St Mary with St Alban Twickenham Road Teddington TW11 9ND

Preliminary Ecological Appraisal

February 2017

FINAL

Produced by

Ecology and Land Management

For MRDA

on behalf of

Parochial Church Council of the Church of St Mary with St Alban

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Summary

- The Proposed site comprises land at St Mary with St Alban church, Twickenham Road, Teddington with associated churchyard and landscaping. The development site is located on the northern side of the church within the churchyard.
- At the time of the survey the area proposed for development comprises a small, pitched roof, brick extension, a small wooden shed, Cypress trees and mown grass.
- The site is designated as a Site of Local Importance for Nature Conservation. The site lies within a Conservation Area. The development proposals should consider the requirements set out in planning policies of the Local Plan. In addition, churchyards and cemeteries are on the London Biodiversity Action Plans.
- There are mature trees on site some of which would require removal prior to construction of the proposed extension. Trees within a Conservation Area are subject to a Tree Preservation Order (TPO). Mature trees to be removed should be assessed for their potential to support bat roosts. In addition, the risk of affecting root zones of trees within close proximity to the proposed extension should be considered during excavation/piling.
- A bat inspection of the extension to be demolished should be undertaken with a view to undertaking a bat roost emergence survey.
- The site provides opportunities for reptiles. A herpetofauna scoping survey has been recommended.
- 7 Two burrow entrances are located close to the proposed development. These should be investigated for the presence of badger.
- 8 There should be no vegetation clearance during the bird-nesting season
- 9 Any grubbing out of tree roots should investigate presence of stag beetle.
- 10 Consideration should be given to hedgehogs a local BAP species.

Section 1 Introduction

- 1.1 Ecology and Land Management were commissioned by MRDA on behalf of the Parochial Council of the Church of St Mary with St Alban to undertake a Preliminary Ecological Appraisal of land associated with the proposed extension to St Mary with St Alban Church. The proposed development requires the demolition of an existing extension and construction of a new extension along the northern elevation of the church.
- 1.2 The report is required in response to guidance notes set out by the local council to ensure that adequate ecological information accompanies the planning application for the proposed development. The findings of this study have informed, where necessary the design and layout of the proposed development.
- 1.3 The aims of the preliminary ecological appraisal are:
 - to identify the ecological habitats at the study site, and potential for protected species,
 - to provide recommendations for further protected and notable species surveys as necessary,
 - to identify significant features for retention and protection, where possible or appropriate,
 - to identify features for enhancement, and where possible
 - to provide outline recommendations for mitigation and/or compensation where relevant.
- 1.4 The appraisal included undertaking a desk study and preliminary ecological appraisal. The findings have been reviewed in light of relevant legislation, planning policy and biodiversity contextual information. The key findings and recommendations are set out in Section 5.
- 1.5 Assessment of biological records data is recommended as part of the overall assessment of protected species and habitats within close vicinity to the site. Biological records have been obtained from the Greenspace Information for Greater London (GiGL). In addition, biological data has been assessed from National Biodiversity Gateway (nbn, soon to be nbn Atlas) and the Multi-Agency Government Information Centre (MAGIC).

Section 2 Methodology

Desk Study

2.1 This section summarises the methodology used in undertaking the appraisal, which included a desk study and Extended Phase 1 Survey (based on JNCC, 2010 guidance) with reference to the Preliminary Ecological Appraisal guidance (CIEEM, 2012).

Desk Study

- 2.2 The desk study is an important element of undertaking an initial ecological appraisal of a site proposed for development, since it enables the initial collation and review of contextual information such as designated sites together with known records of protected and priority species.
- 2.3 In order to compile information on the site and immediate surroundings a search for relevant background information such as: biological records, history, planning designations, current and past management was undertaken.
- 2.4 The desk study involved collating relevant information from organisations, websites and documents including:
 - ii) Multi-Agency Government Information Centre (MAGIC).
 - iii) National Biodiversity Network (nbn Gateway)¹.
 - iv) London and UK Biodiversity Action Plans.
 - v) Richmond Biodiversity Action Plan.
 - vi) London Borough of Richmond Local Plan.
- 2.5 A search of the Multi-Agency Government Information Centre (MAGIC) website was undertaken to identify statutory designations within 5km for European sites and 2km for UK sites.
- 2.6 The nbn (National Biodiversity Network) Gateway website was searched for information on protected species in the Ordnance Survey 10km Grid Square TQ17.
- 2.7 UK, London and Richmond Biodiversity Action Plans were consulted and their relevance to the site outlined, where relevant.

Preliminary Ecological Appraisal

- 2.8 The survey technique adopted for the habitat assessment is at a level intermediate between the standard Phase 1 Survey technique, based on habitat mapping and description, and a Phase 2 survey, based on detailed habitat and species surveys. The survey technique is commonly known as an extended Phase 1 Survey.
- 2.9 The survey is adapted from the guidelines referenced in the Handbook for Phase 1 Habitat Survey A Technique for Environmental Audit (JNCC. 2010). The site is walked initially to assess the overall habitat types. The extent of each habitat is then recorded and compared to the surrounding area to

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¹ nbn Gateway data transferring to nbn Atlas on 28th February 2017.

demonstrate the status of each habitat type. Subsequently, a preliminary assessment is made of the floristic composition of each habitat indicating rarity, where appropriate. Overall, the survey provides an evaluation of wildlife interest and conservation priority. It should be noted that the survey is based principally on vegetation, although habitats on site are searched for obvious signs of faunal activity and an assessment is made of their potential to support protected species.

Evaluation

- 2.10 The evaluation process used in this report follows broadly the guidance on Guidelines for Preliminary Ecological Appraisal developed by the Institute of Ecology and Environmental Management (CIEEM guidelines, March 2012). Habitats present within the site have been assigned ecological values on a scale between international and local (immediate zone of influence). Values do not take account of economic values or ecological resources, they are based entirely on the innate value of the flora, fauna and habitats in terms of the conservation of the genetic resource. See Appendix II.
- 2.11 The value of areas of habitats and species has been measured against published selection criteria where possible. A level of importance has been assigned to the key ecological features, which occur at the site. In those instances where the potential presence of scheduled or protected species has been identified, a preliminary value is attributed based on a prediction of population size.

