

Ecological Walkover Survey

Project Information & Site Context

Site Name & Location	Plot NW08, Horiba MIRA, Watling Street, Nuneaton	Grid Reference	SP 3695 9661
Client Name	Horiba MIRA Ltd	Report Number	RT-MME-160215 Rev C
Site Area (ha)	0.8	Topography	Flat
Project Background	In March 2023, Horiba MIRA Ltd commissioned Middlemarch to undertake an Ecological Walkover of the site of a proposed development in the north-west of the MIRA site located at Watling Street, Nuneaton. This plot was originally surveyed by Middlemarch in 2016 (Report RT-MME-121221-02-01 Rev A), in association with proposals for NW07 (which has now been developed) and NW08. Although this survey provides useful historical context, the site has changed considerably since completion of the assessment. The site was then subject to an updated assessment by Middlemarch in 2018 (Report RT-MME-126785-01) in association with TIC-IT, located to the north-west, along with a suite of associated protected species surveys also carried out during 2018.		
Summary of Proposals	Proposals include construction of a multi-use concrete pad with associated access, landscaping, and service building. This assessment is based on the proposals detailed within the Site Location Plan produced by BCAL Consulting in July 2023 (Drawing 7045-XX-NW08-XX-DR-X-02).		

Methods

Field Survey	An ecological walkover survey of the site was undertaken on 3rd April 2023 by Helen Griffin ACIEEM (Principal Ecological Consultant) during which the location and extent of all habitat types present within the site were noted. A second visit was carried out on 20th June 2023 by Helen Griffin and Jo Harper (Ecological Project Officer) to provide a targeted botanical assessment. During the surveys, Habitat Condition Assessments were carried out to determine the ecological status of each habitat recorded. The condition assessment was undertaken using criteria published by Natural England (2023)¹, the details of which are presented in Appendix 1. The presence, or likely presence, of protected species within the site was also recorded.			
Weather Conditions	Temperature (°C)	Cloud Cover (%)	Wind Force (Beaufort)	Precipitation
	10	40	F1	Nil
	18	100	F2	Nil
Constraints	The initial survey was carried out in April which falls within the recommended timeframe for completing this assessment. However, March was unusually cold, and the condition of the plant species observed on site (many of which appeared still in the early stages of new growth) indicated that many could still be within their period of winter dormancy and so may have been under-recorded or underestimated. This did not constrain the assignment of habitats on site to Phase 1 habitat types but, as a small number of neutral indicator species were observed during the survey, it was considered that the timing of the initial survey comprised a potential constraint to ascertaining the condition of the grassland.			

¹ Natural England (2023) *The Biodiversity Metric 4.0 – User Guide: Technical Annex 1 Condition Sheets and Methodology*. Natural England Joint Publication JP039. Available <http://publications.naturalengland.org.uk/publication/6049804846366720>

	An updated site visit was therefore undertaken in June, during which no significant constraints were encountered.
Results	
Overview of Habitats	The site comprised an area of unmanaged neutral grassland with encroaching tall ruderal and willow scrub. A large damp area dominated by soft and compact rushes was noted in the east, while in the south the sward was noticeably finer with frequent moss and a gravelly substrate below which was visible in the sparsest areas. Other habitats on site included a line of young trees along the southern boundary, a species-rich hedgerow which delineated the eastern boundary, and a band of dense scrub which was encroaching from the hedgerow base. <u>Species-rich hedgerow with trees</u> Of the habitats noted on site, one habitat – the hedgerow – meets the criteria to be classed as a Habitat of Principal Importance. Current plans indicate this hedgerow will be retained, though there is potential for damage or degradation during construction works, lighting or inappropriate post-construction landscape management. <u>Neutral semi-improved and damp grasslands</u> The majority of the grassland on site was unmanaged and tussocky, with a central stand dominated by succeeding scrub and tall ruderal vegetation. The north-eastern corner contained an area of damp grassland dominated by rush, while the southern-most edge (c. 0.5 m wide) along the roadside appeared to have been sown with a seed mix and contained a mix of neutral species indicative of such. The grassland does not meet the criteria to be classified as a Habitat of Principal Importance; however, Neutral Grassland is listed on the Leicestershire LBAP and includes both traditional meadow-type habitats and those which may have colonised disturbed ground. The grassland on site supports opportunities for protected and notable species, particularly invertebrates; however, given the current condition this habitat could be replaced in the short to medium term. <u>Other habitats</u> The remaining habitats on site are common and widespread, and although they contribute to the structural diversity of the site, the tall ruderal, scrub and young trees could be replaced in the short to medium term.
Key Species Considerations	<u>Bats</u> The trees along the eastern boundary of site were semi-mature to mature and are of a suitable size and age to support roosting features for bats. These trees will be retained and no direct impacts on roosting bats are therefore anticipated; however, should plans change to include any works to this hedgerow, then further assessment for bats would be recommended. There is potential for the proposed development to impact on existing foraging and commuting resources through insensitive use of artificial lighting, particularly along the eastern boundary hedgerow. A recommendation regarding use of lighting has been made. <u>Great crested newt</u> No standing water (potential breeding habitat) was present within the proposed development zone; however, two ponds were present within the immediate vicinity and were assessed during the visit. These comprised a small, natural pond set within dense scrub and a SUDS basin which had been created for the development of NW07 and NW08. Terrestrial refuge opportunities were provided on site and within the immediate vicinity within tussocky and marshy grassland. Reference to OS and aerial mapping indicate the presence of five further ponds within 250 m, located between 30 m and 210 m from site, and up to fifteen additional ponds within a 500m radius. The majority of these ponds have been subject to monitoring as part of a great crested newt mitigation licence, granted in 2019 in association with a development

