Ascerta

Landscape, Arboricultural & Ecological Solutions
for the Built Environment

Report on Ecological Issues

Gateacre Garden Centre
Acrefield Road
Woolton

January 2015

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Contents

EXECUTIVE SUMMARY

An Extended Phase 1 Ecological Assessment has been carried out at the Gateacre Garden Centre, Woolton. The assessment comprised a desk study and biological records search, as well as a site walkover survey in order to map habitat types. The survey was extended to also highlight the potential for protected species using the site. The assessment will provide baseline data as to current site conditions and where appropriate will allow recommendations to be made in respect of further potential work in order to satisfy current wildlife legislation.

The survey area comprises trees, hedges, fences, walls, buildings, and hard standing.

It is concluded within this report that the habitats on site offer potential foraging and nesting sites for breeding birds. Although the site is situated within a highly urbanised area the lines of trees and hedges to the north and south have potential to act as commuting corridors for bats.

The following recommendations are made such as to satisfy current wildlife legislation and to help our clients achieve their objectives.

Key Recommendations

It is recommended that native hedges, trees and shrubs are planted as part of any site development to enhance the area for wildlife, and the species used should aim to maximise food and nectar sources for the benefit of local fauna.

Any external lighting incorporated during any development of the site should be kept to a minimum and designed to avoid spill into nearby vegetation (see *Bats and Lighting in the UK-Bats and the Built Environment Series*, Bat Conservation Trust 2009).

Any vegetation clearance or demolition works should be undertaken outside of the bird breeding season. Vegetation clearance carried out during the breeding season (between March and the end of August) will require a nesting bird survey to be conducted by a suitably qualified ecologist before works commence.

Additional Recommendations

It is recommended that if non natives are to be planted as part of a landscape scheme the species used should be selected for their value to wildlife.

Consideration should be given to the installation of bird nesting boxes within the site to enhance its value for breeding birds.

1.0 Introduction

1.1 Ascerta has been instructed by MacBryde Homes Ltd to carry out an ecological assessment of Gateacre Garden Centre, Woolton.

1.2 Our client seeks planning consent to construct residential dwellings within the site.

1.3 The site was visited on 19th March 2014 by Dr Nicola Wallbank, when a Phase 1 Habitat Survey, extended to include an assessment of the potential for protected species to be using the site or surroundings, was carried out in accordance with the Handbook for Phase 1 Habitat Survey: a Technique for Environmental Audit (*JNCC, 2010*). This report presents the results of the survey and includes recommendations for further actions where applicable in order to satisfy current wildlife legislation and in order to achieve our client's objectives.

2.0 Objectives

2.1 Our objectives are as follows:

- Identify and evaluate any features of ecological value and the potential of the site to support protected species based on the walkover survey and biological records search;
- Identify designated sites within 2km of the site;
- Review protected species records within 2km of the site;
- Map the habitats within the site using JNCC (2010) methods;
- Provide recommendations for further species-specific surveys and mitigation measures where current legislation requires;
- Provide recommendations that seek to enhance the ecological value of the site where possible;
- Provide recommendations to assist our clients in achieving their objectives whilst satisfying current wildlife legislation.

3.0 Relevant Legislation

European Legislation

3.1 The following Directives have been adopted by the European Union and provide protection for fauna and flora species of European importance and the habitats which support them:

- Directive 2009/147/EC on the Conservation of Wild Birds (Birds Directive);
- Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive).

UK Legislation

3.2 The key UK legislation relating to nature conservation is the Wildlife and Countryside Act 1981 (as amended). This Act is supplemented, *inter alia*, by provision in the Countryside and Rights of Way (CRoW) Act 2000, and the Natural Environment and Rural Communities Act 2006.

3.3 The Habitats Directive has been transposed into national legislation through the Conservation of Habitats and Species Regulations 2010, which provides for the designation and protection of 'European Sites' and the protection of 'European Protected Species'.

3.4 It is an offence under Section 14(2) of the Wildlife and Countryside Act 1981 to 'plant or otherwise cause to grow' in the wild any plant in Schedule 9 Part II, which includes Japanese knotweed (*Fallopia japonica*).

