Norton & Associates Ltd
Engineering & Environmental Consultants

Preliminary Ecological Assessment at Bourne End Junior Sports Club, New Road, Bourne End, High Wycombe, Buckinghamshire SL8 5BS

Commissioned by BEJSC

December 2020

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1 Executive Summary

A Preliminary Ecological Assessment was carried out at Bourne End Junior Sports Club during November 2020. The purpose was to check for any ecological issues which might affect proposed development works on site. It is proposed to construct a new covered swimming pool adjacent to an existing sports hall on the site of tennis courts, with construction of new replacement playing areas in an area of playing field nearby.

The survey found the following issues:

1.1 Badgers

Low risk of setts being present on site in dense inaccessible scrub near the works area. As a precaution if scrub clearance is required along the northern site edge, this should be cleared under supervision of an ecologist who can check for setts during clearance. See section 7.3 for full details.

1.2 Bats

Boundary scrub, woodland and hedges may be used by foraging and commuting bats. Boundary habitats should be maintained or replaced elsewhere if to be removed. To minimise impacts on foraging or commuting bats it is recommended a bat sensitive lighting scheme be incorporated into the proposals. The bat conservation trust provides guidance with regards to Bats and Lighting (Stone, 2013). Any lighting should avoid light spill impacts to retained boundary habitats with particular emphasis on avoiding light spill onto hedges, treelines, scrub, and woodland strips.

1.3 Nesting birds

The survey found a high probability of birds nesting on site during the nesting season (1st March to 31st August). Clearance of vegetation or work on building areas with potential to contain nesting birds should be carried out outside this period. Should any clearance of scrub, shrubs, trees, or demolition or works on outbuildings or building sections with potential to contain nesting birds be required during the nesting season any such areas to be cleared should first be inspected by an ecologist or the works supervised by an ecologist. If an active nest is then found clearance will have to be delayed within 5 metres of the nest until any chicks present have left the nest.

1.4 Reptiles

Medium potential for reptiles to be present in some habitats on site. Precautions required as detailed in section 7.8 of this report.

1.5 Invasive species

No important invasive species were found on site. As no important invasive species were found no precautions are required relating to these, however, should workers subsequently find species such as Japanese knotweed or giant hogweed on site in currently inaccessible scrub during clearance, works should stop within 7 m of the area until further advice can be sought from an ecologist or specialist knotweed or invasive species control contractor.

1.6 Validity of Report

This report is valid for one year from the date of the survey visit. Should works be delayed to later than one year after the survey then a further update survey of the site would be required as habitats change over time, along with their potential to support protected species.

The report below should be read in full and detailed guidance given in this report must be followed to avoid breaching legislation regarding protected and invasive species.

2 Introduction

2.1 Surveyor

The surveyor and author of this report is Dan Sullivan BSc (Hons), MCIEEM. Senior Ecologist. Dan has over 18 years' experience as an ecological consultant and currently holds a survey license for great crested newts.

2.2 Survey Site Visit Date

12th November 2020

2.3 Client

The client is BEJSC

2.4 Proposed works

It is proposed to clear a tennis court area at the site and construct a new indoor swimming pool in the current tennis court location. New playing areas replacing the tennis courts will be constructed in a nearby playing field, 125 m northeast of the site. This area is currently part of Bourne End academy, which is adjacent to the existing Junior Sports Club site. The survey area included areas at Bourne End Junior Sports Club around and including the proposed swimming pool site as well as the nearby field where replacement playing areas are proposed. The swimming pool and surrounding areas contained (in addition to tennis courts) amenity grassland, hedgerows, scrub and shrubbery, trees, car parking areas and the main club building. The field where new playing areas are proposed contained amenity grassland edged with scrub and woodland.

2.5 Survey Instructions

The survey was commissioned to identify any ecological constraints that should be considered when carrying out works in the area. Further surveying or mitigation works are recommended where relevant. If works are to be carried out any later than a year after this report, then a second site visit is recommended so that an update to this report be carried out. A Preliminary Ecological Appraisal was carried out in order to provide the information required.

PEA guidelines are published by CIEEM (2013). PEA is based on Phase 1 Survey methodology, as described in the JNCC Handbook for Phase 1 Survey (1990). Its use allows habitat types on sites to be mapped. From this the ecological value of areas of a site can be ascertained. It can then be determined how likely it is that protected, or otherwise notable species might occur on site. It also determines which areas on site might support protected species.

3 Desk Study

3.1 Data search

A data search for protected and notable species and statutory and non-statutory nature reserves within 1 kms of the site was commissioned from Buckinghamshire and Milton Keynes Environmental Records Centre (BMERC).

3.2 General background

The ordnance survey 1:25000 scale map for the area was also examined for evidence of water bodies within 250m of the site which might be potential great crested newt breeding sites.

