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Preliminary Ecological Appraisal

Survey site:

Ham Polo Club, Petersham Road, Petersham, Richmond upon Thames, Greater London, TW10 7AH

Client:

Laura Cole

Survey date:

12th August 2024

Project:

This report is prepared to inform a planning application with the London Borough of Richmond upon Thames Council. The proposal is described as:

The construction of a sand arena for exercising horses.

[Unsubmitted]

Survey methodology and legislation can be found in the Arbtech Supplement: **PEA Methodology and Legislation - 2024.**

The site survey was undertaken by Meike Simms BSc (Hons) who has over three years of ecological surveying experience, including preliminary ecological appraisals.					
Date of survey	Temperature (°C)	Humidity (%)	Cloud Cover (%)	Wind (km/h)	Rain
12/08/2024	29	56	0	8	None

Ecological Survey Factor **Conclusion, Impact or Recommendations**	**Detailed using desk study and site survey (carried out under good weather conditions). Any specific limitations noted within relevant section. This table may include further work you will need to commission (if any) to obtain planning permission or comply with legislation for other consent. All clients are expected to read and understand this section, or to contact the lead surveyor for advice.**
Habitats and plants (see habitat map in appendix 1, location plan in appendix 2, proposal plans in appendix 3 and photos in appendix 4). **Botanical species are described with reference to the DAFOR scale (D = Dominant; A = Abundant, F = Frequent, O = Occasional, R = Rare).**	
Summary of Survey Findings **(***UKHab codes used)*	The site is centred on National Grid Reference TQ 17605 73261. The blue line boundary has an area of approx. 11.5ha and the red line boundary has an area of approx. 0.6ha (Appendix 2). The site is situated in the London Borough of Richmond upon Thames. The site is a part of Ham Polo Club, which consists of polo grounds, horse paddocks, stables, offices and a club house. Immediately to the east is a school with associated grounds. Immediately west is Ham House and Garden, a National Trust property. Immediately north is the River Thames and associated grasslands and woodlands. Immediately south is Petersham Meadows. The site is surrounded by several important and protected habitats, the most notable being Richmond Park approx. 0.8km southeast of the site. It is a Site of Special Scientific Interest (SSSI), National Nature Reserve (NNR) and Special

	Area of Conservation (SAC). The habitats surrounding the site are important to bat species, nesting birds, invertebrates, water voles, otters, amphibians and reptiles. The further surrounding landscape includes suburban London. **On-site Habitat Descriptions** *g4 – modified grassland [11 scattered trees, 73 bare ground]* The majority of the site is modified grassland that has been heavily managed by mowing and is regularly used as horse training or polo grounds (Photo 1, 7 & 8). The sward is therefore short, and the plant diversity very limited, with a greater diversity bordering the hedgerows. Species included: common daisy (*Bellis perennis*) (O), yarrow (*Achillea millefolium*) (A), perennial ryegrass (*Lolium perenne*) (D), hairy willowherb (*Epilobium hirsutum*) (R), dandelion (*Taraxacum officinale*) (O), barley grass (*Hordeum vulgare*) (O), common mallow (*Malva sylvestris*) (R), stinging nettle (*Urtica dioica*) (A), field bindweed (*Convolvulus arvensis*) (A) and black horehound (*Ballota nigra*) (O). There are several scattered trees located on the boundaries of the grasslands, that are not associated with the hedgerows (Photo 6). The tree species included horse chestnut (*Aesculus hippocastanum*) (R) and English elm (*Ulmus procera*). The modified grassland contains areas of bare ground that are horse paddocks or horse exercise routes, which have no plant diversity or ecological value (Photo 3). *h2a5 – species-rich native hedgerow [190 hedgerow with trees]* There are species-rich native hedgerows with trees on the northern, southern and western boundaries of the site (Photo 5). The condition of the hedgerows was assessed following the Biodiversity Metric 3.0 (Natural England 2021). The hedgerows are all considered Poor condition. The hedgerows appear to be regularly flailed, some had several gaps, and some contained scattered non-native Leyland cypress (*Cupressus x leylandii*) trees. Species included: hawthorn (*Crataegus monogyna*) (D), sycamore (*Acer pseudoplatanus*) (F), ash (*Fraxinus excelsior*) (A), English elm (A),