3.5 Under the Hedgerow Regulations 1997 any hedgerows classified as 'Important' cannot be removed without a Hedgerow Removal Notice issued by the relevant Local Authority, unless that removal is subject to an appropriate consent under the Town and Country Planning Act 1990.

The Regulations apply to any hedgerow which:

- grows in, or adjacent to any common land, local nature reserve, Site of Special Scientific Interest (SSSI), or land used for agriculture, forestry of the breeding or keeping of horses, ponies of donkeys and;
- has a continuous length of at least 20 metres, or if less than 20 metres, meets another hedgerow at each end.

An 'important' hedgerow is one that has existed for 30 years or more, and satisfies at least one of archaeological and ecological criteria listed in Schedule 1 of the Hedgerow Regulations 1997.

3.0 Relevant Legislation (Continued)

3.6 The following table provides a summary of the main species within the UK that could be encountered within or within proximity of development sites, together with the legislation that affords them protection.

	Species	Legislation
Amphibians	Great crested newt (*Triturus cristatus*)	Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). Schedule 2 of the Conservation of Habitats and Species Regulations 2010.
	Natterjack toad (*Bufo calamita*)	
Mammals	Badger (*Meles meles*)	Protection of Badgers Act 1992.
	All species of bat Dormouse (*Muscardinus avellanarius*) Otter (*Lutra lutra*) Water vole (*Arvicola amphibious*)	Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). Schedule 2 of the Conservation of Habitats and Species Regulations 2010.
		Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).
Birds	All wild birds	Schedule 1 of the Wildlife and Countryside Act 1981 (as amended).
Reptiles	Adder (*Vipera berus*) Common lizard (*Zootoca vivipara*) Grass snake (*Natrix natrix*) Slow worm (*Anguis fragilis*)	Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).
	Sand lizard (*Lacerta agilis*) Smooth snake (*Coronella agilis*)	Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of The Conservation of Habitats and Species Regulations 2010.
Crustacean	White-clawed crayfish (*Austropotamobius pallipes*)	Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).

Table 3.1 Protected Species and the Associated Legislation.

It is a criminal offence to intentionally, wilfully kill, injure or take any of the aforementioned protected species or to destroy or disturb its habitat.

4.0 Survey Methodology

4.1 The Extended Phase 1 Ecological Assessment involved the collection and review of data from a desk study and field survey.

Desk Study

4.2 A review of the designated sites and habitats within a 2km of the site has been undertaken using the Multi-Agency Geographic Information for the Countryside (MAGIC) and the Natural England websites.

4.3 A review of protected and notable species within 2km of the site has been undertaken using The National Biodiversity Network (NBN) Gateway website.

4.4 A review of UK and Local priority species and habitats known to occur in the region of the site has been undertaken using the Joint Nature Conservation Committee and the Merseyside Biodiversity Group websites.

Field Survey

4.5 A walkover survey of the site was conducted on 19th March 2014 and the habitat types and features of ecological interest were identified and mapped in compliance with the Handbook for Phase 1 Habitat Survey: a Technique for Environmental Audit (*JNCC, 2010*). The survey methodology involves the recording and mapping of all habitat types and ecological features present on site, including the identification of the main species present and examination of the potential for any protected species. Habitats were mapped and target notes made for any interesting features.

4.6 When conducting the surveys particular focus was concentrated on the following species and habitat features:

- Amphibians;
- Badgers;
- Bats;
- Birds (including Schedule 1 species);
- Dormouse;
- Hedgerows and boundaries;
- Invasive plant species;
- Otter;
- Plant communities;
- Reptiles;
- Trees;
- Water vole;
- White-clawed crayfish.

Survey Constraints

4.7 The survey was conducted in March and therefore, it is possible that certain botanical species may have been missed.

5.0 Survey Results

Desk Study

5.1 Two Local Nature Reserves were identified within a 2km radius of the proposed development site and are detailed in Table 5.1. Due to the distance between the survey area and these designated sites, as well as the lack of water bodies and wildlife corridors connecting them it is not considered that the proposed development will have any direct or indirect impact on any designated wildlife sites.

