

www.landuse.co.uk

Hampton Pool

Update of Ecological Appraisal 2020

Prepared by LUC November 2020



Project Title: Hampton Pool

Client: Wimshurst Pelleriti

Version	Date	Version Details	Prepared by	Checked by	Approved by
1.0	12/07/2016	Version 1	Katie Luxmoore	Steve Jackson- Matthews	Steve Jackson- Matthews
2.0	02/11/2020	Version 2 (2020 Update)	Katie Luxmoore / Tom Hicks	Rebecca Turner	David Green

Contents

1	Introduction	1
	Scope	1
	Site Description	1
	Project Description	1
	Policy and Legal Considerations	1
2	Methods	3
	Baseline Data Collection	3
	Appraisal Method	5
	Limitations and Constraints	5
3	Baseline Data	6
	Desk Study	6
	Phase 1 Habitat Survey	9
	Protected and Notable Species	10
4	Discussion, Recommendations and Conclusions	13
	Designated Sites	13
	Habitats and Vegetation	14
	Bats	14
	Reptiles	14
	Hedgehogs	15
	Nesting Birds	15
	Enhancement Opportunities	15
Арр	endix 1	17
	Indicative Scheme	17
		17
		17
Арр	endix 2	18
	Policy and Legal Considerations	18
App	endix 3	20
•	Figures	20
App	endix 4	21
	Target Notes	21
۸nn	endix 5	23
Abb	2016 Photographs	23
	2010 Filotographs	23
App	endix 6	22
	2020 Photographs	22

1 Introduction

Scope

- 1.1 In July 2016, LUC was appointed by Wimshurst Pelleriti to undertake an Ecological Assessment of Hampton Pool buildings and grounds (hereafter referred to as "the Site"). The appraisal was commissioned to inform a planning application to demolish parts of the existing buildings and to erect new facilities at the Site.
- 1.2 The Ecological Appraisal comprises a desk study and Extended Phase 1 Habitat Survey, which includes a classification of the Site's constituent habitats, and a consideration of its suitability for protected and notable species. This included a daytime inspection of the buildings and trees for bat roost potential.
- 1.3 In October 2020, LUC was re-appointed by Wimshurst Pelleriti to undertake an updated Extended Phase 1 Habitat Survey to verify the Site conditions and to identify any changes which had occurred since the previous survey in 2016. The updated Extended Phase 1 Habitat Survey was completed in October 2020, which confirmed that site conditions remained the same with exception to an area of amenity grassland in the west, which was previously recorded as bare ground. Due to the low ecological value of this habitat type and given this habitat had already been accounted previously, this change did not alter the findings of this report.
- 1.4 Site features are then discussed within the legal and policy context which informs the need for further survey and/or protective mitigation measures.
- 1.5 This report has been prepared for the exclusive use of Wimshurst Pelleriti. No part of this report should be considered as legal advice.

Site Description

1.6 The Site is located at TQ 14258 70106 in Hampton, south-west London, within the Borough of Richmond Upon Thames. It comprises two outdoor swimming pools, surrounded by hardstanding and buildings, with a hardstanding car park to the north and an area of amenity grassland to the south. The east of the site is bordered by the Bushy Park and Home Park Site of Special Scientific Interest (SSSI); an historic deer park designated for its veteran trees, acid grasslands and fungal feeding invertebrates. The site is bordered to the west by Hampton High Street and to the north by Bushy Park allotments.

Project Description

1.7 The proposed project will see the part-demolition and refurbishment of the existing buildings, with the creation of a new extension on the western side of the pool. The new buildings will have a similar footprint to the existing, allowing the green space in the south-east of the site to be retained. An indicative redevelopment scheme which informed this ecological appraisal is provided in **Appendix 1**.

Policy and Legal Considerations

- 1.8 This appraisal has been prepared in accordance with relevant legislation and policy. Further detail is provided in **Appendix 2**, however the following primary documents are of relevance:
 - The Wildlife and Countryside Act 1981 (as amended);

- The Countryside and Rights of Way Act (CRoW Act), 2000 (as amended);
- The Natural Environment and Rural Communities Act (NERC Act), 2006;
- The Conservation of Habitats and Species Regulations 2010 (as amended);
- The London Plan and the London Borough of Richmond Upon Thames Biodiversity Action Plan.

2 Methods

2.1 The methods adopted in the survey and appraisal are outlined below. They accord with the best practice guidance documents for survey and appraisal produced by the Chartered Institute of Ecology and Environmental Management¹ and the British Standards Institute².

Baseline Data Collection

Desk Study

- 2.2 To provide additional background to the appraisal and to highlight likely features or species groups of interest, a study of available biological records was undertaken in 2016 to identify sites designated for their nature conservation value, and existing records of protected or notable species of relevance to the Site. A search of the following resources was undertaken, within a 1km radius from the Site:
 - Greenspace Information for Greater London (GiGL)³ to identify non-statutory designated sites and existing records of protected or notable species within 1km of the Site.
 - Multi-Agency Geographical Information for the Countryside (MAGIC) to identify statutory designated sites;
 - Ordnance Survey (OS) mapping; and
 - Aerial photography.
- 2.3 The absence of a species from biological records cannot be taken to represent actual absence. Species distribution patterns should be interpreted with caution as they may reflect survey/reporting effort rather than actual distribution.
- 2.4 Updated biological records were not requested in 2020 as the Site has not changed significantly since the 2016 surveys.