4 Relevant Legislation and Planning Policies

4.1 Badgers

Badgers and their setts are protected under the Protection of Badgers Act 1992. All the following are criminal offences: to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so; to intentionally or recklessly interfere with a sett. Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it. A badger sett is defined in the legislation as 'any structure or place which displays signs indicating current use by a badger'. Badger setts can be disturbed by a multitude of operations which include excavation and coring. (English Nature, 2002).

4.2 Bats

All species of British bat are listed in Appendix ll of the Berne Convention and various annexes of the Habitats Directive. They are protected under Schedule 5 of the Wildlife and Countryside Act 1981 and Schedule 2 of the Conservation (Natural Habitats, etc) Regulations 2017 (Regulation 43). It is therefore illegal to kill, injure or handle any bat or obstruct access to, destroy or disturb any site that they use. A £5000 fine and/or 6 months imprisonment per offence is the maximum penalty. Where a bat roost will be affected by development a licence to carry out the work will be required (issued by Natural England). This will be granted only if suitable mitigation for any adverse impacts on bats is to be carried out.

4.3 Birds

Under the Wildlife and Countryside Act (1981) it is a criminal offence to disturb nesting birds. The breeding season for most species is generally considered to extend between 1st March and 31st July inclusive, although some species may breed slightly earlier in the year or later. Site operations should be phased where possible to occur outside the breeding season. Within this period, clearance of structures and vegetation can only take place if either:

1) Affected areas are first checked by an ecologist or other suitably qualified person and no nesting is found to be occurring.
2) All parts of the vegetation or structures are clearly visible, and no sign of nesting can be seen. If nests are found, work will have to be delayed in that area until chicks have left any nests.

For birds listed on Schedule 1 of the Wildlife and Countryside Act the protection is increased and it is also an offence to disturb them whilst in the process of nest building or at a nest containing eggs or young. It is an offence also to disturb dependent young. Bird species included in Schedule 1 include kingfishers, black redstarts, barn owls and red kites among others.

4.4 Dormice

The hazel dormouse is protected under the Wildlife and Countryside Act 1981 (as amended). It is also a European Protected Species and as has additional protection in the UK under Regulation 43 of the Conservation of Habitats and Species Regulations 2017. It is an offence to intentionally kill, injure or take a hazel dormouse, possess or control any live or dead specimen or anything derived from a hazel dormouse, intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a hazel dormouse (including their habitat). It also an offence to

intentionally or recklessly disturb a hazel dormouse while it is occupying a structure or place used for shelter or protection. A £5000 fine or six months custodial sentence per offence applies.

4.5 Great crested newts

Great crested newts are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). It is also a European Protected Species and has additional protection under Regulation 43 of the Conservation of Habitats and Species Regulations 2017. It is an offence to intentionally kill, injure or take a great crested newt, possess or control any live or dead specimen or anything derived from a great crested newt, intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt (in practice this means breeding sites and terrestrial habitat). It is an offence to intentionally or recklessly disturb a great crested newt while it is occupying a structure or place which it uses for shelter or protection. A £5000 fine or six months custodial sentence per offence applies.

4.6 Reptiles

All native reptiles are protected under the Wildlife and Countryside Act 1981 (as amended). They are protected against killing or injuring even during lawful development. A £5000 fine or six months custodial sentence per offence applies.

4.7 Other protected species

There is a list of species of principle importance as set on in section 42 of Natural Environment and Rural Communities Act 2006 (NERC 2006). These species are regarded a material consideration in planning applications and are usually protected by planning polices

4.8 Invasive Plant Species

Some plants, such as Japanese knotweed are listed under Schedule 9, Part 2 of the Wildlife and Countryside Act 1981. This states that it is an offence to "plant or otherwise cause to grow in the wild" any plant listed in the schedule. “In the wild” is generally taken to mean any area outside the landowner’s site. It is therefore an offence to allow it to spread onto neighbouring sites or to allow some listed plants to be removed offsite without proper disposal, as this could also allow them to spread offsite.

4.9 Hedgerows

The Hedgerow Regulations 1997 provide protection for some types of hedgerows. Under the regulations most hedges require submission of a ‘hedgerow removal notice’ and approval by the local authority before they can be removed. All ‘important’ hedgerows are to be retained and protected from destruction and damage. There are a number of rules determining how a hedgerow is classified as ‘Important’. In most cases the hedgerow is required to be in excess of 30 years old and to contain specific indicator plants. An individual hedge, or more likely, the trees within a hedge can also be subject to a Tree Preservation Order, or TPO, under the Town and Country Planning Act 1990.

4.10 Protected/priority habitats

There is a list of habitats of principle importance as set on in section 41 of Natural Environment and Rural Communities Act 2006 (NERC 2006). These habitats are regarded a material consideration in planning applications and are usually protected by planning polices.