Site name	Grid reference	Distance (km)	Status
Childwall Woods & Fields	SJ413885	1.2	LNR
Allerton (Eric Hardy)	SJ416858	1.5	LNR

Table 5.1 Statutory Sites within 2km of the Proposed Development Site (*LNR:Local Nature Reserve).*

5.2 Following a review of records held on the NBN Gateway as well as information held on the Merseyside Biodiversity Group Website several priority species that have the potential to occur within the vicinity of the proposed development have been identified. These include house sparrow, starling, swift, song thrush, noctule bat, badger, and brown hare.

Habitat Survey

5.3 Table 5.2 details the habitat types on proposed development site.

JNCC Habitat code	Habitat name	JNCC Habitat code	Habitat name
A3.1	Scattered Broadleaved Trees	A3.2	Scattered Coniferous Trees
J2.1.2	Intact Species-poor Hedge	J2.4	Fence
J2.5	Wall	J3.6	Buildings
N/A	Hard Standing		

Table 5.2 Habitat Types on the Proposed Development Site.

Trees

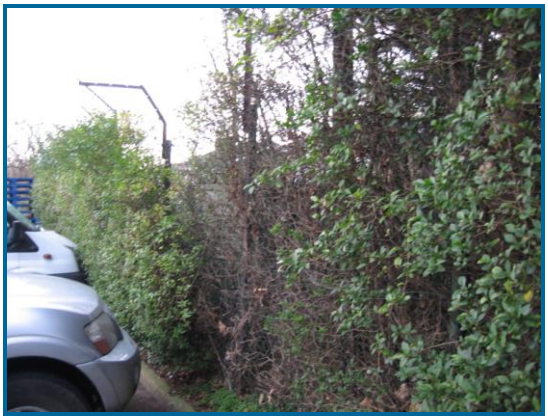
5.4 There are several trees on the proposed development site boundary. Species include horse chestnut (*Aesculus hippocastanum*), *Populus sp., Cupressus sp.*, and sycamore (*Acer pseudoplatanus*). The potential of these trees to support a bat roost is discussed in paragraph 5.9. Further details regarding the trees on site can be found in the Arboricultural Impact Assessment (*Ascerta, 2014*).

5.0 Survey Results (Continued)

Photograph 5.1 Scattered Trees

Hedges

5.5 There are two hedges on the site boundary to the north and south. One comprises privet (*Ligustrum vulgare*) and the other consists of holly (*Ilex aquifolium*), elder (*Sambucus nigra*), and *Rhododendron sp.* Understorey species include ivy (*Hedera helix*), cleavers (*Galium aparine*), chickweed (*Stellaria media*), and groundsel (*Senecio vulgaris*).



Photograph 5.2 Privet Hedge and Photograph 5.3 Rhododendron Hedge

Buildings

5.6 There are three buildings within the proposed development site (see Drawing P.481.14.03). Below are photographs and brief descriptions of each building. The suitability of the buildings to support bat roosts is discussed in paragraph 5.10.

5.0 Survey Results (Continued)

Photograph 5.4 Building 1

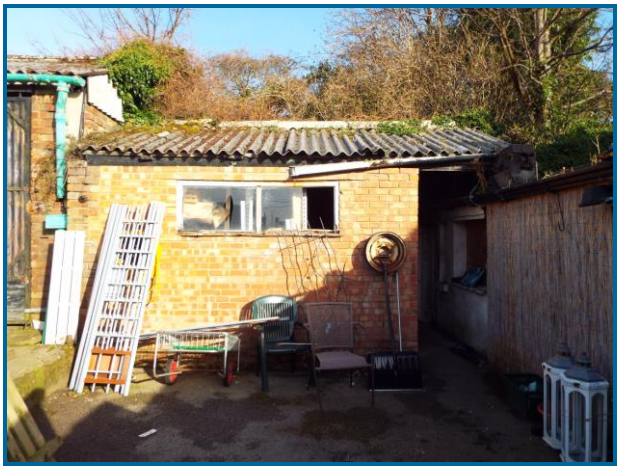
Constructed of wood panelling with a tiled roof. Used for retail purposes.

Photograph 5.5 Building 2

Glasshouse with a multi-pitched roof.

Photograph 5.6 Building 3

Narrow single storey building constructed of rendered brick with a felt roof.