Section 3 Legislation, Planning Policy and Biodiversity Context

Legislation and Policy

This section sets out the relevant legal, planning policy and biodiversity context of the Site and proposed development. The occurrence of species, which are specifically protected by law or otherwise listed as threatened, although not necessarily strictly rare, can also be helpful in establishing the conservation value of sites. A number of habitats and species in the UK receive varying levels of statutory protection under several elements of legislation. The principle mechanism for the legislative protection of wildlife in Britain is shown in Table 1.

Legislation	Species and Habitats	
International		
Bern Convention 1979	Protects important populations of listed species and their habitats. Aims to conserve wild flora and fauna and their natural habitats.	
IUCN (Red List)	The world conservation unit assesses the conservation status of species, sub-species and varieties.	
European		
Council Directive 92/43/EEC on the Conservation of Natural Habitat, Wild Fauna and Flora	This is implemented in the UK by the Conservation of Habitats and Species Regulations or Habitat Regulations, 2010.	
Birds Directive 1979	This provides a framework for the conservation and management of, and human interactions with, wild birds in Europe. In England the Birds Directive is implemented through the WCA, 1981 and the Habitat Regulations, 2010.	
UK		
Wildlife & Countryside Act, 1981 (Schedules 1, 5, and 8) and amendments	Protection of wild plants, animals and habitats in the UK.	

Legislation	Species and Habitats	
Government Circular 06/05	Protected species are also covered by the requirements of the Government Circular 06/05: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System	
NERC Act 2006	Section 41 of the Act requires the Secretary of State to publish a list of habitat and species, which are of principal importance for the conservation of biodiversity in England. This list has been drawn up in consultation with Natural England and forms the basis of the UK Biodiversity Action Plan.	
The CroW Act, 2000	This piece of legislation provides for public access on foot to certain types of land, amends the law relating to public rights of way, increases measures for the management and protection for Sites of Special Scientific Interest (SSSI) and strengthens wildlife enforcement legislation, and provides for better management of Areas of Outstanding Natural Beauty (AONB).	
The Hedgerow Regulations, 1997	Under the Hedgerows Regulations 1997 it is against the law to remove or destroy certain hedgerows without permission from the local planning authority. The local planning authority is also the enforcement body for offences created by the Regulations. Local planning authority permission is normally required before removing hedges that are at least 20 meters (66 feet) in length, more than 30 years old and contain certain plant species. The authority will assess the importance of the hedgerow using criteria set out in the regulations.	

Table 1 – Principle legislative mechanism for wildlife protection in the UK.

Below is a table illustrating how particular biological groups are protected by legislation.

Table 2

Biological Groups	Relevant Legislation	
Flora	A number of plant species are protected under Section 13 of the amended 1998 Wildlife & Countryside Act, 1981. It is an offence to intentionally pick, uproot or destroy any wild plant listed in Schedule 8 of the Act. The list includes both higher plants such as rare orchids and lower plants such as lichens and mosses.	
Bats	All species of bat in Britain and their breeding sites or resting places are protected under Regulation 41 of the Conservation of Habitats and Species Regulations, 2010 and under Section 9 of the Wildlife and Countryside Act, 1981 (WCA). It is an offence for anyone to intentionally kill, injure or handle a bat, to possess at bat (whether live or dead), deliberately disturb a roosting bat, or sell or offer a bat for sale, without a licence. It is also an offence to damage, destroy or obstruct access to any place used by bats for shelter, whether they are present or not. All bat species in Britain are protected under the Wildlife and Countryside Act 1981 through inclusion on Schedule 5. They are also protected under the Conservation (Natural Habitats &c.) Regulations 1994 (which were issued under the European Communities Act 1972), through inclusion on Schedule 2. On 1st April 2010, these Regulations, together with subsequent amendments, were consolidated into the Conservation of Habitats and Species Regulations 2010. European protected animal species and their breeding sites or resting places are protected under Regulation 39. Since August 2007, building development that affects bats or their roosts needs a Protected Species Licence under The Conservation (Natural Habitats &c.) (Amendment) Regulations 2007 administered in England by Natural England.	
Birds	All wild birds (birds in a wild state resident or visiting Great Britain) and their nests and eggs are protected under the WCA, 1981. Particular emphasis is given to the protection of breeding birds. With certain exceptions, it is an offence to intentionally kill, injure or take wild birds, take, damage or destroy the nest of wild birds while in use or being built, take or destroy the eggs of wild birds, disturb wild birds listed in Schedule 1 when nest building or at a nest containing eggs or young or disturb dependent young of wild birds.	
Badgers	Badgers and their setts are protected by the Protection of Badgers Act, 1992. It makes it illegal to kill, injure or take badgers or to interfere with a badger sett or any part of a sett. The term 'badger sett' is normally understood to mean the system of tunnels and chambers in which badgers live and their entrances and immediate surrounds. The 1992 Act specifically defines a sett as "any structure or place, which displays signs indicating current use by badger."	

Biological Groups	Relevant Legislation	
Hazel Dormouse	Individual animals, their breeding sites or nesting places (nests) are protected under Regulation 41 of the Conservation of Habitats and Species Regulations, 2010 and under Section 9 of the Wildlife and Countryside Act,1981 (WCA). It is an offence for anyone to intentionally kill, injure or handle a dormouse, to possess a dormouse (whether live or dead), deliberately disturb a dormouse, or sell or offer a dormouse for sale without a licence. It is also an offence to damage, destroy or obstruct any place used by dormice for shelter, whether present or not.	
Hedgehog	Hedgehogs receive partial protection on Schedule 6 of the Wildlife and Countryside Act, 1981, which stipulates that animals may not be killed or taken by certain methods. In addition, the Convention on the Conservation of European Wildlife and Natural Habitats also lists hedgehog prohibiting the use of all indiscriminate means of capture and killing.	
Water Vole	Water vole and their breeding/resting places are fully protected by the Wildlife and Countryside Act, 1981 (as amended in 2008). It is an offence to deliberately capture, injure of kill a water vole or to damage, destroy or obstruct their breeding or resting places. It is also an offence to disturb them in their breeding or resting places.	
Reptiles	All native reptiles are listed on Schedule 5 of the Wildlife and Countryside Act, 1981. It is an offence for anyone to intentionally kill or injure a 'widespread' reptile species (viviparous lizard, grass snake, adder or slow worm), or sell or offer for sale without a licence.	
	The sand lizard and smooth snake, their breeding sites or resting places (any structure that may offer refuge), are protected under Regulation 41 of the Conservation of Habitats and Species Regulations, 2010. It is an offence for anyone to intentionally kill, injure or handle either of these two species, to possess an animal (whether live or dead), deliberately disturb a sheltering animal, or sell or offer an animal for sale without a licence. It is also an offence to damage, destroy or obstruct access to any place used by sand lizards and smooth snakes for shelter, whether they are present or not.	

