Brooks Ecological
Grounded advice

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Updated Ecological Appraisal
Hanson Garden Centre, Clitheroe

Report reference: R-1525-01.3
October 2013

Report Title:	Updated Ecological Appraisal Hanson Garden Centre, Clitheroe
Report Reference:	R-1525-01.3
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Date	02.10.13

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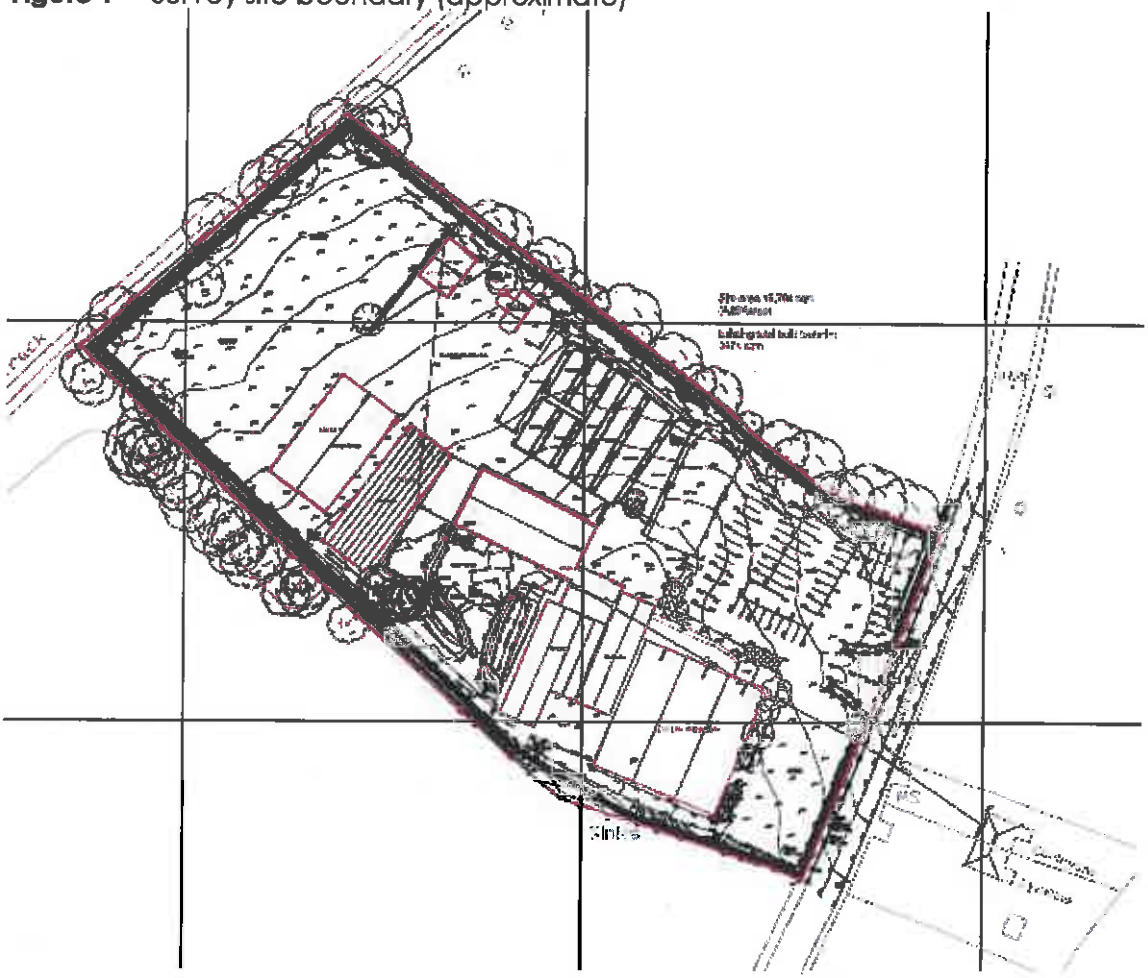
Summary Statement

The majority of the site comprises of land of low ecological value. The boundary hedgerows, wet ditches and mature broadleaf trees have the highest ecological value on site and will all be retained within the proposals.