Photograph 5.7 Building 4

Storage shed constructed of brick with a corrugated sheet roof.

Photograph 5.8 Building 5

Storage shed constructed of brick with a corrugated sheet roof.

Protected Species

Great Crested Newts

5.7 No ponds or ditches within 500m of the site were identified from aerial photographs and OS maps. In addition to the lack of suitable water bodies in the area, the site does not contain terrestrial habitats considered suitable for great crested newts. Therefore, it is deemed very unlikely that the proposed development will impact on any great crested newts.

Badgers

5.8 The site was surveyed for evidence of badgers. Attention was paid to the following field signs; setts, latrines, paths, footpaths, scratching posts, snuffle holes, and traces of hair. No signs of badgers occupying or visiting the site were recorded. The presence of this species is deemed unlikely within the survey area due to the lack of suitable habitat within the site and in the surrounding landscape for sett building and foraging.

Bats

5.9 The trees on site were inspected from ground level for features such as missing limbs, lifted bark, cavities, or woodpecker holes that have potential for bat roosting. No potential roosting sites within the trees on site were identified. None of the trees contained any large cavities or extensive branch or tree splits.

5.10 The buildings on site are not considered to offer suitable bat roosting sites. With the exception of buildings 4 and 5, all the buildings are constructed of materials that are unfavourable to bats such as glass, prefabricated sheet materials, and wood. Although buildings 4 and 5 are constructed of brick they have a corrugated metal sheet roof, the interior is cool and draughty, plus there are very few features on the building's exterior suitable for roosting. Furthermore, none of the buildings have a roof void or contain suitable locations for crevice dwelling bats, each of the buildings is currently subject to high levels of disturbance and a large number of external lights were noted during the habitat survey.

5.11 Although the site is situated within a highly urbanised area, habitats within the site, particularly the line of trees and hedges to the north and south have potential to act as commuting corridors.

5.0 Survey Results (Continued)

Birds

5.12 The habitats on site offer potential foraging and nesting sites for breeding birds. Robins (*Erithacus rubecula*) and house sparrows (*Passer domesticus*) were observed during the habitat survey. The trees onsite are not considered to provide suitable roosting sites for barn owls, and the site does not provide adequate foraging habitat for this species due to the lack of rough grassland.

Invasive Plant Species

5.13 No invasive species were observed on or within the vicinity of the proposed development site.

Otter, Water Vole, and White-clawed Crayfish

5.14 The proposed development is not within 500m of any watercourse and therefore any development of the site is not considered to impact on any otters, water vole or white-clawed crayfish.

Reptiles

5.15 The current provision of favourable habitats for reptiles within the survey area was assessed. The site is considered to be unfavourable for reptiles due to the lack of suitable foraging habitat, basking and refuge sites.

Other Protected Species

5.16 No other species such as common toad, hedgehogs, dormouse, or brown hare were observed during the habitat survey or noted during the desk study. Therefore, further ecological constraints from those already discussed are not anticipated.

6.0 Conclusions & Recommendations

Habitats

6.1 The survey area comprises trees, hedges, fences, walls, buildings, and hard standing. Urban trees are listed as priority habitats within the North Merseyside Biodiversity Action Plan. Therefore, it is recommended that the trees are retained where possible and that a higher number of native trees are planted to compensate for any initial loss.

6.2 Trees and shrubs planted as part of the landscape scheme should aim to maximise food as well as nectar sources for the benefit of local wildlife. Examples of appropriate species are provided in Table 6.1.

Native Tree Species		**Native Shrub Species**	
Common Name	**Scientific Name**	**Common Name**	**Scientific Name**
Field maple	*Acer campestre*	Hawthorn	*Crataegus monogyna*
Common alder	*Alnus glutinosa*	Holly	*Ilex aquifolium*
Hornbeam	*Carpinus betulus*	Blackthorn	*Prunus spinosa*
Hazel	*Corylus avellana*	Field rose	*Rosa arvensis*
Common beech	*Fagus sylvatica*	Dog rose	*Rosa canina*
Common juniper	*Juniperus communis*	Burnet rose	*Rosa pimpinellifolia*
Crab apple	*Malus sylvestris*	Elder	*Sambucus nigra*
English oak	*Quercus robur*	Wayfaring tree	*Viburnum lantana*
Rowan	*Sorbus aucuparia*	Guelder rose	*Viburnum opulus*
Common yew	*Taxus baccata*		

Table 6.1 Recommended Native Tree and Shrub Species

6.3 If non natives are to be planted as part of the landscape scheme it is recommended that the species used are selected for their value to wildlife. Table 6.2 provides examples of appropriate species.