Field Surveys

Extended Phase 1 Habitat Survey

- 2.5 An initial Extended Phase 1 Habitat Survey was undertaken at the Site following standard methods⁴ on 12th July 2016 by Katie Luxmoore BSc, MSc. Weather conditions during the survey were warm and sunny.
- 2.6 An updated Extended Phase 1 Habitat Survey was undertaken on 26th October 2020 by Tom Hicks BSc, a qualifying member of CIEEM. Weather conditions during the survey were cold, overcast and dry.
- 2.7 Phase 1 Habitat Survey provides a rapid means of classifying broad habitat types in any given terrestrial site.
- 2.8 The surveys were 'extended' by considering the suitability of the Site to support notable or protected species. Species considered included those identified during the desk study, or those considered appropriate by the surveyor during the survey. Detailed surveys were not completed for these species; however, based on an understanding of species ecology, consideration was given to the site's potential to provide sheltering or foraging habitat and/or connectivity to allow

¹ Survey guidance is available at http://www.cieem.net/sources-of-survey-methods-sosm- and appraisal guidance is available at http://www.cieem.net/guidance-on-preliminary-ecological-appraisal-gpea-.

² British Standards Institute (2013). BS42020:2013 Biodiversity – Code of Practice for Planning and Development.

³ Available at www.gigl.org.uk

⁴ Joint Nature Conservation Committee (1990). Handbook for Phase 1 Habitat Survey. JNCC, Peterborough.

dispersal between populations. Suitability for each species was considered according to current good practice¹. Further information is provided in the 'Baseline Data' section below.

Daytime Assessment of Bat Roost Potential

- 2.9 This assessment took place during the Extended Phase 1 Habitat Survey and comprised an external inspection of buildings and trees within or immediately adjacent to The Site. Close focusing binoculars were used to look for features which may support bat roosts, and evidence of bat activity. This was carried out with due consideration to best practice guidelines⁵. This survey was updated on 26th October 2020 by Tom Hicks during the Extended Phase 1 Habitat Survey.
- 2.10 Bats may utilise several different roosts throughout the year and may only occasionally make use of any given feature, particularly cracks, crevices and fissures. Any field signs confirming or indicating the presence of bats were recorded including the location, quantity and condition of any droppings and feeding remains, location of characteristic staining from urine and/or grease marks, and the location of clean, cobweb-free timbers, crevices and holes.
- 2.11 The criteria used to categorise bat roost potential (BRP) are summarised in **Table 2.1** below and are based on best practice guidelines, as above.

Table 2.1: Bat Roost Potential Categories

Category	Description
Known or confirmed bat roost	Bats or evidence of bats recorded, both of recent and/or historic activity. Works affecting a roost are licensable. Further survey (e.g. dusk emergence/dawn re-entry survey in accordance with best practice) is required to determine the bat species present, nature of roost and level of use before mitigation can be determined. Seasonal constraints may apply.
1 High BRP Buildings/trees with features capable of supporting a bat roost.	Features include holes, cracks or crevices that extend or appear to extend back to cavities suitable for bats. In buildings, examples include eaves, barge boards, gable ends and corners of adjoining beams, ridge and hanging tiles, behind roofing felt or within cavity walls. In trees, examples include rot holes, woodpecker holes, splits and flaking or raised bark which could provide roosting opportunities. Any ivy cover is sufficiently well-established and matted so as to create potential crevices beneath. Further survey is required to determine whether or not bats are present and if so, the bat species present, nature of roost and level of use. Appropriate mitigation and potentially licensing requirements may then be determined. Seasonal constraints may apply.
2 Low BRP	From the ground, building/tree appears to have features (e.g. holes, cavities or cracks) that may extend back into a cavity. However, owing to the characteristics of the feature, they are deemed to be suboptimal for roosting bats. Alternatively, if no features are visible but owing to the size and age and structure, hidden features, sub-optimal for roosting bats, may occur that only an elevated inspection may reveal. In respect of ivy cover, this is not dense (i.e. providing BRP in itself) but may mask presence of BRP features. No further survey is required. Works may proceed using reasonable precautions (e.g. controlled working methods,
3	supervision of a bat worker. Seasonal constraints may apply). An inspected building/tree that is considered not to have potential for
	, 5, potential to the control of th

⁵ Collins, J. (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition)*. The Bat Conservation Trust, London.

4

Category	Description
Negligible	roosting bats. No further survey or mitigation required.

Appraisal Method

- 2.12 Good practice texts recommend a Site is assigned an 'ecological value' for each of its ecological features using a geographical context. However, the urban, small-scale and largely artificial nature of the site's habitats allows a discussion of the site's ecological features within the legislative and policy framework without this level of interpretation.
- 2.13 This appraisal does not constitute an Ecological Impact Assessment (EcIA) and should not be used for the purposes of Environmental Impact Assessment.

Limitations and Constraints

- 2.14 While every attempt has been made to collect accurate baseline data, all ecological surveys represent a 'snapshot' of activity. Ecological features are dynamic and often transient, and it is not possible to confirm the absence of a species through survey. It may be necessary update ecological surveys and data presented in this report should not be used for long-term analysis of species behaviour.
- 2.15 The updated Extended Phase 1 Habitat survey in 2020 was undertaken outside the optimal season (April September) for habitat surveys and many floral species will not have been in flower. However, given the context of the Site and the nature of the habitats present, this was not considered a constraint to the survey findings.

3 Baseline Data

Desk Study

Designated Sites

3.1 One Site of Special Scientific Interest (SSSI) and five Sites of Importance for Nature Conservation (SINCs) were noted within 1km of the Site and these are summarised in **Table 3.1**, below.