	horse chestnut (O), broad leaved lime (*Tilia platyphyllos*) (D), field maple (*Acer campestre*) (A), blackthorn (*Prunus spinosa*) (O), holly (*Ilex aquifolium*) (F), apple (*Salix sp.*) (R) and bramble (*Rubus fruticosus*) (A). *h2b – non-native and ornamental hedgerow* On the eastern boundary and in the northeastern corner of the site (Photo 4) are non-native and ornamental hedgerows. They consist of Leyland cypress and are heavily managed by flailing. There are several scattered Leyland cypress trees within the hedgerows. *u1e – built linear features [115 track]* There is a paved track road leading throughout the site to provide access (Photo 7). It is hard standing with no plant diversity or ecological value. *u1b5 – buildings* The buildings scattered around the site consist of the clubhouse, offices and stables associated with Ham Polo Club. **Local notable habitats** Bordering the site is Ham House and Garden LWS to the west, River Thames and tidal tributaries LWS to the north and Petersham Meadows LWS to the south. These sites are protected due to their woodland, grassland and/or riparian habitats. These habitats are classed as priority habitat under Section 41 of the Natural Environment and Rural Communities (NERC) Act, 2006. The modified grassland and hedgerows on site may provide opportunistic foraging and commuting opportunities for bats, birds, badgers, hedgehogs, reptiles, amphibians and riparian animals using these habitats.

Foreseen Impacts	**On-site habitats** The proposed development will result in the loss of modified grassland and bare ground in the form of horse paddocks and horse tracks (Photo 3), as well as hard standing (Appendix 4). Despite the habitat being of low ecological value, the loss of the modified grassland habitat will result in a net loss in biodiversity at the site without compensation. **Notable habitats** No direct impacts to designated sites are anticipated due to the small scale of the proposed development. However, due to the proximity of the site to priority habitats, indirect effects (e.g. pollution, noise, dust, litter, surface run off, etc.) could occur during construction.
Recommendations	**On-site habitats** Retained trees should be protected in line with the measures outlined in the British Standard "Trees in Relation to Design, Demolition and Construction to Construction - Recommendations" (BS 5837) (2012). The proposed development is not consistent with a development type exempt from demonstrating a Biodiversity Net Gain through use of the Statutory Biodiversity Metric. As such, a Biodiversity Net Gain Assessment will be required, which demonstrates a minimum net gain of 10%. **Notable habitats** Best practice measures to minimise the possibility of pollution affecting the nearby rivers must be implemented during construction. A Construction Environment Management Plan (CEMP) may be required for this.
Locality and Designated Sites	
Summary of Survey Findings	**On-site designations**

	The site is not subject to any designation. **Statutory designated sites** A search of the MAGIC database found three statutory sites located within 2km of the site. Richmond Park SSSI, NNR and SAC is approx. 0.8km southeast of the site. It is protected because of its grassland, woodland, heath and inland water body habitats. **Non-statutory designated sites** The presence of non-statutory designated sites within 2km of the site is publicly available through Greenspace Information for Greater London CIC (GiGL). 12 Local Wildlife Sites (LWS's) are found within 2km of the site, as outlined below: • River Thames and tidal tributaries LWS is approx. 0.1km north of the site. It is designated due to its river and woodland. • Marble Hill Park and Orleans House Gardens LWS is approx. 0.25km north of the site. It is designated due to its grassland and woodland. • Petersham Lodge Wood and Ham House Meadows LWS is approx. 0.5km east of the site. It is designated due to its woodland, grassland and meadows • Petersham Meadows LWS is approx. 0.1 south of the site. It is designated due to its grassland. • Ham Lands LWS is approx. 1km west of the site. It is designated due to its grassland, scrub and woodland. • The Copse, Holly Hedge Field and Ham Avenues LWS is approx. 0.1 south of the site. It is designated due to its grassland and trees.

	• Ham Common West LWS is approx. 1km south of the site. It is designated due to its grassland and pond. • Richmond Park and associated areas LWS is approx. 0.8km southeast of the site. It is designated due to its grassland, woodland, heath and inland water body habitats. • Terrace Field and Terrace Garden LWS is approx. 1km northeast of the site. It is designated due to its grassland. • East Sheen and Richmond Cemeteries and Pesthouse Common LWS is approx. 1.9km northeast of the site. It is designated due to its grassland and trees. • Moor Mead Recreation Ground LWS is approx. 1.3km northwest of the site. It is designated due to its mature trees. • Twickenham Road Meadow LWS is approx. 1.8km north of the site. It is designated due to its grassland.
Foreseen Impacts	**On-site designations** No impacts foreseen. **Statutory and non-statutory designated sites** No impacts to designated sites are anticipated due to the small scale of the proposed development, as well as the heavy management and use of the site.
Recommendations	None required.
Invasive / Non-native species	
Summary of Survey Findings	No problematic invasive and non-native species recorded on site.
Foreseen Impacts	None foreseen.
Recommendations	No further surveys but remain vigilant.
Invertebrates	