Introduction

1. Brooks Ecological Ltd was commissioned by ID Planning to produce an ecological appraisal of Hanson Garden Centre, Whalley Road, Barrow, Clitheroe, Lancashire, BB7 9BA (SD 738 388).

Figure 1 Survey site boundary (approximate)



Site Proposals

2. The proposals are for a residential development to occupy the application site.

Potential impacts

3. The following potential impacts are highlighted and the report which follows sets out the significance of these impacts relative to the ecological value of the site and the potential presence of protected or notable species:

- Clearance of vegetation;
- Loss of areas currently occupied by habitat to built development;
- Demolition of existing buildings; and
- Effects on adjacent /nearby habitats.

Desk Study

4. A desk study was carried out to identify species or habitats that are considered important in a local context and to identify any species recorded locally that may be associated with the application site. This information can be used to help target groups that need to be considered in more detail in order to identify the ecological baseline for the application site.

Designated Sites

5. A search of the MAGIC website was undertaken. The MAGIC site is a Geographical Information System that contains all statutory (e.g. Sites of Scientific Interest [SSSI's]) as well as many non-statutorily listed habitats (e.g. Ancient woodlands and grassland inventory sites). It is a valuable tool when considering the relationship of a potential development site with nearby important habitats.

6. There is one statutory designated site within 2km of the application site. This is Light Clough Site of Special Scientific Interest (SSSI) approximately 1.8km southeast of the proposed site boundary. Light Clough is a small stream that is designated for it geological interest.

7. Single ancient and semi-natural woodland is situated within a 2km radius; this is Barrow Clough Wood, located roughly 950m north of the site.

8. Local record holders Lancashire Ecological Records Network (LeRN) have confirmed that there are seven non-statutory designated sites within the 2km search area; all of which are designated as Biological Heritage Sites (BHS). These are Calderstones Hospital Woodland/Railway Line (1.7km southwest), Barrow Clough Wood (970m north), Small Field (1.7km west), Barrow Brook Field (1km southwest), Hard Hill Common (910m southwest), Primrose Lodge (1.8km north) and the River Ribble (from

London Road Bridge Preston, in West, to County Boundary, in East) located 1.5km to the northwest.

9. These BHS are all sufficiently distant from the site to remain unaffected by the proposed development.

Natural England Natural Area

10. The site falls within Natural Area 12 *Forest of Bowland Lancashire Plains and Valleys.*

11. The underlying rocks of Carboniferous age, including hard Millstone Grits, softer alternating bands of limestones and shales, and the limestone 'reef knolls' near Clitheroe, have resulted in a diverse landscape rich in features of interest. The Forest of Bowland is dominated by a distinct, almost circular dome of heather moorland. The high Millstone Grit-capped summits of Bowland Fells and Pendle Hill, with their expansive areas of wild, open rolling heather moorland and blanket bog, are managed principally for grouse and sheep. Such areas provide a habitat for internationally important populations of red grouse, hen harrier, merlin, peregrine and golden plover.

12. This dome of moorland is incised by steep, wooded river valleys and is surrounded by a soft, undulating landscape with a mosaic of rush-filled pastures, herb-rich hay meadows and broadleaved woodland, separated by lush agricultural grassland, parkland and water bodies, such as Stocks Reservoir. The area is traversed by many fast-flowing upland streams and rivers, including the Hindburn, Roeburn, Lune, Wyre, Brock, Calder, Ribble and Holder.

13. Internationally important conservation priorities are;

- Moorland and mire

14. Nationally important conservation priorities are;

- Semi-natural woodland
- Coniferous plantations
- Species-rich grassland
- Rushy pasture

15. Regional Conservation priorities for the area are;

- Rivers and water bodies

16. The application site does not support any examples of these habitat types.

Local Biodiversity Action Plan

17. Consideration is given to the Local Biodiversity Action Plan (LBAP), which for this site is the 'Lancashire Biodiversity Action Plan'.

