Hampshire & Isle of Wight Wildlife Trust

Biodiversity Survey & Action Plan
Southampton Solent University

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Executive Summary

Southampton Solent University commissioned Hampshire & Isle of Wight Wildlife Trust to undertake a biodiversity audit of the University's East Park Terrace and Warsash campuses; and make recommendations on how to improve the biodiversity value of the University grounds by producing a Biodiversity Action Plan (BAP). The production of the BAP and implementation of the actions will support the University's commitment to improve biodiversity.

Before visiting the campus, a basic background data search was undertaken to identify if any notable species records had previously been submitted for the sites, and if there were any designations on or adjacent to the survey areas. Both sites had protected and notable species; and four nationally or internationally designated sites are adjacent to Warsash due to its proximity to the Solent.

To assess the current biodiversity value, an extended Phase 1 habitat survey was undertaken in June and July to identify the key habitat types at East Park Terrace and Warsash. Evidence of animals found during the survey were also recorded.

East Park Terrace and Warsash are both primarily areas of amenity grassland, however there is potential to enhance these sites through creating small areas of different habitats which would benefit a range of animals species, as well as increasing the floristic diversity.

The action plan has been developed from the findings of the Phase 1 survey. Some actions are enhancing features that have already been created to benefit biodiversity, while others are new ideas. The action plan has been divided into two tables, one for East Park Terrace and one for Warsash.

By implementing the actions of the BAP the university will enhance the biodiversity of the campus. These actions can also be monitored and used as an evidence base to inform the University's environmental policies and activities.

Contents

1. INTRODUCTION

Southampton Solent University is keen to promote environmental sustainability and "green" activities. The University holds a Green Day and a Green Week across its campus once a year and has plans for a new building designed to achieve a BREEAM award for environmental sustainability. The University campus includes areas of green space, as well as interesting wetland and coastal habitats, which it considers an important biodiversity asset.

The University also participates in the annual People and Planet Green League Award, which assesses the environmental and ethical performance of UK universities. The University was ranked 61st in 2013; two areas identified as needing improvement were the provision of SMART targets to reduce environmental impacts on biodiversity, and to have conducted an environmental audit in the last 5 years to assess and then monitor impacts on biodiversity.

Southampton Solent University addressed these requirements by commissioning Hampshire and Isle of Wight Wildlife Trust to undertake a biodiversity audit and produce a biodiversity action plan for it's East Park Terrace and Warsash campuses.

The audit assessed both the habitats and species (where possible) found on these campuses, producing a species list and Phase 1 habitat map.

The audit has been used, along with background data searches and previous surveys of the University, to produce a biodiversity action plan. The action plan identifies key actions to further enhance and improve the biodiversity interest of the campuses. Actions are SMART and include both land management and people engagement elements, enabling both enhancement of the University for biodiversity, together with raising awareness and educating campus users of the importance of biodiversity.

The biodiversity action plan is a working document which will be used as an evidence base to inform the University's environmental policies and activities.

2. METHODS

2.1 Background Data Search

A search of existing records of protected and notable species was undertaken using the GIS layer produced by Hampshire Biodiversity Information Centre (last updated February 2014), to attain a list of species for East Park Terrace and Warsash campuses. The University's site at Timsbury was not included in this report as it is currently covered by a separate ecological report (ECOSA 2013). A biodiversity review of the Warsash campus conducted in 2007 by Dr Rhu Nash, Kevin Thatcher and Gwen Harvey (School of Engineering, Construction and Maritime, Southampton Solent University) was also obtained.

Designated sites on or adjacent to the survey areas were identified. These include international (SPA, SAC, Ramsar), national (SSSI) and local (SINC) designations. A full explanation of the designations is given in the appendix.

2.2 Questionnaire

A questionnaire to investigate staff and student's thoughts on engagement with biodiversity issues and wildlife on campus was undertaken by Sarah Jackson at the University's green day at the Warsash campus on 26th February 2014.

2.3 Extended Phase 1 Survey

An extended phase 1 habitat survey of Southampton Solent University's Warsash and East Park Terraces campuses was conducted during the daytime of 11th June and 18th July 2014 (respectively) by Sarah Jackson of Hampshire & Isle of Wight Wildlife Trust.

The Joint Nature Conservation Committee (JNCC) methodology for Phase 1 habitat survey was followed (Joint Nature Conservation Committee, 2010). A walkover survey of the site was undertaken, with areas classified and mapped using a standard set of colours on a Phase 1 Habitat Map to indicate the habitat types present. For each different habitat type a species list was compiled, with particular reference to protected, notable or BAP species; this list will not give every species found on the site, but will give a representation of the diversity, significance, and dominance of plant species found within each habitat type. The location of descriptions relating to specific areas and features of interest or note were annotated on the Phase 1 Habitat Map using Target Notes.

Plant nomenclature in this report follows Rose (1989; 2006) for native and naturalised species of vascular plant.