Table 3.1: Designated Sites within 1km

Site Name	Designation(s)	Qualifying Feature(s)	Distance/Orientation from Study Area
Statutory Sites			
Bushy Park and Home Park	SSSI	Nationally important site by reason of the following biological features of special interest: - Acid grassland - Veteran trees - Assemblages of wood and fungal feeding invertebrates	Adjacent to site.
Non-Statutory Sites			
Bushy Park and Home Park	SINC	Park contains several nationally scarce plants as well as wetland habitats and old trees. It contains some of the best acid grassland habitat in London.	Adjacent to site.
River Thames and tidal tributaries	SINC	The Thames, London's most famous natural feature, is home to many fish, birds and invertebrates, creating a wildlife corridor running right across the capital.	620 south
Hampton Water Treatment Works	SINC	A large water treatment works containing flower-rich grassland and habitats for water birds.	670 south-west
Longford River in Richmond	SINC	A section of the Longford River with a wide range of wetland plants and good fish populations.	400 north-west
Beveree Wildlife Site	SINC	A narrow strip of secondary woodland and semi-improved neutral grassland around the edge of a football ground.	380 south-west

3.2 Records of protected and notable species of relevance given the habitats within the Site are summarised in **Table 3.2** below. These were provided by Greenspace Information for Greater London (GiGL).

Table 3.2: Protected and Notable Species within 1km

Species Name	Distance (m)/Orientation from Study Area	Status / Legal Protection	Comments	
Reptiles and Amphibians				
Grass snake Natrix natrix	258 north	Wildlife and Countryside Act 1981 (W&CA) schedule 5 Species of Principal Importance - NERC Act Section 41 (S41 NERC) London BAP Priority Species (LBAP)	Record from 2015	
Slow worm Anguis fragilis	351 north	W&CA schedule 5 S41 NERC LBAP	Record from 2010	
Great crested newt <i>Triturus</i> <i>cristatus</i>	848 north	Conservation Regulations 2010 Schedule 2 W&CA schedule 5 S41 NERC LBAP	Record from 2014	
Common toad Bufo bufo	258 north	S41 NERC LBAP	Record from 2014	
Mammals				
West European Hedgehog <i>Erinaceous</i> <i>europaeus</i>	319 north	S41 NERC LBAP	Record from 2002	
Serotine Eptesicus serotinus	317 north	Cons Regs 2010 Schedule 2 W&CA schedule 5 S41 NERC LBAP	Record from 2004	
Daubenton's batMyotis daubentonii	741 north	Cons Regs 2010 Schedule 2 W&CA schedule 5 S41 NERC LBAP	Record from 2004	
Natterer's bat Myotis nattereri	747 north	Cons Regs 2010 Schedule 2 W&CA schedule 5 S41 NERC LBAP	Record from 20043	
Noctule Nyctalus noctula	580 north	Cons Regs 2010 Schedule 2 W&CA schedule 5 S41 NERC	Record from 2004	

Species Name	Distance (m)/Orientation from Study Area	Status / Legal Protection	Comments
		LBAP	
Nathusius pipistrelle Pipistrellus nathusii	674 north	Cons Regs 2010 Schedule 2 W&CA schedule 5 S41 NERC LBAP	Record from 2006
Common pipistrelle Pipistrellus pipistrellus	184 north	Cons Regs 2010 Schedule 2 W&CA schedule 5 S41 NERC LBAP	Record from 2014
Soprano pipistrelle Pipistrellus pygmaeus	314 north	Cons Regs 2010 Schedule 2 W&CA schedule 5 S41 NERC LBAP	Record from 2006
Brown long- eared bat Plecotus auritus	317 north	Cons Regs 2010 Schedule 2 W&CA schedule 5 S41 NERC LBAP	Record from 2004
Birds			
House sparrow Passer domesticus	18 north-west	IUCN Red List Species S41 NERC LBAP	Record from 2008
Dunnock Prunella modularis	303 north	LBAP	Record from 2014
Starling Sturnus vulgaris	461 north	IUCN Red List Species LBAP	Record from 2014
Song thrush Turdus philomelos	226 west	IUCN Red List Species LBAP	Record from 2014
Lesser spotted woodpecker Dendrocopos minor	303 north	IUCN Red List Species LBAP	Record from 2012
Invertebrates			
Stag beetle Lucanus cervus	94 north	Hab&Spp Dir Anx 2np S41 NERC LBAP Nationally Notable B	Record from 2010

Phase 1 Habitat Survey

Site Description

- 3.3 The habitats within the site are mostly urban and artificial in nature, comprising large areas of hardstanding and bare ground on the northern side, an area of short-mown amenity grassland in the south and a few scattered trees. The site is bordered on three sides by hedgerows and treelines, which on the western boundary provide a buffer between the site and the adjacent Bushy Park and Home Park SSSI.
- 3.4 The habitats at the Site recorded during the updated survey in 2020 were the same as those recorded in 2016 with the only exception being an area of bare ground which has now become amenity grassland.
- 3.5 The Site receives a large number of visitors daily, with the outdoor pools being open between 6am and 9pm, and regular concerts and evening events being hosted on the amenity grassland throughout the year. These activities are associated with relatively high levels of lighting, with the potential to disturb commuting and foraging nocturnal animals.

Habitat Descriptions

- 3.6 Habitat descriptions are set out below. While considering this information, reference should be made to the updated Phase 1 Habitat Map presented in **Figure 1**, **Appendix 3** and target notes in **Appendix 4**. Photographs taken at The Site are also provided in **Appendix 5**.
- 3.7 The table below summarises the habitats identified during the survey and indicates their absolute and relative cover.