18. Table 1 lists the local Species Actions Plans and, with reference to the field study presented later in this report, assesses a) whether the species potentially have any degree of dependence on the site, and b) if so whether development would be likely to have a significant bearing on the objectives of the UK/LBAP.

Table 1: Species Action Plans

Species/group	**Potentially on site**	**Could development impact significantly on BAP objectives**
Black-tailed Godwit	No	-
Farmland Birds	Yes	No
Hen Harrier	No	-
Lapwing	No	-
Reed Bunting	No	-
Skylark	No	-
Song Thrush	Yes	No
Twite	No	-
Bats	Yes *	No
Brown Hare	No	-
Otters	No	-
Red Squirrel	No	-
Water Vole	No	-
Great Crested Newt	Yes**	Unlikely
Natterjack Toad	No	-
Belted Beauty Moth	No	-
Dorus Profuges- a hoverfly	No	-
High Brown Fritillary	No	-
Large Heath Butterfly	No	-
Northern Brown Argus	No	-
Pearl-bordered Fritillary	No	-
Shining Guest Ant	No	-
Southern Wood Ant	No	-
Wall Mason Bee	No	-
Freshwater Pearl Mussel	No	-
Freshwater White-clawed Crayfish	No	-
Jennings Proboscis Worm	No	-
Whorl Snails	No	-
Birds-eye Primrose	No	-
Black Poplar	No	-
Dwarf Cornel	No	-
Flat-Sedge	No	-
Great Butterfly Orchid	No	-

Lady's-slipper Orchid	No	-
Lancaster Whitebeam	No	-
Narrow Small-Reed	No	-
Purple Ramping-fumitory	No	-
Rock Sea Lavender	No	-
Sea Bindweed	No	-

* Potentially roosting in boundary trees and low level foraging/commuting along the boundary vegetation. All of the mature trees and boundary vegetation will be retained and protected from development.

** A fingertip survey carried out in September found no evidence of great crested newts within the site.

19. Table 2 lists local Habitat Action Plans and assesses a) whether habitats on site could represent valuable examples of the habitat type within the spirit of the BAP and b) whether loss of the habitat would have a significant bearing on the objectives of the BAP.

Table 2: Habitat Action Plans

Habitat	**Valuable examples present on site?**	**Could development impact significantly on BAP objectives**
Arable Farmland	No	-
Broadleaved and Mixed Woodlands	No	-
Calcareous Grassland	No	-
Limestone Pavement	No	-
Moorland and Fell	No	-
Mossland	No	-
Reedbed	No	-
Rivers and Streams	No	-
Salt Marsh and Estuarine Rivers	No	-
Sand Dune	No	-
Species-rich Neutral Grassland	No	-

Aerial Photography and Detailed Map Study

20. Aerial photographs published on commonly used websites were studied to place the site in its wider context and to look for ecological features that would not be evident on the ground during the walkover survey. This approach can be very useful in determining if a site is potentially a key part of a wider wildlife corridor or an important node of habitat in an otherwise ecologically poor landscape. It can also identify potentially important faunal habitat (in particular ponds) which could have a bearing on the ecology of the application site. Ponds may sometimes not be apparent on aerial photographs so we also refer to close detailed maps that identify all ponds issues and drains. We use Promap Street + scale maps for this purpose.

21. The site comprises a garden centre in the village of Barrow. The site is bounded by Clitheroe Golf Club to the northwest, Whalley Road to the southeast and pastoral fields to the northeast and southwest.

22. The surrounding landscape is characterised by large pastoral fields enclosed by a network of boundary hedgerows and mature broadleaf standards. These hedgerows form strong linear features across the surrounding landscape. Two small woodlands are situated close to the site; c.200m northwest (Elbow Wood) and 590m southwest. The adjacent golf course supports a mix of amenity grassland, rough grassland and lines of mature trees, again forming strong linear features. Several small streams and wet ditches are present in the surrounding fields, the closest runs along the application sites northern boundary, situated on adjacent land.