4.11 National Planning Policy

The NPPF (2019) describes the Government's planning policies for England and how these should be applied. The NPPF states that:

"When determining planning applications, local planning authorities should apply the following principles:

a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists;
d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity;
e) The following should be given the same protection as habitats sites; potential Special Protection Areas and possible Special Areas of Conservation, listed or proposed Ramsar sites and sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

Under the NPPF, the Planning Authority has a responsibility to:

a) promote preservation, restoration and re-creation of priority habitats, ecological networks and to protect and aid recovery of populations of priority species;
b) identify and pursue opportunities for securing measurable net gains for biodiversity.
c) contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes and sites of biodiversity (in a manner commensurate with their statutory status or identified quality in the development plan)
d) minimise impacts on, and provide net gains for biodiversity, including by establishing a coherent ecological network that is more resilient to current and future pressures.

4.12 Local Planning Policy

Local councils also have various policies designed to protect and enhance local biodiversity.

5 Methodology of survey

The Preliminary Ecological Assessment followed the methodology outlined in the JNCC (1990) Handbook for Phase 1 Survey. A map showing habitat types and locations on site is included as Annex 2.

The Preliminary Ecological Assessment determines the potential for presence of protected and otherwise important or notable species on sites. Where it shows no evidence of a protected species and no suitable habitats for them, then further surveying for that species can be ruled out. Where suitable habitat is present further surveying is recommended if current guidelines and the judgement of the surveyor suggest presence is reasonably likely.

The following protected species are those most commonly found on potential development sites:

1. Bats
2. Birds
3. Great crested newts
4. Reptiles
5. Terrestrial mammals – Badgers, dormice, water voles

Table 1: Terms used in report to indicate likelihood of species presence

Confirmed	**Species directly observed on site** **Clear evidence of species presence observed (e.g. droppings, burrows, etc.)**
High	Important structures or features of use for breeding or refuge present. For instance, ponds for newts, old trees for bats. Significant amount of high-quality foraging habitat present Site adjacent to surrounding areas of suitable habitat, or connected by linear features of use to commuting species (e.g. river) Site close to known offsite species populations
Medium	Some features suitable for breeding or refuge present. Some suitable foraging habitat available Site connected to suitable offsite areas of habitat
Low	Small amounts of low-quality areas for refuge or breeding Small areas suitable for foraging Site not connected to suitable offsite habitats or species not likely to enter site.
Negligible	No suitable habitats on site

The likelihood of species being present ranges in a continuum from extremely unlikely to highly likely. The judgement of the surveyor combined with knowledge of habitats present, signs and sightings of animals and evidence from records is used to give an estimated likelihood of presence.

6 Survey Results

6.1 Desk study results

The search found records of relevant protected species within 1 km of the site. These were:

- Badgers (Meles meles)
- Bats –Common pipistrelle (Pipistrellus pipistrellus)
- Reptiles – Slow worms (Anguis fragilis) and common lizards (Zootoca vivipara)

The data search showed no likely potential great crested newt breeding ponds within 250m of the site.

The data search found no records of statutory designated nature conservation sites within 1 km of the site. There are no non-statutory protected sites adjacent to or on the site, however part of the site is within a Biodiversity Opportunity Area, the Central Chilterns Chalk Rivers area. Biodiversity Opportunity Areas are the most important areas for biodiversity in Buckinghamshire. They represent a targeted landscape-scale approach to conserving biodiversity and identify where the greatest

opportunities for habitat creation and restoration lie, enabling the efficient focusing of resources to where they will have the greatest positive conservation impact and represent a more efficient way of delivering action on the ground. They are priority areas of opportunity for restoration and creation of Biodiversity Action Plan (BAP) habitats.

6.2 Local area and surrounding habitats

The site is located in the village of Bourne End in Buckinghamshire. The local area (within 1 km) contains a mixture of around 50% developed land (mainly housing with some industrial areas) and 50% open spaces, mainly farmland with small woodland and scrub areas. The survey sites are bordered by housing, playing field areas, the adjacent school and to the north an area of scrub and woodland.

6.3 Weather conditions during site visit

Weather conditions are shown below:

- Precipitation: None
- Temperature: 10 ^{o}C
- Cloud cover: 40%
- Wind (Beaufort Scale): Gentle breeze

6.4 Habitats found on site

The proposed development area was found to contain the habitats described below. Annex 2 to this report includes plans showing locations of these habitats. Scientific names for plants listed below are given in Annex 1.