Biological Groups	Relevant Legislation	
Amphibians	All native amphibians are listed on Schedule 5 of the Wildlife and Countryside Act, 1981. It is an offence to sell or offer for sale any native amphibian species.	
	The great crested newt and natterjack toad, their breeding sites (typically ponds) and nesting places (typically terrestrial that offers refuge) are protected under Regulation 41 of the Conservation of Habitats and Species Regulations, 2010. It is an offence for anyone to intentionally kill, injure or handle either of these two species, to possess an animal (whether live or dead), deliberately disturb a sheltering animal, or sell or offer for sale without a licence. It is also an offence to damage, destroy and obstruct access to any place used by great crested newts and natterjack toads whether they are present or not.	
Invertebrates	A small number of invertebrates including beetles, crickets, butterflies and moths are protected under Section 9, Schedule 5 of the Wildlife and Countryside Act, 1981 against deliberately killing, injuring or taking. Other species receive partial protection under the same act. For example it is an offence for anyone to sell or offer for sale a stag beetle without a licence. Others are highlighted for conservation concern through IUCNs red list data and UK and local biodiversity action plans. In addition, a number of invertebrates are listed under Section 41 of the NERC Act 2006. These species are regarded as of principal importance for the conservation of biodiversity in England.	

Table 2 – Legislative protection for particular biological groups.

Planning Policy Context

National Policy Planning Framework (NPPF)

3.2 The NPPF was published in March 2012 and sets out the Government's planning policies for England and how these are expected to be applied. It replaces PPS9 (*Biodiversity and Geological Conservation*), which was published in August 2005. Policies set out in NPPF are taken into account by local planning authorities in the preparation of local development documents. They may also be material to decisions on individual planning applications.

London Borough of Richmond

- 3.3 The site is covered by London Borough of Richmond Local Plan. There is a presumption in the plan policies to adopt a wide range of environmental policies. Nature conservation is an important consideration in many development proposals and planning decisions. In order to understand planning policy and guidance in Richmond, policies within the Local Plan were consulted.
- 3.4 The Local Plan sets out the priorities for the development in the borough and will be used for making decisions on planning applications. It consists of a number of planning documents and guidance including the Core Strategy adopted in 2009 and the Development Management Plan adopted in 2011. A full understanding of the extent of the wildlife present on site and the measures needed to overcome any potential detrimental impact during construction is likely to be essential.
- 3.5 The proposed site lies within land covered by policies DMOS03, DMOS11, CP4, DMTC1 and DMHD1.

Policies in the Core Strategy related to the Biodiversity include:-

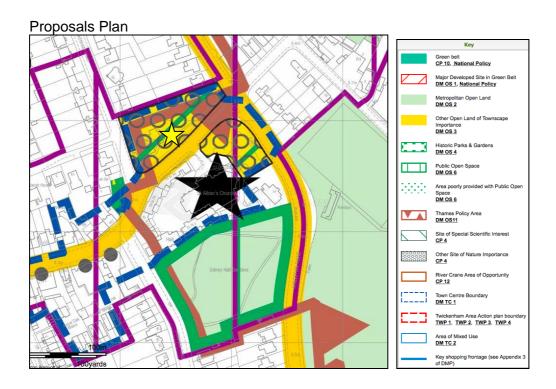
Policy	Relevance to Site
Core Strategy	
Biodiversity	
CP4 – Other Site of Nature Importance The Borough's biodiversity including the SSSIs and Other Sites of Nature Importance will be safeguarded and enhanced. Biodiversity enhancements will be encouraged particularly in areas of deficiency (parts of Whitton, Hampton, Teddington, Twickenham and South Kew), in areas of new development and along wildlife corridors and green chains such as the River Thames and River Crane corridors. Weighted priority in terms of their importance will be afforded to protected species and priority species and habitats in the UK, Regional and Richmond upon Thames Biodiversity Action Plans	Impact and mitigation proposals are considered as part of the biodiversity report.
Other Open Land of Townscape Importance	
DMOS3 Other open areas that are of townscape importance will be protected and enhanced in open use. It will be recognised that there may be exceptional cases where appropriate development is acceptable. The following criteria must be taken into account when assessing appropriate development: It must be linked to the functional use of the Other Open Land of Townscape Importance; or It can only be a replacement or minor extension of existing built facilities;	The site is within an area of other open land of townscape importance.

