



MKA
ECOLOGY

Preliminary Ecological Appraisal and Ground Level Tree Assessment

Bruce Castle Park MUGA, Haringey

Site	Bruce Castle Park MUGA, Haringey, London, N17 8NS
Project number	181425
Client name / Address	McArdle Sport Tec Ltd, 1-2 Thames Park, Lester Way, Wallingford, Oxon, OX10 9TA

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Declaration of compliance

This Preliminary Ecological Appraisal has been undertaken in accordance with British Standard 42020:2013 "Biodiversity, Code of practice for planning and development". The information which we have provided is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.



MKA Ecology Ltd is a CIEEM Registered Practice. This means that MKA Ecology Ltd are formally recognised for high professional standards, working at the forefront of our profession.

Validity of data

Unless stated otherwise the information provided within this report is valid for a maximum period of 24 months from the date of survey. If works at the site have not progressed by this time an updated site visit may be required in order to determine any changes in site composition and ecological constraints.

CONTENTS

1.	EXECUTIVE SUMMARY	3
2.	INTRODUCTION	5
2.1.	Aims and scope of Preliminary Ecological Appraisal	5
2.2.	Site description and context	5
2.3.	Proposed development.....	6
2.4.	Legislation and planning policy.....	6
3.	METHODOLOGIES	8
3.1.	Desktop study	8
3.2.	UK Habitat Classification	8
3.3.	Protected and notable species scoping survey	9
3.4.	Ground Level Tree Assessment	10
3.5.	Equipment.....	13
3.6.	Surveyor, author and reviewer	13
3.7.	Date, time and weather conditions	13
3.8.	Constraints.....	14
4.	RESULTS	15
4.1.	Desktop study	15
4.2.	UK Habitat Classification	17
4.3.	Protected species scoping survey	21
4.4.	Ground Level Tree Assessment	23
5.	ECOLOGICAL CONSTRAINTS, OPPORTUNITIES AND RECOMMENDATIONS	27
6.	CONCLUSIONS	35
7.	REFERENCES	36
8.	APPENDICES	38
8.1.	Appendix 1: Relevant wildlife legislation and planning policy.....	38
8.2.	Appendix 2: UK Habitat Classification species list	49
8.3.	Appendix 3: Site photographs	50
8.4.	Appendix 4: Bird and bat box recommendations.....	56
8.5.	Appendix 5: Lighting plans	59

1. EXECUTIVE SUMMARY

In August 2025, MKA Ecology Limited was commissioned to undertake a Preliminary Ecological Appraisal of Bruce Castle Park MUGA, Haringey. The appraisal included a habitat survey, protected species scoping survey and desktop study of protected and notable sites and species in the area. A Site visit was undertaken on 13 August 2025 and 14 October 2025.

The Site is situated within a small area of green open space and comprises a sealed surface Multi-Use Games Area (MUGA) pitch and associated hardstanding pathways. The proposals are for the redevelopment of the Multi-Use Games Area (MUGA) sports court and the installation of a new pathway and lighting scheme. The anticipated Zone of Influence includes the Site itself and the immediate surrounding habitats.

The following ecological constraints were identified at the Site with recommendations made as follows;

- **Non-Statutory Designated Sites:** The Site lies within a Site of Importance for Nature Conservation (SINC): Tottenham Cemetery, All Hallows Churchyard and Bruce Castle Park Borough Grade II SINC. A Construction and Ecology Management Plan (CEMP) should be produced to ensure that works do not negatively impact this designated site.
- **Roosting bats:** A GLTA was undertaken on all trees within the Zone of Influence. Two trees were found to contain PRF-M features and one tree to contain a PRF-I feature. Under current lighting proposals, no further survey effort is considered necessary in relation to roosting bats at Bruce Castle Park MUGA, Haringey. However, should any aspect of the lighting plans change, further ecological review would be required to reassess potential impacts and determine whether additional survey or mitigation is necessary.
- **Foraging and commuting bats:** The Site and the Zone of Influence was assessed to have moderate suitability to foraging and commuting bats, mainly light tolerant bat species. No habitat removal is proposed in the scheme but impacts may occur due to increase lighting levels. Key foraging habitats of Tottenham Cemetery, All Hallows Churchyard and Bruce Castle Park Borough Grade II SINC will not be affected by the proposed lighting and the conservation status of bat retained in these locations. The scattered and lines of trees along the footpath south-east of the proposed MUGA location will experience increased levels of lighting. These habitats are already subject to increased lighting levels compared to the rest of the park due to lighting from the floodlights from the tennis courts to the south, and already present footpath lighting to the south. No significant impacts on bat foraging or commuting are anticipated, and further survey effort is not considered proportionate.
- **Nesting birds:** It is possible that tree pruning work will be required as part of the proposed works. As such, any vegetation clearance should be undertaken outside of the bird breeding

season, which runs from March to August inclusive. Should these timings not be possible, a nesting bird check by a suitably qualified ecologist should take place prior to any clearance.

Ecological opportunities exist to enhance biodiversity post-development, and recommendations have been provided to enhance the Site for birds and bats. The inclusion of ecological enhancement features is in line with local and regional planning policy, as well as the National Planning Policy Framework (NPPF).

A Biodiversity Net Gain assessment should be undertaken to ensure that the proposed development is able to demonstrate a significant increase in biodiversity and green infrastructure provision within the Site. This should inform a HMMP to ensure the successful establishment and long-term management of newly created habitats.

2. INTRODUCTION

2.1. Aims and scope of Preliminary Ecological Appraisal

In August 2025, MKA Ecology Limited was commissioned to undertake a Preliminary Ecological Appraisal (PEA) and Ground Level Tree Assessment (GLTA) at Bruce Castle Park MUGA, Haringey by McArdle Sport Tec Ltd in order to support a planning application for the redevelopment of the Multi-Use Games Area (MUGA) sports court and the provision of a new footpath lighting scheme.

The aims of the PEA were to:

- Undertake a desktop study to identify the extent of protected and notable species and habitats within 1km proximity of the Site;
- Prepare a habitat map for the Site;
- Identify evidence of protected species/species of conservation concern at the Site;
- Assess the potential impacts of the proposed development, using existing plans;
- Outline recommendations for further survey effort where required; and
- Outline recommendations for biodiversity enhancements.

The aims of the GLTA were to:

- Undertake a desktop study to identify the locations of known bat roosts and activity records within 1km of the Site;
- Assess the suitability of the trees at the Site for roosting bats, and record any evidence of bat presence;
- Identify likely ecological impacts relating to the proposed development;
- Assess the need for further survey effort, a European Protected Species Licence (EPSL) or mitigation, if required; and
- Propose any suitable habitat enhancements for bat species, if required.
-

2.2. Site description and context

The survey area is shown on the map in Figure 1. Within this report this area is referred to as the Site or Bruce Castle Park MUGA, Haringey. It is located in Haringey, North London (centred on: TQ 34138 90510) and falls under the authority of the Haringey Council. The Site is situated within the urban greenspace of Bruce Castle Park and comprises a sealed surface MUGA pitch and associated pathways. Scattered trees, woodland, small wildlife areas, and modified grassland are present within the wider area of green space.

2.3. Proposed development

The development proposals comprise the redevelopment of the MUGA court along with new footpaths and installation of a new lighting scheme.

Due to the likely scale and type of project, the anticipated Zone of Influence will be the Site itself and immediate surrounding habitats in the proposed floodlighting spill area. Anticipated spill calculations were taken from the lighting calculations plans provided by Christy Lighting Ltd (Figure 3-Figure 6, Appendix 5)

2.4. Legislation and planning policy

This PEA and GLTA have been undertaken with reference to relevant wildlife legislation and planning policy.

Relevant legislation considered within the scope of this document includes the following:

- The Environment Act 2021;
- The Wildlife and Countryside Act 1981 (as amended);
- The Conservation of Habitats and Species Regulations 2017 (as amended);
- Natural Environment and Rural Communities (NERC) Act 2006;
- The Countryside and Rights of Way (CROW) Act 2000;
- Protection of Badgers Act 1992; and
- Wild Mammals (Protection) Act 1996.

Further information is provided in Appendix 1, including levels of protection granted to the species considered in Section 3.3.

In addition to obligations under wildlife legislation, the revised National Planning Policy Framework (NPPF) updated on 12 December 2024 requires planning decisions to contribute to conserving and enhancing the local environment. Further details are provided in Appendix 1.

Given that the Site is located within London, consideration of the London Plan (2021) has been given. The London Plan contains a number of policies relating to biodiversity, a brief summary of which is set out below:

- Policy G1 Green infrastructure;
- Policy G5 Urban greening;
- Policy G6 Biodiversity and access to nature; and
- Policy G7 Trees and woodlands;

The London Borough of Haringey Council has produced an adopted Local Plan which covers a number of policies relating to biodiversity and habitat conservation, including:

- Policy SP11: Design; and
- Policy SP13: Open space and biodiversity

There is also a Biodiversity Action Plan (BAP) for Greater London (London Biodiversity Partnership, 2022) which identifies regional priority habitats and species.

The London Borough of Haringey have produced a Haringey BAP (2023), which identifies a series of local priority habitats and species.

Further details of these policies are provided in Appendix 2. Where relevant, these are discussed in further detail in Section 5.

3. METHODOLOGIES

This PEA and GLTA has been undertaken in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Preliminary Ecological Appraisal, 2nd edition (CIEEM, 2017).

3.1. Desktop study

A data search was conducted for the Site and the surrounding area within 1km and 10km for internationally designated sites. The search was extended to 10km for internationally designated sites. Data was retrieved from the sources listed in Table 1.

Table 1: Sources of data for desktop study

Organisation	Data collected	Date collected
Multi-agency Geographic Information for the Countryside (MAGIC) www.magic.gov.uk	Information on local, national and international statutory protected areas.	09/12/2025
Greenspace Information for Greater London	Information on protected and notable sites and species within 1km of the Site (TQ 33566 90746).	09/12/2025
Ordnance Survey maps and aerial photography	Information on habitats and connectivity between the Site and the surrounding landscape	09/12/2025
Plantlife Important Plant Areas and Buglife Important Invertebrate Areas	Information on important plant and invertebrate areas within 2km of the Site.	09/12/2025

3.2. UK Habitat Classification

Habitats were surveyed using the standardised UK Habitat classification and mapping methodology (UKHab Ltd, 2023). Data were recorded onto a Samsung Tablet in a Geographic Information System (GIS), in this instance QField, following a modified UK Habs colour mapping palette. Dominant plant species were observed and recorded within each habitat type. The plant species nomenclature follows that of Stace (2019).

The DAFOR scale is used to describe the relative abundance of species. The scale is shown in Table 2. It is important to note that where a species is described as rare this description refers to its relative abundance within the Site and is not a description of its abundance within the wider landscape.

Therefore, a species with a rare relative abundance within the Site may be common within the wider landscape.

Table 2: DAFOR scale

DAFOR code	Relative abundance
D	Dominant
A	Abundant
F	Frequent
O	Occasional
R	Rare

In order to assess grassland habitats a series of 1m by 1m quadrats are used to understand species composition. Within each quadrat the percentage cover of each species is recorded. The number of quadrats used varies depending on grassland complexity. Low complexity grasslands, such as amenity grasslands, have fewer quadrats. Neutral, acidic and calcareous grasslands have at least five quadrats to ensure the habitat types are correctly assigned.

3.3. Protected and notable species scoping survey

As part of the Preliminary Ecological Appraisal, an assessment of the potential for the habitats on site, or within the zone of influence of the proposed development, to support protected or notable species was made. This assessment was based on the quality, extent and interconnectivity of suitable habitats, along with the results of the desktop study detailed in Section 3.1. This includes Species of Principal Importance as listed on Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006, and Red and Amber listed Birds of Conservation Concern (BoCC) as per Stanbury *et al.*, 2021 (see Appendix 1).