23. Four ponds are located within a 500m radius, three of which are connected to the site by the network of surrounding hedgerows; c.152m northeast, c.190m southwest and c.430m southwest. Two large reservoirs are present approximately 540m southeast and 580m south, separated from the site by busy roads and built development.

Records

24. Lancashire Ecological Records Network (LeRN) has been asked to provide information on protected or notable species and locally designated sites within 2 km of the application site. The records include the following which are of relevance to this assessment:

- Two common amphibian species and three records for great crested newt (gcn). The gcn records date from 1985 to 2011 and relate to three different sites c.1.9km, c.2km and 2.1km south, all of which are separated from the site by built development.
- A range of common and notable bird species, many of which are listed under the Lancashire BAP Provisional Long List.
- Three water vole records from 1977 relating to Barrow Lodge, c.570m south.
- A record of otter spraint c.2km northeast.
- Three bat records relating to soprano pipistrelle, pipistrelle sp. and chiroptera sp. Two of these records relate to roosts, c.970m and c.1.8km south.
- A single badger record relating to a site c.2km west.

Survey Method

25. An initial site walkover was carried out in March 2013 by an experienced field ecologist who is a member of the Institute of Ecology and Environmental Management (IEEM); however at this point access constraints meant that the survey was restricted to areas accessible to the public only. As such the boundary habitats could not be fully surveyed.

26. Full site access was granted in September 2013 allowing the boundary habitats to be surveyed.

27. The survey followed a Phase 1 habitat survey methodology (JNCC, 1993) and was extended to assess faunal potential. This involves walking the site, mapping and describing different habitats (for example: woodland, grassland, scrub). Evidence of fauna and faunal habitat is also recorded (for example droppings, tracks or specialist habitat such as ponds for breeding amphibians). This modified approach to the Phase 1 survey is in accordance with the approach recommended by the Guidelines for Baseline Ecological Assessment (IEA, 1995).

Results

28. The application site comprises an active garden centre, which is bordered by pastoral fields and a golf course. The site supports the following habitat types:

- Garden centre & buildings;
- Hedgerows;
- Trees, and;
- Ditches.

Garden centre & buildings

29. The application site is Hanson's Garden Centre, which consists primarily of tarmac and compacted gravel hard-standing. A public tarmac car park is located towards the eastern end of the site and a private compacted gravel car park to the northwest. The centre of the site supports a range of buildings and tarmac bays which are filled with a wide range of potted flowering plants, shrubs and trees. Several ornamental broadleaf and conifer trees have been planted within the garden centre, mostly of semi-mature age.

Figure 2

Hanson's Garden Centre.

30. A small public children's play area is situated along the south-western boundary, comprising of amenity grassland. This grassland is dominated by perennial rye (*Lolium perenne*), with a small amount of scattered forbs including creeping buttercup (*Ranunculus repens*), greater plantain (*Plantago major*), dandelion (*Taraxacum agg.*) and white clover (*Trifolium repens*).

31. Several buildings are present on site, all of which are single storey. These include; several large glass greenhouses, several rendered buildings with either flat or double pitched corrugated metal roofs, and a single skin breeze block building with a corrugated metal roof.

Figure 3a

Large greenhouses towards the south-eastern corner of the site.

Figure 3b

Rendered buildings within the centre of the site.

Hedgerows

32. The site is completely enclosed by hedgerows and a number of ornamental hedges are located within the centre of the site.

33. The south-eastern boundary hedgerow along Whalley Road has been planted within a slightly raised bed and is regularly cut to a height of around 1.5m. This consists entirely of hawthorn (*Crataegus monogyna*) with a ground layer of ivy (*Hedera helix*), daffodil (*Narcissus sp.*), Yorkshire fog (*Holcus lanatus*) and cock's foot (*Dactylis glomerata*).

Figure 4

South-eastern hedgerow.

