Swallow; House Martin

**Species Records within 2km Accuracy**
- Species within SK42P: Red Kite; Redwing; Fieldfare; Yellowhammer; Reedbunting; Linnet; Dunnock; Bullfinch; Starling; Song Thrush
- Species within SK42U: Skylark

0 1,000 2,000 m

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drawing title
DESK STUDY RESULTS - DISTRIBUTION OF OTHER PROTECTED/NOTABLE SPECIES RECORDS - NOTABLE ANIMALS
scale @ A3 1:27500
drawn LE / SJA
issue date 19/6/2025
drawing / figure number **Figure 2b**
rev -

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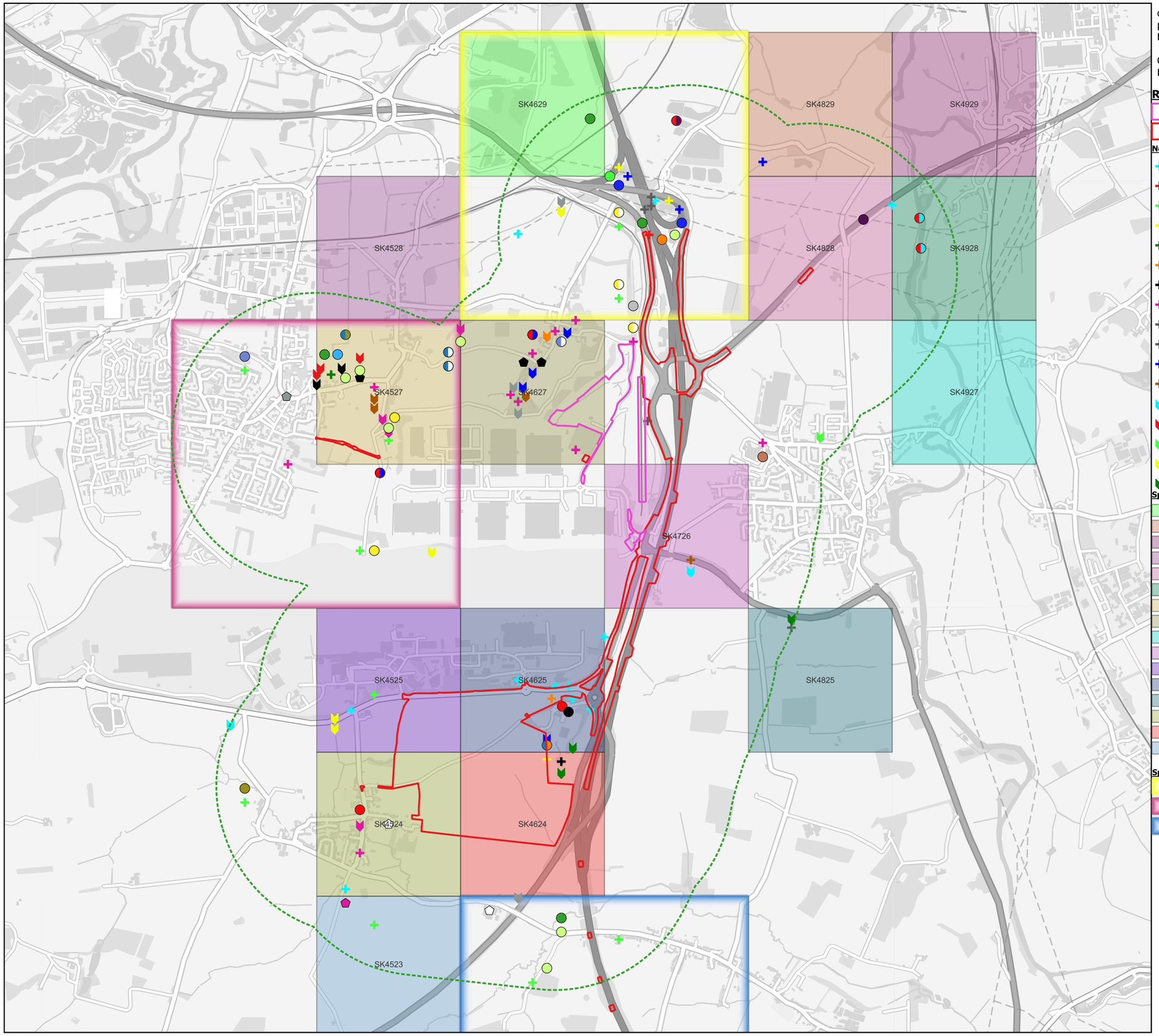


**Red Line Boundary**

1km Buffer

Order Limits EMG1 MCO

Order Limits EMG2 DCO

**Notable Plants**

- Bee Orchid
- Blue Water-speedwell
- Bluebell
- Bogbean
- Brown Bent
- Buck's-horn Plantain
- Burnet Rose
- Cherry Laurel
- Chicory
- Common Bistort
- Common Cudweed
- Corn Marigold
- Cornflower
- Devil's-bit Scabious
- Field Garlic
- Giant Hogweed
- Grass Vetchling
- Greater Celandine
- Harebell
- Himalayan Balsam
- Hoary Plantain
- Hybrid Bluebell
- Japanese Knotweed
- Knotted Hedge-parsley
- Least Duckweed
- Lesser Hawkbit
- Marsh Ragwort
- Meadow Brome
- Monkeyflower
- New Zealand Pigmyweed
- Pampas-grass
- Quaking-grass
- Ragged-Robin
- Rhododendron ponticum
- Rough Hawk's-beard
- Sanicle
- Scarlet Pimpernel
- Shininig Pondweed
- Small Cudweed
- Small-leaved Lime
- Spotted Medick
- Stinking Chamomile
- Thread-leaved Water-crowfoot
- Three-cornered Garlic
- Tree-of-heaven
- Variegated Yellow Archangel
- White Stonecrop
- Wild Pansy
- Wild Strawberry

**Species Records within 1km Accuracy**

- Species within SK4629: Ragged-Robin
- Species within SK4829: Nuttall's Waterweed
- Species within SK4929: Narrow-leaved Water-plantain
- Species within SK4528: Columbine; Himalayan Balsam; Cherry Laurel
- Species within SK4828: Variegated Yellow Archangel; Cherry Laurel
- Species within SK4928: Large-Leaved Lime; Greater Burdock; Floating Pennywort; Himalayan Balsam; Marsh Speedwell
- Species within SK4527: Bluebell; Montbretia; Nuttall's Waterweed; Variegated Yellow Archangel
- Species within SK4627: Variegated Yellow Archangel
- Species within SK4927: Greater Burdock; Nuttall's Waterweed; Floating Pennywort; Least Duckweed; Water Primrose; Greater Duckweed
- Species within SK4726: Bee Orchid
- Species within SK4525: Hybrid Bluebell; White Stonecrop
- Species within SK4625: Grass Vetchling; Buck's-horn Plantain; Burnet Rose
- Species within SK4825: Chicory
- Species within SK4524: Columbine; Hybrid Bluebell; Variegated Yellow Archangel; Keeled-fruited Cornsalad
- Species within SK4624: Grass Vetchling
- Species within SK4523: Rye Brome; Himalayan Balsam

**Species Records within 2km Accuracy**

- Species within SK42U: Japanese Rose
- Species within SK42N: Canadian Waterweed
- Species within SK42R: Columbine; Greater Burdock; Harebell; Wall Cotoneaster; Himalyan Balsam; Variegated Yellow Archangel; Lesser Hawkbit; Hoary Plantain; Cherry Laurel; White Stonecrop

0 1,000 2,000 m

client
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project
East Midlands Gateway Phase 2 (EMG2)