Protected and notable species considered within the protected species scoping survey for Bruce Castle Park MUGA, Haringey include the following:

- Plants and fungi: Large-leaved lime *Tilia platyphyllos*, yellow vetchling *Lathyrus aphac*, and wall bedstraw *Galium parisiense*.
- Invertebrates: Stag beetle *Lucanus cervus*, white-letter hairstreak *Satyrrium w-album*, brown hairstreak *Thecla betulae*.
- Fish: European eel *Anguilla anguilla*, river lamprey *Lampetra fluviatilis*, brown trout *Salmo trutta subsp. fario*.
- Amphibians: Natterjack toad *Epidalea calamita*, great crested newt *Triturus cristatus* and common toad *Bufo bufo*.

- Reptiles: Adder *Vipera berus*, common lizard *Zootoca vivipara*, slow-worm *Anguis fragilis*, grass snake *Natrix helvetica helvetica*.
- Birds: With special reference to species listed under Schedule 1 of The Wildlife and Countryside Act, 1981, Species of Principal Importance and BoCC species.
- Mammals: Badger *Meles meles*, bats (all species), water vole *Arvicola amphibius*, otter *Lutra lutra*, hazel dormouse *Muscardinus avellanarius*, hedgehog *Erinaceus europaeus*, brown hare *Lepus europaeus*, harvest mouse *Micromys minutus*, polecat *Mustela putorius* and European beaver *Castor fiber*.

In each case the likelihood of presence of these protected species in the zone of influence of the proposed development was classified as being either confirmed, high, moderate, low or negligible.

- **Confirmed:** The species is confirmed during the Preliminary Ecological Appraisal, previous survey effort or recent records.
- **High:** Habitats are available which are highly suitable for this species and there are records within the desktop study. The surrounding areas also provide widespread opportunities for the species which are well connected to the Site.
- **Moderate:** Some suitable habitat available for the species although not of optimum quality. Species is present with the desktop study.
- **Low:** Some suitable habitat available for the species but this is low value and possibly of small scale or with poor connectivity. No, or very few, records returned in the desktop study.
- **Negligible:** No suitable habitat available for the species, or very little poor-quality habitat.

This protected species scoping survey is designed to assess the *potential* for presence or absence of a particular species or species group, and does not constitute a full survey for these species.

3.4. Ground Level Tree Assessment

A ground level inspection of trees within and adjacent to the proposed floodlighting spill area was undertaken following guidance set out in *Bat Surveys for Professional Ecologists – Good Practice Guidelines (4th edition)* (Collins, 2023). The locations of the inspected trees are shown in Figure 2.

The following features were recorded for trees:

- Species; and
- Diameter at breast height.

Descriptions of suitable and actual roost features were recorded (including height above ground level and aspect), as well as descriptions of evidence of bats found.

Potential roost features recorded were:

- Woodpecker holes;
- Rot holes;
- Hazard beams;
- Other vertical or horizontal cracks and splits (such as frost-cracks) in stems or branches;
- Partially detached plated bark;
- Knot holes arising from naturally shed branches, or branches previously pruned back to the branch collar;
- Man-made holes (e.g. cavities that have development from flush cuts) or cavities created by branches tearing out from parent stems;
- Cankers (caused by localised bark death) in which cavities have developed;
- Other hollows or cavities, including butt-rots;
- Double-leaders forming compression forks with included bark and potential cavities;
- Gaps between overlapping stems or branches;
- Partially detached ivy *Hedera helix* with stem diameters in excess of 50mm; and
- Bat, bird or dormouse boxes.

The following types of evidence of use by bats were recorded for trees:

- Presence of bats;
- Bat droppings in, around or below a potential roost feature;
- Odour emanating from a potential roost feature;
- Audible squeaking at dusk or in warm weather; and
- Staining below the potential roost feature.

Trees were assessed for their bat roost suitability according to the scheme presented in Collins (2023). These categories are shown in Table 3.

Table 3: Categories to assess roost suitability in trees (adapted from Collins, 2023)

Roost suitability	Description
None	Either no potential roost features in the tree or highly unlikely to be any
FAR	Further assessment required (FAR) to establish if potential roost features (PRFs) are present in the tree
PRF	A tree with at least one potential roost feature present

If potential roost features were identified in trees, these were further categorised as follows.

Table 4: Categories to assess roost suitability in trees (adapted from Collins, 2023)

Suitability	Description
PRF-I	PRF is only suitable for individual bats or very small numbers of bats, either due to size or lack of suitable surrounding habitats.
PRF-M	PRF is suitable for multiple bats and may therefore be used by a maternity colony.

The guidelines for categorisation of bats in England by distribution and rarity (adapted from Reason and Wray 2025) are shown in Table 5 and Table 6 below.

Table 5: Categorising bats by rarity (South-eastern/East Anglia to The Wash)

Rarity within England	Species
Rarest Annex II species and very rare	- Alcathoe's bat <i>Myotis alcathoe</i> - Barbastelle <i>Barbastella barbastellus</i>
Rarer or restricted distribution	- Whiskered bat <i>Myotis mystacinus</i> - Brandt's bat <i>Myotis brandtii</i> - Leisler's bat <i>Nyctalus leisleri</i> - Nathusius' pipistrelle <i>Pipistrellus nathusii</i> - Serotine <i>Eptesicus serotinus</i>
Widespread in many geographies, but not abundant in all	- Noctule <i>Nyctalus noctula</i> - Daubenton's bat <i>Myotis daubentonii</i> - Natterer's bat <i>Myotis nattereri</i>
Widespread	- Common pipistrelle <i>Pipistrellus pipistrellus</i> - Soprano pipistrelle <i>Pipistrellus pygmaeus</i> - Brown long-eared bat <i>Plecotus auritus</i>

Table 6: Level of importance of roost type

Geographic frame of reference	Roost type
Site, District, Local or Parish	Feeding perches Non-breeding day roosts Mating sites (excluding individual trees and swarming sites) Small numbers of hibernating bats Larger transitional roosts

Geographic frame of reference	Roost type
	Maternity sites (for widespread species, unless colony atypically large)
County	Hibernation sites (excluding rarest Annex II species) Maternity sites (for widespread but not abundant in all geographies species unless colony atypically large) Autumn swarming sites (can reach regional importance depending on assemblage)
Regional	Maternity sites (depending on rarity and value of assemblage) Hibernation sites (for rarest Annex II species, depending on assemblage and size)
National/UK	Sites meeting SSSI guidelines*
International	SAC sites

*Sites meeting SSSI (Sites of Special Scientific Interest) selection guidelines include Barbastelle maternity roosts and mixed species hibernacula assemblages

3.5. Equipment

The inspection of trees was conducted using a variety of equipment including ladders, digital video endoscope, binoculars, high-powered torch and a digital camera.

3.6. Surveyor, author and reviewer

The survey was undertaken by Henry Wyn-Jones and Jessica Thomson, Ecologist and Graduate Ecologist at MKA Ecology Ltd respectively. The GLTA was undertaken by Max Ellis, Consultant Ecologist at MKA Ecology Ltd. Max has three years of experience as an ecologist and holds a level 2 bat licence from Natural England. This report was written by Henry and reviewed by Felix Bird, Senior Ecologist at MKA Ecology Ltd. Felix has seven years' experience as an ecological consultant.

3.7. Date, time and weather conditions

See Table 7 below for details of the date, time and prevailing weather conditions recorded during the Site visit for the Preliminary Ecological Appraisal.

Table 7: Date, time and weather conditions of survey visit

Date	Time of survey	Weather conditions*
13 August 2025	12:00	Wind: BF1 Cloud: 2/8

Date	Time of survey	Weather conditions*
		Temp: 24°C Rain:0
14 October 2025	11:30	Wind: BF3 Cloud: 8/8 Temp: 17°C Rain: 0

*Wind as per Beaufort Scale / Cloud cover given in Oktas.

3.8. Constraints

A single visit cannot always ascertain the presence or absence of a protected species. However, an assessment is made of the likelihood for protected species to occur based on habitat characteristics and the ecology of each species. Where there is potential for protected species, additional survey work may be required to ascertain their presence or absence.

Data on species records obtained from local biological records centres are sometimes only available at low spatial resolutions and are constrained by the voluntary nature of the contributions and what has been chosen to be submitted as records. While these records provide a useful indication of species recorded in the local area, in particular protected or notable species, the data is not necessarily an accurate reflection of species assemblages or abundance in the vicinity.

4. RESULTS

4.1. Desktop study

An ecological desktop study was completed for the Site and the surrounding 1km for non-statutory and national statutory designated sites, and 10km for internationally designated sites. Data provided by Greenspace Information for Greater London identified numerous records of UK and European protected species, Species and Habitats of Principal Importance (as listed under Section 41 of the NERC Act 2006), and species of conservation concern within 1km of the Site. It should be noted that this is not a comprehensive list of the distribution or extent of the local flora and fauna of conservation importance. These species records are discussed in greater detail in the protected species scoping survey section (Section 4.3 below).

Details of internationally designated sites identified as part of the desktop study are displayed in Table 8 below. These consist of one Special Area of Conservation (SAC), one Special Protection Area (SPA), and one Ramsar wetland.

Table 8: Statutorily designated sites within 10km of Bruce Castle Park MUGA, Haringey

Site name	Area (ha)	Distance and direction	Reasons for selection
Lee Valley (SPA and Ramsar wetland)	451.3	1.5km SE	Lee Valley has been designated for internationally important numbers of breeding and wintering wildfowl, especially gadwall <i>Anas strepera</i> and shoveler <i>Anas clypeata</i> , and for wintering bittern <i>Botaurus stellaris</i> .
Epping Forest (SAC)	1628.87	5.1km E	Epping Forest SAC represents Atlantic acidophilous beech forests in the north-eastern part of the habitat's UK range. The site is a very important site for fauna associated with decaying timber, and supports many Red Data Book and Nationally Scarce invertebrate species including stag beetle. Notable species also include the rare moss <i>Zygodon forsteri</i> .

Details of statutorily designated sites identified as part of the desktop study are displayed in Table 9 below. These consist of one Site of Special Scientific Interest (SSSI).

Table 9: Statutorily designated sites within 1km of Bruce Castle Park MUGA, Haringey

Site name	Area (ha)	Distance and direction	Reasons for selection
Walthamstow Reservoirs (SSSI)	179.51	1.5km SE	The Walthamstow Reservoirs contain one of the country's major heronries and a particularly large concentration of breeding wildfowl. They are also an important gathering area for moulting tufted duck <i>Aythya fuligula</i> and in winter attract nationally significant populations of wildfowl and other wetland birds.

Details of non-statutorily designated sites identified as part of the desktop study are displayed in Table 10 below. These consist of four Sites of Importance for Nature Conservation (SINCs)

Table 10: Non-statutorily designated sites within 1km of Bruce Castle Park MUGA, Haringey

Site name	Area (ha)	Distance and direction	Reasons for selection
Tottenham Cemetery, All Hallows Churchyard and Bruce Castle Park (Borough II SINC)	29.5	Within Site	The site attracts numerous migrant birds in spring and autumn and contains a number of old oak trees <i>Quercus sp.</i> Small areas of grass are managed as meadow suitable for pollinators. The cemetery contains a large pond with two islands, which provide nest sites for common waterfowl, and a stream, the Moselle Brook, runs across the site.
Bruce Grove Wood (Local SINC)	0.78	0.7km S	There are a range of habitats on the site, including overgrown allotments, mown grass, and secondary woodland of ash <i>Fraxinus excelsior</i> and sycamore <i>Acer pseudoplatanus</i> .
Tower Gardens (Local SINC)	1.33	0.8km W	This small park contains several features of value to wildlife, including numerous mature trees and areas of native woodland and scrub planting. These provide nest sites and food for a good range of common birds. On the northern edge is a sunny bank, covered in rough grassland and tall herbs, which is likely to support a good diversity of invertebrates.

Site name	Area (ha)	Distance and direction	Reasons for selection
Lordship Lane Recreation Ground (Local SINC)	12.08	1.2km SW	The most valuable features for nature conservation in this large park are a short length of stream known as 'The Moselle', and a pond which supports common waterfowl. Adjacent damp grassland has a large population of marsh foxtail <i>Alopecurus geniculatus</i> , which is scarce in Haringey. An area of woodland by the access path from Downhills Park Road has matured to provide valuable habitat for birds. A further small plot of native species woodland has been planted in the south-east corner which will provide good habitat for birds as it matures.