Table 3.2: Habitat Summary

Habitat Type	JNCC Code	2016 Area (m²)	2020 Area (m²)
Amenity grassland (including with scattered trees)	J1.2	1645	1965
Introduced Shrubs	J1.4	185	185
Bare Ground	J4	320	0
Buildings and hardstanding	J3.6	3993	3993
Open water	G1	597	597

Amenity Grassland

- 3.8 Species-poor amenity grassland, dominated by Perennial rye-grass *Lolium perenne*, with locally abundant red fescue *Festuca rubra*, annual meadow-grass *Poa annua*, daisy *Bellis perennis*, white clover *Trifolium repens*, occasional Yorkshire fog *Holcus lanatus*, and occasional dandelion *Taraxacum* agg. This area is short-mown and heavily used. This species composition is indicative of prolonged nutrient enrichment and disturbance and is considered to represent a habitat of low ecological value. A small compost heap, largely consisting of recently cut grass, is located in the south-west of the site, behind the pump room building.
- 3.9 During the 2020 survey, it was noted that the area of bare ground previously recorded in the west of the Site (**Section 3.11**) is now amenity grassland. This area was more sparsely vegetated than other areas of amenity grassland at the Site. This comprised of a similar range of species as detailed above.

Introduced Shrubs

3.10 A number of introduced shrubs and small, ornamental flowerbeds are scattered around the areas of hardstanding. In particular, a well-maintained cherry laurel hedge *Prunus laurocerasus*, is located along the north-west boundary of the site, adjacent to the area of bare ground.

Buildings, Bare Ground and Hardstanding

- 3.11 Buildings within the study area included the main leisure centre building, located near the centre of the site, a freestanding pump room/ maintenance building to the south-west, two freestanding walls in the west of the site and a number of small wooden sheds and metal storage units situated around the buildings. Areas of hardstanding consisted of a large paved area around the two pools in the centre of the site and a large concrete car park in the north. In the west of the site, a recently cleared area of bare ground is present, where the majority of the proposed work would take place.
- 3.12 It was noted during the 2020 update survey that the area of bare ground in the west of the Site is now amenity grassland as detailed in **Section 3.9.**

Open Water

3.13 Two swimming pools, surrounded by hardstanding, are located in the centre of the site. Both of these are regularly treated, used daily for recreation and therefore not considered to support wildlife.

Scattered Trees

3.14 Within the site, two semi-mature oaks *Quercus robur*, are located on the north-east corner of the amenity grassland and one alder *Alnus glutinosa*, is located near the eastern boundary of the car park.

Treeline

3.15 A treeline borders the northern boundary of the site, adjacent to Bushy Park allotments. Species include locally abundant birch *Betula spp.*, locally abundant sycamore *Acer pseudoplatanus*, occasional alder *Alnus glutinosa*, and common hawthorn *Crataegus monogyna*, with occasional introduced shrubs at either end. Many tall, mature specimens are present.

Mature Hedgerows with Trees

3.16 The site is bordered on western and southern sides by tall, mature native hedgerows with trees. The western hedges are dominated by common hawthorn, with locally frequent field maple *Acer campestre*, frequent bramble *Rubus fruticosus* agg., and occasional elm *Ulmus sp.* To the north there is a higher density of trees with the additional presence of locally frequent silver birch, occasional large bindweed *Calystegia silvatica*, and rarely sycamore *Acer pseudoplatanus*. The southern hedge contains many gaps with common nettle *Urtica dioica*, and bramble, and a high density of trees, with abundant hawthorn, frequent field maple, frequent elm, frequent sycamore, occasional ivy *Hedera helix*, and rare ash *Fraxinus excelsior*.

Protected and Notable Species

- 3.17 The desk study and site visit identified the following species as potentially present at the site:
 - Bats;
 - Great crested newt;
 - · Grass snake and slow worm;
 - Hedgehogs; and
 - Nesting birds.

Bats

Habitat Assessment

3.1 Relevant legislation pertaining to bats is summarised in **Appendix 2.**

- 3.2 The habitats present within the site are considered to be of low ecological value and offer very limited foraging opportunities for bats. The mature hedgerows and the treeline, which border the site on three sides, have a more diverse structure and species assemblage and could potentially be used by foraging bats. These linear features are connected to a wider network of hedgerows, woodland, watercourses and other green spaces within Bushy Park and Home Park; providing commuting routes, potential roosting and foraging sites and opportunities for dispersal to wider populations.
- 3.3 The habitats recorded within and adjacent to the Site during the 2020 update surveys were consistent to those recorded in 2016.

Daytime Assessment of Bat Roost Potential

3.4 No buildings within the site had features likely to support roosting bats:

• The Main Building

The main building is mostly one storey with a roof terrace stretching across the full length and width. A small second storey café with a flat roof is located in the centre. The building is in very good condition with no cracks, crevices or other features that could potentially lead to a cavity. As a result, it has been classified as having **negligible bat roost potential**.

The Pump/ Maintenance Building

This is of similar construction to the main building, also with a flat roof. The building is in good condition with no visible features in the brickwork, or roof that could support roosting bats. Light- moderate ivy cover is present on the south-west and north-western corners of the building and a few windows on the southern aspect have glass missing. However, given the good condition of the building and the high levels of human activity and lighting inside, it is considered unlikely that this building would reasonably support a bat roost. The building is therefore considered to have **negligible bat roost potential.**

Wooden Sheds and Metal Storage Units

A total of 13 small, temporary structures were identified and assessed for bat roost potential. These were located on the hardstanding, at various points around the buildings and pools. All were in constant use and good condition with either no access points or no available cavities to support a roost. Given the high level of use and lack of features for roosting bats, these were all considered to have **negligible bat roost potential**.