drawing title
DESK STUDY RESULTS - DISTRIBUTION OF OTHER PROTECTED/NOTABLE SPECIES RECORDS - NOTABLE PLANTS

scale @ A3
1:27500

drawn
LE / SJA

issue date
19/6/2025

drawing / figure number
**Figure 2c**

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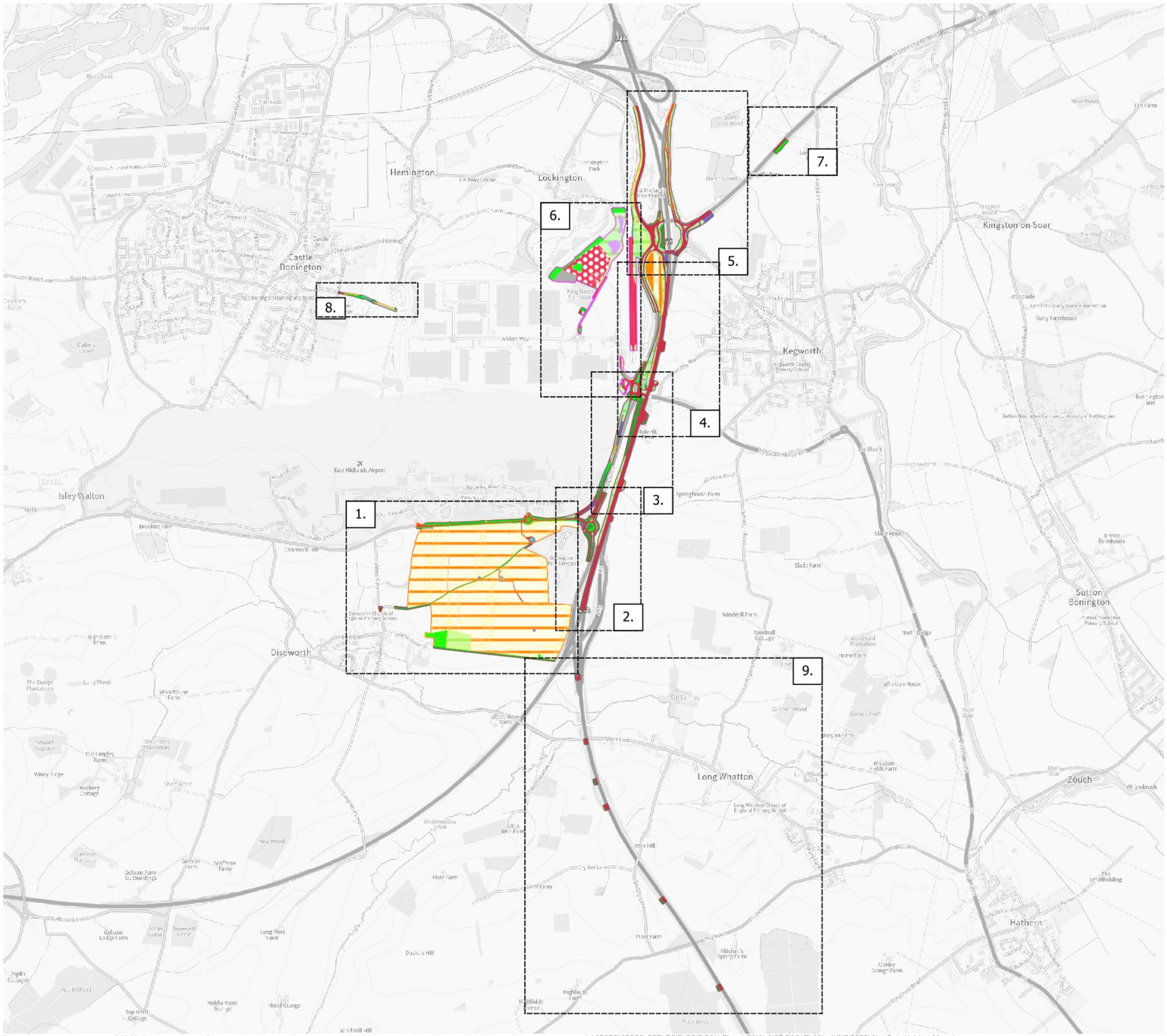


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0 800 1,600 m

- Order Limits EMG1 MCO
- Order Limits EMG2 DCO

Habitats Baseline

- Bioswale
- Bramble scrub
- Built linear features
- Cereal crops
- Developed land; sealed surface
- Introduced shrub
- Mixed scrub
- Modified grassland
- Other neutral grassland
- Other woodland; broadleaved
- Ponds (non-priority habitat)
- Sustainable drainage system
- Temporary grass and clover leys
- Tall forbs
- Bare ground

date: 20/06/25

drwn/chkd: RAM / SJA

client: **SEGRO Properites Ltd and SEGRO (EMG) Ltd**

project: **East Midlands Gateway Phase 1 & 2 (EMG1 & EMG2)**

title: **SITE LAYOUT PLAN**

scale: 1:29,000 @ A3

number: **FIGURE 3a**

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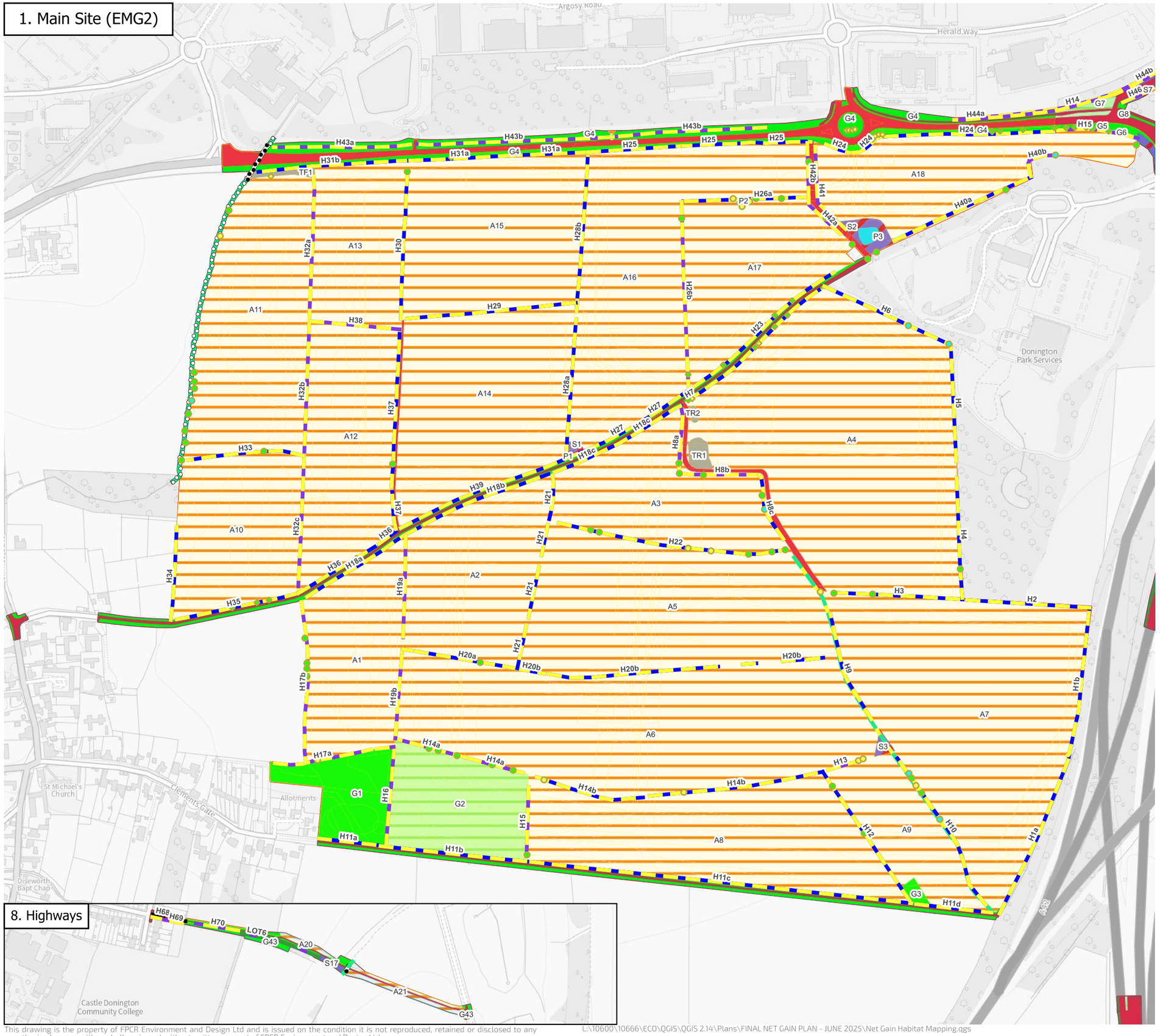
1. Main Site (EMG2)




8. Highways

N

0 100 200 m

Order Limits EMG2 DCO

Baseline Habitats

- Built linear features
- Cereal crops
- Mixed scrub
- Modified grassland
- Other neutral grassland
- Other woodland; broadleaved
- Ponds (non-priority habitat)
- Tall forbs

Baseline Hedgerow

- Native hedgerow
- Native hedgerow - associated with bank or ditch

Baseline Watercourse

- Culvert
- Ditches
- Other rivers and streams

Baseline Individual Trees

- Existing large rural tree
- Existing medium urban tree
- Existing medium rural tree
- Existing small urban tree
- Existing small rural tree