<table>
<tr><td>Summary of Survey Findings</td><td>The modified grassland, scattered trees and hedgerows on site provides common invertebrates with opportunities to forage and shelter but are limited due to the low diversity of the sward and/or heavy management. The site contains no further notable habitats which may provide niches for specialised or protected invertebrates and thus the site is not considered suitable to support a protected and/or notable assemblage of invertebrates.</td></tr>
<tr><td>Foreseen Impacts</td><td>None foreseen.</td></tr>
<tr><td>Recommendations</td><td>No further surveys.

Suggested biodiversity enhancements
The incorporation of bee bricks (e.g. Ibstock BeeHabitat or similar alternative brand) into the fabric of the new development would provide sheltering opportunities for pollinators. These should be installed 0.5m above ground level on a south-facing elevation with no obscuring vegetation. The site could be further enhanced via the provision of native wildflowers or wildflower turf, which would provide foraging opportunities for invertebrates.</td></tr>
<tr><td colspan="2">Bats</td></tr>
<tr><td>Summary of Survey Findings</td><td>EPSL data
A search of the MAGIC database for granted EPSLs within a 2km radius of the site has been completed. Displaced bats from licensed sites <2km away from the survey site will find alternative habitat either within the mitigation measures implemented as part of the licence or will relocate to other known roosts sites in close proximity to the licensed site. There are six EPSLs within a 2km radius of site as detailed below:
<table>
<tr><th>EPSL reference</th><th>Bat species affected</th><th>Distance from site</th><th>Impacts allowed by licence</th></tr>
<tr><td>2014-274-EPS-MIT</td><td>Soprano pipistrelle (Pipistrellus pygmaeus)</td><td>1.8km</td><td>Destruction of resting place</td></tr>
</table></td></tr>
</table>

2014-274-EPS-MIT-1	Soprano pipistrelle	1.8km	Destruction of resting place
2014-274-EPS-MIT-2	Soprano pipistrelle & common pipistrelle (*Pipistrellus pipistrellus*)	1.8km	Destruction of resting place
2015-15368-EPS-MIT	Common pipistrelle & soprano pipistrelle	1.9km	Destruction of resting place
2019-43456-EPS-MIT	Brown long-eared (*Plecotus auratus*) & soprano pipistrelle	500m	Destruction of resting place
2016-25082-EPS-MIT	Brown long-eared, soprano pipistrelle & common pipistrelle	650m	Destruction of resting place

Foraging and commuting habitat

Habitats recorded on site are assessed to provide optimal foraging and commuting opportunities for bats in the form of scattered trees and hedgerows. Bats are well known to utilise linear features to aid navigation whilst travelling between foraging resources and roost sites. The hedgerows and trees could provide important foraging/commuting habitat for bats using the protected areas surrounding the site, especially those using the River Thames. The modified grassland will also provide bat foraging habitat however it is considered sub-optimal due to the diversity of the sward and heavy management/use.

Roosting habitat

The only hedgerows to be removed as part of the development are the short non-native hedgerows on the northeastern corner of the site (Appendix 3). The hedgerows were assessed to be of Negligible potential to support roosting bats. There are no other trees or buildings on site that will be felled or removed as part of the development.

Foreseen Impacts	**Foraging and commuting habitat** The proposed development will result in the loss of small areas of non-native hedgerow, as well as areas of modified grassland and bare ground. However, the majority of hedgerows and trees will be retained, therefore, considering the size of the hedgerow in the context of the wider landscape, this is likely to be inconsequential for bats. **Roosting habitat** The short non-native hedgerows on the northeastern corner will be felled to facilitate the development. No roosting features were identified on any of these hedgerows and as such there are unlikely to be any impact to bats as a result of their felling. There are no other trees or buildings on site that will be felled or removed as part of the development. **Artificial lighting** The proposed development may lead to an increase in the amount of current lighting of surrounding habitats without mitigation. This may disturb commuting and foraging bats.
Recommendations	**Foraging and commuting habitat** No further surveys are required. **Roosting habitat** The short non-native hedgerows on the northeastern corner will be felled to facilitate the development. No roosting features were identified on any of these hedgerows and as such there are unlikely to be any impact to bats as a result of their felling. There are no other trees or buildings on site that will be felled or removed as part of the development.