- 3.5 The update survey in 2020 determined that the buildings descriptions from 2016 were still appropriate and that all buildings still had **negligible bat roost potential.**
- 3.6 Numerous trees are present along the borders of the site, along with a few scattered trees located near the centre. These all appeared in good condition with no visible roost features and were therefore classified as having **negligible bat roost potential.**
- 3.7 During the 2020 update survey tree T9⁶ was recorded as having three knotholes and woodpecker markings during the 2020 surveys. None of these holes were considered to extend into suitable cavities or crevices for bats and therefore it was determined to have **negligible bat roost potential.** Therefore, the 2020 update surveys are consistent with the findings from 2016 with all trees still having **negligible bat roost potential.**

⁶ Tree ID correlates with a previous Tree Protection Plan produced by Canopy Consultancy, drawing reference: 16-408-TPP

Amphibians

Great Crested Newt

Bushy Park and Home Park contains several ponds and wet ditches, some of which may have the potential to support great crested newts. However, it should be noted that the nearest record for this species is at Hampton Hill Pond, 848m north of the Site. This exceeds the maximum 500m distance within which great crested newts are typically known to travel. Given the largely urban nature of the Site and the low ecological value of the habitats present within, it is considered highly unlikely that this species would be adversely affected by the redevelopment work. In addition, the current scheme focuses on the western side of the Site, on areas of bare ground and hardstanding, leaving the green spaces adjacent to the Bushy Park and Home Park SSSI intact. Consequently, this species is not considered further in this report.

Reptiles

Grass Snake and Slow Worm

3.8 The habitats within the site provided sub-optimal conditions for reptiles, being mostly comprised of highly managed amenity grassland, bare earth and hardstanding. However, a small compost heap, largely consisting of recently cut grass, was present in the south-west of the site, behind the pump room. This feature could potentially provide sheltering opportunities for both grass snake and slow worm, in addition to egg-laying opportunities for grass snake. The compost heap lies adjacent to a hedgerow which is connected to a wider network of hedgerows, scrub and woodland within Bushy Park and Home Park, with the potential to be used by reptiles. Bushy Park Allotments to the north also contains a mosaic of habitats which could provide refuge and basking opportunities for these species.

Other Mammals

Hedgehogs

3.9 Most habitats within the site are considered to be of low value for hedgehogs, with limited foraging and sheltering opportunities. In addition, the high level of human activity within the site, particularly at evening events, is likely to discourage hedgehogs. However, the small compost heap in the south-west of the site, behind the pump room, could potentially be used by sheltering and hibernating hedgehogs.

Nesting Birds

3.10 Some trees and introduced shrubs within the site, and the mature hedgerows along the boundaries, provided suitable nesting habitat for common species of garden birds. In addition, the wider area, particularly habitats within the Bushy Park and Home Park SSSI, provided further suitable nesting and foraging habitat for such species.

4 Discussion, Recommendations and Conclusions

Designated Sites

Discussion

- 4.1 The Site lies directly adjacent to Bushy Park and Home Park SSSI, a site of National Importance for nature conservation. Due to the relatively low ecological value of the habitats within the Site, its use by wildlife associated with the SSSI is likely to be very limited.
- 4.2 Light spill onto adjacent vegetation, within Bushy Park and Home Park SSSI, may increase to a limited degree as a consequence of the building extension. This has the potential to adversely affect wildlife within this area, such as bats and their prey species. However, it should be noted that due to the Site's current use as a leisure centre and concert venue, light spill to these areas is likely to have already occurred for some time.
- 4.3 The mature hedgerows currently provide a buffer between the Site and the SSSI, reducing light spill and noise. In addition to this, the hedgerows, which are part of a wider network of hedgerows, scrub, woodland and ponds within the SSSI, could provide shelter and commuting corridors for roaming wildlife.

Mitigation

- 4.4 The following mitigation is recommended both as precautionary and an enhancement measures:
 - Hedgerow and boundary vegetation between the site and the SSSI should be retained at its current height and condition and ideally, increased.
 - A sensitive lighting scheme is recommended to ensure there is minimal light spill to the surrounding area, particularly with respect to the Bushy Park and Home Park SSSI. Potential design measures in line with best practice guidance, which may help to minimise light spill include:
 - Implementation of dark buffer zones, illumination limits and zonation to separate habitats or features of importance for bats, such as hedgerows and mature trees from proposed lighting;
 - Use of LED lighting, which does not emit UV and which has a warm white light spectrum (preferably <2700Kelvin) and uses wavelengths higher than 550nm;
 - o Internal lighting adjacent to windows should be recessed to reduce glare and light spill;
 - Directional lighting, such as specialist bollards, low-level downward direction lighting or column lighting to minimise light spill;
 - Use of motion sensor lighting or timers to restrict lighting to required periods;
 - o Dimming or part-night lighting to reduce light levels when bats are most active;
 - Use of the lowest lux possible;
 - Sensitive scheme design to minimise light spill on key habitats and features i.e. location, orientations and height of new structures or placement of open spaces and footpaths;
 - Screening through soft landscaping and installation of walls and fences; and
 - Creation of alternative valuable habitat for bats, such as the incorporation of a green roof and tree planting within the scheme design, which provide opportunities for bats to forage and commute and the provision of bat boxes, which provide additional opportunities for bats to roost.