Table 2a: Habitats found in and around the proposed new swimming pool area:

Habitat type	**Description**
Solitary trees	The front car park of the sports centre included a small patch of amenity grassland with two small lime trees in it.  **Small lime tree at the front of the site**

Dense scrub	Dense scrub was present, mainly away from the tennis courts area and along the western and north-western Sports Club land edges. The scrub was close to the tennis courts where it adjoined the northern end of the main building. Some areas adjacent to the building were on a tall bank and too dense to explore internally. The scrub included scattered small trees, mainly field maple, sycamore, and oak saplings. Scrub was on flat ground at the front of the site and on the northern side was mainly on steep tall banks. Scrub was mainly tall, with brambles and hawthorn being dominant. Also recorded was buddleia and ivy. Ground flora under the scrub was mainly grasses or ivy. Species at ground level included cocksfoot, nettles, ivy, Canadian fleabane. Mammal runs were visible on the scrub banks on the northern site edge, a footprint was visible, appearing to be a fox print, however other indistinct prints were visible which could be of other mammal species.  **Dense inaccessible scrub on top of tall bank at the side of the main building**

Native hedgerow	Adjacent to the tennis courts in the area where the new swimming pool is proposed, the field boundary is a species poor native hedge. This is well maintained, tall and dense with no significant gaps. This consists of 90% hawthorn with other species including ivy, holly, hornbeam, and honeysuckle. The hedge base includes nettles, cow parsley and grasses. At the front of the site along the boundary with New Road was a tall, thin species poor native hedge. This consisted entirely of hornbeam.  **View of native hedge on northern site boundary, adjacent to existing tennis courts, view looking to east**
Tree line	Adjacent to part of the southwestern edge of the tennis courts was a row of semi-mature Leyland cypress. These lacked hole, cracks or other areas suitable for bat roosting. Under these was mainly bare ground or sparse vegetation. Viburnum was also observed growing under these trees.  **Row of Leyland cypress near western edge of tennis courts**

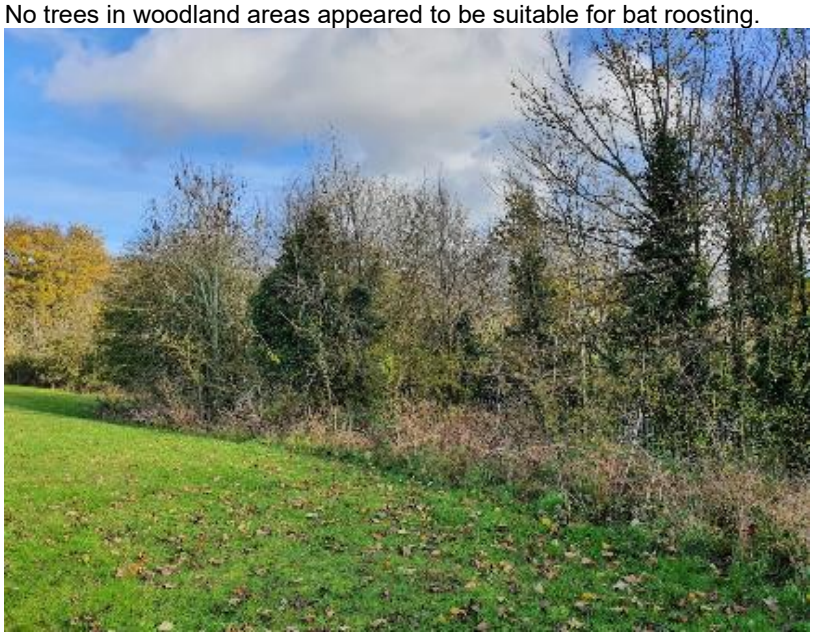
Ornamental shrubbery	The southern edge of the tennis courts was bordered partly by a strip of ornamental shrubbery with small ornamental trees. Planted species present included typical amenity planting species such as mahonia, snowberry and viburnum.  **View looking south east with shrubbery visible in distance adjacent to tennis courts**
Amenity grassland	The survey area around the tennis court contained predominantly short cut amenity grassland, including on banks sloping down to the courts. Herb species present in the grass included yarrow, rough hawkbit, daisy, dandelion, and ribwort plantain. A few small areas of this habitat were also present around the car parking areas at the front of the site. The grassland areas were considered to be moderately species rich. A badger latrine was found in grassland just north of the tennis court, adjacent to the hedge and contained recent droppings. A track was visible running along the hedge to the east. The track led to a gap in a fence under the hedge and into an adjoining garden. A less distinct track ran along the hedge from this point west into scrub at the side of the main building.  **Amenity grassland along eastern edge of tennis courts**

Rough, overgrown amenity grassland	Close to the tennis courts on a bank adjacent to the sports club building and in small areas next to the wall of the building were less managed overgrown amenity grassland areas, with some ruderal vegetation colonising, such as mugwort.  **Area of less managed grassland along eastern edge of main building**
Hardstanding	The proposed new swimming pool survey area contained various areas of hardstanding, mainly tarmac including the existing tennis courts, car parking areas and paths.  **View of hardstanding tennis courts with Bourne End Academy buildings in the distance**