The immediate surroundings of the Site comprise of the grassland and individual trees making up the surrounding Tottenham Cemetery, All Hallows Churchyard and Bruce Castle Park (Borough II SINC). Within the SINC there is extensive grassland and scattered mature trees and the Moselle Brook runs throughout the cemetery to the north. These habitats are extended into the surrounding landscape through the pockets of green space within the area, many of which are designated sites (see Tables 8, 9, and 10 above). Whilst there are valuable habitats within the surrounding green spaces, the Site is located within London which is dense with urban development, fragmenting the green spaces and creating barriers for dispersal and connectivity of important habitats and notable species to the Site.

Two veteran trees (both sessile oaks *Quercus petraea*) are listed on the Ancient Tree Inventory within Bruce Castle Park. These lie 50m and 100m to the north-west of the Site boundary. The latter of these trees is a particularly notable specimen being the oldest tree in the borough at over 450 years old.

The Site lies within a SSSI Impact Risk Zone (Natural England, 2019), further details of which are discussed in Section 5. The Site does not lie within any Important Plant Areas or Important Invertebrate Areas. The Site also does not lie within a B-Line.

4.2. UK Habitat Classification

The Site was found to comprise a sealed surface Multi-Use Games Area (MUGA), associated pathways, and modified grassland. Habitats within the Zone of Influence of the development include modified grassland and scattered urban trees and urban infrastructure such as tennis courts and residential houses. More ecologically valuable habitats in the form of veteran trees, a lake and small pockets of woodland are present west of the Site within the Tottenham Cemetery, All Hallows Churchyard and Bruce Castle Park Borough II SINC. More detailed species lists, along with their relative abundance,

can be found in Appendix 2. The UK habitat classification survey map is provided in Figure 1, at the end of this section. Descriptions of the habitat types present along with dominant species compositions are provided below.

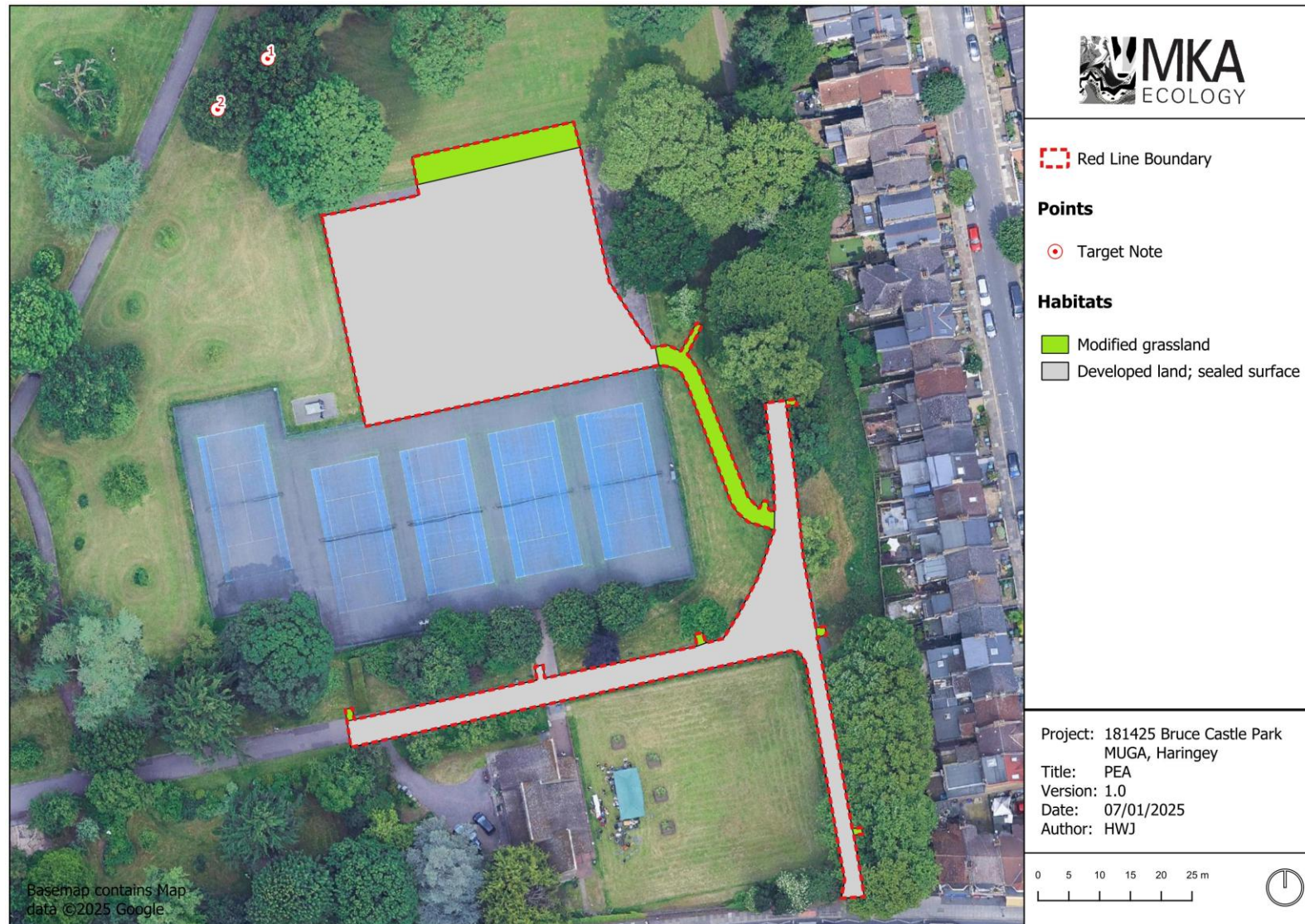
Developed land; sealed surface – u1d

A sealed surface MUGA sports pitch is present in the centre of the Site with associated footpaths leading south from the MUGA (Photograph 1, Photograph 2; Appendix 3).

Developed land; sealed surface – u1d

Species-poor modified grassland is found surrounding the footprint of the MUGA and footpaths (Photograph 3, Appendix 3).

Figure 1: UK Habitat Classification map of Bruce Castle Park MUGA, Haringey



Target notes for Figure 1:

Target note	Description
1	Possible veteran tree
2	Possible veteran tree

4.3. Protected species scoping survey

Plants and fungi

The data search returned a small number of recent records of nationally protected and notable plant species including large-leaved lime *Tilia platyphyllos* nearest record being 0.2km south-west of the Site in 2020. Historic records for box *Buxus sempervirens*, with the most recent and nearest record being 0.4km north-west of the Site in 2022, and juniper *Juniperus communis*, with the most recent and nearest record being 0.5km west of the Site in 2015. No protected or notable species were recorded within the Site during the survey. Given the Site comprises mostly artificial surfaces with a small area of highly managed modified grassland, the likelihood of the Site supporting nationally protected or notable plant species has been assessed to be **negligible**.

The data search returned recent records of butterfly-bush *Buddleja davidii*, the nearest and most recent record being 0.07km north-east of the Site in 2022 and turkey oak *Quercus cerris* recorded 0.07km south-west of the Site in 2023. No non-native invasive species were identified during the Site visit. Therefore, the presence of invasive non-native plant species on-Site has assessed to be **negligible**.

Invertebrates

The data search returned a number of records of nationally protected or notable invertebrate species, including three records of stag beetle, the nearest being 0.5km east of the Site in 2019. In addition, a single historic record of white-letter hairstreak *Satyrrium w-album* was returned from 0.5km north-west of the Site in 2010. The data search also returned records for small copper *Lycaena phlaeas*, with the nearest record being 0.2km south-west of the Site in 2021. Stag beetle is listed on Schedule 5 of The Wildlife and Countryside Act 1981 (as amended), and these species are all listed as SPIs on the NERC Act 2006.

No evidence of stag beetle was recorded during the Site visit. Additionally, no deadwood features are present within the Site, which supports limited habitat diversity to support the species. Overall, there is a **negligible** likelihood of the Site supporting protected or rare invertebrates or notable assemblages.

Fish

No records for protected or notable species of fish were returned in the data search. There is no suitable habitat for fish within or adjacent to the Site boundary. Therefore, the likelihood that the Site supports any notable fish has been assessed to be **negligible**. This species group is not considered further in this report.

Amphibians

The data search returned four records for common frog *Rana temporaria*, the most recent of which being 0.4km west of the Site in 2021. The data search returned no records for great crested newt. A

search of Defra's MAGIC website returned no EPSLs granted for great crested newt within 2km of the Site.

The Site contains no suitable breeding habitat for great crested newt, and the existing artificial surfaces and well managed modified grassland offer limited suitable terrestrial habitat for amphibians. As such, the likelihood that the Site supports nationally protected or notable amphibians has been assessed as **negligible**. This species group is therefore not considered further in this report.

Reptiles

No records for reptiles were returned in the data search. The Site supports no suitable habitat for reptiles. Furthermore, suitable habitat for reptiles in the surrounding areas have significant barriers to connectivity with the Site given the urban setting including residential and commercial buildings as well as major roads. Therefore, the likelihood that the Site supports reptiles has been assessed to be **negligible**. This species group is therefore not considered further in this report. This species group is not considered further in this report.

Birds

Five bird species were recorded during the site visit. These species are shown in Table 11 together with their conservation status. It is important to note that this is not a full inventory of species for the site.

Table 11: Bird species recorded during site visit at Downhill Park MUGA, Haringey

Common name	Systematic name	S1 W&CA ¹	BoCC ² Status	S41 SPI ³	Local PrSp ⁴
Carrion crow	<i>Corvus corone</i>	-	Green	-	-
Feral pigeon	<i>Columba livia</i>	-	Green	-	-
Blue tit	<i>Cyanistes caeruleus</i> ,	-	Green	-	-
Great tit	<i>Parus major</i>	-	Green	-	-
Ring-necked parakeet	<i>Psittacula krameri</i>	-	-	-	-

¹ Schedule 1 of The Wildlife and Countryside Act 1981 (as amended) (see Appendix 1)

² Birds of Conservation Concern (see Appendix 1)

³ Section 41 (NERC Act 2006) 'Species of Principal Importance' (see Appendix 1)

⁴ Local Priority Species

The data search returned several bird species records from within 2km of the Site including SPIs listed under Section 41 of the NERC Act 2006 and those listed as Red and Amber of the BoCC list, including swift *Apus apus*, the nearest and most recent record being 0.2km east of the Site in 2023, house sparrow, and spotted flycatcher *Muscicapa striata*, both recorded 0.5km north-west of the Site in 2015.

As the Site is comprised of artificial surfaces, no suitable habitat for breeding birds is present at the Site. Therefore, the likelihood of the Site supporting common bird species is **negligible**. In addition, the habitats present at the Site have no potential to support assemblages of protected/notable bird species and therefore the likelihood of the Site supporting such assemblages is considered to be **negligible**. A number of ring-necked parakeets were recorded during the survey effort. This species has become widespread in London and is listed on Schedule 9 of the Wildlife and Countryside Act 1981. This is due to the species being non-native and can invasively outcompete local fauna. Whilst its presence is confirmed within the Zone of Influence there is no suitable habitat present for breeding of this invasive species onsite.

However, a number of mature trees and shrubs overhang the Site boundary within the Zone of Influence. These features hold potential for nesting birds and therefore the likelihood of Zone of Influence of the development supporting breeding common bird species is **low**. The presence of non-native invasive bird species is **confirmed** within the Zone of Influence; however, the proposals will not result in increase spread of this species.

Badgers

No records for badger were returned in the data search. No evidence of badger such as setts, prints or latrines was observed during the survey. The amenity grassland within the Site offers foraging opportunities for badger, although this is limited in extent and is fully encompassed by roads and dwellings isolating the area from the wider landscape. There is limited suitable habitat for sett building present at the Site and is located within an urban area, further reducing the likelihood of badgers being present within the Site. Therefore, the likelihood of badgers being present at the Site is considered to be **negligible**.