of the Imp other des Who other ope acc	addition to 1. or 2., it does not harm the character and openness he open land. brovement and enhancement of the openness and character of the open land and measures to open up views into and out of signated other open land will be encouraged where appropriate. The considering developments on sites outside designated the open land, any possible visual impacts on the character and tenness of the designated other open land will be taken into ount. The constant open land will be taken into ount.	
The ider ider en inclindi disrive which dep slip en take from the en inclindi esp pro inclindi and new pro Tha rout enc for I rect to the whe increte	e special character of the Thames Policy Area (TPA), as stiffied on the Proposals Map, will be protected and enhanced by: suring development protects the individuality and character, uding the views and vistas, of the river and the identified vidual reaches; scouraging land infill and development which encroaches into the rr and its foreshore other than in exceptional circumstances, chimay include where necessary for the construction of river sendent structures such as bridges, tunnels, jetties, piers, ways etc.; suring development establishes a relationship with the river and es full advantage of its location, addressing the river as a stage, opening up views and access to it and taking account of changed perspective with tides; couraging development which includes a mixture of uses, uding uses which enable the public to enjoy the riverside, recially at ground level in buildings fronting the river; otecting and promoting the history and heritage of the river, uding landscape features, historic buildings, important structures a chaeological resources associated with the river and ensuring of development incorporates existing features; otecting and improving existing access points to the River times, its foreshore and Thames Path, including paths, cycle tes, facilities for launching boats, slipways, stairs etc. and souraging opening up existing access points to the public, both pedestrians and boats; quiring public access as part of new developments alongside and the River Thames, including for pedestrians, boats and cyclists, are appropriate; easing access to and awareness of the river including from town centres.	The site is within the Thames policy area.
DM To I app Cer Ricl Twi Pro app cha cou fron	maintain and improve the town centres, the Council will require propriate development to take place within the identified Town intre Boundaries of the five main town centres. These are hmond, the major centre, and the four district centres — ckenham, East Sheen, Teddington and Whitton. posals that contribute towards a suitable mix of uses will be proved, provided that they are appropriate to the function, practer and scale of the centre. Acceptable town centre uses all include retail (if within or well related to designated intages), business, leisure, tourism, community uses, health I residential development compatible with other development	The site is within the town centre boundary.
DM The des Cor	ne town centre. nservation Area HHD1 Council will continue to protect areas of special significance by signating Conservation Areas and extensions to existing asservation Areas using the criteria as set out in PPS 5 and as rised by English Heritage.	The site is within a Conservation Area.

The Council will prepare a Conservation Area Appraisal and Management Plan for each Conservation area, these will be used as a basis when determining proposals within or where it would affect the setting of, Conservation Areas together with other policy guidance.

Buildings or parts of buildings, street furniture, trees and other features, which make a positive contribution to the character, appearance or significance of the area should be retained. New development (or redevelopment) or other proposals should conserve and enhance the character and appearance of the area.

Table 1. Core Strategy Policies and their relevance to the site.



Site Location:

Figure 1 – London Borough of Richmond Local Plan Policy Map.

The London Plan – Spatial Development Strategy for Greater London (July 2011)

The London Plan is part of the development strategy for Greater London. Amongst other things, The London Plan states that it is:

- setting out an integrated social, economic and environmental framework for the future development of London, looking forward 15–20 years;
- integrating the physical and geographic dimensions of the Mayor's other strategies, including broad locations for change and providing a framework for land use management and development, which is strongly linked to improvements in infrastructure, especially transport;
- providing the London wide context within which individual boroughs must set their local planning policies;
- setting the policy framework for the Mayor's involvement in major planning decisions in London;

- setting out proposals for implementation and funding; and being London's response to European guidance on spatial planning.
- 3.6 The London Plan, 2011 includes policies relating to the ecology and the natural environment relevant to the Site as follows:

Policy 7.19 - Biodiversity and access to nature

The Mayor will work with all relevant partners to ensure a proactive approach to the protection, promotion and management of biodiversity in support of the Mayor's Biodiversity Strategy. This means planning for nature from the beginning of the development process and taking opportunities for positive gains for nature through the layout, design and materials of development proposals.

Policy 7.21 – Trees and Woodland

Trees and woodlands should be protected, maintained, and enhanced, following the guidance of the London Tree and Woodland Framework (or any successor strategy).

Biodiversity

Natural Areas

- 3.7 Natural Areas are a subdivision of England each with a characteristic association of wildlife and natural features. They provide a way of interpreting the ecological variations of the country in terms of natural features, illustrating the distinctions between one area and another. Each Natural Area has a unique identity resulting from the interaction of wildlife, landforms, geology, land use and human impact. Natural Areas have been formally defined as bio geographic zones which reflect the geological foundation, the natural systems and processes and the wildlife in different parts of England, and provide a framework for setting objectives for nature conservation (Biodiversity: The UK Steering Group Report, HMSO 1995).
- 3.8 The Site lies within the London Basin Natural Area. The London Basin is a large, trough like basin that was formed around 50 million years ago, and is filled with mostly sand and clay sediments. About one-third of the area is covered by London and the wildlife of the Natural Area is characterized by islands of semi-natural habitats. It can be said that suburbia forms the major land use category within the London Basin. However, it is often on the fringes of settlements that biodiversity is greatest. The many parks, commons, gardens and woods that London possesses support a great variety of wildlife. The climate in London is warmer, drier, more disturbed and more polluted than its rural surrounds. London's numerous species are a factor of London's large size and the high proportion of recently colonised species. Urban wildlife sites, including semi-natural habitats, which amount to the encapsulated countryside provide the last refugia for some species. They are sites where hybrid species and new communities can evolve and where adaptive behaviour is observed.
- 3.9 The largest land-use category is suburban backland including gardens, roads, verges, derelict land and car parks. This type of habitat is often ecologically richer and more extensive than that of formal open space, but it is also both understudied and more threatened than formal open space.

Biodiversity Action Plans

- 3.10 The UK post 2010 Biodiversity Framework covers the period 2011 2020 and replaces the UK Biodiversity Action Plan. Its aim is to address the underlying causes of biodiversity loss and improve and enhance biodiversity and ecosystem services. The UKBAP biodiversity habitats and species background information is still widely used at a county level. UKBAP biodiversity habitats and species have been considered within this report and enhancement measures have been suggested within the recommendations sections. The UKBAP sets out targets for a number of Priority Species and Habitats as well as for broad habitat types. Priority species listed in the UKBAP include several species of bat, water vole and great crested newt and is relevant in the context of Section 74 of the Countryside and Rights of Way Act 2000.
- 3.11 The Countryside and Rights of Way (CRoW) Act (2000) provides legislation to promote the further conservation of habitat types and species considered of principle importance for biodiversity. In the NPPF it is stated that local plans should "promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets, and identify suitable indicators for monitoring biodiversity in the plan." The lists of habitats and species of principle importance comprise those identified as priorities under the UKBAP. This list forms Annex C of Government Circular 06/057.
- 3.12 Furthermore, the Department for the Environment, Food and Rural Affairs (Defra) has published a "Working with the Grain of Nature" document 8, which seeks to develop a five- year work programme for the implementation of the targets set out in the UKBAP.
 - London Borough of Richmond Biodiversity Action Plan
- 3.13 "The main aims of the London Borough of Richmond BAP is as follows:

To conserve, and where possible, enhance Richmond's variety of habitats and species, in particular those, which are of international or national importance, are in decline locally, are characteristic to Richmond or have particular public appeal, which can raise the profile of biodiversity.