Small structures and walls	The front of the site contained small containers, shed, storage units and other structures. None of these were suitable for bats to roost in. The rear of the main building next to the tennis courts had a short retaining wall adjacent along a bank and adjacent to the rear door of the building. This was in good condition and lacked crevices or holes.  **Car park area at front of the site with shed and storage containers in the distance**
Main building	The main sports building adjacent to the tennis courts was a brick building with a ridged metal clad roof. The eaves were concrete. The front of the building included a number of windows and a door with porch. The upper parts of the front of the building were clad in wood. Areas under the wood were sealed and lacked entry points for bats. The rear of the building adjacent to the tennis courts was a relatively featureless wall with no windows, small doors and no features on the wall where bats could enter or roost. The building eaves were concrete with no gaps under where bats could enter. The sides of the building were also relatively featureless, lacking in potential bat roost areas.  **Rear of main building**

	 **Front of main building showing wooden cladding**

Table 2b: Habitats found in and around the proposed new playing surface/tennis courts area:

Secondary deciduous woodland	The area proposed for constructing replacement tennis courts/playing areas in is an area of playing field, around the northern and southeastern edges of the field were strips of deciduous woodland. The woodland along the northern edge consisted of tall, dense scrub elm woodland with dense brambles, with ivy, oak, nettles, and ash also recorded. Along the southeastern field edge was open, mixed woodland with semi-mature sycamore, cherry, elm, ash, Leyland cypress and field maple. The shrub layer was sparse with scattered brambles and hazel. Ground flora was mainly sparse with false oatgrass and nettles predominating. No trees in woodland areas appeared to be suitable for bat roosting.  **Mixed woodland along southeastern edge of the site**

Tree line	On the western edge of the field was a short Leyland cypress hedge which appeared to be regularly cut and was intact with no gaps.  **Leyland cypress hedge on western field edge**
Dense scrub with scattered trees	The western and part of the eastern field edge contained a strip of dense tall bramble scrub with scattered small trees, mainly sycamore and Leyland cypress. Other shrub species present in the scrub included buddleia, rose, elder, blackthorn and hawthorn. Ground flora under the scrub consisted mainly of sparse grasses, nettles and ivy. Mammal paths were seen running into the western scrub strip, a muntjac deer was seen emerging from this scrub onto a path, it is likely the paths are created by muntjacs following regular routes along field edges.  **View looking south with dense scrub visible along western edge of the site**

Ruderal vegetation	A small area of previously disturbed ground was present along the southern site edge, this contained nettles.  **Strip of nettles at southern end of site adjacent to fence**
Amenity grassland	The field contained closely mown amenity grassland. This contained similar species to the amenity grassland in the Junior Sports Club site, herb species present included yarrow, rough hawkbit, daisy, dandelion, and ribwort plantain. The grassland edges had mammal tracks along them considered likely to be muntjac tracks.  **View looking northeast from western edge of site**
Hardstanding	The proposed new playing surface survey area contained a small area of hardstanding, a short path connecting the playing fields area with the adjoining path.

6.5 Protected species

Table 3: Likelihood of protected species on site

Protected species or features	Potential for presence	Suitability of habitats on site.	Evidence of presence on site or data suggesting likely presence
Badger setts	Low	The site contains suitable badger foraging areas (amenity grassland) and sett building areas (scrub and woodland). It is possible a sett is present in impenetrable dense scrub on top of a bank less than 30 m from the proposal area, however it is more likely any setts in the area are located in scrub woodland east of the site. On other sides of the site are low density housing areas and the adjacent school areas.	The data search found records of badgers within 1 km of the site. Evidence of badger activity was seen on site in the form of runs and a latrine.
Bat roosts	Negligible	Trees on site were either small and thin or if large were well-maintained. No potential bat roosting features, such as loose bark, rot holes, crevices etc. were observed in the visible parts of the trees. The buildings were found to be unsuitable for roosting due to lack of possible entry points for bats or suitable roosting areas within the buildings.	The data search found records of bats within 1 km of the site.
Bat foraging and/or commuting routes	Medium	The site contains hedges and tree lines which might be used for foraging by bats. However, there were no linear features likely to be important foraging or commuting routes, such as long lines of large trees, watercourses or large waterbodies.	
Breeding birds	High	The site contained dense scrub and dense conifer tree lines which have a high potential for nesting birds. Trees on site and outbuildings might also be used to a lesser extent	No nests were seen, although if present they would be likely to be in hidden areas.
Dormice	Low	The site contained areas of dense scrub and woodland suitable for dormice. The total area of suitable habitats for dormice in the surveys areas was around 0.35 Ha of which a minimal amount is likely to be impacted by works.	The data search found no records of dormice within 1 km of the site.
Great crested newts	Low	The site contains no suitable waterbodies on site for breeding newts. It contains small areas of suitable terrestrial habitat for newts, i.e., scrub, rough grassland, ruderals, and woodland.	The data search found no records of great crested newts within 1 km of the site.