Species surveys were not conducted at this time as they require a sustained survey effort for a minimum of one season (March to October for most animals). Instead habitat types were recorded and it is assumed that suitable habitats will support the anticipated species. Actions in the BAP have been designed to enhance many areas, therefore increasing the suitability of these areas for more wildlife.

3. RESULTS

3.1 Background Data Search

3.1.1 East Park Terrace Campus

Fourteen protected and notable species have been recorded within the same 1km grid square as the East park terrace campus.

There are no designated sites on or adjacent to East park terrace. The nearest designated site is Rollesbrook Valley Greenway SINC, 800m to the east of the campus.

3.1.2 Warsash Campus

155 protected and notable species have been recorded within the same 1km grid square as the Warsash campus. This comprises 36 invertebrates, 12 vascular plants and 107 birds.

There are no designated sites within the campus boundary, but there are four nationally and internationally designated sites adjacent to the western boundary. These are Solent & Southampton Water Ramsar and SPA, Solent Maritime SAC and Lee-on-the-Solent to Itchen East SSSI.

3.2 Questionnaire

Nineteen responses were obtained for the questionnaire. Staff and students considered areas that support wildlife and nature to be very important, with over 50% of respondents visiting wildlife areas at least once a week most typically for walking. The majority of people (84%) would like to see more wildlife areas on campus, with 85% interested in doing something on campus to help wildlife, such as take part in a wildlife survey (30%) or join a conservation group (10%).

3.3 Extended Phase 1 Survey

3.3.1 East Park Terrace Campus

East park terrace is not very botanically diverse, with many non-native, ornamental and/or evergreen species. A number of areas are planted in raised beds such as in the quadrant (target note 1; photograph 1), and the western entrances to the campus (target note 2).

The areas of amenity grassland have a very short sward, but do contain the most species (target note 3; photograph 2). The area around the northern parking area (target note 4; photograph 3) also has a reasonable number of common species. Enhancement of this area is restricted by the requirement for it to remain open for safety reasons and it is unknown as to its future purpose once the current development is complete.

No animal species were recorded during the visit.

The range of habitats at East park terrace is shown in table 1 and map 1.

Table 1. Habitat types found in East Park Terrace

Habitat Type	Area (Ha)	% of Site
Amenity Grassland	0.11	3
Bare Ground	2.25	54
Buildings	1.61	39
Introduced Shrub	0.16	4
Total	**4.13**	

3.3.2 Warsash Campus

The grass areas on the campus are predominantly mown short for use as amenity grassland by staff and students (target note 1). However there are areas of longer grass, and a semi-improved grassland with ant hills (animal target note 5; photograph 4) in the north east corner of the site (target note 5) which could be further enhanced for wildlife. The campus is bounded by hedges (target note 2), introduced shrubs (target note 3) and areas of scrub and trees (target note 4). In addition there are 5 ponds on the site; pond 4 is a tidal sea water pool which contains crabs (animal target note 3; photograph 5) but is also subject to the discharges from the fire school and pond 5 is brackish due to the influx of sea water at high tides. The remaining ponds (1 to 3) are freshwater water, except potentially during freak weather events. Ponds 2 and 3 are linked by a densely vegetated ditch, and also contain carp (photograph 6). Japanese knotweed was identified in five locations on the campus and has been marked on map 2, represented by the red diamond. In most areas it is a single stem and therefore, if removed soon, could be eradicated from the site.

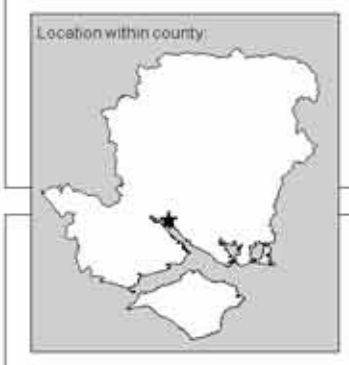
Whilst on site a willow with several holes with potential to support roosting bats contained a blackbird nest with chick(s) (animal target note 2), molehills were also present nearby (animal target note 1). The northern corner with long grass was also found to be very good for grasshoppers (animal target note 4).

In addition to the animal target notes a number of birds were seen or heard on the site during the survey including green woodpecker, oystercatcher, robin, black-headed gull, chiff chaff and goldfinch. Several invertebrates were also seen utilising the areas of longer grass; these were common blue damselfly, white-tailed bumblebee, blue-tailed damselfly, azure damselfly, burnet moth and speckled wood butterfly.

The range of habitats at Warsash is shown in table 2 and map 2.