date 20/06/25

drwn/chkd RAM / SJA

client

**SEGRO (Properties) PLC and SEGRO (EMG) Ltd**

project

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

title

**BASELINE HABITAT PLAN**

scale 1:5,100 @ A3

number

# FIGURE 3b

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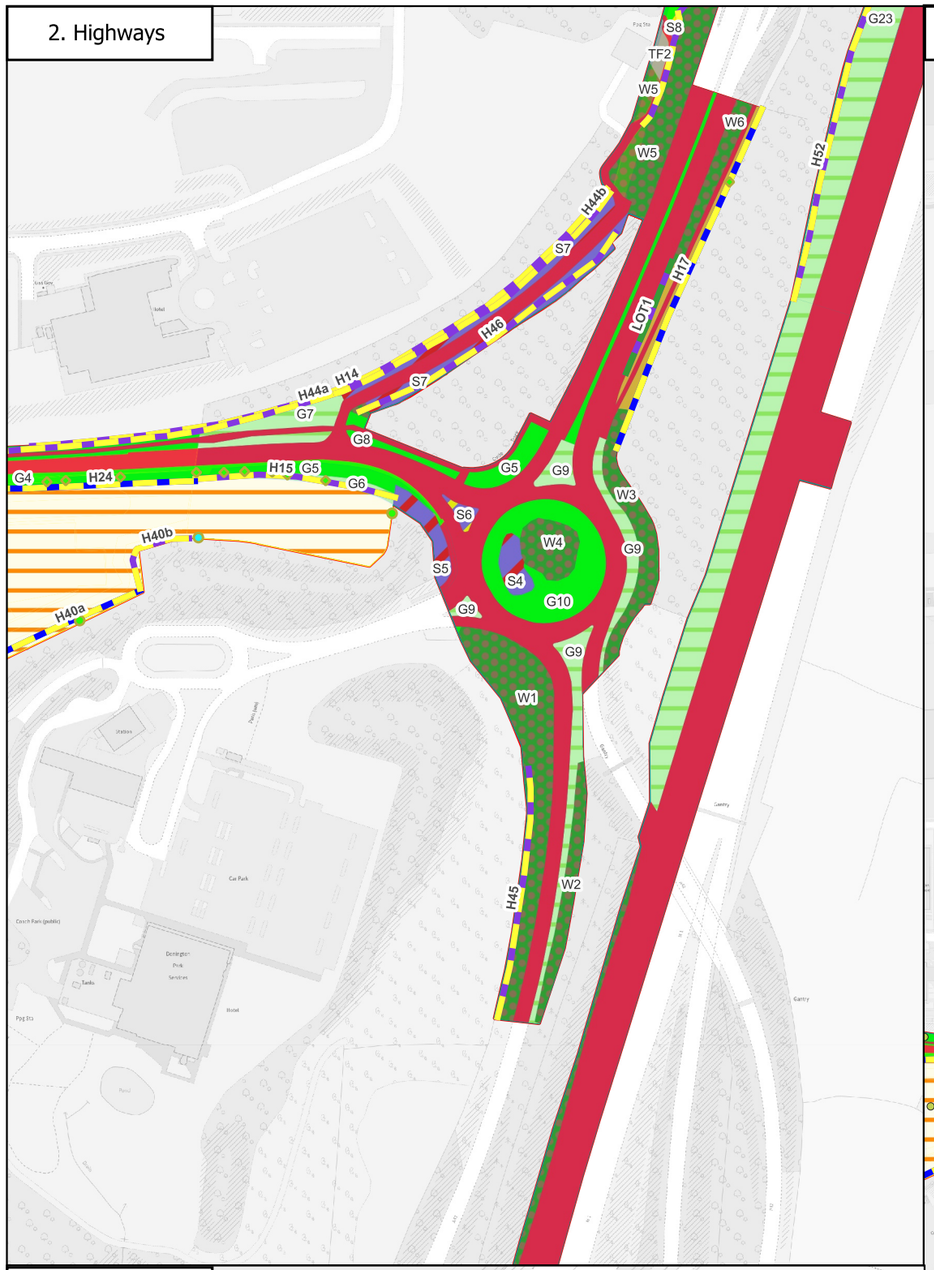


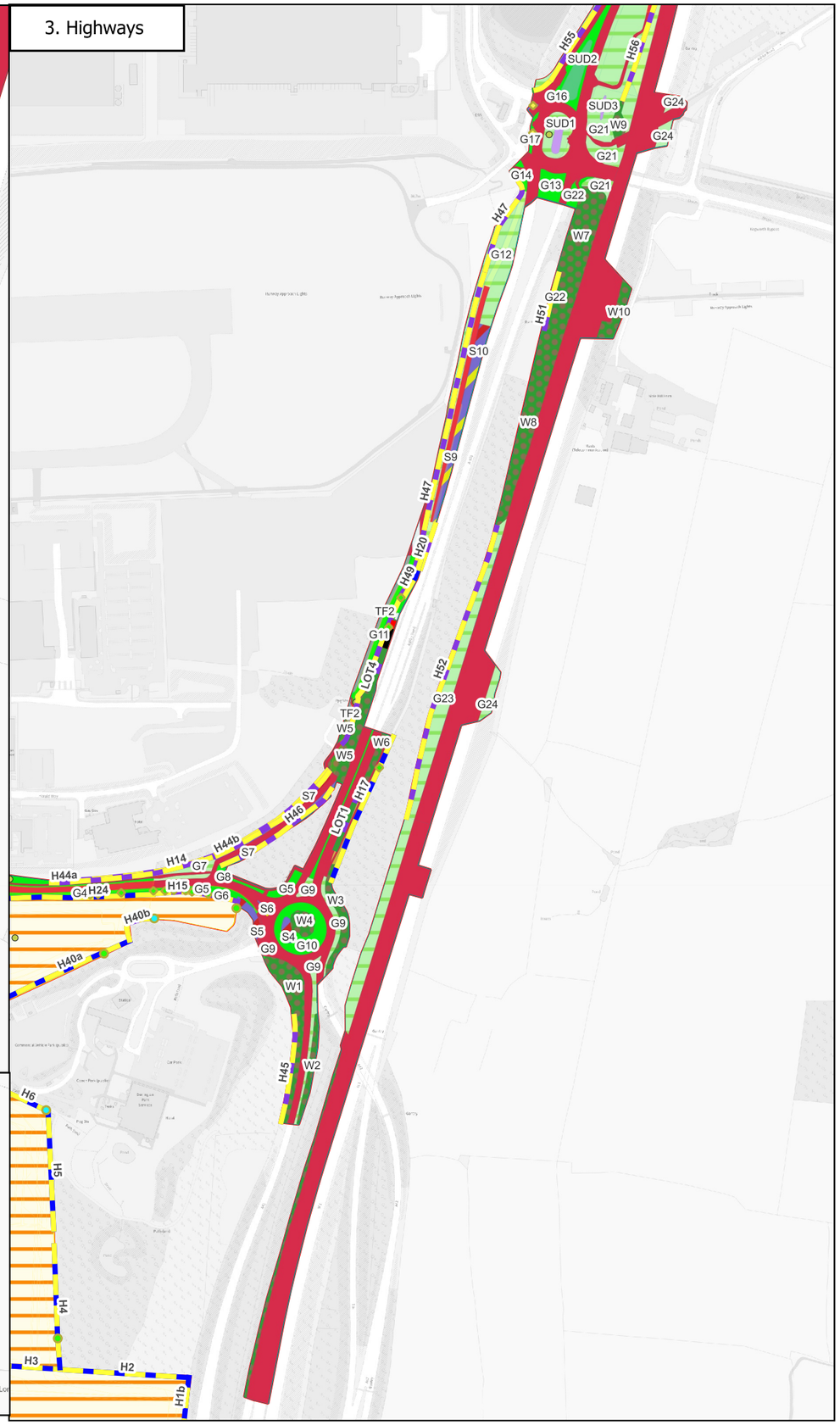


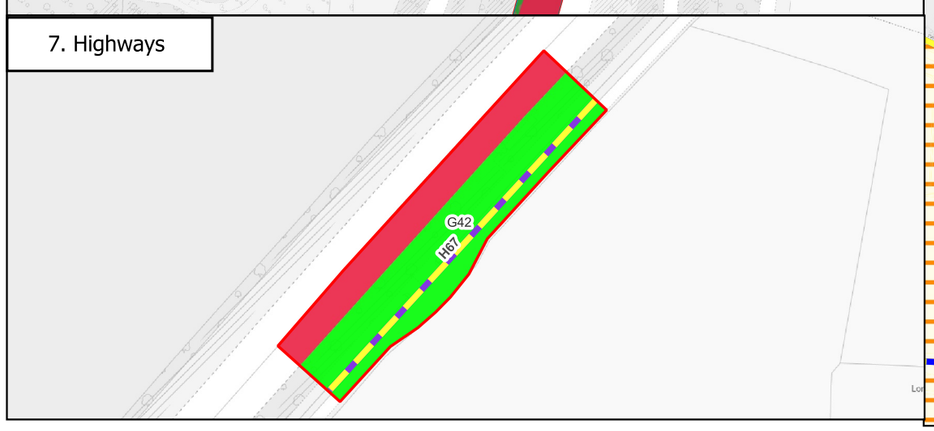





N

0 100 200 m

Order Limits EMG2 DCO

Baseline Habitats

- Bramble scrub
- Built linear features
- Cereal crops
- Mixed scrub
- Modified grassland
- Other neutral grassland
- Other woodland; broadleaved
- Tall forbs
- Bare ground

Baseline Hedgerow

- Line of trees
- Native hedgerow
- Native hedgerow - associated with bank or ditch