in the wider MIRA site. Original survey work to inform this licence application was undertaken in 2018, and the first two years of monitoring were completed in 2020 and 2022. During monitoring surveys, individual great crested newts were recorded within a pond located 190 m north-east and within one other pond located 330 m south-west. The wider landscape supported three populations of great crested newts: one medium population (peak count 24 no.), and two small populations (peak counts 1 no. and 4 no. respectively).

Great crested newts were not recorded within the three nearest ponds during the previous surveys, and only low numbers of individuals have been recorded within ponds in the surrounding area. However, the site provides suitable terrestrial opportunities and forms part of a potential commuting route between ponds present within the locality.

Long term impacts resulting from habitat loss and/or fragmentation are not deemed likely due to the small scale of the project. All ponds will be retained, while suitable commuting and foraging habitat will remain within the surrounding landscape. However, in the absence of mitigation, clearance works to the marshy grassland have the potential to cause death or harm to individuals.

A Habitat Suitability Index Assessment and eDNA survey for great crested newts was carried out by Middlemarch in June 2023. The details of this assessment can be found within Report RT-MME-160692.

Nesting birds

The hedgerow and scrub habitats on site provide opportunities for a range of generalist species, as well as common specialists associated with these habitat types. During the assessment, a skylark was heard singing high above the site. The habitats within the survey area provided limited suitability to support nesting skylark due to the small size, and presence of dense scrub vegetation. The wider landscape is dominated by areas of open grassland and arable farmland, and it is considered most likely that the skylark observed was utilising these habitats rather than those on site. Nevertheless, vigilance should be maintained, and protection measures should be provided within a Construction Ecological Management Plan.

Reptiles

The wider site is known to support a small population of grass snake and the habitats on site are considered suitable to support individuals commuting through or seeking temporary refuge within the grassland. Given the prevalence of suitable habitat to the north, no long-term effects resulting from habitat loss or fragmentation are anticipated; however, given the presence of suitable refuge on site the presence of individuals cannot be completely ruled out. Overall, the risk of encountering grass snake is considered low; however, protection measures should be provided within a Construction Ecological Management Plan to reduce this risk to negligible.

Terrestrial mammals (badger and brown hare)

The walkover included the site and surrounding habitats, including up to 50 m to the north and east, and 100 m to the far boundary in the north-west. The assessment area also included a large spoil bund, approximately 50 m long and 5 m wide, situated off-site to the north-west.

During the walkover, no badger setts were observed on site or within the immediately surrounding area. A network of well-worn paths was present, with badger footprints observed in areas of soft mud, and foraging evidence within the grassland. One main path was observed, which extended from scrub at the north-western boundary, crossed directly through site and exited through the hedgerow base at the eastern boundary. The path was wide and well-worn, with footprints facing in both directions, indicating the path is a well-used commuting route. A brown hare was disturbed from within the marshy grassland during the survey. Hares are most commonly associated with farmland however, can also be found within grassland habitat. Both species are known to be present on site and protection measures should be provided within a Construction Ecological Management Plan.

Recommendations

The recommendations below are based on Middlemarch's current understanding of the project. If works are changed in any way these recommendations will need to be amended if appropriate.