4.5 These measures have been updated since the survey in 2016 to reflect the best practice guidance⁷ that was updated in 2018.

Habitats and Vegetation

Discussion

4.6 The habitats within the site comprise mostly amenity grassland, introduced shrubs and scattered trees. These are relatively common and widespread habitats which are not particularly species rich. Their ecological value therefore relates to the species they may support and mitigation in relation to such species is discussed below.

Mitigation

4.7 Any development within the Site has the potential to impact retained mature trees and shrubs. Therefore, tree protection measures should be put in place around retained trees during works in accordance with BS5837: 2012. Trees in Relation to Construction. Additionally, boundary vegetation should be retained where possible.

Bats

Discussion

- 4.8 All bats and their roosts are subject to the highest level of protection afforded to species in the UK as European Protected Species (EPS). Relevant legislation afforded to bats is detailed in **Appendix 2.**
- 4.9 The buildings and trees within the site were considered to have negligible bat roost potential and so no further surveys will be required.
- 4.10 Given the lack of suitable roosting and foraging opportunities within the site, the remaining potential impacts on bats relate to light spill from the completed scheme onto commuting routes and the surrounding area. Light spill has the potential to affect any nearby bat roosts (if for example trees supporting bat roosts are lit by external lighting), foraging areas and commuting routes (bats use linear features such as hedgerows and treelines for commuting).

Mitigation

4.11 Lighting should be sensitively designed and minimised where possible (as previously discussed). Additional guidance on wildlife friendly lighting is provided in **Section 4.4**.

Reptiles

Discussion

4.12 Legislation afforded to reptiles is detailed in **Appendix 2**. Reptiles are protected from killing and injury under the Wildlife and Countryside Act 1981. The habitats within the site were considered to be of low value to reptiles, however, a small compost heap was present in the west of the site, behind the pump room. This feature has the potential to be used by reptiles for shelter and egglaying.

Mitigation

4.13 The lack of suitable habitat and high levels of human activity within the site indicate that risk of reptiles being present is small. Given this low risk, further detailed survey is not required.

⁷ Ferguson, F.R., Smith, N., Fox, H., (2018). Bats and Artificial Lighting in the UK. The Bat Conservation Trust, London.

However, in line with a precautionary approach the following recommendations will further reduce the risk of killing and injury to reptiles:

• Removal of the compost heap by hand, and ideally during spring, autumn or winter to avoid the grass snake egg laying, incubation and hatching period.

Hedgehogs

Discussion

4.14 Hedgehogs are protected from killing and being taken by certain methods under the Wildlife and Countryside Act 1981. The habitats within the site are considered to be of low value to hedgehogs, however, the small compost heap could potentially be used for shelter and hibernation.

Mitigation

4.15 Removal of the compost heap by hand is recommended, as per the instructions above.

Nesting Birds

Discussion

4.16 Legislation afforded to birds and their nests is detailed in **Appendix 2**. Removal of any tree or scrub vegetation during the nesting season may affect nesting birds and result in an illegal activity.

Mitigation

- 4.17 Wherever possible, any removal of trees or shrubs within The Site should be undertaken between September-February (inclusive) to avoid the season during which birds are most likely to nest.
- 4.18 Where clearance of suitable habitat is programmed during the bird breeding season, which is typically March to August inclusive, prior to works, a suitably qualified and experienced person must undertake a survey to determine whether birds are nesting in the area. If a nest is discovered, clearance or other construction works would need to be delayed within an exclusion zone. Works may only recommence once it is confirmed that chicks have fledged and that no other nests are in use within the exclusion zone.
- 4.19 Additionally, where possible any nesting or foraging habitat that is removed should be replaced as part of the scheme design. This would involve replacing trees and shrubs removed as part of the proposals or erecting bird boxes within trees surrounding the site. Replacement should either comprise native species, or non-native species with known benefit to wildlife, such as those with a high nectar load, or berry producing species.

Enhancement Opportunities

- 4.20 Opportunities for ecological enhancement within The Site could include:
 - Inclusion of native scrub or wildflower species (or non-native species with a known wildlife benefit) within landscaping proposals. This would provide habitat for species such as birds and invertebrates. Species identified on the Royal Horticultural Society's "Perfect for Pollinators" species lists would be particularly suitable. It would also provide connectivity for such species and over time would reduce light spill from the development onto retained boundary trees and any bat/bird roosting features;
 - Planting of new trees and shrubs within the scheme design, particularly along the boundary with Bushy Park and Home Park SSSI. These could be native or non-native as discussed above and would also help to reduce light spill to the SSSI;

- Installation of bird and/or bat boxes (such as those suitable for common garden species) in nearby trees or within the buildings where appropriate;
- Incorporating a biodiverse living roof into the design of the new extension. This would deliver
 an enhancement for biodiversity by offering foraging and sheltering resources for wildlife
 (invertebrates, birds and bats), and by increasing the species-richness and cover of
 plants. The following could be considered in order to maximise the biodiversity potential of
 any such roof:
 - A substrate depth of between 60mm to 80mm to ensure retention of moisture and sufficient rooting depth.
 - A species-rich herbaceous seed mix could be sown in selected areas to provide pollen and nectar sources and to provide a greater biodiversity benefit through inclusion of a range of flowering species which can be selected to be particularly suitable to green roof conditions (particularly low water availability).
 - Nutrient poor soil types should be used and preferably those of slightly alkaline pH to
 prevent out competition of selected species by invasive ruderal species and to promote
 continued diversity of flowering plants (e.g. crushed concrete mixed with soil).
 - Provision of small areas of coarse woody debris and large size aggregates and rocks would further increase the range of burrowing and sheltering habitats for invertebrates.