Baseline Individual Trees

- Existing large rural tree
- Existing medium urban tree
- Existing medium rural tree

date: 20/06/25

drwn/chkd: RAM / SJA

client: **SEGRO (Properties) Ltd and SEGRO (EMG) Ltd**

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

title: **BASELINE HABITAT PLAN**

scale: 1:3,500 @ A3

number: **FIGURE 3c**

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4. Highways

5. Highways

N

0 100 200 m

Order Limits EMG2 DCO

Baseline Habitats

Bramble scrub

Built linear features

Mixed scrub

Modified grassland

Other neutral grassland

Other woodland; broadleaved

Sustainable drainage system

Temporary grass and clover leys

Baseline Hedgerow

Line of trees

Native hedgerow

Baseline Individual Trees

Existing medium urban tree

Existing medium rural tree

date 20/06/25

drwn/chkd RAM / SJA

client
**SEGRO (Properties) PLC and SEGRO (EMG) Ltd**

project
**East Midlands Gateway Phase 1 & 2 (EMG1 & EMG2)**

title
**BASELINE HABITAT PLAN**

scale 1:4,500 @ A3

number
**FIGURE 3d**

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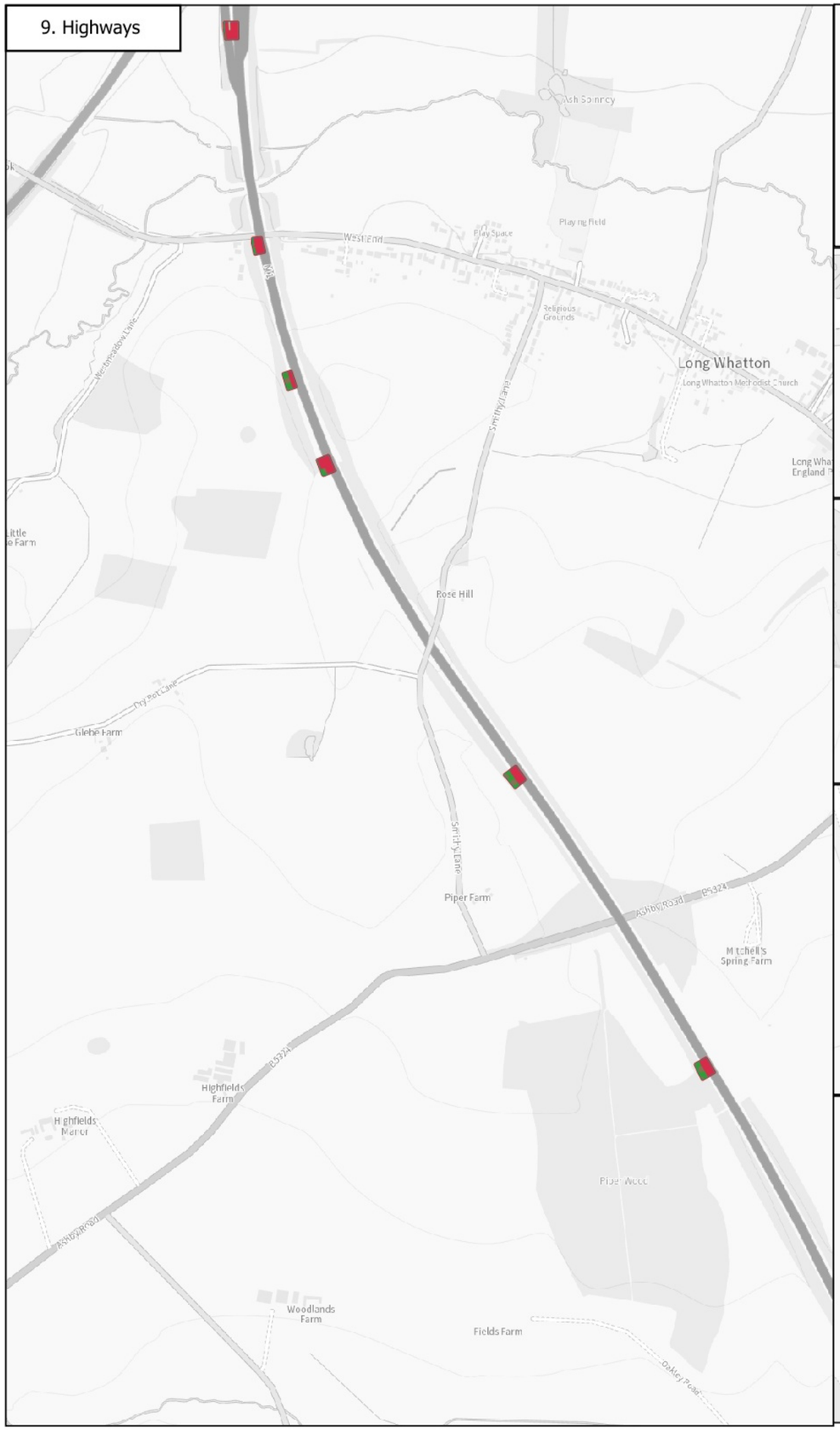
9. Highways





N

0 100 200 m

Order Limits EMG2 DCO

Baseline Habitats

- Built linear features
- Other neutral grassland
- Other woodland; broadleaved

date: 20/06/25

drwn/chkd: RAM / SJA

client: SEGRO (Properties) Ltd and SEGRO (EMG) Ltd

project: East Midlands Gateway Phase 2 (EMG2)

title: BASELINE HABITAT PLAN

scale: 1:3,500 @ A3

number: FIGURE 3e

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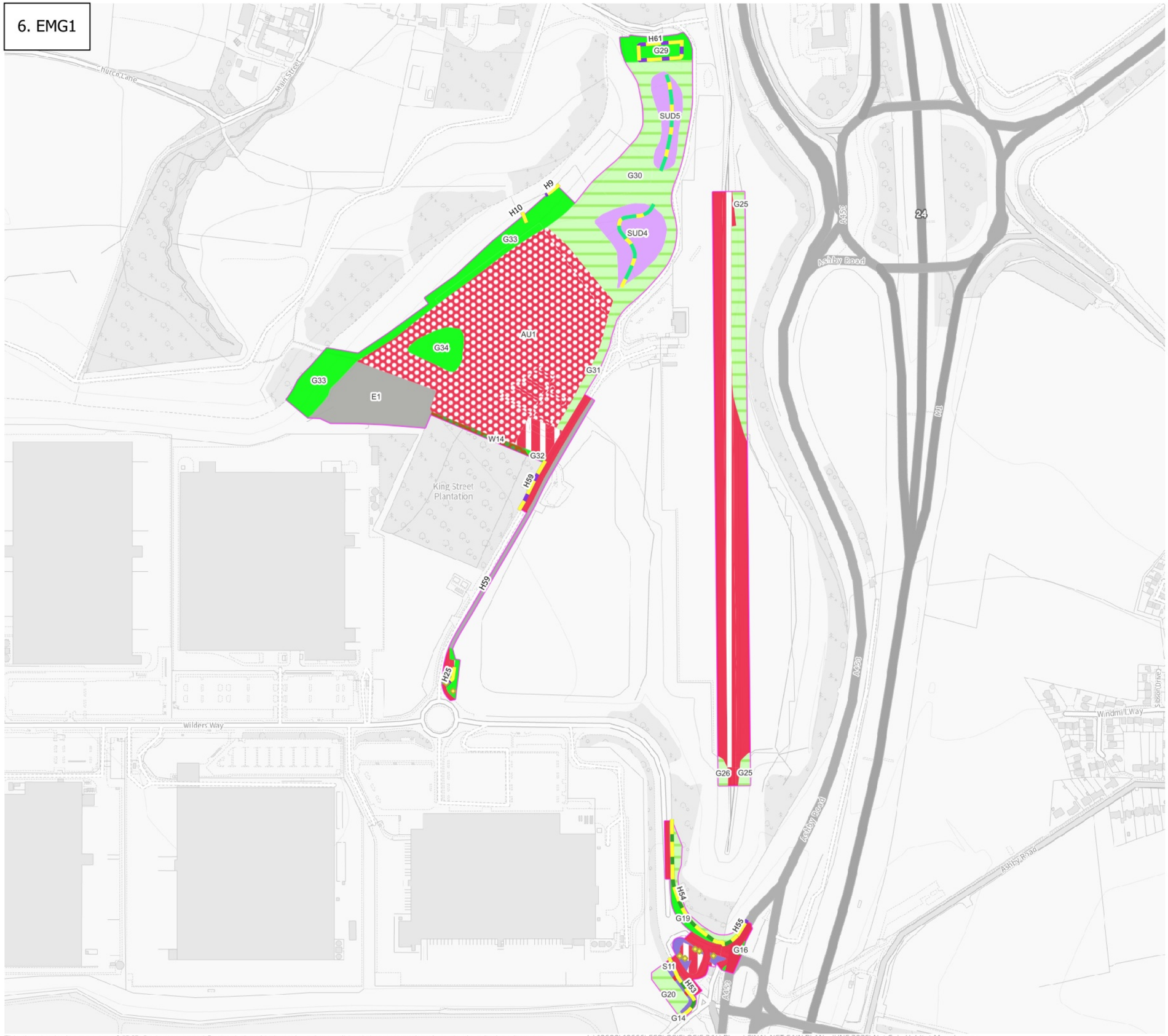
6. EMG1




N

0 100 200 m

Order Limits EMG1 MCO

Habitats Baseline

- Artificial unvegetated, unsealed surface
- Built linear features
- Developed land; sealed surface
- Introduced shrub
- Mixed scrub
- Modified grassland
- Other neutral grassland
- Other woodland; mixed
- Ruderal/Ephemeral
- Sustainable drainage system