Other mammals

The data search returned four historic records of hedgehog *Erinaceus europaeus* with the nearest record being 0.3km north of the Site in 2001 and the most recent record being 0.9km south-west of the Site in 2002. The Site provides suitable habitat for hedgehog through the grassland however there are limited opportunities for movement into the Site from surrounding gardens or green spaces in the surrounding area because of the dense arrangement of garden fences and roads surrounding the Site. Therefore, the likelihood of hedgehogs being present is considered to be **low**. No other mammals were returned in the data search and such species are not considered further.

4.4. Ground Level Tree Assessment

Desktop study

The data search returned 10 records for bats within 1km of the Site. Four species were returned in total: Daubenton's bat, noctule, common pipistrelle, and soprano pipistrelle. The data search also returned five unspecified bat records including *Myotis sp.*, *Nyctalus sp.*, and *Pipistrellus sp.* A search of Defra's

MAGIC website returned five European Protected Species Licenses granted for bats within 2km of the Site boundary. Four licenses were granted for the destruction of a common pipistrelle resting place, the most recent granted April 2015-December 2018 approximately 1.3km north of the Site; and one granted for the destruction of a common pipistrelle and noctule resting place, granted from March 2018-March 2023 approximately 1.5km south-west of the Site.

Foraging and commuting bats

The habitats within the Site itself offer limited foraging and commuting opportunities for bats, given the Site comprises artificial surfaces and heavily managed modified grassland. However, the scattered urban trees that are present within the Zone of Influence (the proposed floodlighting spill area) provide some suitable foraging and commuting opportunities. The Site is located within a highly urbanised location, with the wider landscape predominately comprising residential and commercial development interspersed with some areas of green space. As the surrounding area is considerably urbanised with footpath, flood, and street lighting already present to the south and east of the Site, it is likely that the Site will be predominantly used by the more light-tolerant species (common pipistrelle and soprano pipistrelle). The likelihood that the Zone of Influence supports foraging and commuting bats has been assessed to be **moderate**.

Roosting bats

A Ground Level Tree Assessment of the trees within the Zone of Influence (the proposed lighting spill area) was undertaken during the survey. No direct evidence of roosting bats was observed during the survey.

The likelihood that the Site and proposed Zone of Influence supports roosting bats has been assessed to be **high**. Further detailed information regarding the results of the Ground Level Tree Assessment is set out below in Table 12. The locations of the inspected trees are shown in Figure 2.

Table 12: Ground Level Tree Inspection results

Tree	Roost suitability	Descriptions of potential/actual roost features
T1	PRF-Multiple	A mature, likely veteran, pedunculate oak approximately 20m in height (Photograph 5, Appendix 3). The mature tree was found to support nine features of bat roosting potential. This included a branch tear at 8m and knot hole at 15m on the eastern aspect, two pruning wounds and a rot hole at 15m on the southern aspect, two knot holes and a tear out at 10m on the western aspect and a large lightning strike cavity at the very top of the trunk at 20m (Photograph 7-Photograph 10, Appendix 3). All of the features were inspected from the ground using a high-powered torch and binoculars. All features were of elevated potential and all classed as PRF-M features due to being able to support multiple bats.
T2	PRF-Multiple	A mature, likely veteran, pedunculate oak approximately 15m in height (Photograph 6, Appendix 3). The mature tree was found to support three features of bat roosting potential. This included a large lightning strike cavity at the top of the main trunk, and knot holes at 8m and 10m on the south-western aspect (Photograph 11, Appendix 3). All of the features were inspected from the ground using a high-powered torch and binoculars. All features were of elevated potential and all classed as PRF-M features due to being able to support multiple bats.
T3	PRF-Individual	A mature sycamore tree 20m in height (Photograph 4, Appendix 3). A branch tear was observed at approximately 15m in height on the south-eastern edge of the tree. This feature was inspected from the ground using a high-powered torch and binoculars. The branch tear was found to be only suitable for supporting individual bats and therefore classed as a PRF-I.
All other trees within Zone of Influence	None	No roosting features were observed from the ground.

Figure 2: Ground Level Tree Assessment results for Bruce Castle Park MUGA, Haringey



5. ECOLOGICAL CONSTRAINTS, OPPORTUNITIES AND RECOMMENDATIONS

This section outlines key ecological issues for consideration, recommendations for further work and ecological enhancements where appropriate.

Designated sites

The Site lies within a Natural England SSSI Impact Risk Zone (Natural England, 2019). Developments that fall into the below categories require Local Planning Authority (LPA) consultation with Natural England:

- **Infrastructure:** Pipelines and underground cables, pylons and overhead cables (excluding upgrades and refurbishment of existing network). Any transport proposal including new or extended footways, cycleways, roads/car parks, railways and waterways (excluding routine maintenance). Airports, helipads and other aviation proposals.
- **Minerals, Oil and Gas:** Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil and gas exploration/extraction.
- **Rural Non-Residential:** Large non-residential developments outside of existing settlements/urban areas where the footprint exceeds 1ha.
- **Rural Residential:** Any residential development of 100 or more units outside existing settlements/urban areas.
- **Air Pollution:** Any industrial/agricultural development that could cause air pollution (including: industrial processes, livestock and poultry units with a floorspace > 500m², slurry lagoons > 200m² and manure stores > 250 tonnes).
- **Combustion:** General combustion processes >20MW energy input. Including: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/combustion.
- **Waste:** Landfill. Including: inert landfill, non-hazardous landfill, hazardous landfill.
- **Compost:** Any composting proposal with more than 75000 tonnes maximum annual operational throughput. Including: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.
- **Discharge:** Any discharge of water or liquid waste of more than 5m³/day that is discharged to ground (i.e. to seep away) or to surface water, such as a beck or stream.
- **Water Supply:** Large infrastructure such as warehousing/industry where the total net additional gross internal floorspace following development is 1,000m² or more.

The proposed development does not fall into any of the above categories and therefore consultation with the LPA is not required. Due to the type and scale of development proposed, the risk of impacts to surrounding statutory designated sites is considered **negligible**.

The Site lies within the Tottenham Cemetery, All Hallows Churchyard and Bruce Castle Park Borough Grade II SINCE. The proposed development works have the potential to indirectly impact this designated site through pollutants and dust released during demolition and construction works as well as direct harm. Whilst not listed as veteran trees on the Veteran Tree Inventory, the two mature oak trees north-west of the Site (T1 and T2, Figure 2) contain veteran features and are of elevated ecological importance within the surrounding area. Whilst the works will be confined to already sealed surfaces, it is recommended that measures are put in place to protect these two trees from accidental harm. It is recommended that a Construction Environmental Management Plan (CEMP) is produced, detailing mitigatory measures to be implemented in order to minimise disturbance to designated sites and potentially veteran trees during the proposed works. In particular, the CEMP should include, but not be limited to:

- Measures to protect trees on-site, including canopy and root areas;
- Measures to minimise soil compaction and excessive vehicle tracking over sensitive habitats;
- Measures to minimise dust arising, when necessary, including the use of dust control machinery and wet machinery;
- Measures to prevent pollution / contamination events through surface run-off; and
- Measures to minimise other pollution events such as noise, vibration and wind-blown litter.

Recommendation 1

Produce a CEMP for the construction phase of the development. This document should detail mitigatory measures to be implemented so as to minimise disturbance to designated sites and features of ecological importance during the works.

Roosting bats

A ground level tree assessment was undertaken for all trees within the Zone of Influence of the proposed MUGA and footpath lighting development. The survey identified two trees containing PRF-M features and one tree containing a PRF-I feature. All trees are proposed to be retained as part of the development.

Bat roosting behaviour, commuting routes, and foraging activity can be adversely affected by artificial lighting (ILP/BCT, 2023). All bat species are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended). Bats are also Species of Principal Importance (SPIs) listed under Section 41 of the NERC Act 2006. It is an offence to deliberately disturb bats, damage or destroy a bat roost, intentionally

or recklessly disturb bats at a roost, or obstruct access to a roost. Obstruction may occur where increased or inappropriate artificial lighting affects access to or conditions within a roost feature.

Due to the small size and limited depth of the PRF-I feature identified within tree T3 onsite, this feature is considered to offer suitability for no more than a single bat. In accordance with current best practice guidance, PRF-I features do not typically require further survey if precautionary mitigation measures are followed. However, PRF-M features may require additional survey where impacts cannot be confidently ruled out. In line with best practice guidance (Collins, 2023), where impacts are anticipated, further survey would normally comprise up to three Aerial Tree Inspections (ATI) and/or bat emergence and re-entry surveys. These surveys would be undertaken between May and August, with September considered suboptimal, and spaced at least three weeks apart.

Due to the high roost potential of trees 1 and 2, lighting plans were requested to model the wider lighting spill from the MUGA as well as specific point plans at each of the PRF-M tree location detailing the proposed lux levels from ground level to the tops of the trees. The lighting modelling undertaken by Christly Lighting Ltd for the proposed MUGA indicates that the proposed floodlighting is not predicted to result in a lux level on trees containing PRF-M or PRF-I features over the 0.2 lux value set out in the ILP guidelines (Figure 3-Figure 6, Appendix 5). These plans therefore indicate that the development will not have an adverse impact on roosting bats and are in line with guidelines on lighting (ILP, 2023).

On the information currently available, and assuming that the lighting design, specifications, and installation are implemented as assessed, no further bat survey effort is required. However, should there be any subsequent changes to the lighting design, specification, positioning, or operation that could result in increased illumination of PRF features, further ecological review would be required. In such circumstances, additional bat surveys of the PRF-M features may be necessary to establish the presence or likely absence of roosting bats and to inform any appropriate mitigation or licensing requirements.

It is not anticipated that any removal of tree limbs is required as part of the development. If proposal change so that limbs are to be removed from any trees marked to contain PRFs then ecological input must be sought.

Recommendation 2

Under current proposals, no further survey effort is considered necessary in relation to roosting bats at Bruce Castle Park MUGA. However, should any aspect of the lighting plans change, further ecological review would be required to reassess potential impacts and determine whether additional survey or mitigation is necessary.

Foraging bats

As the surrounding area is highly urbanised, with existing footpath and street lighting, it is highly likely that the Site will primarily be used by more light-tolerant bat species, such as common and soprano pipistrelles. There are substantial habitats for bat foraging however these are sited over 100m north-west of the Site and comprises woodland and large lines of mature trees. The proposed development includes lighting designed in accordance with ILP guidelines (2023); however, some low levels of light spill into Bruce Castle Park is anticipated from the footpath and flood lighting within the development.

Lighting models for key bat foraging habitats within the wider area indicate that the proposed floodlighting within the development will limit spill to areas of modified grassland and thus the conservation status of this species group maintained within the wider SINC from the floodlighting. A number of scattered urban trees are present within the Zone of Influence which present low to moderate quality foraging habitat for light tolerant species of bats. These include the short line of trees on the southern and eastern edges of the footpath south of the play zone. These habitats, are already affected by existing floodlighting from the tennis court development, streetlighting, and residential lighting which currently contributes to elevated light levels in these areas. Lighting within the MUGA will be restricted with automatic turn-off scheduled for 10pm throughout the year and pathway lighting will be dimmable for when movement is not detected. Therefore, during the main bat foraging months, bat foraging and commuting habitats will remain unlit or dimly lit for the majority of the night, thereby minimising potential disturbance to bat activity. Therefore, further survey effort is not recommended for this species group.

Birds

A number of mature trees and shrubs overhang the Site boundary providing suitable opportunities for nesting birds. Whilst all vegetation is expected to be retained in the development, if any pruning works are to occur to facilitate the construction stage, then breeding birds may be at risk of harm if undertaken during the breeding bird season.

All wild birds, their active nests and eggs are protected under The Wildlife and Countryside Act 1981 (as amended), which makes it an offence deliberately, or recklessly, to kill or injure any wild bird or damage or destroy any active birds' nest or eggs.

Scheduling vegetation removal works between the months of September and February inclusive (i.e. outside of the bird season) would avoid impacts on breeding birds. Where vegetation clearance works are required during the breeding bird season (between the months of March and August inclusive), such works can only proceed following the completion of a nesting bird check undertaken by an experienced ornithologist. Any active birds' nest identified during this check must be protected from harm until the nesting attempt is complete. This will require a buffer to be left around the nest, the size of which will depend upon the species involved (as a general rule, this will be 10m in all directions around the nest). Any buffers established as a result of the initial nesting bird check must be subjected

to a second check after the original nesting attempt is completed, before such areas can be removed during the breeding bird season.