Appendix 1

Indicative Scheme



Appendix 2

Policy and Legal Considerations

Statutory nature conservation sites and protected species are a 'material consideration' in the UK planning process (DCLG 2012). Where planning permission is not required, for example on proposals for external repair to structures, consideration of protected species remains necessary given their protection under UK and EU law.

Natural England Standing Advice aims to support Local Planning Authorities decision making in respect of protected species (Natural England 2012). Standing advice is a material consideration in determining the outcome of applications, in the same way as any individual response received from Natural England following consultation.

The Conservation of Habitats and Species Regulations 2010 transpose the requirements of the European Habitats Directive (Council Directive 92/43/EEC) and Birds Directive (Council Directive 79/409/EEC) into UK law, enabling the designation of protected sites and species at a European level.

The Wildlife and Countryside Act 1981 (as amended) forms the key piece of UK legislation relating to the protection of habitats and species.

The Countryside Rights of Way Act 2000 provides additional support to the Wildlife and Countryside Act 1981; for example, increasing the level of protection for certain species of reptiles.

The Protection of Badger Act 1992 provides specific protection for this species.

The Wild Mammals Protection Act 1996 sets out the welfare framework in respect to wild mammals, prohibiting a range of activities that may cause unnecessary suffering.

Species and Habitats of Principal Importance for Conservation in England and Wales and priority habitats and species listed on the London Biodiversity Action Plans (BAP) are species which are targeted for conservation. The government has a duty to ensure that involved parties take reasonable practice steps to further the conservation of such species under Section 41 of the Natural Environment and Rural Communities Bill 2006. In addition, the Act places a biodiversity duty on public authorities who 'must, in exercising their functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity' (Section 40 [1]). Criteria for selection of national priority habitats and species in the UK include international threat and marked national decline.

The National Planning Policy Framework (DCLG 2012) states (Section 11), that the planning system should minimise impacts on biodiversity, providing net gains in biodiversity where possible. It also states that local planning authorities and planning policies should:

- Plan positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure.
- Take account of the need to plan for biodiversity at a landscape-scale across local authority boundaries.
- Identify and map components of the local ecological networks, including: international, national and local sites of importance for biodiversity, and areas identified by local partnerships for habitat restoration or creation.
- Promote the preservation, restoration and re-creation of priority habitats, ecological networks and the recovery of priority species populations, linked to national and local targets and identify suitable indicators for monitoring biodiversity in the plan.

The London Plan (The Mayor of London, 2011) makes reference to the protection or enhancement of biodiversity in a number of separate policies. These include:

 Policy 7.19 – Biodiversity and access to Nature, which states that "development proposals should wherever possible make a positive contribution to the protection, enhancement, creation and management of biodiversity".

- Policy 2.18 Green infrastructure The network of open and green spaces.
- Policy 5.3 Sustainable Design and construction.
- Policy 5.10 Urban Greening.
- Policy 5.11 Green roofs and development site environs.

Bats

All British species of bat are listed on the Wildlife and Countryside Act 1981 (as amended) Schedule 5. It is an offence to deliberately kill, damage, take (Section 9(1)) a bat; to intentionally or recklessly disturb a bat whilst it occupies a place of shelter or protection (Section 9(4)(b)); or to deliberately or recklessly damage, destroy or obstruct access to a bat roost (Section 9(4)(c)). Given the strict nature of these offences, there is an obligation on the developer and owner of a site to consider the presence of bats.

All British bats are listed on the Conservation of Habitats and Species Regulations 2010, Schedule 2. Regulation 41 strengthens the protection of bats under the 1981 Act against deliberate capture or killing (Regulation 41(1) (a)), deliberate disturbance (Regulation 41(1) (b))⁸ and damage or destruction of a resting place (Regulation 41(1) (d)).

A bat roost is defined as any structure or place which is used for shelter or protection, irrespective of whether or not bats are resident. Buildings and trees may be used by bats for a number of different purposes throughout the year including resting, sleeping, breeding, raising young and hibernating. Use depends on bat age, sex, condition and species as well as the external factors of season and weather conditions. A roost used during one season is therefore protected throughout the year and any proposed works that may result in disturbance to bats, and loss, obstruction of or damage to a roost are licensable.

Development works that may cause killing or injury of bats or that would result in the damage, loss or disturbance of a bat roost would require a Natural England (NE) Mitigation Licence. Licensed works require evidence that the works entailing detrimental impacts are unavoidable, as well as appropriate mitigation, which may include seasonal constraints and provision of alternative habitat and/or roosting structures. A NE Mitigation Licence application can only be submitted on completion of surveys and receipt of planning consent. The application typically takes six weeks to process, after which mitigation could commence.

All UK species of bat are also listed on the UK BAP. Under the NERC Act, 2006 the Government has a duty to ensure that parties take reasonable practicable steps to further the conservation of these species.

Reptiles

All UK reptiles and amphibians are legally protected from intentional and reckless killing and injury under the Wildlife and Countryside Act 1981 (as amended).

Nesting Birds

Birds and their nests are protected by the Wildlife and Countryside Act 1981 (as amended). This Act gives protection to all species of bird with regard to killing and injury, and to their nests and eggs with regard to taking, damaging and destruction. Certain species listed on Schedule 1 of the Act, are afforded additional protection against protection.