34. The southwest and northeast boundaries support the original field hedgerows which would have been present before the garden centre occupied the site. Mature species of hawthorn (*Crataegus monogyna*), hazel (*Corylus avellana*), blackthorn (*Prunus spinosa*), elder (*Sambucus nigra*), crab apple (*Malus sylvestris*), field maple (*Acer campestre*) and holly (*Ilex aquifolium*) are present in both hedgerows, with

many of these having been layed. These hedgerows are likely to have been overgrown and gappy at the time of the garden centres construction, as both have been beaten up with a wide range of native and non-native broadleaf, evergreen and conifer shrubs, including hawthorn, lawsons cypress (*Chamaecyparis lawsoniana*), cherry laurel (*Prunus laurocerasus*), yew (*Taxus baccata*), larch (*Larix decidua*) and garden privet (*Ligustrum ovalfolium*).

35. The ground layer comprises primarily of ivy, bramble, nettle *(Urtica dioica)*, wood avens and herb robert, but also supports several small stands of garlic mustard (*Alliaria petiolata*), lesser celandine (*Ranunculus ficaria*), daffodil, lords-and-ladies (*Arum maculatum*), dogs mercury (*Mecurialis perennis*) and Solomon's seal (*Polygonatum odoratum*) many of which indicate to these hedgerows being ancient.

Figure 5

South-western hedgerow.

36. The northwest hedgerow comprises entirely of cypress and also extends along most of the northeast boundary, running parallel to the hedgerow described earlier.

37. Several small sections of ornamental hedgerow are present within the garden centre. These comprise either garden privet (*Ligustrum ovalifolium*) or cypress.

Trees

38. A large number of mature broadleaf trees are present as standards within the boundary hedgerows and overhanging the site from adjacent land. Species noted include ash (*Fraxinus excelsior*), horse chestnut (*Aesculus hippocastanum*), lime (*Tilia sp.*), oak (*Quercus robur*), turkey oak (*Quercus*) and larch.

Figure 6

Mature standard trees along the north-eastern boundary.

39. Several semi-mature broadleaf and conifer trees have been planted within the garden centre. These include ash, silver birch (*Betula pendula*), cherry (*Prunus padus*), cypress, fir (*Abies sp.*), pine (*Pinus sp.*) and spruce (*Picea sp.*).

Ditches

40. A wet ditch runs along the entire northwest boundary and most of the southwest. The ditch is positioned on the far side of the hedgerows and is cast in heavy shade. No emergent or aquatic vegetation typically associated with running or standing water is present, with the exception of Himalayan balsam.

Figure 7

Wet ditch along the southwest boundary.

41. A dry ditch is present along the northeast boundary between the two parallel hedgerows, most likely created when the cypress hedge was planted.

Fauna

Bats

42. The buildings on site are considered to have a very low risk of supporting roosting bats. Several of the mature boundary trees support features, such as split limbs, woodpecker holes and cavities that have the potential to support roosting bats.

43. The boundary hedgerows also have the potential to support foraging and commuting bats.

Amphibians

44. The site supports no amphibian breeding habitat; however, suitable terrestrial habitat is present in the form of boundary hedgerows and artificial refugia within the garden centre, i.e. pallets, rubble piles, log piles, felt, timber and plant pots. Four ponds are located within a 500m radius, three of which are connected to the site by the northern hedgerows; c.152m northeast, c.190m southwest and c.430m southwest.

45. Although great crested newt (gcn) has not been recorded within these ponds, they are known to be present in the wider area (three sites between 1.9 - 2.1 km south of the site). As such a landscape appraisal has been produced later in this report to determine what level of survey is appropriate for this site.

Birds

46. The boundary hedgerows, trees and some of the garden centre buildings have the potential to support nesting birds.

Protected mammals

47. A dedicated survey of the boundary hedgerows and ditches found no evidence of badger or water vole activity.

Reptiles

48. The application site is considered to represent sub optimal reptile habitat and as no reptile records were returned for the 2km radius search area, the absence of this species from the site can be reasonably concluded.