To ensure that Richmond residents become aware of, and are given the opportunity to become involved in, conserving and enhancing the biodiversity around them.

To raise awareness and increase stakeholder involvement in maintaining and where possible, enhancing species and habitats of importance. "

- 3.14 "The London Borough of Richmond upon Thames covers approximately 5,500 hectares and it is the only London Borough to straddle both sides of the River Thames. Richmond upon Thames is believed to be one of the richest boroughs in London in terms of the total area of green space, the quality and diversity of parks, open spaces and conservation areas and the wealth of different habitats and species these areas support, as many of the species are also important on a regional, national and international scale."
- 3.15 Action plans have since been produced and common issues have been addressed generically. "However, the review of the first round of Action Plans has shown that in many areas the Partnership could be more effective. Despite their efforts, wildlife in London still faces major challenges from development, lack of management, lack of awareness and so on and in some ways their work is still beginning. There are also a number of Biodiversity Action Plans for

Greater London. The habitats and species highlighted within the London BAP, which may be relevant to the Site include 'Built Structures', 'Rivers and Streams', 'House sparrow' and 'Bat'.

Action Plan	Aims	Relevance
Parks and Urban Green Spaces	"The Action Plan provides a focus to look at ways to improve the nature conservation value of London's parks and green spaces, alongside their other uses. It provides support to parks and green space managers and promotes the values and benefits of biodiversity for both parks and people."	There is opportunity to provide biodiversity enhancement at the proposed development.
Built Structures	Design for Biodiversity.	Opportunities for enhancement exist within the proposed scheme.
House Sparrow	"Raise awareness of the need for biodiversity conservation by focusing attention on the decline in the house sparrow and its importance as a cultural emblem. Establish the cause(s) of decline in the population of house sparrows and, if possible, undertake measures to reverse the decline."	There is opportunity for this species to forage on the site.
Song thrush	The overall aim of this action plan is to prevent further decline of the song thrush in Richmond Borough and to contribute to an overall strengthening of the population of song thrush throughout London.	There is opportunity for this species to forage on the site.
Common Starling	UK BAP species.	There is opportunity for this species to forage on the site.
Bat	To reverse the current population declines of bats in London Borough of Richmond upon Thames To redress public misconceptions about bats and secure their status as culturally valued species.	There are records of bats within 1km of the site.
Stag beetle	To protect, conserve and enhance nationally significant populations of stag beetle in London Borough of Richmond upon Thames.	There is record of stag beetle within 1km of the site.
	To ascertain the reasons for uneven distribution of stag beetle populations across the borough.	
	Increase public awareness of the importance of stag beetle and that of the dead wood habitat.	

Section 4 Description and Site Location

4.1 This section sets out the findings of the desk study and extended Phase 1 survey and should be read in conjunction with Habitat Plan (Appendix III).

Context

4.2 The site is associated with St Mary with St Alban Church as shown in Appendix I (OSGR: TQ3165713). The site is approximately 0.56ha in extent. The land lies

- at approximately 10m AOD. The soils are described in Soilscapes (Cranfield University) as freely draining slightly acid loamy soils.
- 4.3 The area proposed for development consists of a northern extension to the main church and associated churchyard and garden shed. The extension is brick built with pitched roof. The garden shed is wooden. There are mature trees and gravestones within the area.
- 4.4 The development proposals for the site involve the demolition of extension to the north, removal of the wooden shed and removal of two mature Cypress trees. It is understood that graves will be retained.
- 4.5 The wider landscape is characterised by the townscape of Teddington. The A313 Ferry Road borders the site to the south; Twickenham Road borders the site to the southwest. The River Thames is approximately 200m north of the site and the St Mary's Parish Hall, Landmark Arts Centre and public park to the southeast.

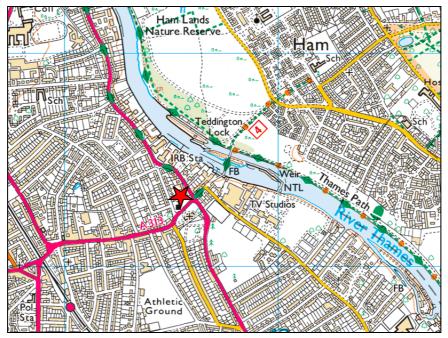


Figure 2 – Site Location



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Protected Species and Designated Sites

A biological records search has not been obtained from Greenspace Information for Greater London (eCountability). The data must not be distributed or published for an external or public audience, for example within the appendix of a report. Local Planning Authorities may request a copy of the data from GiGL either via their service level agreement (most Boroughs of GiGL partners) or as a data search. The search confirms that the Site is designated for its nature conservation value and is listed as a Site of Local Nature Conservation Importance. The site also within 300m of a Local Nature Reserve and a Site of Metropolitan Importance for Nature Conservation. A full list of records of protected and BAP species within 1km of the Site can be found in the data search. Below is a table listed within the GiGL database that may be relevant to the site.

Taxon <i>Name</i>	Number of protected species from GiGL data	Likely presence on Site
Plants	12	Negligible
Birds	5	Negligible
Mammals (not bats)	1	Low Risk
Bats	3	Moderate Risk
Amphibians	0	Negligible
Reptiles	0	Moderate
Invertebrates	9	Low Risk

Table 3 – Protected Species Data within 1km of Site. Source: GiGL February 2017.

- 4.7 There is one site with European or National statutory designation within the search area and one Local Nature Reserve. There are five non-statutory Sites of Nature Conservation Importance (SINCs) and no RIGS/LIGS within 1km of the Site.
- 4.8 Non-statutory designations within Greater London are collectively known as Sites of Importance for Nature Conservation (SINCs). Within the collective SINC designation there is further subdivision into three types, which are chosen on the basis of their importance to a particularly defined geographical area, known as Sites of Metropolitan Importance (SMI), Sites of Borough Importance (SBI) and Sites of Local Importance (SLI). A full description of the non-statutory designation system is provided by GiGL and can be found in the GiGL data search.