	If any other trees or the buildings on site are to be felled or removed as part of the development, then a Ground Level Tree Assessment (GLTA) of the trees and a Preliminary Roost Assessment of the buildings will be required by a suitably qualified ecologist. If any trees or buildings are deemed suitable to support roosting bats, further surveys will be required in the summer (May – September) to determine the impact of the development on bats. **Artificial Lighting** A low impact lighting strategy will be adopted for the site during post-development which outlines the areas of the site that will be retained as dark corridors. Parameters can be found on the Bat Conservation Trust website: https://www.bats.org.uk/our-work/buildings-planning-and-development/lighting-2 **Suggested biodiversity enhancements** The installation of two bat boxes on trees at the site will provide additional roosting habitat for bats. They will be suitable for pipistrelles and long-eared bats (which have been identified locally through EPSL data). Suitable bat boxes include Schwegler 3FN Small Bat Box or similar alternative brand. Bat boxes should be positioned 3-5m above ground level facing in a south or south-westerly direction with a clear flight path to and from the entrance, away from artificial light.
Birds	
Summary of Survey Findings	A wood pigeon (*Columba palumbus*), common pigeon (*Columba livia*), jackdaw (*Coloeus monedula*) and swift (*Apus apus*) were seen on site. Birds could use the modified grassland, scattered trees and hedgerows for foraging purposes. No evidence of nesting birds was found on site during the surveys; however, birds could use the hedgerows and scattered trees on the site for nesting. No habitat for schedule 1 birds was observed.

Foreseen Impacts	The proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests.
Recommendations	No further surveys required. Any vegetation removal should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the vegetation should be undertaken immediately, by a qualified ecologist, prior to the commencement of work. All active nests will need to be retained until the young have fledged. Precautions should be taken with machinery and noise levels when working close to any retained nests so as not to disturb any nearby nesting birds during construction works. At least a 3-5m buffer should be created between any machinery and active nests until the young have fledged. **Suggested biodiversity enhancements** The installation of a minimum of two bird boxes on trees on site will provide additional nesting habitat for birds e.g. • Schwegler 1B Nest Boxes (trees) • Schwegler 2H Robin Boxes (trees) • Woodstone Nest Box (buildings or trees) • Or a similar alternative brand.
Reptiles	
Summary of Survey Findings	**EPSL data** A review of the MAGIC database returned no granted EPSL records for protected reptiles within 2km of the site. **Habitat suitability**

	The modified grassland and hedgerows on site provide very limited foraging or commuting reptile habitat due to the heavy management and use of the site. However, there are several manure or brash piles dotted around the site which could provide hibernating habitat, and the site is connected to further suitable habitat across the wider landscape. Therefore, the presence of reptiles cannot be ruled out.
Foreseen Impacts	Although a small area of suitable habitat is being removed as part of the development, there is a low risk that a low number of reptiles could be present in the vicinity of the works. These could be injured or killed without mitigation.
Recommendations	A precautionary working method will be implemented for widespread reptiles during construction, including the following measures: • Vegetation will be maintained at a short sward (5cm) to discourage reptiles. • Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. • Best practice pollution prevention measures will be implemented to minimise impacts to nearby habitats. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. • If any reptiles are found in the working area these should be allowed to disperse of their own accord or, if at immediate risk, should be moved by hand to a sheltered, vegetated area away from disturbance. • In the unlikely event that a reptile is identified, works must cease and advise must be sought from a suitably qualified ecologist. **Suggested biodiversity enhancements** The site could be enhanced for reptile's post development with the inclusion of log piles and a compost heap.
Amphibians	