Recommendation 3

Schedule vegetation clearance works between the months of September and February inclusive to avoid impacts on breeding birds. Where this timing is not feasible works should be preceded by a nesting bird check.

It is strongly recommended that any potential nesting bird habitat is cleared outside the breeding bird season in order to avoid potentially lengthy delays if nests are found during nesting bird checks.

Ecological enhancements

Following the issue of the National Planning Policy Framework (NPPF; see Appendix 1), all planning decisions should aim to maintain and enhance, restore or add to biodiversity and geological conservation interests. Ecological enhancements should aim to deliver biodiversity gains for the proposed development site.

Enhanced opportunities for breeding birds should be incorporated into the design scheme. Bird boxes should be mounted on trees at the Site. Examples of suitable boxes are shown in Appendix 4 together with information concerning the correct siting of these enhancement features.

Recommendation 4

A minimum of one generalist bird box should be installed at the Site

The Site has the potential for use by roosting and foraging bats. With this in mind, enhanced opportunities for roosting bats should also be provided at the Site through installation of bat boxes. The bat boxes should be installed sensitively and positioned away from areas likely to experience light spill, within suitable habitats in the wider Bruce Castle Park area. Final locations should be agreed in consultation with a suitably qualified ecologist. Details of appropriate bat box types are provided in Appendix 3.

Recommendation 5

Provisions should be made for roosting bats post-development, to include a minimum of six boxes mounted in trees within Bruce Castle Park. It is recommended that their final locations are agreed in consultation with a suitably qualified ecologist.

As set out within the Environment Act 2021, biodiversity gains at the Site must demonstrably achieve 10% or more. A Biodiversity Net Gain (BNG) assessment will be undertaken for the proposed development following the methodology set out in the DEFRA Statutory Metric (2025). The results of

the PEA indicate that the proposed development will need to deliver 10% net gain in habitat areas, no linear features or watercourses are present onsite.

Recommendation 6

Undertake a Biodiversity Net Gain (BNG) assessment for the proposed development.

The Environment Act 2021 states that all BNG assessments must be accompanied by an appropriate management plan that covers the next 30 years of Site management. This serves to ensure that all proposed habitats achieve the desired ecological value used in net gain calculations. It is recommended that a Habitat Monitoring and Management Plan (HMMP) is produced in order to ensure legislative compliance.

Recommendation 7

Produce a HMMP covering the next 30 years to accompany the BNG assessment.

Summary of recommendations

Table 13 below summarises the recommendations made within this report and specifies the stage of the development at which action is required. Colour coding of cells within the table is as follows:

Key:

	No action required for this species group at this stage
	Action required (see notes for details)
	Level of action required will be determined following the further survey work

Table 13: Summary of recommendations at Bruce Castle Park MUGA, Haringey

Species	Pre-planning action required?	Pre-construction action required?	Construction phase mitigation required?	Enhancements proposed?
Biodiversity Net Gain	Undertake a Biodiversity Net Gain Assessment	No	No	Details of the creation of habitat features included within the HMMP to be produced
Designated sites	No	CEMP production to protect nearby designated sites.	Adhere to CEMP recommendations	No
Bats	No	Further assessment of impacts is required if lighting plans changed from those included within this report.	No	Bat boxes

Species	Pre-planning action required?	Pre-construction action required?	Construction phase mitigation required?	Enhancements proposed?
Birds	No	No	Timing of works for vegetation removal OR further survey work	Bird boxes

6. CONCLUSIONS

Ecological constraints related to the development include designated sites, bats, and breeding birds. A GLTA was undertaken on all trees within the Zone of Influence. Two trees were found to contain PRF-M features and one tree to contain a PRF-I feature. Under current lighting proposals, no further survey effort is considered necessary in relation to roosting bats at Bruce Castle Park MUGA. However, should any aspect of the lighting plans change or pruning is anticipated within trees marked to have bat potential, then further ecological review would be required to reassess potential impacts and determine whether additional survey or mitigation is necessary. The Site was assessed to have moderate suitability to foraging and commuting bats, mainly light tolerant bat species. Key foraging habitats of Bruce Castle Park will not be affected by the proposed lighting and the conservation status of bat retained. No significant impacts on bat foraging or commuting are anticipated, and further survey effort is not recommended. If any vegetation pruning works are required as part of the development then works should be reviewed to ensure no potential impacts occur on roosting bats and timed sensitively to protect nesting birds.

The Site lies within a Site of Importance for Nature Conservation (SINC): the Tottenham Cemetery, All Hallows Churchyard and Bruce Castle Park Borough Grade II SINC and is located within 50m of mature and possibly veteran trees. A Construction and Ecology Management Plan (CEMP) should be produced to ensure that works do not negatively impact this designated site or trees.

A number of faunal enhancements have been recommended in order to further promote biodiversity at the Site and provide opportunities for London Priority Species. This comprises the provision of bird boxes and bat boxes in the trees within Bruce Castle Park. The inclusion of such features will contribute to ensuring sustainable development that helps to achieve both local and national biodiversity targets.

A Biodiversity Net Gain assessment should be undertaken to ensure that the proposed development is able to demonstrate a significant increase in biodiversity and green infrastructure provision within the Sites. This should inform a HMMP to ensure the successful establishment and long-term management of newly created habitats.

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8. APPENDICES

8.1. Appendix 1: Relevant wildlife legislation and planning policy

Please note that the following is not an exhaustive list, and is solely intended to cover the most relevant legislation pertaining to species commonly associated with development sites.

Subject	Legislation (England)	Relevant prohibited actions
Amphibians		
Great crested newt <i>Triturus cristatus</i> Natterjack toad <i>Epidalea calamita</i>	Schedule 2 of Conservation of Habitats and Species Regulations (2017)	- Deliberately capture or kill, or intentionally injure; - Deliberately disturb or recklessly disturb them in a place used for shelter or protection; - Damage or destroy a breeding site or resting place; - Intentionally or recklessly damage, destroy or obstruct access to a place used for shelter or protection; and - Possess an individual, or any part of it, unless acquired lawfully.
	Schedule 5 of The Wildlife and Countryside Act 1981 (as amended)	
Reptiles		
Common lizard <i>Zootoca vivipara</i> Adder <i>Vipera berus</i> Slow-worm <i>Anguis fragilis</i> Grass snake <i>Natrix helvetica helvetica</i>	Part of Sub-section 9(1) of Schedule 5 of The Wildlife and Countryside Act 1981 (as amended)	Intentionally kill or injure individuals of these species (Section 9(1)).

Subject	Legislation (England)	Relevant prohibited actions
Sand lizard <i>Lacerta agilis</i> Smooth snake <i>Coronella austriaca</i>	Full protection under Section 9 of Schedule 5 of The Wildlife and Countryside Act 1981 (as amended)	- Deliberately or intentionally kill, capture (take) or intentionally injure; - Deliberately disturb; - Deliberately take or destroy eggs; - Damage or destroy a breeding site or resting place or intentionally damage a place used for shelter; or - Intentionally obstruct access to a place used for shelter.
Birds		
All wild birds	Wildlife and Countryside Act 1981 (as amended)	Intentionally kill, injure, or take any wild bird or their eggs or nests.
'Schedule 1' birds	Schedule 1 of the Wildlife and Countryside Act 1981 (as amended)	- Disturb any wild bird listed on Schedule 1 whilst it is building a nest or is in, on, or near a nest containing eggs or young; or - Disturb the dependent young of any wild bird listed on Schedule 1.
Mammals		
Bats (all UK species)	Schedule 2 of Conservation of Habitats and Species Regulations (2017)	- Deliberately capture, injure or kill a bat; - Deliberately disturb a bat (disturbance is defined as an action which is likely to: (i) Impair their ability to survive, to breed or reproduce, or to rear or nurture their young; (ii) Impair their ability to hibernate or migrate; or (iii) Affect significantly the local

Subject	Legislation (England)	Relevant prohibited actions
	Schedule 5 of Wildlife and Countryside Act 1981 (as amended)	distribution or abundance of the species); • Damage or destroy a bat roost; • Intentionally or recklessly disturb a bat at a roost; or • Intentionally or recklessly obstruct access to a roost. In this interpretation, a bat roost is "<i>any structure or place which any wild [bat]...uses for shelter or protection</i>". Legal opinion is that the roost is protected whether or not the bats are present at the time.
Badger <i>Meles meles</i>	Protection of Badgers Act 1992	Under Section 3 of the Act: • Damage a sett or any part of it; • Destroy a sett; • Obstruct access to, or any entrance of, a sett; or • Disturb a badger when it is occupying a sett. A sett is defined legally as any structure or place which displays signs indicating current use by a badger (Natural England 2007).
Hazel dormouse <i>Muscardinus avellanarius</i>	Schedule 2 of Conservation of Habitats and Species Regulations (2017)	• Intentionally or deliberately capture or kill, or intentionally injure;

Subject	Legislation (England)	Relevant prohibited actions
	Schedule 5 of Wildlife and Countryside Act 1981 (as amended)	- Deliberately disturb or intentionally or recklessly disturb them in a place used for shelter or protection; - Damage or destroy a breeding site or resting place; - Intentionally or recklessly damage, destroy or obstruct access to a place used for shelter or protection; and - Possess an individual, or any part of it, unless acquired lawfully.
Otter <i>Lutra lutra</i>	Schedule 2 of Conservation of Habitats and Species Regulations (2017)	- Deliberately capture, injure or kill an otter; - Deliberately disturb an otter in such a way as to be likely to significantly affect the local distribution or abundance of otters or the ability of any significant group of otters to survive, breed, rear or nurture their young; - Intentionally or recklessly disturb any otter whilst it is occupying a holt; - Damage or destroy or intentionally or recklessly obstruct access to an otter holt.
	Section 9(4)(b) and (c) of Schedule 5 of Wildlife and Countryside Act 1981 (as amended)	
Water vole <i>Arvicola amphibius</i>	Section 9 of Schedule 5 of Wildlife and Countryside Act 1981 (as amended)	- Intentionally kill, injure or take water voles; - Possess or control live or dead water voles or derivatives; - Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection; or - Intentionally or recklessly disturb water voles whilst occupying a structure or place used for that purpose.

Subject	Legislation (England)	Relevant prohibited actions
<i>Crustaceans</i>		
White-clawed crayfish <i>Austropotamobius pallipes</i>	Section 9(1) of Schedule 5 of Wildlife and Countryside Act 1981 (as amended)	Intentionally kill, injure or take white-clawed crayfish by any method.

The Environment Act 2021

Full legislation text available at: <https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted>

The Environment Act 2021, sets out key legislation after the UK's exit from the European Union. With the largest changes to green regulations in decades, the Act includes the establishment of an Office for Environmental Protection, targets on air pollution, water quality and biodiversity, and the enshrinement of the 25 Year Environment Plan in law. The Act also makes provisions for a mandatory 10% net gain in biodiversity for all developments covered by the Town and Country Planning Act and it also introduces a statutory requirement for Local Nature Recovery Strategies.

The Conservation of Habitats and Species Regulations 2017 (as amended)

Full legislation text available at: [The Conservation of Habitats and Species Regulations 2017 \(as amended\)](https://www.legislation.gov.uk/ukpga/2017/10/contents/enacted) (legislation.gov.uk)

The Wildlife and Countryside Act 1981 (as amended)

Full legislation text available at: [http://www.legislation.gov.uk/ukpga/1981/69/contents](https://www.legislation.gov.uk/ukpga/1981/69/contents).

Countryside and Rights of Way Act 2000

Full legislation text available at: [http://www.legislation.gov.uk/ukpga/2000/37/contents](https://www.legislation.gov.uk/ukpga/2000/37/contents)

Protection of Badgers Act 1992

Full legislation text available at: [http://www.legislation.gov.uk/ukpga/1992/51/contents](https://www.legislation.gov.uk/ukpga/1992/51/contents)

Section 41 of Natural Environments and Rural Communities (NERC) Act 2006

Full legislation text available at: [http://www.legislation.gov.uk/ukpga/2006/16/section/41](https://www.legislation.gov.uk/ukpga/2006/16/section/41)

Many of the species above, along with a host of others not afforded additional protection, are listed on Section 41 of the NERC Act 2006.