R1	Scheme Design: The proposed development should be designed in accordance with the ecological mitigation hierarchy as set out in the National Planning Policy Framework (NPPF), and the National Planning Practice Guidance (NPPG). The mitigation hierarchy requires all development schemes to apply the following principles: ● <i>Avoidance</i> – the proposed development should seek to avoid/minimise losses of hedgerow, scrub, trees and grassland, in the first instance and incorporate these features in the landscaping layout of the scheme accordingly. This will help to further avoid and minimise impacts to protected and notable species. ● <i>Mitigation</i> – where significant harm cannot be wholly or partially avoided, adverse effects should be minimised by design or through the use of effective mitigation measures such as minimising light spill on retained vegetation. ● <i>Compensation</i> – where unavoidable losses occur and mitigation cannot be provided, compensation for significant residual harm will be required as a last resort or planning permission could be refused. Compensation should include the remediation of lost habitats and/or connectivity, the creation of new habitats of ecological value and providing novel compensation solutions to minimise effects on protected or notable species to ensure compliance with UK wildlife legislation. In accordance with the principles of the Environment Act 2021 the development should also secure an overall net gain for biodiversity. Biodiversity Net Gain is a planning process that aims to leave biodiversity on site in a better state than it was before, going beyond solely avoiding, mitigating and compensating adverse effect on biodiversity and actively seeking to enhance the site's biodiversity value overall. A Management Plan should be produced setting out the detailed establishment and management of all on site compensation and enhancement measures. In accordance with Biodiversity Net Gain Best Practice Principles, and the principles of the Environment Act 2021, this document should cover a period of 30 years from the date of commencement with provisions for long-term monitoring and contingency actions linked to the Biodiversity Net Gain objectives of the project. A Biodiversity Net Gain Scoping Assessment was produced by Middlemarch in 2022 (Report RT-MME-158470) as part of a wider site strategy, and it is proposed that a net gain in biodiversity for NW08 will be delivered as part of this strategy.
R2	Great crested newts: The recommendations made within Report RT-MME-160692 should be adhered to.
R3	Construction Ecological Management Plan (CEcMP): A Construction Ecological Management Plan should be produced for the site setting out the safeguards and appropriate working practices that will be employed to minimise adverse effects on biodiversity and ensure compliance with UK Wildlife Legislation. The details of the CEcMP will be informed by the final site design and ongoing ecological survey works but should include as a minimum: ● Development standoffs and safeguards for all retained habitats; ● Construction timetables to avoid sensitive periods such as nesting bird season; ● Vegetation management measures to minimise the risk to protected or notable species (nesting birds, brown hare, badger and grass snake); and, ● Compliance with any specific mitigation measures that will be required to acquire a Development Licence for works affecting protected species. The CEcMP should be submitted to the Local Planning Authority for Approval and implemented in full thereafter.

Quality Assurance

Date	Version	Author	Checked & Approved By
12/05/2023	Final	Helen Griffin ACIEEM (Principal Ecological Consultant)	Dr James Hildreth CEnv MCIEEM (Executive Director)
25/07/2023	Rev A	Helen Griffin ACIEEM (Principal Ecological Consultant)	Hannah Train ACIEEM (Principal Consultant)
01/08/2023	Rev B	Helen Griffin ACIEEM (Principal Ecological Consultant)	Hannah Train ACIEEM (Principal Consultant)
04/08/2023	Rev C	Helen Griffin ACIEEM (Principal Ecological Consultant)	Hannah Train ACIEEM (Principal Consultant)

Appendix 1

The following tables include full habitat descriptions and summarise the condition assessment for habitats and hedgerows using Panks *et al.* (2022)¹.