	HBIC Data Research Results Number of Sites	Relevance to Site
European Statutory Designated Site	0	N/A
National Statutory Designated Site	1	Approximately 200m north and northeast of site.
Local Nature Reserve	1	Approximately 200m north and north east of site.
Non Statutory Designated Site (SMI, SBI, SLI)	5	The site is designated as of Local Importance for Nature Conservation.

Table 4 – Designated Site Data. Source: GiGL, February 2017

4.9 Table 4 summarises non-statutorily designated sites within 1km of the proposed development site. A plan illustrating the distribution of SINC designations within 1km of the Site is included in GiGL data search.

Section 5

Potential Ecological Interest and Recommendations

Habitats

- 5.1 The site was surveyed on 24th January 2017 on a sunny and cold day (ca. 5^o C). The site was surveyed by a qualified ecologist. The aim was to identify the main habitat types within the area proposed for development including the general species composition and structure of the vegetation as well as areas of potential ecological interest. Habitats Habitat types and landscape features adjacent to the site were also noted. In addition, notes were made with regard to biodiversity enhancement potential within the site with a view to informing the overall assessment.
- 5.2 The habitats identified are listed below. Habitats were searched for obvious signs of faunal activity or potential to support particular biological groups.

Key to Site and Habitat Descriptions

Scattered Trees
Amenity Grassland
Bryophytes
Lichens
Buildings and Hard Surfaces

Scattered Trees

- 5.3 A schedule of churchyard trees lists 25 trees within the churchyard. Species include lime (*Tilia sp.*), maple (*Acer sp.*), holly (*Ilex aquifolium*), beech (*Fagus sylvatica*), cypress (*Cupressus sp.*), yew (*Taxus baccata*) and hawthorn (*Crataegus monogyna*). In the northern section of the site trees are closer together and provide continuous cover and structure similar to woodland with lower growing shrubs. The site lies within a Conservation Area (Teddington Lock), which means all trees within the churchyard are protected by Tree Preservation Order (TPO). Permission must be granted by the local authority before carrying out tree work, unless the tree in question is dead or dangerous, in which case the local authority must be given five working days notice under the dead and dangerous exemption.
- Trees are important in the landscape and provide a refuge for birds, small mammals and invertebrates. Where possible, trees should be retained, protected, maintained, and enhanced, following the guidance of the London Tree and Woodland Framework.
- 5.5 It is understood that the two Cypress trees will need to be removed as part of the proposals. Where proposals are likely to be in close proximity to trees it is recommended that any works within the tree protection zones are carefully monitored to protect trees in the long-term.
- 5.6 All tree protection, work to trees and any work in the vicinity of trees is to accord with the relevant sections of the following standards:
 - BS 3998 Recommendations for Tree Work.
 - BS 4428 Code of practice for general landscape operations.
 - BS 5837 Guide for Trees in Relation to Construction.
 - BS 1722 Fences.

Amenity Grassland/semi-natural Grassland

- 5.7 The churchyard comprises amenity grassland with informal grass paths. There is one hard-core path (tarmac) along Ferry Road. The grassy ground is undulating and two burrow entrances were located adjacent to graves near the proposed extension site. A compost heap is located on the northern boundary. The wildlife citation for the site indicates that the grass between the graves along side Ferry Road is generally kept short. Although this could not be confirmed due to the time of year the survey was undertaken it is suggested that away from the road the grass is allowed to grow longer with an annual hay cut in summer, which has allowed wild flowers to thrive including rosy garlic (Allium roseum), honesty (Lunaria annua) and wood avens (Geum urbanum). Foxgloves (Digitalis purpurea) and sweet violets (Viola odorata) grow in the shade cast by a group of yew (Taxus baccata) and lime (Tilia sp.) trees.
- 5.8 Amenity grassland is not listed in the UK BAP or local BAP. Intensively managed and regularly mown grassland communities are typical of private grounds. This type of grassland is usually considered to be of limited botanical interest and is likely to support a low diversity of insect life. However, part of this grassland is management as semi-natural grassland.
- 5.9 There are records of 12 species of higher plant (nationally scarce, local conservation concern or Red list) within 1km of the site. None of these are likely to occur on site. However, the churchyard is known as supporting a flowery grassland with large trees. Semi-natural grassland is considered of nature conservation interest. This allows a range of flora to develop providing botanical interest and feeding opportunities for invertebrates. In addition, expanses of amenity grassland can still have high biomass of soil fauna (e.g. earthworms and leatherjackets) and thereby provide feeding opportunities for birds such as gulls or lapwings as well as small mammals and if left to grow tall, can support some invertebrate life. The grassland may be used for basking reptiles when adjacent to scrub vegetation or mature shrub or be a feeding territory for amphibians and reptiles. There is potential for reptiles within the area proposed for redevelopment. However, the floristic diversity in this immediate area of the proposals is low and no further botanical survey is recommended. Nevertheless, care should be taken not to damage the areas of grass managed as meadow. Storage of equipment, machinery etc. during construction must not damage the grassland with floristic interest in the wider churchyard.

Buildings and Hard Surfaces

5.10 There is one brick built extension, one wooden shed, paving stones and a number of gravestones within the area proposed for the new extension. Buildings can be valuable for a range of species including birds, bats and lower plants that find refuge in crevices and within loft spaces. The brick extension has loose mortar around the western gable making it of potential use for roosting bats. There are bryophyte and lichens communities on gravestones. Churchyards are important because they have changed little over decades or even centuries, and this allows slow growing lichen species the time and ecological continuity that they need to become established and flourish. A few lichens are rare and only found in churchyards. It is recommended that lichen covered gravestones should where possible be preserved. Where it is not possible to retain gravestones in situ they should be relocated to replicate the original aspect and light conditions.

Invasive Species

- 5.11 There are five notifiable (injurious) weeds listed in the Weeds Act, 1959. These are: Cirsium vulgare, Cirsium arvense, Rumex crispus, Rumex obtusifolius and Senecio jacobaea. These must not be allowed to spread. Guidelines issued by the Ministry of Agriculture, Fisheries and Food should be used for their disposal. These species were not observed within the site but may be present within the more wooded area to the northeast.
- 5.12 There are three plants not listed in the Weeds Act that must not be allowed to spread. These plants are listed in Schedule 9 Part II of the Wildlife and Countryside Act, 1981 and must not be released or allowed to escape into the wild. They are Japanese knotweed (*Fallopia japonica*), Giant hogweed (*Heracleum mantagazzianum*) and Himalayan balsam (*Impatiens glandulifera Royle*). Guidelines issued by Natural England (formerly Defra) should be used for its disposal. None of these were seen during the site visit.