Hedgerow Baseline

- Native hedgerow
- Native hedgerow with trees

Individual tree Baseline

- Existing Small Urban Tree

Watercourse Baseline

- Ditches

date: 20/06/25

drwn/chkd: RAM / SJA

client: SEGRO (Properties) PLC and SEGRO (EMG) Ltd

project: East Midlands Gateway Phase 1 (EMG1)

title: BASELINE HABITAT PLAN

scale: 1:5,500 @ A3

number: **FIGURE 3e**

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## APPENDIX A – RECORDS OF PROTECTED/NOTABLE SPECIES WITHIN 1KM

**Table 1: Records of Birds within 1km**

| Taxon | Vernacular | Number of Records |
|---|---|---|
| *Tyto alba* | Barn Owl | 5 |
| *Phoenicurus ochruros* | Black Redstart | 1 |
| *Limosa limosa* | Black-tailed Godwit | 5 |
| *Fringilla montifringilla* | Brambling | 3 |
| *Pyrrhula pyrrhula* | Bullfinch | 5 |
| *Branta canadensis* | Canada Goose | 20 |
| *Cettia cetti* | Cetti's Warbler | 5 |
| *Cuculus canorus* | Cuckoo | 1 |
| *Numenius arquata* | Curlew | 1 |
| *Prunella modularis* | Dunnock | 12 |
| *Alopochen aegyptiaca* | Egyptian Goose | 7 |
| *Turdus pilaris* | Fieldfare | 12 |
| *Spatula querquedula* | Garganey | 3 |
| *Bucephala clangula* | Goldeneye | 4 |
| *Locustella naevia* | Grasshopper Warbler | 2 |
| *Tringa ochropus* | Green Sandpiper | 125 |
| *Tringa nebularia* | Greenshank | 7 |
| *Perdix perdix* | Grey Partridge | 14 |
| *Anser anser* | Greylag Goose | 11 |
| *Coccothraustes coccothraustes* | Hawfinch | 2 |
| *Larus argentatus* | Herring Gull | 3 |
| *Falco subbuteo* | Hobby | 4 |
| *Delichon urbicum* | House Martin | 19 |
| *Passer domesticus* | House Sparrow | 28 |
| *Alcedo atthis* | Kingfisher | 7 |
| *Vanellus vanellus* | Lapwing | 47 |
| *Acanthis cabaret* | Lesser Redpoll | 5 |
| *Linaria cannabina* | Linnet | 34 |

| Taxon | Vernacular | Number of Records |
|---|---|---|
| *Charadrius dubius* | Little Ringed Plover | 86 |
| *Aix galericulata* | Mandarin Duck | 1 |
| *Poecile palustris* | Marsh Tit | 1 |
| *Ichthyaetus melanocephalus* | Mediterranean Gull | 1 |
| *Falco columbarius* | Merlin | 3 |
| *Pandion haliaetus* | Osprey | 1 |
| *Falco peregrinus* | Peregrine | 4 |
| *Anas acuta* | Pintail | 3 |
| *Coturnix coturnix* | Quail | 1 |
| *Milvus milvus* | Red Kite | 5 |
| *Turdus iliacus* | Redwing | 6 |
| *Emberiza schoeniclus* | Reed Bunting | 10 |
| *Turdus torquatus* | Ring Ouzel | 1 |
| *Calidris pugnax* | Ruff | 4 |
| *Riparia riparia* | Sand Martin | 33 |
| *Alauda arvensis* | Skylark | 30 |
| *Turdus philomelos* | Song Thrush | 9 |
| *Muscicapa striata* | Spotted Flycatcher | 2 |
| *Sturnus vulgaris* | Starling | 11 |
| *Hirundo rustica* | Swallow | 42 |
| *Apus apus* | Swift | 44 |
| *Passer montanus* | Tree Sparrow | 16 |
| *Cygnus columbianus* | Tundra Swan | 2 |
| *Streptopelia turtur* | Turtle Dove | 9 |
| *Numenius phaeopus* | Whimbrel | 1 |
| *Cygnus cygnus* | Whooper Swan | 3 |
| *Poecile montanus* | Willow Tit | 7 |
| *Tringa glareola* | Wood Sandpiper | 13 |
| *Motacilla flava* | Yellow Wagtail | 35 |
| *Emberiza citrinella* | Yellowhammer | 26 |

**Table 2: Records of Herpetofauna within 1km**

| Taxon | Vernacular | Number of Records |
|---|---|---|
| *Rana temporaria* | Common Frog | 13 |
| *Bufo bufo* | Common Toad | 11 |
| *Lissotriton vulgaris* | Smooth Newt | 27 |

**Table 3: Records of Invasive & Non-Native Species (INNS) within 1km**

| Taxon | Vernacular | Number of Records |
|---|---|---|
| Neovison vison | American Mink | 1 |
| Heracleum mantegazzianum | Giant Hogweed | 5 |
| Harmonia axyridis | Harlequin Ladybird | 14 |
| Impatiens glandulifera | Himalayan Balsam | 8 |
| Hyacinthoides non-scripta x hispanica = H. x massartiana | Hybrid Bluebell | 7 |
| Fallopia japonica | Japanese Knotweed | 3 |
| Potamopyrgus antipodarum | Jenkins' Spire Snail | 1 |
| Muntiacus reevesi | Muntjac | 2 |
| Crassula helmsii | New Zealand Pigmyweed | 3 |
| Crangonyx pseudogracilis/floridanus | Northern River Crangonyx | 4 |
| Rhododendron ponticum | Rhododendron ponticum | 3 |
| Pacifastacus leniusculus | Signal Crayfish | 3 |
| Viola tricolor subsp. tricolor | Wild Pansy | 1 |

**Table 4: Records of Mammals within 1km**

| Taxon | Vernacular | Number of Records |
|---|---|---|
| Meles meles | Badger | 40 |
| Rattus rattus | Black Rat | 1 |
| Lepus europaeus | Hare | 14 |
| Erinaceus europaeus | Hedgehog | 59 |
| Mustela putorius | Polecat | 2 |
| Arvicola amphibius | Water Vole | 2 |

**Table 5: Records of Invertebrates within 1km**

| Taxon | Vernacular | Number of Records |
|---|---|---|
| Timandra comae | Blood-vein | 1 |
| Tyria jacobaeae | Cinnabar | 5 |
| Brachytron pratense | Hairy Dragonfly | 1 |
| Scotopteryx chenopodiata | Shaded Broad-bar | 1 |
| Coenonympha pamphilus | Small Heath | 1 |

## APPENDIX B – BOTANICAL SPECIES LIST

### Table 1a: Botanical Species List – Grassland (G1-G11)

| Species | Latin | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G11 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A bindweed | *Convolvulus spp.* | ✓ | ✓ | | | | | | | | |
| A dandelion | *Taraxacum agg.* | ✓ | ✓ | | ✓ | | | | ✓ | | |
| Black medic | *Medicago lupulina* | | ✓ | | | | | ✓ F | | | |
| Bramble | *Rubus fruticosus agg.* | | ✓ | | | | | | | | ✓ R |
| Bristly oxtongue | *Helminthotheca echioides* | | ✓ | | | | | ✓ R | ✓ | | ✓ r |
| Broadleaved dock | *Rumex obtusifolius* | | | ✓ | ✓ | | | | | | ✓ R |
| Bulbous buttercup | *Ranunculus bulbosus* | ✓ | | | | | | | | | |
| Cleavers | *Galium aparine* | ✓ | | ✓ | ✓ | | | | | | |
| Cock's foot | *Dactylis glomerata* | ✓ | ✓ | ✓ | ✓ | | | ✓ R | | ✓ O | |
| Common agrimony | *Agrimonia eupatoria* | | | | | | | ✓ R | | | |

| Species | Latin | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G11 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Common bird's-foot trefoil | *Lotus corniculatus* | | | | | ✓ O | ✓ | ✓ F | ✓ | ✓ R | ✓ R |
| Common centuary | *Centaurium erythraea* | | | | | | | | | ✓ R | |
| Common daisy | *Bellis perennis* | | | | ✓ | ✓ R | ✓ | | ✓ | | |
| Common mallow | *Malva sylvestris* | | | | | | | | | ✓ R | |
| Common mouse ear | *Cerastium fontanum* | ✓ | | | ✓ | | | ✓ O | | | ✓ R |
| Common nettle | *Urtica dioica* | ✓ | | ✓ | | | | | | | ✓ LA |
| Common ragwort | *Jacobaea vulgaris* | ✓ | | | ✓ | ✓ R | ✓ | ✓ R | ✓ | ✓ R | ✓ R |
| Common spotted orchid | *Dactylorhiza fuchsii* | | | | | | | | | | ✓ R |
| Common vetch | *Vicia sativa* | | | | | | ✓ | | ✓ | ✓ R | |
| Cow parsley | *Anthriscus sylvestris* | | | ✓ | | | | | | | |
| Creeping bent | *Agrostis stolonifera* | ✓ | | | | ✓ O | ✓ | ✓ O | ✓ | ✓ R | |
| Creeping buttercup | *Ranunculus repens* | | ✓ | | ✓ | ✓ R | ✓ | ✓ LF | | | ✓ O |
| Creeping cinquefoil | *Potentilla reptans* | | | | | | | ✓ D | | ✓ A | ✓ R |