Area Habitat				Condition Sheet Criteria Score																
Polygon / Line Ref.	Phase 1 Habitat Type	UK Hab Habitat Equivalent	Habitat Description	Condition Sheet Used	A	B	C	D	E	F	G	H	I	J	K	L	M	Total Score	Condition Assessment	
n/a	Semi-improved neutral grassland	Other neutral grassland	The site was characterised by neutral grassland, the majority of which appeared unmanaged and tussocky though variation was noted throughout the sward. Margins of approximately 1.5 m were regularly mown along the adjacent roadside. Most of the grassland comprised a rough sward growing to c. 0.5 m tall and contained locally abundant curly dock <i>Rumex crispus</i> , locally frequent false oat-grass <i>Arrhenatherum elatius</i> , perennial rye-grass <i>Lolium perenne</i> , bent-grasses <i>Agrostis</i> spp., meadow grasses <i>Poa</i> spp., crested dog’s tail <i>Cynosurus cristatus</i> and forbs including locally frequent frequent bristly oxtongue <i>Helminthotheca echioides</i> , occasional ribwort plantain <i>Plantago lanceolata</i> , creeping buttercup <i>Ranunculus repens</i> , lesser trefoil <i>Trifolium dubium</i> , spear thistle <i>Cirsium vulgare</i> , teasel <i>Dipsacus fullonum</i> , smooth tare <i>Ervum tetraspermum</i> and hairy tare <i>Ervilla hirsute</i> , broad-leaved willowherb <i>Epilobium montanum</i> and cut-leaved cranesbill <i>Geranium dissectum</i> , and rarely occurring meadow vetchling <i>Lathyrus pratensis</i> , greater plantain <i>Plantago major</i> and common mouse-ear <i>Cerastium fontanum</i> . Local patches of colt’s foot <i>Tussilago farfara</i> were also noted where the sward appeared thinner. In the south, a linear strip was present along the roadside which was c. 0.5 m wide. Here the sward was noticeably more diverse with species indicative of having been sown by a seed mix. Additional forbs included common knapweed <i>Centaurea nigra</i> , oxeye daisy <i>Leucanthemum vulgare</i> , wild carrot <i>Daucus carota</i> , common field speedwell <i>Veronica persica</i> , red clover <i>Trifolium pratense</i> , common vetch <i>Vicia sativa</i> , yellow rattle <i>Rhinanthus minor</i> and salad burnet <i>Sanguisorba minor</i> , with grasses primarily comprising rough meadow grass <i>Poa trivialis</i> and crested dog’s tail.	Grassland Med, High and V High	P	F	F	F	P	P	-	-	-	-	-	-	-	-	3 of 6	Moderate
n/a	Marsh / marshy grassland	Other neutral grassland	The ground was noticeably wet at the time of the first survey, and the north-eastern corner of the survey area was dominated by a stand of soft and compact rushes <i>Juncus effusus</i> and <i>J. conglomeratus</i> which extended beyond the survey area to the north.	Grassland Med, High and V High	F	F	F	P	P	F	-	-	-	-	-	-	-	2 of 6	Poor	
n/a	Tall ruderal	Tall forbs	The grassland area was readily succeeding with large pockets of encroaching willow scrub and tall ruderal vegetation, dominated by curly dock <i>Rumex crispus</i> .	Urban	F	F	P	-	-	-	-	-	-	-	-	-	-	1 of 3	Poor	
n/a	Scrub (scattered)	Scattered scrub	Within the grassland, willow scrub was readily encroaching in central areas. This was dominated by goat willow <i>Salix caprea</i> to c. 2 m tall. Local patches of bramble were also noted at ground level.	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n/a	
n/a	Scrub (dense)	Blackthorn scrub	A band of scrub was encroaching outwards from the hedgerow base at the southern boundary. Species were dominated by bramble <i>Rubus fruticosus</i> and densely suckering blackthorn <i>Prunus spinosa</i> to c. 1 m in height.	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n/a	
Key: P – Criteria passed F – Criteria failed																				

Hedgerows				Condition Sheet Criteria Score										Condition Assessment
Ref.	Phase 1 Habitat Type	UK Hab Habitat Equivalent	Description	A1	A2	B1	B2	C1	C2	D1	D2	E1*	E2*	
H1	Species-rich hedgerow with trees		Rather unmanaged hedgerow located along the south-eastern boundary of the site, measuring to c. 6 m in height with emerging semi-mature standards. The vegetation was rather sparse in places, though gaps were filled with either low scrambling scrub or newly planted saplings. Hedgerow species included: hawthorn <i>Crataegus monogyna</i> , blackthorn <i>Prunus spinosa</i> , self-set English oak <i>Quercus robur</i> , dog rose <i>Rosa canina</i> , bramble <i>Rubus fruticosus</i> and standing dead elm <i>Ulmus sp.</i> , with standards of ash <i>Fraxinus excelsior</i> and sycamore <i>Acer pseudoplanatus</i> . Pockets of dense bramble and suckering blackthorn scrub were present encroaching from the hedgerow base into the surrounding grassland. A deep ditch was present at the hedgerow base which was holding water at the time of survey.	P	P	P	P	P	F	P	P	P	P	Good
Key: *Applicable to hedgerows with trees only														