Section 41 (S41) of the Natural Environment and Rural Communities (NERC Act 2006) requires the Secretary of State to publish a list of habitats and species that are of principal importance for the conservation of biodiversity in England. The list (including 56 habitats and 943 species) has been drawn

up in consultation with Natural England and draws upon the UK Biodiversity Action Plan (BAP) List of Priority Species and Habitats.

The S41 list should be used to guide decision-makers such as local and regional authorities to have regard to the conservation of biodiversity in the exercise of their normal functions – as required under Section 40 of the NERC Act 2006. The duty applies to all local authorities and extends beyond just conserving what is already there, to carrying out, supporting and requiring actions that may also restore or enhance biodiversity.

Schedule 9 of Wildlife and Countryside Act 1981 (as amended)

In addition to affording protection to some species, The Wildlife and Countryside Act 1981 (as amended) also names species which are considered invasive and require control. Section 14 of the Act prohibits the introduction into the wild of any animal of a kind which is not ordinarily resident in, and is not a regular visitor to, Great Britain in a wild state, or any species of animal or plant listed in Schedule 9 to the Act. In the main, Schedule 9 lists non-native species that are already established in the wild, but which continue to pose a conservation threat to native biodiversity and habitats, such that further releases should be regulated.

Wild Mammals (Protection) Act 1996

Full legislation text is available at: <http://www.legislation.gov.uk/ukpga/1996/3/contents>

Under this legislation it is an offence to cause unnecessary suffering to wild mammals, including by crushing and asphyxiation. It largely deals with issues of animal welfare, and covers all non-domestic mammals including commonly encountered mammals on development sites such as rabbits, foxes and field voles.

Birds of Conservation Concern (BoCC)

This is a quantitative assessment of the status of populations of bird species which regularly occur in the UK, undertaken by the UK's leading bird conservation organisations. It assesses a total of 245 species against a set of objective criteria to place each on one of three lists – Green, Amber and Red – indicating an increasing level of conservation concern. There are currently 70 species on the Red list, 103 on the Amber list and 72 on the Green list. The classifications described have no statutory implications, and are used merely as a tool for assessing scarcity and conservation value of a given species.

National Planning Policy Framework (NPPF)

Full text is available at: <https://www.gov.uk/government/publications/national-planning-policy-framework--2>.

The revised NPPF was updated on 12 December 2024 setting out the Government's planning policies for England and the process by which these should be applied. The policies within the NPPF are a material consideration in the planning process. The key principle of the NPPF is a presumption in favour of sustainable development, with sustainable development defined as a balance between economic, social and environmental needs.

Policies 187 to 201 of the NPPF address conserving and enhancing the natural environment, stating that the planning system should:

- Contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes;
- Recognise the wider benefits of ecosystem services; and
- Minimise impacts on and provide net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures and incorporating features which support priority or threatened species such as swifts, bats and hedgehogs.

Furthermore, there is a focus on re-use of existing brownfield sites or sites of low environmental value as a priority, and discouraging development in and around National Parks, Sites of Specific Scientific Interest, the Broads, and National Landscapes other than in exceptional circumstances.

Where possible, planning policies should also:

- Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
- Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

Local planning policy

Given that the Site is located within London, consideration of the policies relating to biodiversity within the London Plan 2021 has also been given. These include policies G1 and G5 to G8, as detailed below:

- Policy G1 Green infrastructure
 - a) *London's network of green and open spaces, and green features in the built environment, should be protected and enhanced. Green infrastructure should be planned, designed and managed in an integrated way to achieve multiple benefits.*

- b) Boroughs should prepare green infrastructure strategies that identify opportunities for cross-borough collaboration, ensure green infrastructure is optimised and consider green infrastructure in an integrated way.*
 - c) Development Plans and area-based strategies should use evidence, including green infrastructure strategies, to:*
 - 1. identify key green infrastructure assets, their function and their potential function*
 - 2. identify opportunities for addressing environmental and social challenges through strategic green infrastructure interventions.*
 - d) Development proposals should incorporate appropriate elements of green infrastructure that are integrated into London's wider green infrastructure network.*
- Policy G5 Urban greening
 - a) Major development proposals should contribute to the greening of London by including urban greening as a fundamental element of site and building design, and by incorporating measures such as high-quality landscaping (including trees), green roofs, green walls and nature-based sustainable drainage.*
 - b) Boroughs should develop an Urban Greening Factor (UGF) to identify the appropriate amount of urban greening required in new developments. The UGF should be based on the factors set out in within the London Plan, but tailored to local circumstances. In the interim, the Mayor recommends a target score of 0.4 for developments that are predominately residential, and a target score of 0.3 for predominately commercial development (excluding B2 and B8 uses).*
 - c) Existing green cover retained on site should count towards developments meeting the interim target scores set out in (B) based on the factors set out in the London Plan*
- Policy G6 Biodiversity and access to nature
 - a) Sites of Importance for Nature Conservation (SINCs) should be protected.*
 - b) Boroughs, in developing Development Plans, should:*
 - 1. use up-to-date information about the natural environment and the relevant procedures to identify SINCs and ecological corridors to identify coherent ecological networks*
 - 2. identify areas of deficiency in access to nature (i.e. areas that are more than 1km walking distance from an accessible Metropolitan or Borough SINC) and seek opportunities to address them*
 - 3. support the protection and conservation of priority species and habitats that sit outside the SINC network, and promote opportunities for enhancing them using Biodiversity Action Plans*
 - 4. seek opportunities to create other habitats, or features such as artificial nest sites, that are of particular relevance and benefit in an urban context*

5. *ensure designated sites of European or national nature conservation importance are clearly identified and impacts assessed in accordance with legislative requirements.*
 - c) *Where harm to a SINC is unavoidable, and where the benefits of the development proposal clearly outweigh the impacts on biodiversity, the following mitigation hierarchy should be applied to minimise development impacts:*
 1. *avoid damaging the significant ecological features of the site*
 2. *minimise the overall spatial impact and mitigate it by improving the quality or management of the rest of the site*
 3. *deliver off-site compensation of better biodiversity value.*
 - d) *Development proposals should manage impacts on biodiversity and aim to secure net biodiversity gain. This should be informed by the best available ecological information and addressed from the start of the development process.*
 - e) *Proposals which reduce deficiencies in access to nature should be considered positively.*
- **Policy G7 Trees and woodlands**
 - a) *London's urban forest and woodlands should be protected and maintained, and new trees and woodlands should be planted in appropriate locations in order to increase the extent of London's urban forest – the area of London under the canopy of trees.*
 - b) *In their Development Plans, boroughs should:*

'veteran' trees and ancient woodland where these are not already part of a protected site opportunities for tree planting in strategic locations.

Development proposals should ensure that, wherever possible, existing trees of value are retained. If planning permission is granted that necessitates the removal of trees there should be adequate replacement based on the existing value of the benefits of the trees removed, determined by, for example, i-tree or CAVAT or another appropriate valuation system. The planting of additional trees should generally be included in new developments – particularly large-canopied species which provide a wider range of benefits because of the larger surface area of their canopy.

The London Borough of Haringey has produced a Local Plan which covers a number of policies relating to biodiversity and habitat conservation, including:

- **Policy SP11 Design**

All new development should enhance and enrich Haringey's built environment and create places and buildings that are high quality, attractive, sustainable, safe and easy to use. To achieve this all development shall:

 - a) *Be of the highest standard of design that respects its local context and character and historic significance, to contribute to the creation and enhancement of Haringey's sense of place and identity;*

- b) *Ensure impacts on health, climate change, natural resources and biodiversity are minimised by adopting and improving sustainable design and construction techniques;*
 - c) *Incorporate solutions to reduce crime and the fear of crime, such as promoting social inclusion; creating well-connected and high quality public realm that is easy and safe to use; and by applying the principles set out in 'Secured by Design' and Safer Places;*
 - d) *Promote high quality landscaping on and off site, including improvements to existing streets and public spaces;*
 - e) *Seek the highest standards of access in all buildings and places; and*
 - f) *Ensure buildings are designed to be flexible and adaptable – and able to integrate services and functions.*
- Policy SP13 Open space and biodiversity
New development shall protect and improve Haringey's parks and open spaces. All new development shall:
 - a) *Protect and enhance, and when and where possible, extend the existing boundaries of the borough's Green Belt, designated Metropolitan Open Land, designated Open Spaces, Green Chains, allotments, river corridors and other open spaces from inappropriate development;*
 - b) *Provide amenity space in accordance with the Council's Open Space and Recreational Standards Supplementary Planning Document (SPD);*
 - c) *Manage the impact of such new developments in areas adjacent to designated open space;*
 - d) *Secure improvements, enhancement and management in both quality and access to existing green spaces;*
 - e) *Seek on-site or financial contributions towards open space from new developments as set out in the Open Space and Recreational Standards SPD;*
 - f) *Seek to secure opportunities for additional publicly accessible open space especially in those identified areas of Open Space deficiency e.g. in the east of the borough where the quality and amount of provision is poorer as set out in the Council's Open Space and Recreational Standards SPD; and*
 - g) *Conserve the historic significance of the borough's designated historic parks and gardens.*

Local Priority Habitats and Species

The London Biodiversity Action Plan, led by the London Biodiversity Partnership, identified a total of 214 priority species that are under particular threat in London. The full text is available here: <https://www.gigl.org.uk/london-bap-priority-species/>

The London Borough of Haringey has also produced a London Biodiversity Action Plan, which provides important Action Plans for biodiversity enhancement across the borough and information on

designated sites in the area. The full text is available here:

<https://www.minutes.haringey.gov.uk/documents/s140464/Appendix%20%20-%20Biodiversity%20Action%20Plan%20-%20cabinet.pdf>

8.2. Appendix 2: UK Habitat Classification species list

Please note that these lists are intended to be incidental records and do not constitute a full botanical survey of the site. Relative abundance is given using the DAFOR scale. Please see Table 2 for details.

Developed Land; Sealed Surface – u1b

Common Name	Systematic Name	Relative abundance
Yarrow	<i>Achillea millefolium</i>	A
Common nettle	<i>Urtica dioica</i>	O
Ribwort plantain	<i>Plantago lanceolata</i>	O
Black horehound	<i>Ballota nigra</i>	R
Burdock	<i>Arctium sp.</i>	R
Common mallow	<i>Malva sylvestris</i>	R

Modified grassland – g4

Common Name	Systematic Name	Relative abundance
Perennial rye-grass	<i>Lolium perenne</i>	D
White clover	<i>Trifolium repens</i>	D
Creeping buttercup	<i>Ranunculus repens</i>	A
Dandelion	<i>Taraxacum sp.</i>	F
Annual meadow-grass	<i>Poa annua</i>	O
Ribwort plantain	<i>Plantago lanceolata</i>	O
Yarrow	<i>Achillea millefolium</i>	O
Wall barley	<i>Hordeum murinum</i>	R