Invasive species

49. Himalayan balsam is present along the southwest, northwest and southeast boundaries.

50. A landscape appraisal is required, as suitable great crested newt terrestrial habitat is present on site, and the surrounding landscape support ponds that have the potential to hold great crested newts.

51. The nearby ponds are not within the ownership or access rights of ID Planning and hence it is not possible through aquatic survey methods to carry out great crested newt presence/likely absence surveys. Consequently the risk of great crested newts using the application site is assessed through landscape analysis relying on walkover survey from accessible footpaths and roads and a study of aerial photography and mapping.

52. The results of this analysis are presented in plan form at the end of this report (D-1525-02). This plan shows the locations of nearby ponds assessed as having *potential* to support breeding great crested newt as well as our assessment of the likely associated terrestrial territories based on habitat types and presence of barriers to dispersal, such as built development and roads.

53. For the purposes of this report, good terrestrial habitat includes:

- Scrub, woodland and woodland edge vegetation;
- Wetland;
- unkempt gardens and allotments; and
- Hedgerows with broad verges.

54. Poor habitat is:

- arable land;
- improved, grazed and regularly cut grassland; and
- hard-standing and built development.

55. The application site itself supports predominately hard-standing and built development, surrounded by boundary hedgerows. The large number of pot plants, sheds and other features, such as pallets, offer potential refuge habitat for amphibians. However, all of these features are subjected to high levels of disturbance and are frequently moved by garden centre staff and customers.

56. The boundary hedgerows (scheduled for retention) represent <u>moderate habitat potential</u> for foraging if great crested newt are able to access them.

Assessment of ponds

57. Ponds were identified using Ordnance Survey (OS) detailed plans. An attempt was made to visit these ponds during the survey to assess their potential to support breeding great crested newts; however, no public access was available.

Figure 8 Locations of surrounding ponds in relation to the application site.

58. These ponds are located, c.152m northeast (pond 1), c.190m southwest (pond 2), c.430m southwest (pond 3) and c.200m south (pond 4).

59. Ponds 1, 2 and 3 are surrounded by prime terrestrial habitat in the form of Clitheroe Golf Club and surrounding woodland pockets. These are joined together by field hedgerows and the application sites north-western boundary hedgerow. Pond 4 is isolated from the site by built development and Whalley Road. This pond is surrounded predominantly by poor habitat in the form of pastoral fields.

60. Pond 1 looks to be ornamental and is therefore likely to be stocked with fish. If this is correct, then the pond would be unsuitable for supporting breeding great crested newts. The pond is surrounded by tarmac hard-standing which is likely to further reduce its attraction to newts.

61. Ponds 2 and 3 appear to be very similar; both are positioned within the corners of pastoral fields, immediately surrounded by boundary hedgerows and mature broadleaf trees. These ponds will therefore be subjected to high levels of shade. While shading does not preclude the presence of great crested newt it much reduces the likelihood of being used and its capacity to support a breeding population. However for the purposes of this assessment these ponds are considered able to support a small population.

62. Figure D-1525-01.2 shows our assessment of the surrounding terrestrial habitat and the core areas that any great crested newt associated with these ponds would be expected to be found in, should they be present.

63. Connected high value habitat is found in close proximity to these ponds in the form of Clitheroe Golf Club which supports a mix of rough grassland, hedgerows, scrub, trees and woodland. It is likely that any local population would be centred in this area with great crested newt moving between pond 2 and 3 in a meta-population. The application site is not likely to form a core part of the terrestrial habitat for this putative meta-population.

Fingertip survey

64. A precautionary fingertip survey was undertaken in September 2013 searching for any great crested newts sheltering beneath the many refugia scattered around the site. Within the centre of the garden centre and along the southwest boundary this comprised primarily of plant pots and wooden pallets. To the northern end of the site, refugia included rubble and log piles, roofing felt, timber, moulded plastic sheets and scrap furniture. All of these items that could be lifted and checked for amphibians, were so.