Summary of Survey Findings	**EPSL data** A review of the MAGIC database returned no granted EPSL records for protected amphibians, such as great crested newt (GCN, within 2km of the site. **Habitat suitability** A review of aerial imagery (MAGIC and OS Maps) indicates the presence of no ponds present within 500m of the site. GCN exist in metapopulations and are known to utilise ponds and their connecting terrestrial habitat during their life cycle; GCNs are typically found within terrestrial habitats up to 500m from breeding ponds (Langton et al. 2001). The modified grassland and hedgerows on site provide very limited foraging or commuting amphibian habitat due to the heavy management and use of the site. However, the site is connected to further suitable habitat across the wider landscape and has several brash/manure piles on site that could provide hibernation habitat. Therefore, the presence of GCN and other common amphibians, such as toads and frogs, cannot be ruled out.
Foreseen Impacts	The modified grassland and hedgerows on site provide limited foraging or commuting amphibian habitat. There is other suitable habitat in the locality of the site (e.g. woodland, grassland), but there are no known ponds within 500m when consulting OS maps. Therefore, protected amphibians, such as GCN, are likely be absent around the survey site year-round. Although, other common amphibians, such as toads and frogs, have better mobility and can travel further from breeding sites, so their presence cannot be ruled out.
Recommendations	No further surveys are required. A precautionary working method will be implemented for amphibians during construction, including the following measures:

	• Any rubble piles will be dismantled by hand and debris and brash will be stored on pallets or removed from the site to prevent amphibians from utilising these areas. • Best practice pollution prevention measures will be implemented to minimise impacts to nearby aquatic habitats that amphibians could use. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. • If any common amphibians are found in the working area these should be allowed to disperse of their own accord or, if at immediate risk, should be moved by hand to a sheltered, vegetated area away from disturbance. • In the unlikely event that a great crested newt is identified, works must cease and advise must be sought from a suitably qualified ecologist. **Suggested biodiversity enhancements** The site could be enhanced for amphibians post-development through creation of amphibian hibernacula using rubble and logs from site clearance. Information on how to construct a hibernaculum can be found here: https://www.wiltshirewildlife.org/hibernaculum
Badger	
Summary of Survey Findings	No evidence of badgers was found on or within 30m of the site. The grassland and hedgerows are suitable foraging habitat for badgers, but due to the heavy use and management of the site, it is of low ecological value, especially in context of the wider landscape.
Foreseen Impacts	No works will be undertaken within 30m of a badger sett. Modified grassland and hedgerows will be removed during construction. The loss of this habitat is likely to be inconsequential to local badger populations owing to their low