8.3. Appendix 3: Site photographs

Photograph 1: Footprint of proposed MUGA looking south towards tennis courts



Photograph 2: Footprint of proposed MUGA looking east towards scattered trees



Photograph 3: Modified grassland - g4



Photograph 4: Tree T3 to the north-east of the MUGA



Photograph 5: Tree T1 to the north-west of the MUGA



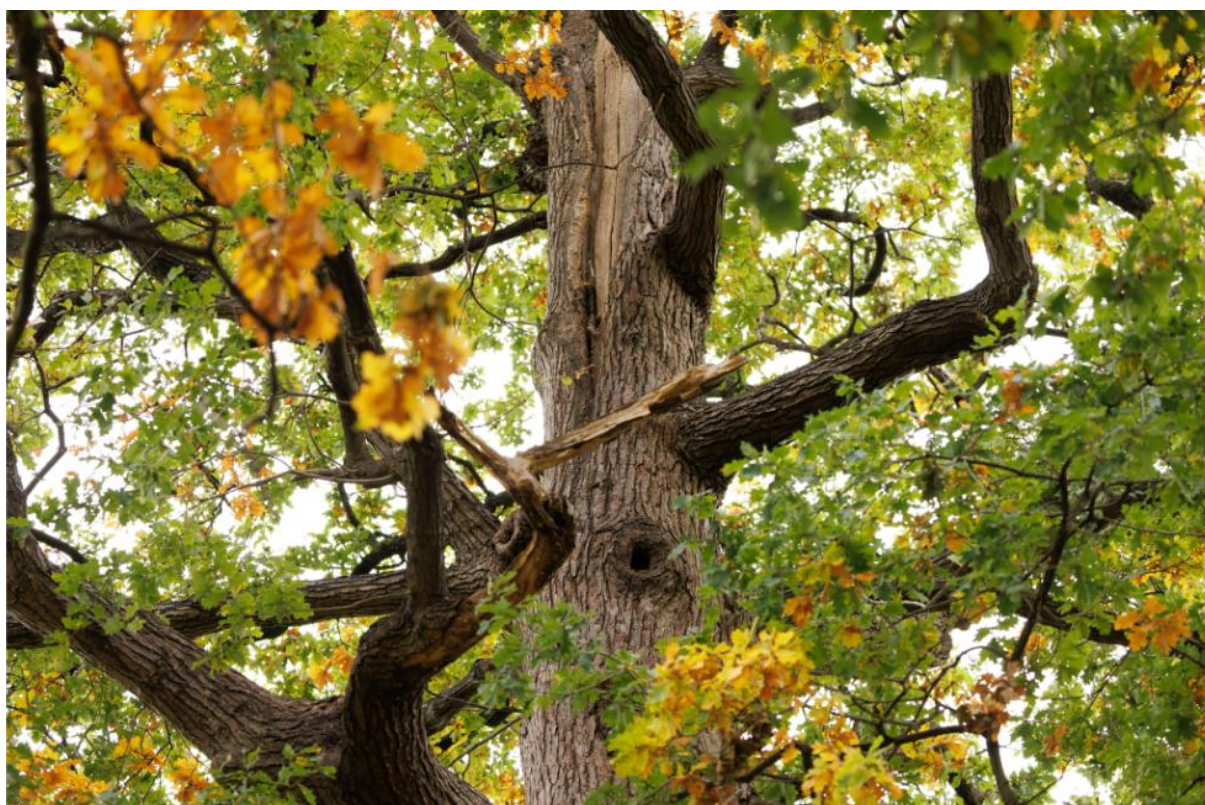
Photograph 6: Tree T2 to the north-west of the MUGA



Photograph 7: Branch tear PRF-M on T1



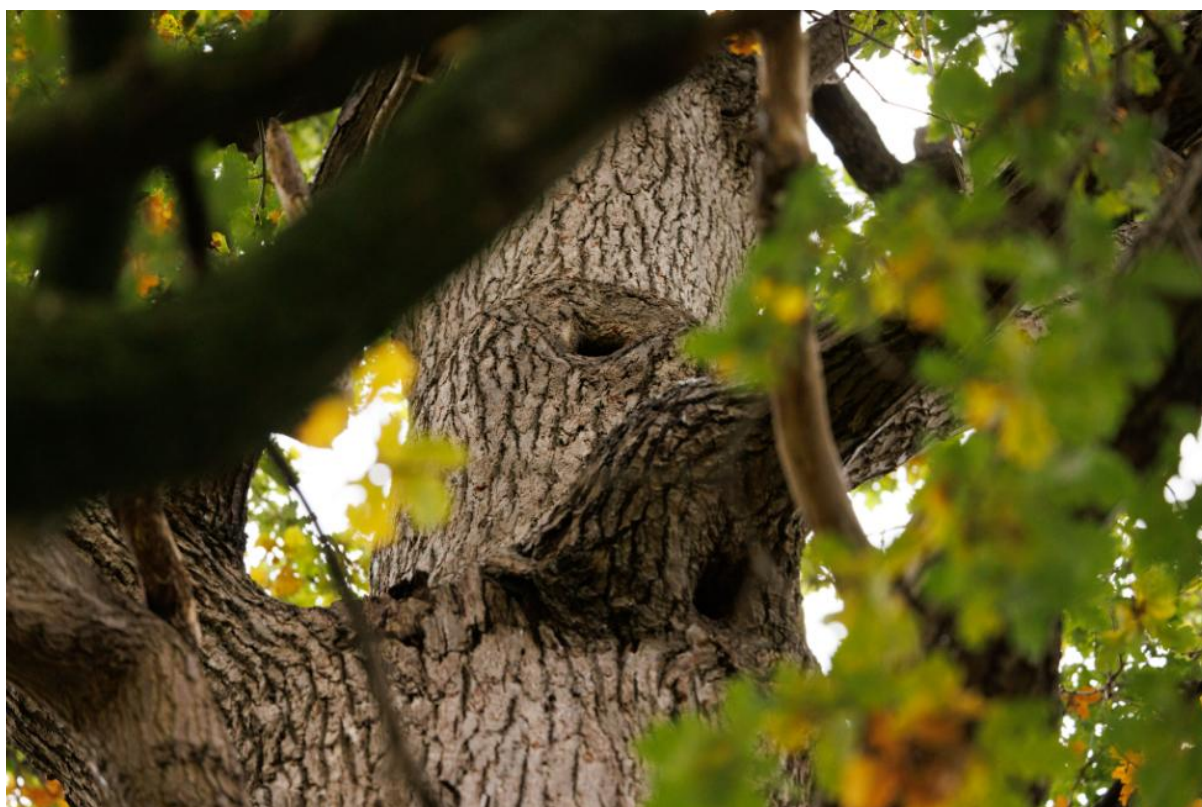
Photograph 8: Pruning wounds and central trunk cavity PRF-Ms on T1



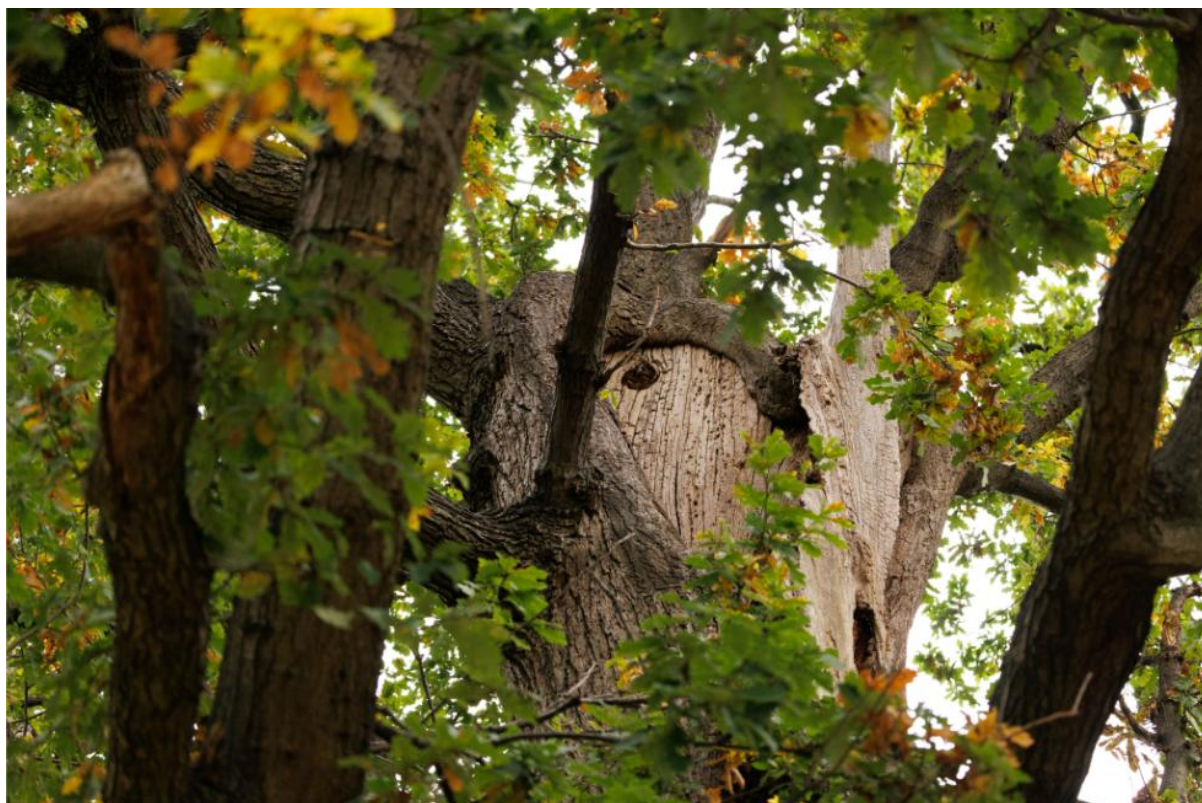
Photograph 9: tear out and knot hole PRF-Ms on T1



Photograph 10: Knot hole PRF-Ms on T1



Photograph 11: Central cavity PRF-M on T2



8.4. Appendix 4: Bird and bat box recommendations

Bird box recommendations

A large number of bird boxes are available, designed for the specific needs of individual species. These are normally either designed to be mounted onto trees, external walls or integrated into a building. In general, bird boxes should be mounted out of direct sunlight and prevailing winds, out of reach of predators, with suitable foraging habitat for the subject species close by. Bird boxes should also be left up over winter as they can provide useful roosting sites for birds in bad weather.

Nest boxes should be cleaned at the end of each bird breeding season. All nesting material and other debris should be removed from the box. It should then be scrubbed clean with boiling water to kill any parasites (avoid using any chemicals). Once the box is clean, it should be left to dry out thoroughly. Under the Wildlife and Countryside Act 1981 it is an offence to disturb breeding birds and therefore annual cleaning is best undertaken from October to January when there is no risk of disturbing breeding birds.

Generalist boxes

Boxes to attract garden birds and woodland breeding species such as tits, nuthatch, redstart and pied flycatcher can be placed in gardens, orchards, woodlands and a wide variety of other habitats. The species of birds attracted to the box will depend upon the size of the entrance hole (see table below).

Boxes should be fixed two to five metres up a tree or wall, out of the reach of predators such as domestic cats. Unless there are trees or buildings, which give permanent shelter, it is best facing between north and east.

General		
Schwegler No. 1B General Purpose Nest box	www.schwegler-nature.com Suitable for various garden and woodland birds, created with different sized entrance holes to avoid competition between species. Other variations (e.g. 2M) can be free hanging, to deter predators.	
Entrance Hole	Species	

26 mm	Blue-, Marsh-, Coal- and Crested Tit, possibly Wren. All other species are prevented from using the nest box due to this smaller entrance hole
32 mm	Great-, Blue-, Marsh-, Coal- and Crested Tit, Redstart, Nuthatch, Pied Flycatcher, Tree and House Sparrows.
Oval	Redstart; also used by species that nest in the diameter 32 mm boxes. However, because more light enters the brood chamber, it is preferred by Redstarts.