		There are no known suitable breeding ponds within 250 metres of the site. As the development is small scale and is likely to affect only small areas of crested newt terrestrial habitat it is considered unlikely to have any impact on crested newt populations located more than 250 metres away.	
Reptiles	Medium	The site contains suitable reptile habitat (open woodland areas and edges, ruderal vegetation, scrub and rough grass). The proposed new tennis courts area adjoins a large area of scrub woodland with areas suitable for reptiles.	The data search found records of reptiles within 1 km of the site. Species recorded were common lizards and slow worms. No evidence of reptile presence was seen whilst on site, however reptiles tend to remain hidden and without specialist surveying over a period of days are hard to detect.
Other protected species	Negligible	No habitats suitable for water voles, otters, or other protected species not mentioned above.	

6.6 Other notable species seen

Birds of Conservation Concern - Red list:

None seen

Birds of Conservation Concern - Amber list:

Black headed gulls seen on playing fields

Wildlife and Countryside Act Schedule 1 Birds:

Red kite seen foraging over the southern playing field site.

Priority Species under Section 41 of the NERC Act 2006:

None seen

Other non-protected species of relevance:

Muntjac deer tracks seen on edges of southern playing field area and muntjac seen emerging from scrub in this area.

Fox footprints seen on scrub bank around car park of the junior sports club.

6.7 Invasive species

No evidence of Japanese knotweed (Fallopia japonica), giant hogweed (Heracleum mantegazzianum) or other important invasive species was seen on site.

7 Discussion of results and recommendations

7.1 Constraints to surveying

All works areas except small areas within dense scrub were visible. Where necessary recommendations have been made which take this into account.

7.2 Protected sites

The proposed activities will involve works which will mainly affect low value habitats, mainly hardstanding and amenity grassland areas and possibly small areas of scrub and/or rough grass. The site is within a Biodiversity Opportunity Area, so is in an area where enhancement to biodiversity is particularly important within developments. The works will have minimal impact on biodiversity on site. By including enhancements in the development such as a green roof on the swimming pool, native and wildlife friendly trees, shrubs and climbers as well as bird and bat boxes and/or bricks the development will increase the biodiversity value of the site. There are no other important protected site on or adjacent to the site, and the works are unlikely to impact any sites no on or adjacent due to the small scale of works.

7.3 Badgers

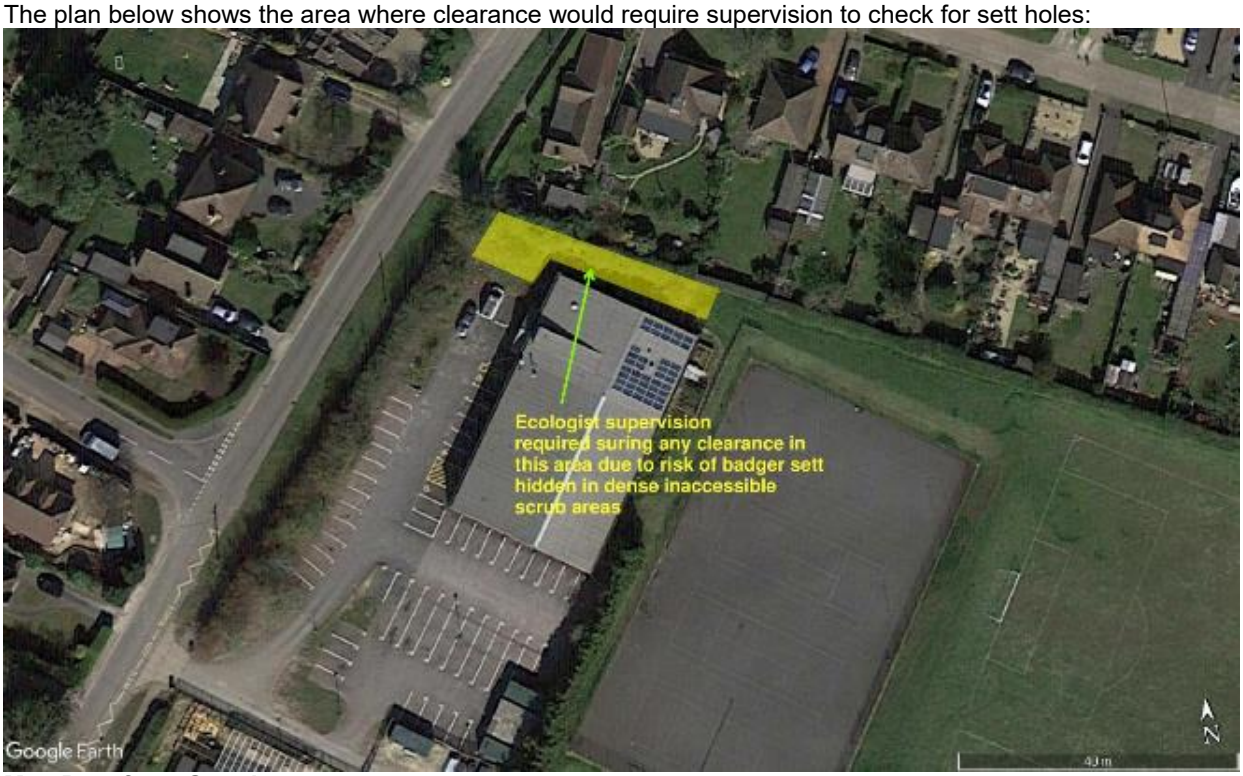
The survey found evidence of badgers entering the survey area, with a badger latrine found next to the hedgerow on the northern site boundary a few metres from the existing tennis courts. A mammal run was present along the northern boundary hedge leading back to an area of scrub woodland at the rear of the playing fields. The track led to a gap in a fence under the hedge where badgers may enter an adjacent garden. A less distinct track led from here westwards along the hedge and into scrub adjoining the main Sports Club building.