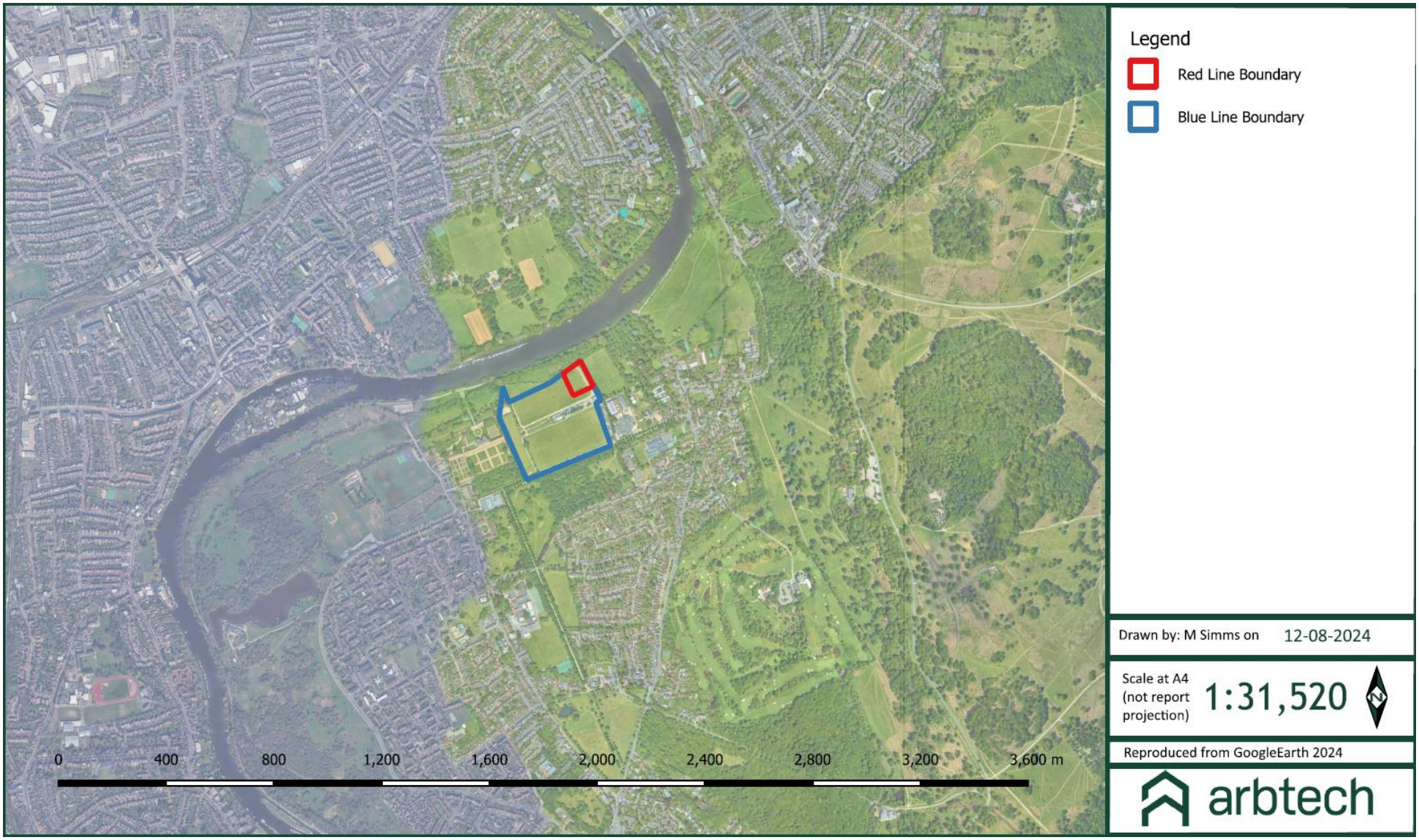
	value and the presence of more extensive habitat locally. However, construction activities could result in the death or injury of badgers, if present.
Recommendations	It is recommended that a suitably qualified ecologist checks for signs of badger before works can begin. The ecologist must confirm the site is clear of badgers or badger setts before development works can begin. Basic precautionary mitigation during works is recommended: • Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. • The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to habitats which badgers could use. South and west boundaries. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. **Suggested biodiversity enhancements** Planting fruit bearing trees and species-rich grassland to increase foraging opportunities for badgers.
Riparian animals	
Summary of Survey Findings	**EPSL data** A review of the MAGIC database returned no granted EPSL records for otters or water voles within 2km of the site. **Habitat suitability** There are no watercourses on or connected to the site, however, the River Thames is less than 100m north of the site. This watercourse provides commuting and foraging opportunities for otters and burrow excavation opportunity for water voles; however, the River Thames is not considered connected to the development site.

Foreseen Impacts	No impacts are anticipated on riparian animals as a result of the proposed development.
Recommendations	None required.
Hazel dormouse	
Summary of Survey Findings	**EPSL data** There are no Hazel dormouse European Protected Species License (EPSL) within 2km. **Habitat suitability** There is no suitable dormouse habitat on the site or in the surrounding vicinity.
Foreseen Impacts	No impacts are anticipated on hazel dormice as a result of the proposed development.
Recommendations	None.
Other e.g. hedgehog	
Summary of Survey Findings	The modified grassland and hedgerows onsite provide foraging and commuting opportunities for hedgehogs, with suitable hedgehog habitat bordering the site.
Foreseen Impacts	The modified grassland will be removed during construction. The loss of such habitat is likely to be inconsequential to local hedgehog populations owing to the presence of more extensive habitat locally. However, construction activities could result in the death or injury of hedgehogs, if present.
Recommendations	Similar to the badgers, a precautionary working method will be implemented during construction, including the following measures: • Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. • The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to retained habitats which hedgehogs could use.