Bat box recommendations

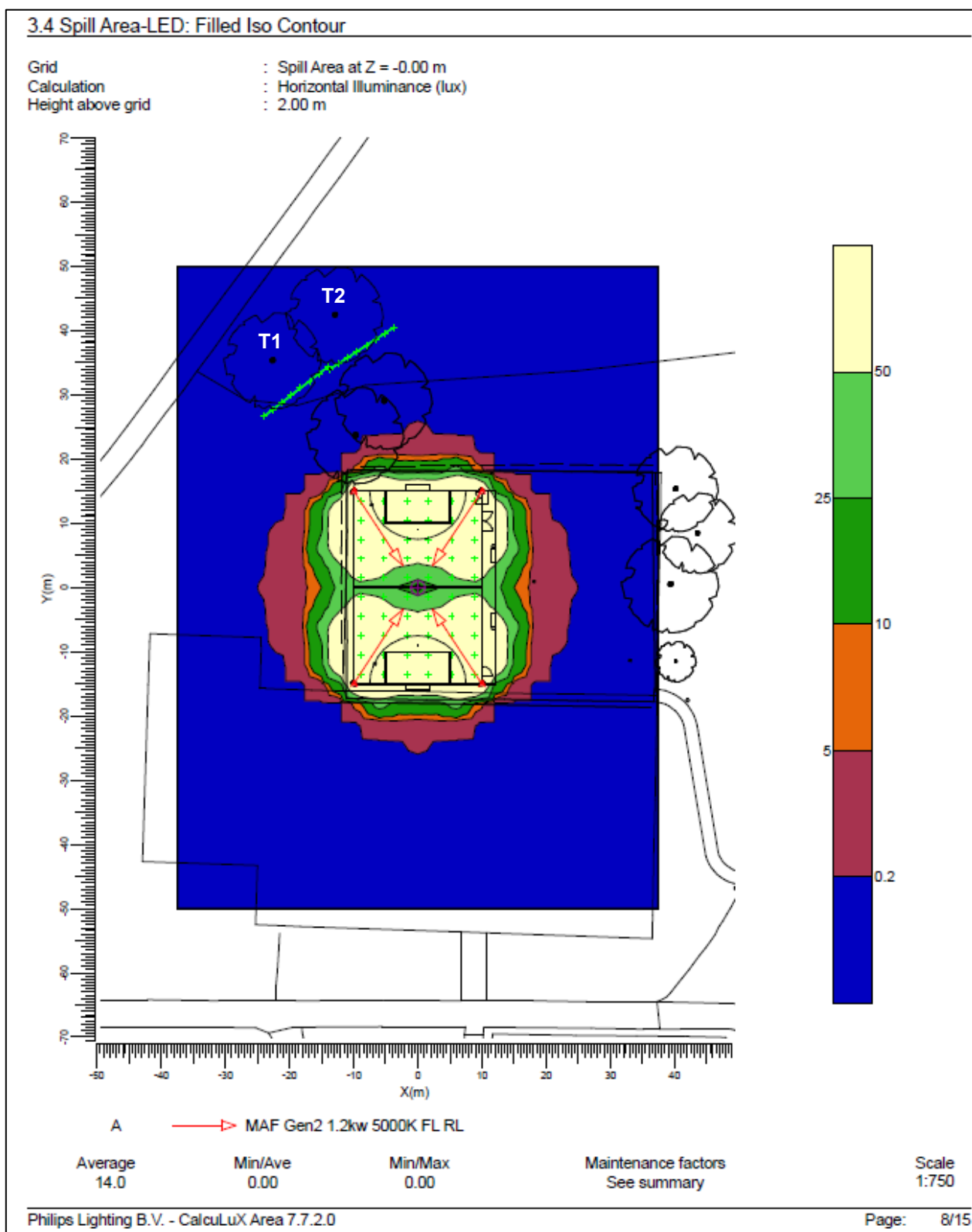
A wide range of bat boxes are available to suit a variety of species and design requirements. Bat boxes can be mounted externally on buildings, built directly into the wall structure or mounted on trees (dependent on box design).

Boxes are more likely to be inhabited if they are located where bats feed and it may help to place the box close to features such as tree lines or hedgerows, which bats are known to use for navigation and can provide immediate cover for bats leaving the roost. Boxes should be placed in areas sheltered from strong winds and are exposed to the sun for part of the day. Access to any bat roosting features should not be lit and should also be at a reasonable height to avoid predation (at least 2m if possible, preferably 4-5m).

Example	Description	Picture
Schwegler General Purpose Bat Box 2F	www.schwegler-nature.com Height: 33 cm Weight: approx. 3.8 kg External diameter: 16 cm Installation: Hanging A general purpose box, suitable for all species.	

Example	Description	Picture
Schwegler General Purpose Bat Box 2F with Double Front Panel	www.schwegler-nature.com Height 33 cm Weight: approx. 4.1 kg External diameter: 16 cm Installation: Hanging This box is suitable for crevice dwellers, such as Nathusius' pipistrelle, Daubenton's bat and common pipistrelle.	
Schwegler 1FF	www.schwegler-nature.com Dimensions: 14(d) x 27(w) x 43(h) cm Weight: 9.9 kg Installation: Hanging This box is suitable for crevice dwellers, such as Nathusius' pipistrelle, Daubenton's bat and common pipistrelle. This box minimises temperature fluctuations in spring and autumn and is self-cleaning.	

Figure 4: Horizontal Illuminance (lux) for MUGA floodlighting



*Areas shown in blue (0.2 lux) are in line with values recommended by the Institution of Lighting Professionals (ILP, 2025) Guidance Notes.

Figure 5: Vertical Illuminance (lux) for MUGA floodlighting modelled at T1

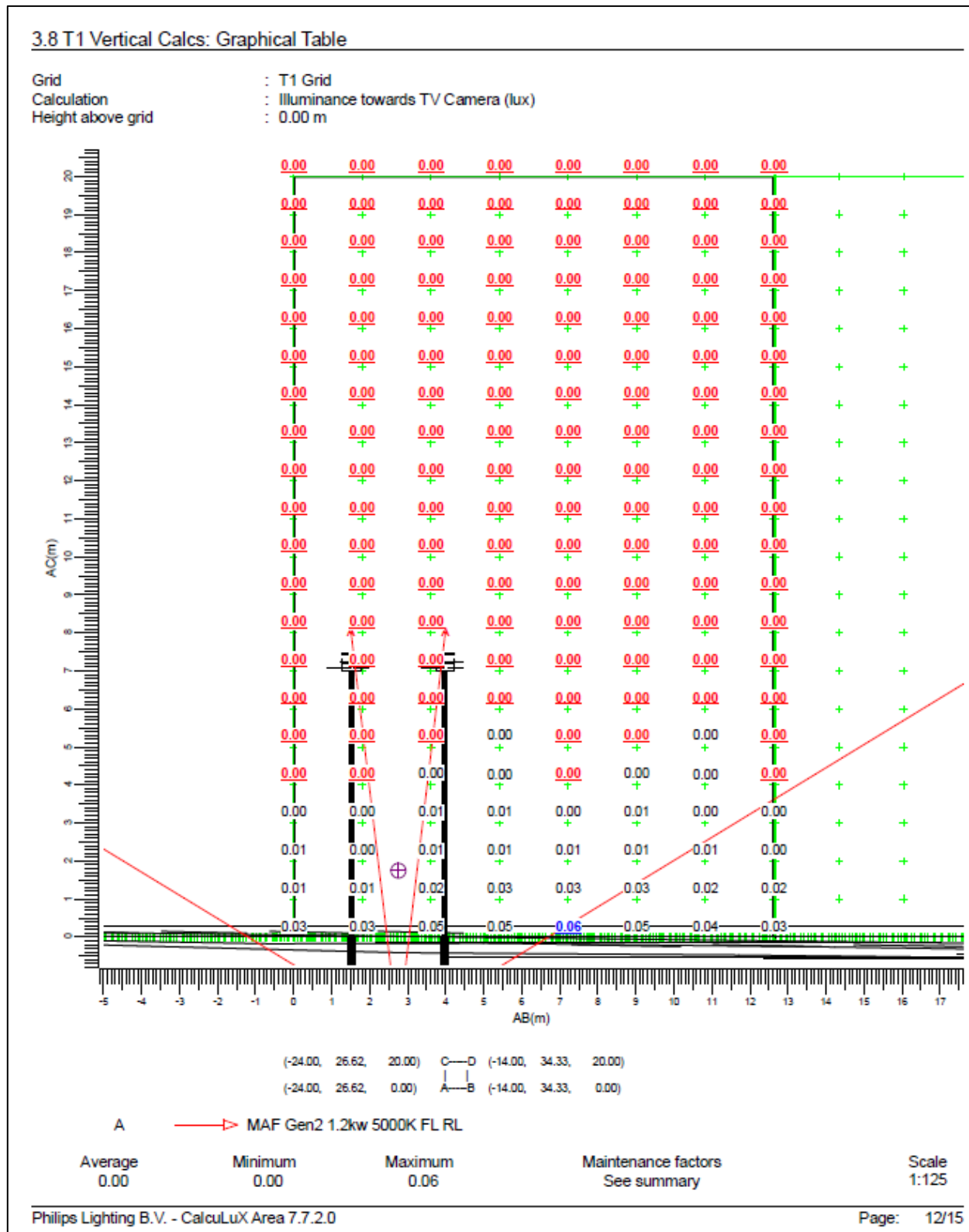
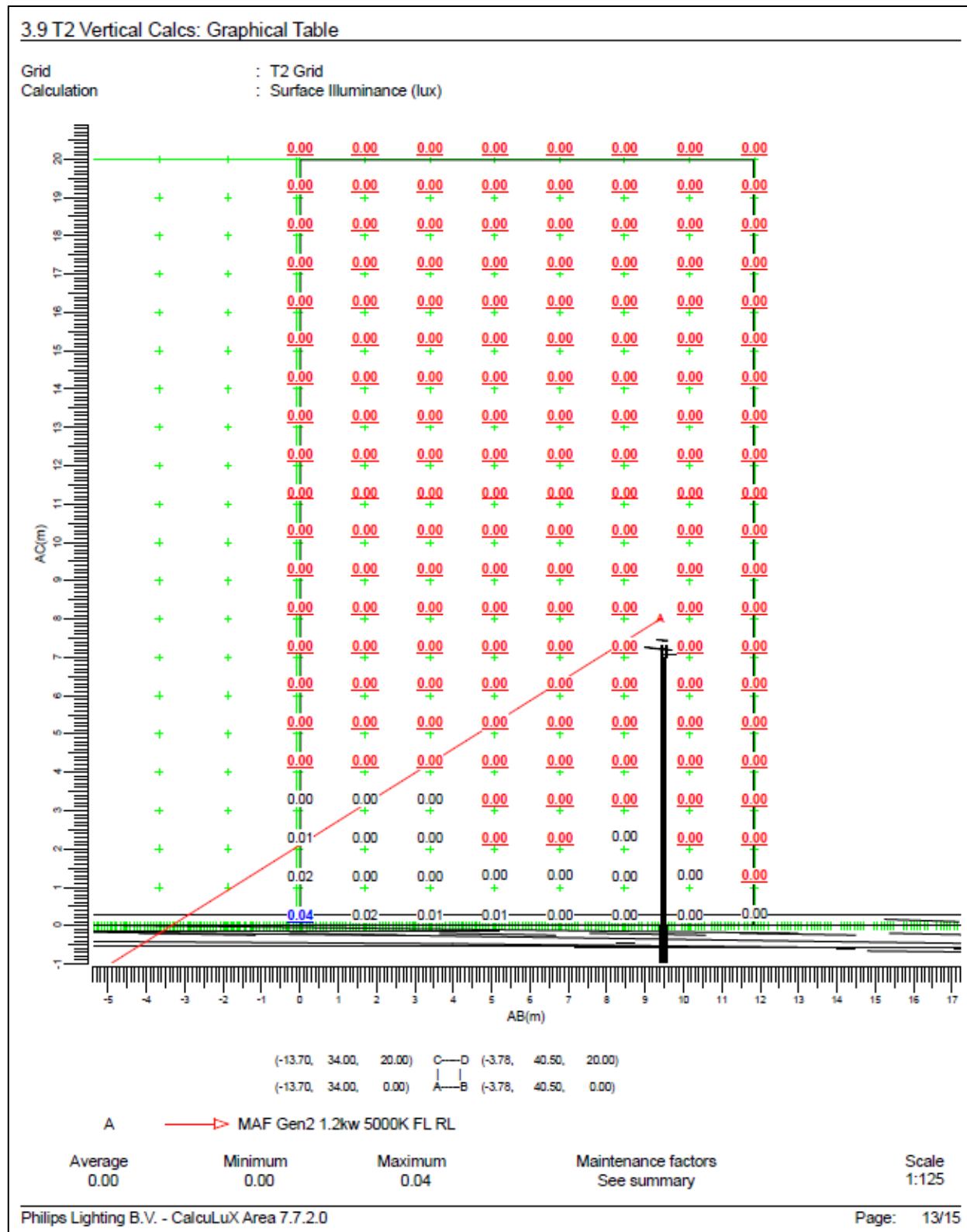


Figure 6: Vertical Illuminance (lux) for MUGA floodlighting modelled at T2





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