Fauna

- 5.13 This survey has identified areas of importance for floral and faunal communities and provided information on habitat features of particular value to different biological groups, including features of conservation interest. The following provides a summary of the potential presence of protected species.
- 5.14 Detailed Impact Assessment and mitigation proposals would be required where protected species are found.

Species	Relevance to Site	Recommendation
Badger	There are no records of badger within 1km of the site. There are two burrow entrances on the northern side of the church near graves. These should be surveyed for signs of badger.	It is understood that construction works will not require excavation of graves. However, building works are likely to be in close vicinity to the burrow entrances. Badger surveys can be undertaken throughout the year with the ideal time being September to November. However, May to August may also provide sett survey information. Further survey work of the burrow entrances should be undertaken to establish whether badger is using these burrows and whether a licence will be required prior to the development works.
Bat	There are records of three species of bat within 1km of the site. The brick extension on the northeastern corner of the main church provides opportunities for bats where missing mortar creates gaps along the eaves of the western gable. It is recommended that a bat emergence survey is undertaken prior to demolition works.	Bat roost inspection/emergence survey should be undertaken during May to September inclusive. Please note that where bat roosts are confirmed a European Protected Species Mitigation Licence (EPS) (under the 2010 Regulations) for Bats in respect of development would be required from Natural England to permit the predicted disturbance to bats and the potential temporary loss of bat resting places during the proposed building works, as bats are fully protected by UK and European law.
Hazel Dormouse	Habitats typically suitable for dormice include deciduous woodland, hazel and sweet chestnut coppice, continuous thick (4m) wide hedgerow, close to woodland and thick continuous areas of scrub close to woodlands. There are no dormouse records within 1km of the site.	The development site does not support suitable habitat. No further survey work is recommended.
Hedgehog	There is available habitat for hedgehogs within the development footprint.	The presence of hedgehog is not an obstacle to development. However, if hedgehog is found on site they should be carefully removed to a suitable or purpose built habitat close by. No further survey work is recommended.
Species	Relevance to Site	Recommendation

Water vole	There are no records of water vole within 1km of the site. There are no watercourses within the development footprint. Although the River Thames is within 1km. The nearest records are likely to be from Longford River in Bushy Park.	The proposed development will have no impact upon this species.
European otter	There are no records of this species within 1km of the site and no watercourses within the site.	The proposed development will have no impact upon this species.
Birds	The development site presents opportunities for birds. Birds are likely to nest and forage within trees and shrubs. However, there were no signs of nesting birds within the brick extension.	All bird species are protected by the Wildlife & Countryside Act, 1981 (and amendments) vegetation clearance should not be undertaken during the bird-breeding season from March to September inclusive. Where this is not possible, great care should be taken to avoid damage to nesting birds. In addition, should there be any signs of nesting birds at the time of demolition/ground clearance advice should be sought from a qualified ecologist.
Herpetofauna	There are no records of amphibians and reptiles within 1km of the site. The development site currently has opportunities for hibernating or basking reptiles. The wider area of private gardens could provide suitable terrestrial habitat. There are no known ponds within 1km of the site, although the River Thames is approximately 200m northeast of the site.	However, GiGL may not always hold up to date records for reptiles, amphibians and mammals; hence the relevant organisations that hold these records may need to be contacted separately in case these species are deemed potentially present on the site. A herpetofauna scoping survey is recommended for the site. The scoping survey would review site conditions and advise on likely presence of herpetofauna and need for additional, follow-up survey and mitigation works, as appropriate. The survey will follow current, published guidelines. Scoping surveys can be undertaken throughout the year. Full presence/absence surveys can be undertaken March to September inclusive.

Species	Relevance to Site	Recommendation
Invertebrates	There are nine records of invertebrates within 1km of the site. Stag beetle may be present within decaying wood on the site.	A full invertebrate survey is not recommended. However, it is recommended that any log piles/tree roots to be lost should be investigated for live beetles before being removed. If beetles are found these should be moved to a safe habitat. A stag beetle survey should be undertaken by an experienced surveyor with specialist knowledge of invertebrates, including stag beetles. The survey should be done in early June. It should be done when a safe habitat has already been created, so any larvae or adults that are disturbed/dug up can be placed out of harms way and/or the log pile moved at the same time to form the safe habitat.
White clawed crayfish	There are no records of this species within 1km and no waterbody to support this species.	No further survey work is recommended.
Fish	There are no records of fish within 1km of the site and no waterbody to support fish.	No further survey work is recommended.

Table 9 – Potential presence of protected species of fauna.