| Species | Latin | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G11 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Creeping thistle | *Cirsium arvense* | ✓ | ✓ | ✓ | | | | ✓ R | | ✓ R | ✓ LA |
| Crested dog's-tail | *Cynosurus cristatus* | ✓ A | | | | | | | | ✓ O | |
| Curled dock | *Rumex crispus* | | ✓ | ✓ | | | | ✓ R | | ✓ R | ✓ R |
| Cut-leaved cranesbill | *Geranium dissectum* | ✓ | ✓ | ✓ | | | | ✓ O | ✓ | | |
| Dog rose | *Rosa canina* | ✓ | | | | | | | | | |
| Dove's-foot crane's-bill | *Geranium molle* | | | ✓ | | | | | | | |
| False oat-grass | *Arrhenatherum elatius* | ✓ | ✓ | ✓ | ✓ | | | ✓ R | ✓ | ✓ F | |
| Fescue spp. | *Festuca spp.* | | | | | | | | ✓ | ✓ O | |
| Field bindweed | *Convolvulus arvensis* | | | | | | | | ✓ | ✓ LA | |
| Forget-me-not | *Myosotis spp.* | | | | | | | ✓ R | | ✓ R | ✓ R |
| Fringed willowherb | *Epilobium ciliatum* | | | | | | | | | | ✓ LF |
| Glaucous sedge | *Carex flacca* | | | | | | | | | ✓ R | |
| Goat's beard | *Aruncus dioicus* | | | | | | | | ✓ | | |
| Great willowherb | *Epilobium hirsutum* | | | | | | | | | | ✓ R |

| Species | Latin | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G11 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Greater plantain | *Plantago major* | | | | | | | | | | ✓ R |
| Hairy tare | *Vicia hirsuta* | | | | | | | | | ✓ R | |
| Hedge woundwort | *Stachys sylvatica* | | | ✓ | | | | | | | |
| Hemp nettle | *Galeopsis tetrahit* | ✓ | | | | | | | | | |
| Hoary willowherb | *Epilobium parviflorum* | | ✓ | ✓ | | | | | | | |
| Hogweed | *Heracleum sphondylium* | | | ✓ | | | | | | | |
| Lesser knapweed | *Centaurea nigra* | | | | | ✓ R | ✓ | ✓ R | ✓ | ✓ F | ✓ R |
| Lesser trefoil | *Trifolium dubium* | ✓ | | | | | | | | | |
| Lords and ladies | *Arum maculatum* | ✓ | | | | | | | | | |
| Meadow buttercup | *Ranunculus acris* | | ✓ | ✓ | ✓ | ✓ O | ✓ | | | | ✓ O |
| Meadow foxtail | *Alopecurus pratensis* | ✓ | | ✓ | | | | | | | |
| Meadow vetchling | *Lathyrus pratensis* | | | | | ✓ R | ✓ | | | | |
| Mugwort | *Artemisia vulgaris* | | | | | | | | | ✓ R | |
| Oxeye daisy | *Leucanthemum vulgare* | | | | | | | ✓ R | | ✓ F/A | |

| Species | Latin | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G11 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perennial ryegrass | *Lolium perenne* | ✓ D | ✓ | | ✓ | ✓ A | ✓ | ✓ F | ✓ | | ✓ A |
| Perforate St John's wort | *Hypericum perforatum* | | | | | | ✓ | | | ✓ R | |
| Pyramidal orchid | *Anacamptis pyramidalis* | | | | | | ✓ | | | | |
| Red bartsia | *Odontites vernus* | | | | | | | | | | ✓ LF |
| Red campion | *Silene dioica* | | | | | | ✓ | | | | |
| Red clover | *Trifolium pratense* | ✓ | ✓ | | | ✓ O | ✓ | | ✓ | | |
| Red fescue | *Festuca rubra* | | ✓ | | | | | ✓ F | | | |
| Ribwort plantain | *Plantago lanceolata* | | ✓ | | ✓ | ✓ F | ✓ | ✓ O | ✓ | ✓ O | ✓ O |
| Rosebay willowherb | *Chamaenerion angustifolium* | | | | | | | | | | ✓ R |
| Rough meadow grass | *Poa trivialis* | ✓ | ✓ | | | | | | | | |
| Selfheal | *Prunella vulgaris* | ✓ | | | | ✓ R | ✓ | ✓ F | | ✓ R | ✓ O |
| Smooth tare | *Vicia tetrasperma* | | | | | | | | | | ✓ R |
| Soft brome | *Bromus hordeaceus* | ✓ | ✓ | | | | | | | | |
| Spear thistle | *Cirsium vulgare* | ✓ | ✓ | ✓ | | | | ✓ R | | ✓ R | ✓ R |

| Species | Latin | G1 | G2 | G3 | G4 | G5 | G6 | G7 | G8 | G9 | G11 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Speedwell | *Veronica spp.* | ✓ | | | | | | | | | |
| Tansy | *Tanacetum vulgare* | | | | | | | | | ✓ R | |
| Timothy | *Phleum pratense* | ✓ R | | | | | | ✓ R | | | |
| White clover | *Trifolium repens* | ✓ | | ✓ | ✓ | ✓ A | ✓ | ✓ F | ✓ | | ✓ O |
| White dead nettle | *Lamium album* | ✓ | | | | | | | | | |
| Wild carrot | *Daucus carota* | | ✓ | | | ✓ R | ✓ | | ✓ | ✓ R | |
| Wild teasel | *Dipsacus fullonum* | | | | | | | | | | ✓ R |
| Willowherb | *Epilobium spp.* | | ✓ | ✓ | | | | ✓ R | | | |
| Yarrow | *Achillea millefolium* | | | | | | | | ✓ | ✓ O | |
| Yorkshire fog | *Holcus lanatus* | ✓ R | ✓ D | ✓ | ✓ | ✓ O | ✓ | ✓ O | | ✓ R | ✓ O |

**Table 1b: Botanical Species List – Grassland (G12-G25)**

| Species | Latin | G12 | G13 | G14 | G15 | G16 | G17 | G18 + G19 | G20 | G21 | G25 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A dandelion | *Taraxacum agg.* | | ✓ R | ✓ R | ✓ R | ✓ R | | ✓ R | ✓ R | ✓ L F | |
| A dock | *Rumex spp.* | | | | | | | ✓ R | | ✓ R | |
| A tare | *Vicia spp.* | | | | | | | | | ✓ | |
| Annual meadowgrass | *Poa annua* | | ✓ R | | ✓ R | ✓ R | | ✓ R | | | |
| Autumn hawkbit | *Scorzoneroides autumnalis* | | ✓ R | | | ✓ R | | | | | |
| Barren brome | *Bromus sterilis* | | | | | | | | | | ✓ R |
| Black medic | *Medicago lupulina* | ✓ R | | | | | | | ✓ R | | ✓ F |
| Bramble | *Rubus fruticosus agg.* | ✓ LD | | ✓ R | | | | | | ✓ R | ✓ R |
| Bristly oxtongue | *Helminthotheca echioides* | | ✓ R | ✓ R | ✓ R | ✓ R | ✓ R | | ✓ R | ✓ R | ✓ L O |
| Broadleaved dock | *Rumex obtusifolius* | | ✓ R | | | ✓ R | | | | | ✓ R |
| Canadian fleabane | *Erigeron canadensis* | | | | | | | | | ✓ | |
| Cat's ear | *Hypochaeris radicata* | | | | ✓ R | | ✓ R | | | | |

| Species | Latin | G12 | G13 | G14 | G15 | G16 | G17 | G18 + G19 | G20 | G21 | G25 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cock's foot | *Dactylis glomerata* | ✓ R | ✓ R | | | ✓ R | ✓ R | | | ✓ R | ✓ R |
| Colt's foot | *Tussilago farfara* | | | | | | | | | | ✓ LF |
| Common bird's-foot trefoil | *Lotus corniculatus* | ✓ O | ✓ R | ✓ R | ✓ R | ✓ R | | | ✓ R | | ✓ R |
| Common centuary | *Centaurium erythraea* | ✓ R | | | | | | | | | |
| Common couch | *Elymus repens* | | | | | | | | | ✓ | ✓ r |
| Common daisy | *Bellis perennis* | | ✓ R | ✓ R | ✓ R | ✓ R | ✓ R | | | | |
| Common mouse ear | *Cerastium fontanum* | ✓ R | | | ✓ R | | | | ✓ R | ✓ R | ✓ R |
| Common nettle | *Urtica dioica* | ✓ R | | | | | | | | ✓ R | ✓ R |
| Common ragwort | *Jacobaea vulgaris* | ✓ A | ✓ R | ✓ R | ✓ R | ✓ R | ✓ R | ✓ R | ✓ R | ✓ R | ✓ O |
| Common vetch | *Vicia sativa* | | | | | | | | | ✓ R | ✓ R |
| Creeping bent | *Agrostis stolonifera* | ✓ F | ✓ F | | ✓ O | ✓ F | | | ✓ O | ✓ O | ✓ A |
| Creeping buttercup | *Ranunculus repens* | | ✓ R | | | ✓ R | | | ✓ R | ✓ R | ✓ R |
| Creeping cinquefoil | *Potentilla reptans* | ✓ LF | | | | | | | | | |