Non-Native Tree Species		**Native-Shrub Species**	
Common Name	**Scientific Name**	**Common Name**	**Scientific Name**
Norway maple	*Acer platanoides*	Darwin's barberry	*Berberis darwinii*
Sugar maple	*Acer saccharum*	Golden barberry	*Berberis stenophylla*
Apple	*Malus spp.*	Japanese quince	*Chaenomeles japonica*
Pear	*Malus spp.*	Firethorn	*Pyracantha spp.*
Cherry plum	*Prunus cerasifera*	Snowberry	*Symphoricarpos albus*
		Lilac	*Syringa vulgaris*
		Mock orange	*Philadelphus spp.*

Table 6.2 Recommended Non Native Tree and Shrub Species

6.0 Conclusions & Recommendations (Continued)

Protected Species

Bats

6.4 As the buildings and trees on site are deemed to have low bat roosting potential the proposed development site is not considered to currently offer any roosting opportunities for bats. Therefore, no further survey work relating to bats is recommended as part of the proposed development unless more than two years lapses before works commence.

6.5 As there may be bat activity in the vicinity of the site due consideration should be taken if additional lighting is installed in the area. The lighting scheme should comply with guidance from the Bat Conservation Trust (See *Bats and Lighting in the UK-Bats and the Built Environment Series*, 2009). In summary, lights should point towards the ground away from natural habitats, they should be shielded and at a height which reduces spill sideways as well as upwards, and high ultra violet lights should be avoided.

Birds

6.6 As habitats within the site have the potential to provide nesting sites for breeding birds any vegetation clearance or demolition works required for development purposes should be undertaken outside of the bird breeding season. Vegetation clearance carried out during the breeding season (between March and the end of August) will require a nesting bird survey to be conducted by a suitably qualified ecologist before works commence.

6.7 Consideration should be given to the installation of bird nesting boxes within the site to enhance its value for breeding birds.

7.0 References

Bat Conservation Trust (2009) *Bats and lighting in the UK- bats and the built environment series* [online] Available at: http://www.bats.org.uk/pages/bats_and_lighting.html [Accessed 25.03.2014];

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Appendix 1

ALL COORDINATES RELATED TO LOCAL GRID
LOCATED TO OS NG BY BEST FIT TO DETAIL.
EXTRACTED FROM OS DIGITAL DATA.

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KEY

A3.1	Scattered Broad-leaved tree
A3.2	Scattered Coniferous tree
J2.1.2	Species poor intact hedge
J2.4	Fence
J2.5	Wall
J3.6	Building
J5	Hard standing
①	Target note

REV	DESCRIPTION	DATE

DO NOT SCALE

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CLIENT:
MacBryde Homes Ltd

PROJECT:
Gateacre Garden Centre, Woolton, Liverpool

DRAWING TITLE:
Phase One Habitat Survey

SCALE:	DRAWN BY:	DRAWING No:	REV:
1:500 @A3	CP		
DATE:	CHKD BY:		
20/03/2014	NW	P.481.14.03	-

Target Notes

Each plant species noted during the phase 1 habitat survey was assigned a DAFOR score. DAFOR scale: D= dominant, A=abundant, F= frequent, O=occasional, R= rare.

TN1: Retail Displays

TN2: Wall With Ivy

TN3: Privet Hedge			
Species	**DAFOR**	**Species**	**DAFOR**
Ligustrum vulgare	D	*Sambucus nigra*	O
Galium aparine	F	*Senecio vulgaris*	O
Hedera helix	A	*Stellaria media*	O

TN4: Rhododendron Hedge			
Species	**DAFOR**	**Species**	**DAFOR**
Rhododendron sp.	D	*Sambucus nigra*	O
Ilex aquifolium	F		