⁸ Relates specifically to deliberate disturbance in such a way as to be likely to significantly affect i) the ability of any significant group of animals of that species to survive, breed or rear or nurture their young or ii) the local distribution of that species.

Appendix 3

Figures



Appendix 4

Target Notes

- Hampton Pools Ecological Appraisal, 12th July 2016, Katie Luxmoore.

Target Note	Description
1	Amenity grassland, dominated by Perennial rye-grass <i>Lolium perenne</i> , with locally abundant red fescue <i>Festuca rubra</i> , annual meadow-grass <i>Poa annua</i> , daisy <i>Bellis perennis</i> , white clover <i>Trifolium repens</i> , occasional Yorkshire fog <i>Holcus lanatus</i> , and occasional dandelion <i>Taraxacum</i> agg. This area is short-mown and heavily used. Species assemblage is relatively poor and indicative of nutrient enrichment.
2	Mature hedgerow with a few young trees, dominated by common hawthorn <i>Crataegus monogyna</i> , with frequent bramble <i>Rubus fruticosus</i> agg., occasional elm <i>Ulmus sp.</i> , and occasional field maple <i>Acer campestre</i> . This hedgerow is approximately 4m high and connected to other hedgerows at either end. Forms a barrier between the site and the adjacent Bushy Park.
3	Similar to TN2 but taller and with more trees. Dominated by common hawthorn with abundant silver birch <i>Betula pendula</i> , frequent bramble, occasional field maple, occasional large bindweed <i>Calystegia silvatica</i> , and rare sycamore <i>Acer pseudoplatanus</i> . Connected at either end and forms a barrier between the site and the adjacent Bushy Park.
4	Hedgerow with gaps, dominated by trees. Species include abundant hawthorn, frequent field maple, frequent elm, sycamore, occasional ivy <i>Hedera helix</i> , occasional nettle <i>Urtica dioica</i> , occasional bramble and rare ash <i>Fraxinus excelsior</i> . As with TN2 and TN3, the trees in this area were mostly of small diameter with no obvious cracks or crevices suitable for roosting bats observed. They were therefore considered to have negligible bat roost potential .
5	Tree-line between the site and the adjacent Bushy Park allotments to the north. Species include locally abundant silver birch, locally abundant sycamore, occasional alder <i>Alnus glutinosa</i> , and common hawthorn, with occasional introduced shrubs at either end. The trees along this boundary are large but in good condition and lacking visible features to support roosting bats. They are considered to have negligible bat roost potential .
6	Two semi-mature oak trees <i>Quercus robur</i> , at the edge of the amenity grassland with negligible bat roost potential .
7	One elm tree surrounded by hardstanding, with negligible bat roost potential .
8	Recently removed trees
9	A neatly managed ornamental hedge of cherry laurel <i>Prunus laurocerasus</i> , with rare sycamore <i>Acer pseudoplatanus</i> . Potential for nesting birds to be present.
10	Narrow flowerbeds with small introduced shrubs and ornamental species.
11	Main building – mostly one storey with a roof terrace stretching across the full length and width of the building, except for a small second storey café which is located in the centre and also has a flat roof. The building is in good condition with no cracks, crevices or other features that could potentially lead to a cavity. Classified as negligible bat

Target Note	Description
	roost potential.
12	Pump room/ maintenance building with a flat roof. As with TN11, this building is in good condition with no features in the brickwork, or roof that could support roosting bats. Light- moderate ivy cover is present on the south-west and north-western corners of the building and few windows on the southern aspect have glass missing. However, given the good condition of the building and the high levels of human activity and lighting inside, it is considered unlikely that this building would support a bat roost. The building is considered to have negligible bat roost potential.
13	Freestanding wall in good condition with no significant vegetation cover and no features to support roosting bats. Negligible bat roost potential.
14	Four small sheds/ temporary storage units. Nine other similar structures are located at various points around the main building and pump room. All are in constant use and good condition. Given the high level of use and lack of features to support roosting bats, these were all considered to have negligible bat roost potential .
15	Two swimming pools surrounded by hardstanding, both of which are regularly treated and used daily for recreation.
16	A relatively large area of recently cleared bare earth with little to no vegetation present.
17	A small compost heap, located next to a hedge behind the pump room and consisting mainly of recently cut grass. Potential for use by reptiles and hedgehogs.

Appendix 5 2016 Photographs



View of the pool, amenity grassland and oak trees, looking south.



View of the pool and pump room/ maintenance Building, looking south-west.



View of the main building and car park, looking west.



View of the bare ground, looking south.



Part of the hedgerow on the western boundary with Bushy Park and Home Park SSSI.



The compost heap behind the pump room, looking north.

Appendix 6 2020 Photographs



Cherry laurel Prunus laurocerasus hedge and sparsely vegetated amenity grassland along western boundary.



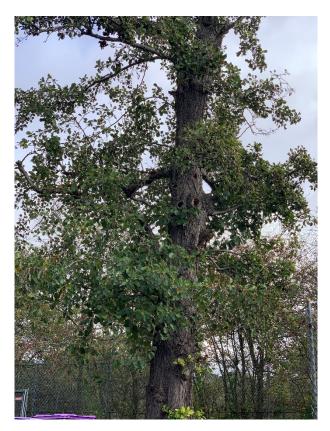
View of main building and car park.



Red fox Vulpes vulpes hole on eastern boundary.



Amenity grassland and temporary structure in the south of the Site.



Tree T9. Whilst there were knotholes and woodpecker markings, none extended into cavities or crevices suitable for bats. Tree T9 was determined to have negligible bat roosting potential.