| Species | Latin | G12 | G13 | G14 | G15 | G16 | G17 | G18 + G19 | G20 | G21 | G25 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Creeping thistle | *Cirsium arvense* | ✓ R | | | | | ✓ R | | | ✓ R | ✓ LF |
| Crested dog's-tail | *Cynosurus cristatus* | | | | ✓ R | | ✓ R | | ✓ O | ✓ F | ✓ F |
| Curled dock | *Rumex crispus* | | | | | | | | | | ✓ R |
| Cut-leaved crane's-bill | *Geranium dissectum* | ✓ R | | | | | | | | | ✓ R |
| Dog rose | *Rosa canina* | | | | | | | | | ✓ O | |
| Dove's-foot crane's-bill | *Geranium molle* | | | | | | | | | ✓ R | |
| False oat-grass | *Arrhenatherum elatius* | ✓ R | | | | | | | | ✓ O | ✓ LF |
| Fescue spp. | *Festuca spp.* | | ✓ R | | | ✓ D | | | ✓ O | ✓ F | ✓ |
| Field bindweed | *Convolvulus arvensis* | ✓ R | | | | | | | | | |
| Field maple | *Acer campestre* | | | | | | | | | | ✓ R |
| Field poppy | *Papaver rhoeas* | | | | | | | | | | ✓ R |
| Forget-me-not | *Myosotis spp.* | ✓ R | | | | | | | | | |
| Goat's beard | *Aruncus dioicus* | | ✓ R | | | ✓ R | | | | | |
| Great mullein | *Verbascum thapsus* | ✓ R | | | | | | | | | |

| Species | Latin | G12 | G13 | G14 | G15 | G16 | G17 | G18 + G19 | G20 | G21 | G25 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Greater burnet | *Sanguisorba officinalis* | | | | | | | | | | ✓ R |
| Greater plantain | *Plantago major* | | ✓ R | ✓ R | ✓ R | ✓ R | | | | ✓ R | ✓ R |
| Hairy tare | *Vicia hirsuta* | | | | | | | | | | ✓ R |
| Hawthorn | *Crataegus monogyna* | | | | | | | | | | ✓ R |
| Hazel | *Corylus avellana* | | | | | | | | | | ✓ R |
| Hedge bedstraw | *Galium mollugo* | ✓ R | | | | | | | | | ✓ LF |
| Hedge woundwort | *Stachys sylvatica* | | | | | | | | | | ✓ R |
| Hemlock | *Conium maculatum* | ✓ R | | | | | | | | | |
| Hogweed | *Heracleum sphondylium* | | | | | | | | | ✓ R | ✓ R |
| Hop trefoil | *Trifolium campestre* | | ✓ R | | ✓ F | ✓ R | | | | ✓ R | |
| Kidney vetch | *Anthyllis vulneraria* | | | | | | | | | | ✓ R |
| Lady's bedstraw | *Galium verum* | | | | ✓ R | | | | ✓ LO | | ✓ LF |

| Species | Latin | G12 | G13 | G14 | G15 | G16 | G17 | G18 + G19 | G20 | G21 | G25 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lesser knapweed | *Centaurea nigra* | ✓ R | ✓ R | ✓ R | ✓ O | ✓ R | | | ✓ LF | ✓ O | ✓ LA |
| Lesser trefoil | *Trifolium dubium* | | ✓ R | ✓ A | ✓ F | ✓ R | ✓ R | ✓ F | | | |
| Meadow buttercup | *Ranunculus acris* | | | | ✓ R | | | | ✓ R | | ✓ R |
| Meadow vetchling | *Lathyrus pratensis* | | | | | | | | | ✓ R | |
| Mugwort | *Artemisia vulgaris* | | | | | | | | | | ✓ R |
| Musk mallow | *Malva moschata* | | | | | | | | | | ✓ R |
| Oak | *Quercus spp.* | | | | | | | | | | ✓ R |
| Oxeye daisy | *Leucanthemum vulgare* | ✓ R | ✓ R | | ✓ R | ✓ R | | | ✓ O | ✓ F | ✓ LF |
| Perennial ryegrass | *Lolium perenne* | | ✓ D | ✓ A | ✓ A | ✓ D | ✓ D | ✓ D | ✓ A | ✓ F | ✓ O |
| Petty spurge | *Euphorbia peplus* | | | | | | ✓ R | | | | |
| Red clover | *Trifolium pratense* | | | | ✓ R | | | | ✓ R | ✓ O | ✓ O |
| Red fescue | *Festuca rubra* | | | | | | | | | | |

| Species | Latin | G12 | G13 | G14 | G15 | G16 | G17 | G18 + G19 | G20 | G21 | G25 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ribwort plantain | *Plantago lanceolata* | ✓ R | | | ✓ R | | ✓ R | | ✓ R | ✓ R | ✓ O |
| Rosebay willowherb | *Chamaenerion angustifolium* | | | | | | | | | | ✓ R |
| Selfheal | *Prunella vulgaris* | ✓ R | ✓ O | ✓ O | ✓ O | ✓ O | | | | ✓ R | ✓ O |
| Silver birch | *Betula pendula* | | | | | | | | | | ✓ R |
| Smooth tare | *Vicia tetrasperma* | | | | | | | | | | ✓ r |
| Soft brome | *Bromus hordeaceus* | | | | | | | | | | ✓ R |
| Spear thistle | *Cirsium vulgare* | | | ✓ R | | | | | | | ✓ R |
| Timothy | *Phleum pratense* | | ✓ O | | ✓ R | ✓ O | | | ✓ R | | ✓ L O |
| Tufted hairgrass | *Deschampsia cespitosa* | | | | | | | | | | ✓ R |
| White clover | *Trifolium repens* | ✓ O | ✓ R | ✓ A | ✓ F | ✓ A | ✓ F | ✓ O | ✓ A | ✓ R | ✓ O |
| Wild carrot | *Daucus carota* | | ✓ R | | ✓ R | ✓ R | | | | ✓ A | ✓ F |
| Wild privet | *Ligustrum vulgare* | | | | | | | | | | ✓ R |
| Wild radish | *Raphanus raphanistrum* | | ✓ R | | | | | | | | |

| Species | Latin | G12 | G13 | G14 | G15 | G16 | G17 | G18 + G19 | G20 | G21 | G25 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Willow | *Salix spp.* | | | | | | | | | | ✓ R |
| Willowherb | *Epilobium spp.* | | | | | | | | | ✓ O | ✓ R |
| Woodruff | *Galium odoratum* | | | | | | | | ✓ R | | |
| Yarrow | *Achillea millefolium* | | ✓ O | | ✓ R | ✓ O | | | | ✓ O | ✓ O |
| Yellow wort | *Blackstonia perfoliata* | | | | | | | | ✓ R | | |
| Yorkshire fog | *Holcus lanatus* | ✓ D | ✓ R | | ✓ O | ✓ R | ✓ R | | ✓ A | ✓ R | ✓ A |

## Table 1c: Botanical Species List – Grassland (G26-G35)

| Species | Latin | G26 (M17) | G27 (ONG2) | G28 (M7) | G29 (M8) | G30 (M7 + extra info) | G31 (M6) | G32 (M5) | G33 (M9) | G34 (M12) | G35 (ONG11) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A dandelion | *Taraxacum agg.* | ✓ R | | | | | ✓ | ✓ R | | | |
| A goosefoot | *Chenopodium spp.* | | | | | ✓ R | | | | | |
| Annual meadowgrass | *Poa annua* | | | | | | | | | ✓ R | |
| Barren brome | *Bromus sterilis* | | | | | | | | ✓ R | ✓ R | |
| Black medic | *Medicago lupulina* | | ✓ F | | | | ✓ | | | ✓ R | ✓ R |
| Bristly oxtongue | *Helminthotheca echioides* | ✓ R | ✓ R | ✓ R | ✓ R | ✓ R | ✓ | ✓ R | ✓ R | ✓ R | |
| Broadleaved dock | *Rumex obtusifolius* | | ✓ R | | ✓ R | | | | ✓ R | | |
| Cat's ear | *Hypochaeris radicata* | | | | | | | ✓ R | | | |
| Cock's foot | *Dactylis glomerata* | | ✓ R | | | | | | ✓ R | | ✓ A |
| Common bent | *Agrostis capillaris* | | | | ✓ O | | | | | | |
| Common bird's-foot trefoil | *Lotus corniculatus* | | ✓ D | | ✓ R | | ✓ | ✓ R | ✓ R | ✓ R | ✓ R |