65. The search took around an hour and a half to complete and found only a single common toad resting beneath a rubble pile to the northwest. The absence of great crested newts beneath the many suitable types of refugia on site during a period of year when this species is reliant upon terrestrial habitats for foraging and therefore would be expected to be sheltering under refugues such as this, adds further weight to the assessment that the garden centre is unlikely to form a core part of the terrestrial habitat for this species.

Conclusion

66. Following the negative results of a detailed fingertip search, it is concluded that the risk of great crested newts being present on site is very low. However, it is recommended that site clearance work proceed with care and vigilance and should any newts be encountered at any stage, then work should stop immediately and Brooks Ecological contacted for advice. If identified as great crested newts, a licence will be sort from Natural England to allow work to continue.

Introduction

67. The boundary hedgerows and mature trees will be retained and protected during the development, meaning that there will be no significant loss in bat foraging habitat as a result of the proposed development.

68. A bat activity survey was carried out to characterise how local bat populations make use of the site, so that an accurate assessment of the potential impacts of development on the site could be made. The results of the survey will also allow appropriate enhancements to be made. Surveys therefore set out to collect the following data (BCT survey guidelines 2012):

- The assemblage of bat species using the site;
- The relative frequency with which the Site is used by different species; and
- The nature of activity for different bat species, for example foraging, commuting and roosting.

69. Surveys also started in strategic locations to further assess the risk of bats roosting in trees on and around the Site.

Local Status

70. The application site is within the natural range of species of bats listed in Table 1.

Table 1: Bat species recorded within 100km of the application site

Species	National status
Pipistrelles (*Pipistrellus pipistrellus* and *P. pygmaeus*)	widespread/common
Nathusius' Pipistrelle (*Pipistrellus nathusii*)	Widespread/rare
Noctule (*Nyctalus noctula*)	widespread/frequent
Leisler's (*Nyctalus leisleri*)	widespread/rare
Brown long-eared (*Plecotus auritus*)	widespread/common
Natterer's (*Myotis nattereri*)	widespread/frequent
Daubenton's (*Myotis daubentonii*)	widespread/common
Whiskered/Brandt's (*Myotis mystacinus* and *M. brandtii*)	widespread/scarce
Alcathoe's (*Myotis alcathoe*)	Local/unknown

Method

71. The walked transect started half an hour before sunset and continued up to two hours after sunset. Both Heterodyne and frequency division bat detectors were used to aid detection of bats and assist with species identification.

72. The survey was carried out in September 2013 on a warm calm and dry evening with moderate levels of invertebrate activity.

73. Survey work was directed by Peter Brooks BSc (Hons) MA, MIEEM CEnv. Peter has over 15 years experience of carrying out bat surveys in a professional capacity and holds a Natural England license in respect of bats and is a Natural England Roost Warden.

74. A qualitative assessment was made of bat activity highlighting areas where bats were seen to:

- *Forage:* Either occasionally or regularly. Occasional meaning one or two foraging episodes across the transect period, regular means foraging noted on 3 or more occasions on the transect.
- *Commute:* Commuting activity would be characterised by a number of bats entering the site and flying purposefully in a direct line: e.g. following a hedge or flying across open country.
- *Interact:* These could include regular chasing or 'lecking' or making regular social calls.

Results

75. Figure D-1525-01.3 illustrates levels of activity noted on site. It presents a 'heat map' which is organised according to levels of activity assessed on a qualitative basis. It does not show individual passes, as these do not translate well to plans and provide information of limited use.

76. The survey began with an emergence survey of the trees along the northern boundary, which where identified as having bat roost potential. During this survey no bats were seen to emerge from any of these trees.

77. The following transect recorded a concentration of activity along the northwest and northeast boundaries, with smaller levels of activity along the southwest boundary. Activity along the northwest and northeast boundaries comprised of up to 3 separate common pipistrelles, which were seen to make regular foraging circuits along the tree lines and hedgerows.

78. All of these bats were accounted for flying into the site from adjacent locations. These entered around mean pipistrelle emergence time suggesting a near by roosting location, no doubt in surrounding housing stock or golf club building.