Part of badger latrine found to contain fresh faeces, adjacent to hedge on northern site boundary

The presence of a latrine indicates a sett is likely nearby. Latrines may be found close to setts but are often used as boundary markers indicating territory boundaries between different groups of badgers, in which case the sett may be some way from the latrine. The survey area includes an area of dense, impenetrable scrub at the side of the main building, on top of a steep, tall bank. There is a possibility that this area contains a hidden badger sett. However, it is more likely that the sett is located in the area of scrub woodland located at the end of the playing fields in the Sports Club site as this area is further from human activity, houses, lights and other disturbance.

As a precaution if any clearance or works are to take place on the dense scrub in this area, clearance of the area should be supervised by an ecologist who would check for active badger setts in this area. Should a sett be found, works within up to 30 m of the area would be likely to require a licence from Natural England before continuing. A licence to carry out works impacting on badger setts can take up to 6 weeks to be issued by Natural England. If a sett needs to be removed, it can only be closed and infilled between 1 July and 30 November. Usually, a one-way gate is fitted to each sett hole and then monitored, and the sett can be closed when no badgers have come out of the sett for 21 days.

The plan below shows the area where clearance would require supervision to check for sett holes:



Map Data from Google

7.4 Bats

The survey found it unlikely that bats are roosting on site. As a result, no further surveying or mitigation for bats is recommended.

Boundary scrub, woodland and hedges may be used by foraging and commuting bats. Boundary habitats should be maintained or replaced elsewhere if to be removed. To minimise impacts on foraging or commuting bats it is recommended a bat sensitive lighting scheme be incorporated into the proposals. The bat conservation trust provides guidance with regards to Bats and Lighting (Stone, 2013). Any lighting should avoid light spill impacts to retained boundary habitats with particular emphasis on avoiding light spill onto hedges, treelines, scrub and woodland strips.

7.5 Nesting Birds

The survey found a high probability of birds nesting on site during the nesting season (1st March to 31st August). Clearance of vegetation or work on building areas with potential to contain nesting birds should be carried out outside this period. Should any clearance of scrub, shrubs, trees, or demolition or works on outbuildings or building sections with potential to contain nesting birds be required during the nesting season any such areas to be cleared should first be inspected by an ecologist or the works supervised by an ecologist. If an active nest is then found clearance will have to be delayed within 5 metres of the nest until any chicks present have left the nest.

7.6 Dormice

The data search found no records for dormice and the site contains areas of dense scrub, hedgerows and woodland suitable for dormice. However, these are not extensive in area, at the most over both areas combined is 0.35 Ha suitable habitat. It is considered there is a low potential for dormice to be present on site. If they were present, dormouse density is generally around 2 per hectare of suitable habitat. Therefore, even if present it is likely that at most only one or two might be present on site. Given that only a very small area of habitat is likely to be impacted even if dormice were present the risk of injuring or killing one is minimal. No further surveying for dormice is recommended, but as a precaution clearance of scrub and undergrowth on site should be kept to the minimum required Should a dormouse be seen during works then work should stop in that area until further advice is sought from an ecologist.

7.7 Great crested newts

The survey found a low probability of great crested newts being present on site. As a result, no further surveying or mitigation for great crested newts is recommended.