| Species | Latin | G26 (M17) | G27 (ONG2) | G28 (M7) | G29 (M8) | G30 (M7 + extra info) | G31 (M6) | G32 (M5) | G33 (M9) | G34 (M12) | G35 (ONG11) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Common couch | *Elymus repens* | ✓ F | | | | | | | ✓ R | | |
| Common daisy | *Bellis perennis* | | | | | | | ✓ R | | | |
| Common mouse ear | *Cerastium fontanum* | | | | | | ✓ | | | | ✓ R |
| Common nettle | *Urtica dioica* | ✓ R | | | | | | | | | |
| Common ragwort | *Jacobaea vulgaris* | ✓ R | ✓ R | | ✓ R | ✓ | | ✓ R | ✓ R | | ✓ R |
| Common vetch | *Vicia sativa* | | | ✓ R | | ✓ R | | | ✓ R | | ✓ R |
| Creeping bent | *Agrostis stolonifera* | ✓ A | | | ✓ A | | ✓ | | ✓ F | | ✓ R |
| Creeping buttercup | *Ranunculus repens* | | | ✓ R | | ✓ R | | | ✓ R | | |
| Creeping cinquefoil | *Potentilla reptans* | | | | | | | | | | ✓ R |
| Creeping thistle | *Cirsium arvense* | ✓ R | ✓ R | | | | | | ✓ L F | | |
| Crested dog's-tail | *Cynosurus cristatus* | | ✓ R | ✓ O | | ✓ O | ✓ | | | | |
| Curled dock | *Rumex crispus* | ✓ R | | ✓ O | | ✓ O | ✓ | | | | ✓ R |
| Cut-leaved crane's-bill | *Geranium dissectum* | | | ✓ R | | ✓ R | | | | | |

| Species | Latin | G26 (M17) | G27 (ONG2) | G28 (M7) | G29 (M8) | G30 (M7 + extra info) | G31 (M6) | G32 (M5) | G33 (M9) | G34 (M12) | G35 (ONG11) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dove's-foot crane's-bill | *Geranium molle* | ✓ R | | | | | | | | | |
| False oat-grass | *Arrhenatherum elatius* | ✓ R | | | | | | | ✓ L F | | ✓ F |
| Fescue spp. | *Festuca spp.* | | ✓ R | ✓ F | | ✓ F | ✓ | | ✓ O | | ✓ F |
| Field bindweed | *Convolvulus arvensis* | | | | | | | | | | ✓ R |
| Field poppy | *Papaver rhoeas* | | | | | | | | | ✓ R | |
| Forget-me-not | *Myosotis spp.* | | | | | | | | | | ✓ R |
| Greater plantain | *Plantago major* | | | | | | ✓ | ✓ R | | | |
| Ground ivy | *Glechoma hederacea* | | | | | | | | ✓ R | | |
| Hairy tare | *Vicia hirsuta* | | | | | | ✓ | | | ✓ O | ✓ R |
| Hawthorn | *Crataegus monogyna* | ✓ R | | | | | | | | | ✓ R |
| Hazel | *Corylus avellana* | | | | | | | | ✓ R | | |
| Hedge bedstraw | *Galium mollugo* | ✓ R | | | | | | | | | |

| Species | Latin | G26 (M17) | G27 (ONG2) | G28 (M7) | G29 (M8) | G30 (M7 + extra info) | G31 (M6) | G32 (M5) | G33 (M9) | G34 (M12) | G35 (ONG11) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hedge woundwort | *Stachys sylvatica* | | | ✓ R | | ✓ R | | | ✓ R | | |
| Hoary willowherb | *Epilobium parviflorum* | | | | | | | | ✓ R | | |
| Hogweed | *Heracleum sphondylium* | | | | | | | | | | ✓ R |
| Lady's bedstraw | *Galium verum* | | | ✓ R | | ✓ R | ✓ | | | | |
| Lesser knapweed | *Centaurea nigra* | | ✓ R | ✓ R | | ✓ R | ✓ | | | | |
| Lesser trefoil | *Trifolium dubium* | | | ✓ O | | ✓ O | | ✓ F | ✓ R | | ✓ R |
| Mayweed | *Tripleurospermum* | | | | | | | | | ✓ A | |
| Meadow foxtail | *Alopecurus pratensis* | | | | ✓ O | | | | ✓ R | | |
| Meadow vetchling | *Lathyrus pratensis* | | | ✓ R | | ✓ R | | | | | |
| Mugwort | *Artemisia vulgaris* | ✓ R | | | | | | | ✓ R | | ✓ R |
| Narrow-leaved ragwort | *Senecio inaequidens* | | | | | | | | | | ✓ R |
| Nipplewort | *Lapsana communis* | | | | | ✓ R | | | | | |

| Species | Latin | G26 (M17) | G27 (ONG2) | G28 (M7) | G29 (M8) | G30 (M7 + extra info) | G31 (M6) | G32 (M5) | G33 (M9) | G34 (M12) | G35 (ONG11) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Oak | *Quercus spp.* | | | | | | | | ✓ R | | |
| Oxeye daisy | *Leucanthemum vulgare* | ✓ LF | ✓ R | | | | ✓ | | | | ✓ A |
| Perennial ryegrass | *Lolium perenne* | | ✓ R | ✓ F | ✓ A | ✓ F | ✓ | ✓ D | ✓ F | ✓ A | |
| Perforate St John's wort | *Hypericum perforatum* | ✓ R | | | | | | | | | ✓ R |
| Prickly lettuce | *Lactuca serriola* | | ✓ R | | | | | | ✓ R | | ✓ R |
| Prickly sow-thistle | *Sonchus asper* | | | ✓ R | | ✓ R | | | | | |
| Red bartsia | *Odontites vernus* | | | | | | ✓ | | | | |
| Red campion | *Silene dioica* | ✓ R | | | | | | | | | |
| Red clover | *Trifolium pratense* | | ✓ R | ✓ LA | | ✓ LA | ✓ | | ✓ r | | |
| Red fescue | *Festuca rubra* | | | | | | | | | | ✓ |
| Redshank | *Persicaria maculosa* | | | | | ✓ R | | | | | |
| Ribbed melliot | *Melilotus officinalis* | | | | | | | | | | ✓ R |
| Ribwort plantain | *Plantago lanceolata* | ✓ R | ✓ R | ✓ O | | ✓ O | ✓ | ✓ R | ✓ O | ✓ R | ✓ R |

| Species | Latin | G26 (M17) | G27 (ONG2) | G28 (M7) | G29 (M8) | G30 (M7 + extra info) | G31 (M6) | G32 (M5) | G33 (M9) | G34 (M12) | G35 (ONG11) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Rough meadow grass | *Poa trivialis* | | | ✓ R | | ✓ R | | | | | |
| Salad burnet | *Sanguisorba minor* | | | | | ✓ R | | | | | |
| Selfheal | *Prunella vulgaris* | | ✓ R | | | | ✓ | ✓ R | ✓ R | ✓ R | |
| Smooth tare | *Vicia tetrasperma* | | ✓ R | | | | ✓ | | ✓ R | ✓ O | |
| Sneezewort | *Achillea ptarmica* | | | | | ✓ R | | | | | |
| Soft brome | *Bromus hordeaceus* | | ✓ R | ✓ R | | ✓ R | | | ✓ R | | |
| Soft rush | *Juncus effusus* | | | | | | | | ✓ R | | |
| Spear thistle | *Cirsium vulgare* | | ✓ R | | | | | | | | ✓ R |
| Sycamore | *Acer pseudoplatanus* | | | | | | | | | | ✓ |
| Timothy | *Phleum pratense* | | ✓ R | ✓ R | | ✓ R | | | | ✓ O | |
| Tufted hairgrass | *Deschampsia cespitosa* | | | ✓ R | | ✓ R | | | | | |

| Species | Latin | G26 (M17) | G27 (ONG2) | G28 (M7) | G29 (M8) | G30 (M7 + extra info) | G31 (M6) | G32 (M5) | G33 (M9) | G34 (M12) | G35 (ONG11) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tufted vetch | | | ✓ R | ✓ L F | | ✓ L F | | | | ✓ F | |
| Weld | | | ✓ R | | | | | | | | |
| White campion | *Silene latifolia* | | | | | | | | | | ✓ R |
| White clover | *Trifolium repens* | | ✓ F | ✓ O | ✓ R | ✓ O | ✓ | ✓ F | ✓ R | ✓ A | ✓ R |
| White melilot | *Melilotus albus* | | ✓ R | | | | | | | | |
| Wild carrot | *Daucus carota* | | ✓ O | ✓ L F | | ✓ L F | ✓ | | ✓ O | ✓ R | ✓ R |
| Wild teasel | *Dipsacus fullonum* | | ✓ R | | | | | | | | ✓ R |
| Willow | *Salix spp.* | ✓ R | | | | | | | | | |
| Willowherb | *Epilobium spp.* | ✓ R | | ✓ R | | ✓ R | | | ✓ R | ✓ R | |
| Yarrow | *Achillea millefolium* | | ✓ R | ✓ R | | ✓ R | ✓ | | | | |
| Yorkshire fog | *Holcus lanatus* | ✓ F | ✓ R | ✓ A | ✓ D | ✓ A | ✓ | ✓ R | ✓ A | ✓ R | ✓ F |