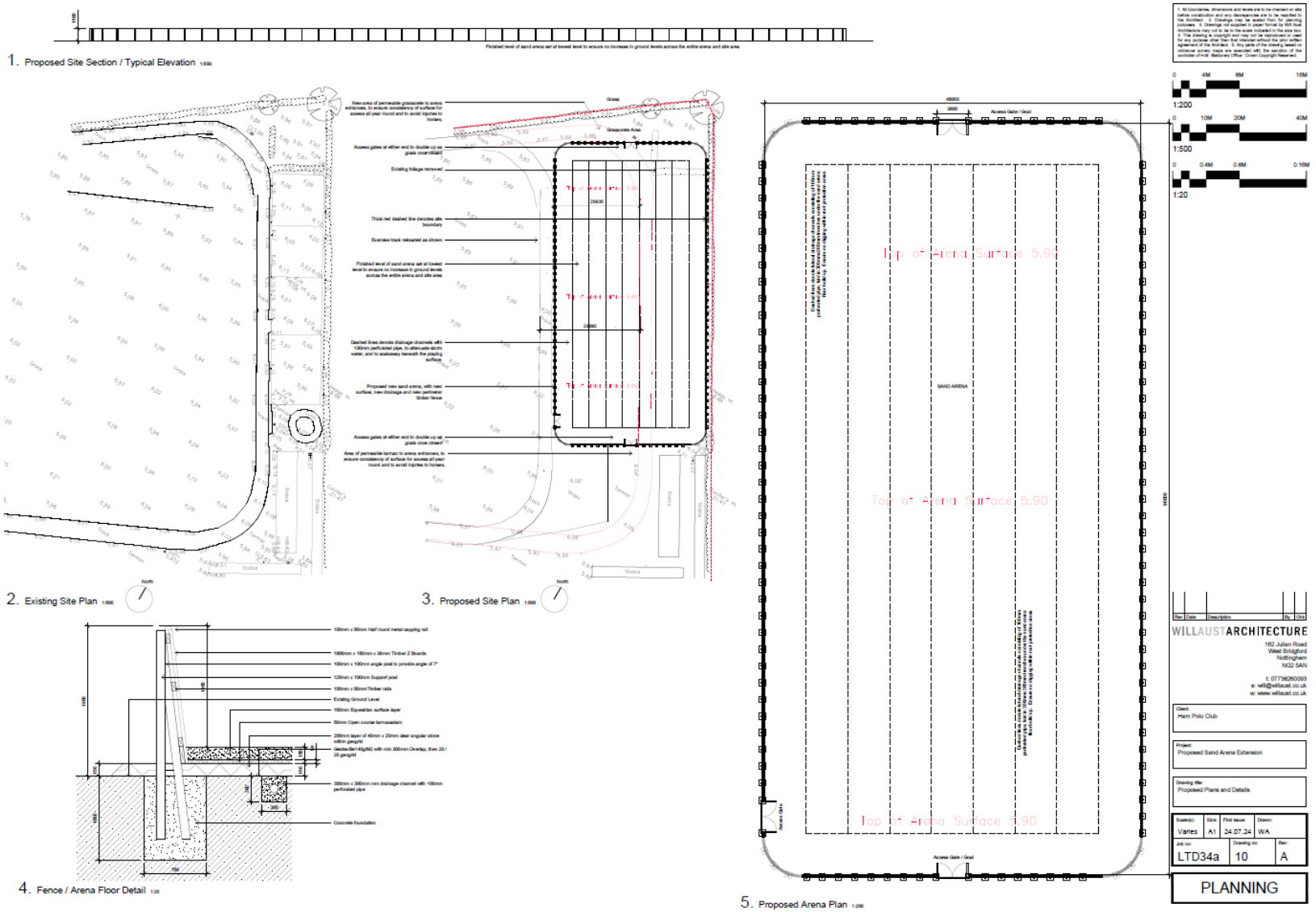
	• Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. If any hedgehogs are found in the working area these should be allowed to disperse of their own accord or, if at immediate risk, should be moved by hand to a sheltered, vegetated area away from disturbance. **Suggested biodiversity enhancements** The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for hedgehogs: • Planting fruit bearing trees and species-rich grassland to increase foraging opportunities. • Creation of brash piles or installation of hedgehog houses in shady areas. Installation of gaps under boundary fencing to enable hedgehogs to move freely through the site.

Appendix 1: Survey/Habitat map

Appendix 2: Location map



Appendix 3: Proposed plan



Appendix 4: Photos

	Photo 1: Northern modified grassland used as polo grounds
	Photo 2: Stable buildings

	Photo 3: Horse paddocks on eastern boundary to be removed
	Photo 4: Non-native hedgerows in northeastern corner to be removed

	Photo 5: Northern species-rich hedgerow
	Photo 6: Scattered tree

	Photo 7: Western modified grassland and western boundary species-rich hedgerow
	Photo 8: Southern modified grassland and southern boundary species-rich hedgerow

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Version control			
Status	**Issue**	**Name**	**Date**
Draft	0.1	Meike Simms BSc (Hons)	12/08/2024
Proof	0.2	Mel Reid BSc (Hons) MRes MRSB, Senior Consultant	14/08/2024
Final	1.0	Ann Balshaw BA (Hons)	20/08/2024