79. A single soprano pipistrelle was observed irregularly foraging along the southwest boundary, and a noctule was heard on two occasions foraging high over the site.

Evaluation and Recommendations

80. Land within the centre of the site, currently used as a garden centre, is assessed as being of low ecological value; the boundary hedgerows, ditch and mature standard broadleaf trees on the other hand all have a higher ecological value. These boundary habitats will be retained within the development. Recommendations for their protection are provided below.

81. The proposed development presents minimal risk of significant impacts on important, protected or designated sites.

Invasive species

82. Himalayan Balsam has been recorded along sections of the southwest, northwest and south-eastern boundaries. As such, these boundaries should be subjected to long term management in an effort to eradicate this species from the site. Himalayan Balsam spreads by seed which can lay dormant in the soil for up to three years. Therefore, the continual hand removal of this species prior to it flowering is the preferred treatment, if eradication is to be successful.

Boundary habitats

83. The boundary hedgerows, ditches and mature standard trees should be protected through erecting suitable tree protective fencing outside of the tree and hedgerow root protection area (RPA) during the construction phase of the development. As the hedgerows also have the potential to act as wildlife corridors for animals such as bats, artificial light used during construction and post development should be directed away from the boundaries.

Bats

84. The site has not been found to support high levels of bat activity or any key commuting corridors. Only small numbers of common bat species have been found and the development proposals would not affect their use of the site. There would appear to be no scope for bats to be negatively affected by development.

85. The mature trees have the potential to support roosting bats, therefore if any of these boundary trees require removal or significant pruning work, then further bat surveys are needed.

Nesting birds

86. To prevent the proposed works impacting on nesting birds, all vegetation clearance or work to existing buildings will need to be undertaken outside of the breeding bird season which is 1st March – 31st August inclusive. Any clearance that is required during the breeding bird season should be preceded by a nesting bird survey to ensure that the Wildlife and Countryside Act (1981) is not contravened through the destruction of nests and that any active nests are identified and adequately protected during the construction phase of the development.

Enhancement

87. In line with planning guidance now outlined in the National Planning Policy Framework (NPPF) development should take account of the value of ecosystem services and enhance ecological networks.

88. A landscape scheme could be produced for the site which incorporates only native species, or those non-natives that have a benefit to local wildlife, i.e. berry bearing or nectar rich. Night scented flowers and shrubs would attract nocturnal invertebrate which would then benefit bats.

89. The site could be enhanced in terms of providing roosting opportunities for bats. Up to 5 features providing artificial bat roosting could be incorporated into the south-east and south-western facing elevations of new builds.

90. Similarly the site could be enhanced for nesting birds by erecting up to 5 artificial bird boxes in suitable locations on some of the new builds.

References

IEA. (1995). *Guidelines for Baseline Ecological Assessment*. Chapman and Hall

Nature Conservation Committee (1990). *Handbook for Phase 1 Habitat Survey: A technique for environmental audit*. NCC

N

Garden centre / hard-standing

Amenity grassland

Buildings

Hedgerows

Ditch

Trees

Road,
LS20 8BX
Tel: 01943 864451 / 01943 879129

Site: Hansons Garden Centre

Title: Ecological Features Plan

Drawing Number: D-1525-01.1

Scale: Do not scale Date: 27.09.13

Revision:

N

Pond

Core territory based on availability of prime terrestrial habitat

Likely associated territory

Barriers to movement

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LS19 7PP
www.brooks-ecological.co.uk

T: 0113 250 6101 F: 0113 250 6944

Project: Hansons Garden Centre

Title: Great Crested Newt Landscape Analysis

Drawing Number: D-1525-01.2

Scale: Do not scale Date: September 2013

Revision:

N

smas worksafe consultant www.smasltd.co.uk

SSIP

Brooks Ecological

Greenfield course

Unit A, | Station Road
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www.brooks-ecological.co.uk

T: 01943 884451

Project: Hansons Garden Centre

Title: Composite Bat Activity Survey Plan

Drawing Number: D-1525-01.3

Revision