Appendix I Guidance on Valuation of Ecological Importance

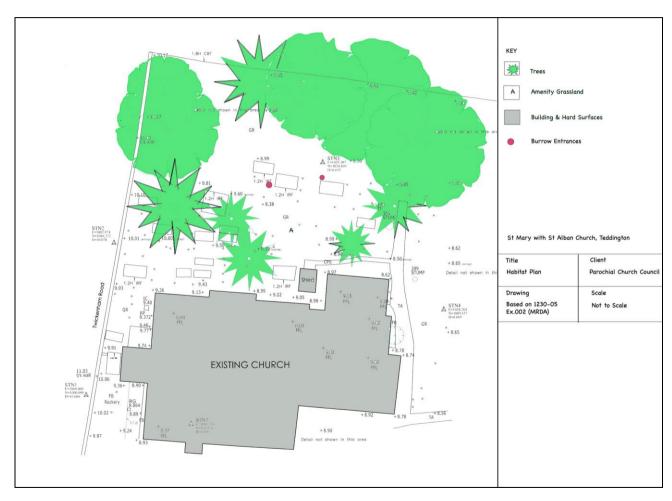
Level of Value	Examples
International	An internationally designated site or candidate site (SPA, pSPA, SAC, cSAC, pSAC, Ramsar site, Biogenetic Reserve) or an area which the country agency has determined meets the published selection criteria for such designation, irrespective of whether or not it has yet been notified.
	A viable area of a habitat type listed in Annex I of the Habitats Directive, or smaller areas of such habitat which are essential to maintain the viability of a larger whole.
	Any regularly occurring population of an internationally important species, which is threatened or rare in the UK. i.e. it is a UK Red Data Book species or listed as occurring in 15 or fewer 10km squares in the UK (categories 1 and 2 in the UK BAP) or of uncertain conservation status or of global conservation concern in the UK BAP.
	A regularly occurring, nationally significant population/number of any internationally important species.
National	A nationally designated site (SSSI, ASSI, NNR, Marine Nature Reserve) or a discrete area, which the country conservation agency has determined meets the published selection criteria for national designation (e.g. SSSI selection guidelines) irrespective of whether or not it has yet been notified.
	A viable area of a priority habitat identified in the UK BAP, or of smaller areas of such habitat which are essential to maintain the viability of a larger whole.
	Any regularly occurring population of a nationally important species, which is threatened or rare in the region or county (see local BAP).
	A regularly occurring, regionally or county significant population/number of any nationally important species.
	A feature identified as of critical importance in the UK BAP.
Regional	Viable areas of key habitat identified in the Regional BAP or smaller areas of such habitat which are essential to maintain the viability of a larger whole;
	Viable areas of key habitat identified as being of Regional value in the appropriate Natural Area profile;
	Any regularly occurring, locally significant population of a species listed as being nationally scarce which occurs in 16-100 10km squares in the UK or in a Regional BAP or relevant Natural Area on account of its regional rarity or localisation;
	A regularly occurring, locally significant number of a regionally important species;
	Sites, which exceed the County-level designations but fall short of SSSI selection guidelines, where these occur.
County /	Semi-natural ancient woodland greater than 0.25 ha;
Metropolitan	County/Metropolitan sites and other sites which the designating authority has determined meet the published ecological selection criteria for designation, including Local Nature Reserves selected on County / metropolitan ecological criteria (County/Metropolitan sites will often have been identified in local plans);
	A viable area of habitat identified in County BAP;
	Any regularly occurring, locally significant population of a species which is listed in a County/Metropolitan "red data book" or BAP on account of its regional rarity or localisation;
	A regularly occurring, locally significant number of a County/Metropolitan important species.
District /	Semi-natural ancient woodland smaller than 0.25 ha;
Borough	Areas of habitat identified in a sub-County (District/Borough) BAP or in the relevant Natural Area profile;
	District sites that the designating authority has determined meet the published ecological selection criteria for designation, including Local Nature Reserves selected on District/ Borough ecological criteria (District sites, where they exist, will often have been identified in local plans)
	Sites/features that are scarce within the District/Borough or which appreciably enrich the District/Borough habitat resource;
	A diverse and/ or ecologically valuable hedgerow network;
	A population of a species that is listed in a District/Borough BAP because of its rarity in the locality or in the relevant Natural Area profile because of its regional rarity or localisation;
	A regularly occurring, locally significant number of a District / Borough important species during a critical phase of its life cycle.
Parish/ Neighbourhood	Areas of habitat considered to appreciably enrich the habitat resource within the context of the Parish or neighbourhood, e.g. species-rich hedgerows.
	Local Nature Reserves selected on Parish ecological criteria.

TAG Guidance on Determining the Nature Conservation Value of Features

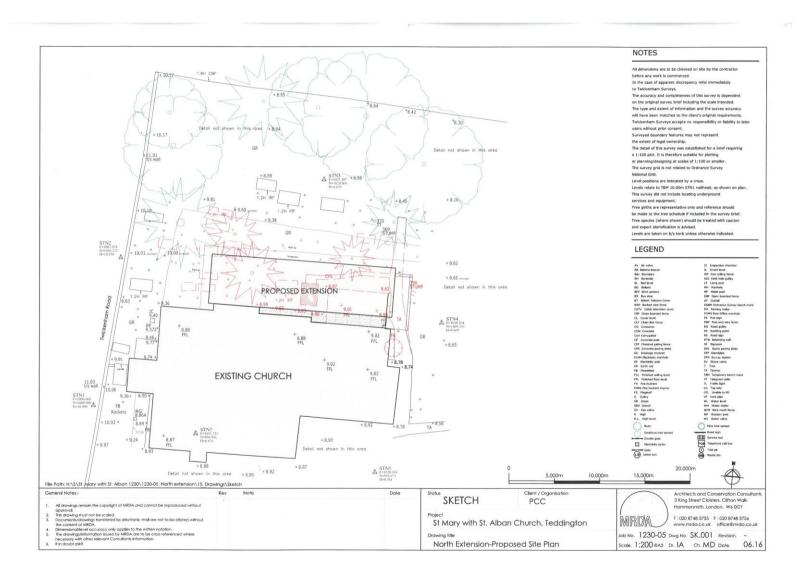
Values of ecological receptors are set out in a table in TAG (Transport Assessment Guidance, DfT) as produced below.

Value	Criteria	Examples
Very High	High Importance and Rarity. International Scale and limited potential for substitution	Internationally designated sites.
High	High Importance and Rarity, national scale or regional scale with limited potential for substitution.	Nationally designated sites. Regionally important sites with (limited potential for 'substitution'.
Medium	High or Medium Importance, or rarity, Local or regional scale and (limited) potential for substitution	Regionally important sites with potential for Substitution. Locally designated sites.
Lower	Low or medium importance, or rarity, local scale	Un-designated sites of some local biodiversity and earth heritage interest.
Negligible	Very low importance and rarity, local scale	Other sites with little or no local biodiversity and earth heritage interest.

Appendix II Figure 3 – Indicative Habitat Plan



Appendix III Figure 4 – Proposed Site Plan



Appendix IV Photographic Evidence













Burrow entrance north of church

Burrow entrance north of church

Gravestones and ivy north of church







Looking west towards church

Vegetation behind shed

Paving stones behind shed

Ecology and Land Management works towards the policy of 'best practice' advocated by the Chartered Institute of Ecology and Environmental Management (CIEEM), the Landscape Institute, the Institute for the Environment as well as a number of specialist organisations working towards the conservation of protected species.

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