7.8 Reptiles

The survey found a medium probability of reptiles being present on site within scrub, rough grass, woodland or ruderal areas. However, as the area of suitable reptile habitats likely to be cleared in the proposed works is likely to be minimal no further survey for reptiles is required. Instead as a precaution clearance of any significant areas of scrub, rough grass, woodland or ruderal habitats should be carried out using methods designed to minimise risk to reptiles. Specifically, this should involve the following:

Suitable reptile habitats to be cleared should first be cut to a height of no lower than 10-15 cms in a first cut. This would remove cover for reptiles and deter them from the area if they are present. After between 1-7 days later the remaining vegetation should be cut to ground level under ecologist supervision only after a period with temperature over 10 C had passed since the first cut, as until temperature had reached this level reptiles could not become active and would not have moved from the area. Once the vegetation had been cut to ground level works could continue in the cut area and if works are delayed the cut areas should be kept cut short until works begin. Reptiles captured by the ecologist during supervision would be released into habitat nearby away from works areas.

7.9 Other protected species

The site lacks habitats able to support other protected species.

7.10 Habitats of Principal Importance

The site does not contain any habitats considered as Habitats of Principal Importance under Section 41 (41) of the Natural Environment and Rural Communities (NERC) Act.

7.11 Notable and Biodiversity Action Plan Species

Notable species seen around the site were red kites and black headed gulls. These are unlikely to be impacted by works and site is likely to still be used by them after development.

7.12 Invasive species

No important invasive species were found on site. As no important invasive species were found no precautions are required relating to these, however, should workers subsequently find species such as Japanese knotweed or giant hogweed on site in currently inaccessible scrub during clearance, works

should stop within 7 m of the area until further advice can be sought from an ecologist or specialist knotweed or invasive species control contractor.

7.13 Validity of Report

This report is valid for one year from the date of the survey visit. Should works be delayed to later than one year after the survey then a further update survey of the site would be required as habitats change over time, along with their potential to support protected species.

8 Impact Assessment and recommendations

8.1 Impact assessment

The proposed development will impact habitats of low ecological value and have minimal impact on biodiversity provided recommendations in this report are carried out.

8.2 Mitigation and compensation

In order to avoid potential harm to badgers, nesting birds and reptiles recommendations in this report should be carried these are given in detail above but include possible requirement for ecologist supervision of clearance, nesting bird surveying and clearance of vegetation in stages.

8.3 Enhancements

Given the proposals location within a Biodiversity Opportunity Area it is recommended that the development includes enhancements to increase biodiversity value of the site. It is recommended that the roof of the new swimming pool is a green roof. Ideally this should include locally native wildflower and grassland planting.

Where space is available at ground level native trees species, native hedgerows and/or wildlife friendly/native and shrubs and climbers should also be added to the site. Bird and bat boxes or bricks could also be added to the site.

9 References

Bat Conservation Trust (2016) Bat Survey Guidelines
English Nature (2001) Great Crested Newt Mitigation Guidelines, English Nature, Peterborough
English Nature (2006) Bat Mitigation Guidelines. English Nature, Peterborough
HMSO, 1981.The Wildlife and Countryside Act 1981(as amended). The Stationery Office, Norwich.
HMSO, 1992. Protection of Badgers Act (1992).
HMSO, 1994.The Conservation (Natural Habitats, &c) Regulations 1994. The Stationery Office, Norwich.
Joint Nature Conservation Committee (1990). Handbook for Phase 1 habitat survey a technique for environmental audit.

10 Annexes

Annex 1: List of plant species mentioned in report showing scientific names
Annex 2: Phase 1 Habitat Map showing habitats on sites on 12th November 2020

Annex 1: List of plant species mentioned in report showing scientific names

Ash	Fraxinus excelsior
Blackthorn	Prunus spinosa
Buddleia	Buddleja davidii
Canadian fleabane	Conyza canadensis
Cherry	Prunus sp.
Cock's-foot	Dactylis glomerata
Cow Parsley	Anthriscus sylvestris
Creeping Buttercup	Ranunculus repens
Daisy	Bellis perennis
Dandelion	Taraxacum officinale
Elder	Sambucus nigra
Elm	Ulmus sp.
False Oat-grass	Arrhenatherum elatius
Field Maple	Acer campestre
Ground-ivy	Glechoma hederacea
Hawthorn	Crataegus monogyna
Hazel	Corylus avellana
Holly	Ilex aquifolium
Honeysuckle	Lonicera periclymenum
Hornbeam	Carpinus betulus
Ivy	Hedera helix
Laurustinus	Viburnum tinus
Leyland Cypress	Cuprocyparis leylandii
Lime	Tilia sp.
Mahonia	Mahonia sp.
Mugwort	Artemisia vulgaris
Nettle	Urtica dioica
Oak	Quercus sp.
Perennial Rye-grass	Lolium perenne
Ribwort Plantain	Plantago lanceolata
Rose	Rosa sp.
Snowberry	Symphoricarpos sp.
Sycamore	Acer pseudoplatanus
Yarrow	Achillea millefolium

Annex 2: Phase 1 Habitat Map showing habitats on sites on 12th November 2020

Plan 1 – Tennis courts area at Bourne End Junior Sports Club

Map Data from Google

Plan 2 – Playing field south of Bourne End Academy

Map Data from Google