Table 2. Habitat types found in Warsash campus

Habitat Type	Area (Ha)	% of Site
Amenity Grassland	1.77	27
Bare Ground	1.94	29
Building	1.06	16
Dense/Continuous Scrub	0.79	12
Introduced Shrub	0.11	2
Non-ruderal Tall Herbs	0.11	2
Scattered Scrub	0.1	1
Semi-improved Neutral Grassland	0.18	3
Total	**6.61**	



Map 1. East Park Terrace

Phase 1 Habitat Mapping

Scale 1:1000

Hampshire and Isle of Wight Wildlife Trust
Beechcroft House, Vicarage Lane
Curdridge, Hampshire
SO32 2DP

Hampshire & Isle of Wight Wildlife Trust

Dense/continuous scrub
Scattered scrub
Semi-improved neutral grassland
Non-ruderal tall herbs
Standing open water
Amenity grassland
Introduced shrub
Building
Bare ground
Scattered broad-leaved trees
Scattered coniferous trees
Japanese knotweed
Botanical target note
Animal target note
Fence
Hedge
Wall

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EAST PARK TERRACE
NEW ROAD
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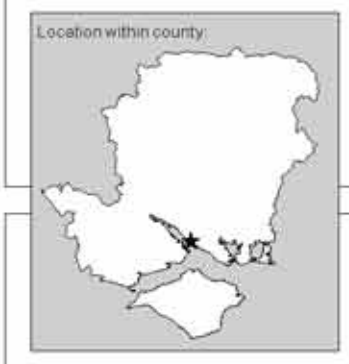
Produced by Hampshire and Isle of Wight Wildlife Trust on 11 August 2014 by Sarah Jackson. For enquiries relating to the Wildlife Trust's GIS data contact Catherine McGuire, email Catherine.McGuire@hwt.org.uk, tel: 01489 774455



Map 2. Warsash Campus

Phase 1 Habitat Mapping

Scale 1:1500

Hampshire and Isle of Wight Wildlife Trust
Beechcroft House, Vicarage Lane
Curdridge, Hampshire
SO32 2DP

Hampshire & Isle of Wight Wildlife Trust

Dense/continuous scrub
Scattered scrub
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Standing open water
Amenity grassland
Introduced shrub
Building
Bare ground
Scattered broad-leaved trees
Scattered coniferous trees
Japanese knotweed
Botanical target note
Animal target note
Fence
Hedge
Wall

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BAP Priority habitat, notable species and SINC data supplied by the Hampshire Biodiversity Information Centre on behalf of the HBIC Partnership.
Produced by Hampshire and Isle of Wight Wildlife Trust on 11 August 2014 by Sarah Jackson. For enquiries relating to the Wildlife Trust's GIS data contact Catherine McGuire, email Catherine.McGuire@hiwt.org.uk, tel: 01489 774455

4. ACTIONS

Based on the results of the background data search and extended Phase 1 survey suitable actions have been developed that will improve the biodiversity interest of East Park Terrace and Warsash campuses.

Some of the actions listed are already underway; others are potential projects, while others are aspirational, they represent ideal actions given sufficient resources and time. The actions listed represent the current priorities. Priorities will, however, constantly change for many reasons, hence the need for regular review of this BAP.

Each action table is divided into 5 main columns; Objective, Action, Outcome, Targets and Reporting Method. Objectives are the overall aim of undertaking the action, actions are the key activities that need to be undertaken, outcomes are the benefits to biodiversity that will be achieved, the targets are the steps that need to be fulfilled by the end of the stated years, and the reporting method identifies how progress towards the final objective is going to be monitored. Some targets also include management suggestions on how best to achieve the target, these should be incorporated into the estates management plans for the sites. There is also a corresponding map for each table, demonstrating where actions could be undertaken.

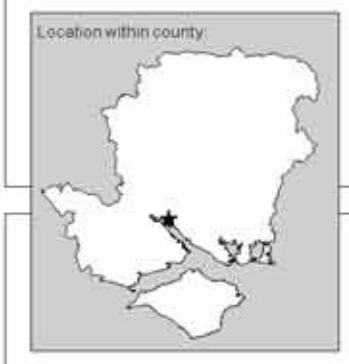
Some actions have a reporting method of an ‘Annual biodiversity check’. This involves a walkover of the sight conducting a visual inspection to ensure the progress towards the actions is being undertaken, and highlight areas where work needs to be progressed.

4.1 East Park Terrace Campus

OBJECTIVE	ACTION	OUTCOME	TARGET (YEARS)			REPORTING METHOD
			1- 2	3 – 5	6 – 10	
Develop amenity grassland	Create long grassland/wildflower areas on amenity grassland	Habitat for invertebrates, such as bees and butterflies, & small mammals Area for staff and students to relax	Area of long grass with no large weeds ***Management:*** Year 1: Cut grass in March then leave to grow over the summer. In autumn remove any weeds & cut. If not very species diverse, seed with a wildflower mix. Do not leave cut grass in-situ. Year 2: Cut when height between 10 - 15cm, then every 6 to 8 weeks, always removing the grass. Do not cut below 5cm.	Grassland with at least 2 native wildflower species present ***Management:*** Year 3: Cut twice – once in late March/early April, & once in late August/early September. From Year 4: Adopt an annual mowing regime – cutting once in late August/early September. Vary the time of the cut each year to allow late-flowering plants to set seeds in some years. Remove any large weeds. Remove grass cuttings from area.	Grassland with a mixture of grass and native wildflowers with no dominant species ***Management:*** Continue annual mowing regime, removing the cut grass from the area and not cutting below 5cm.	Annual Vegetation & Invertebrate surveys
Develop raised beds	Plant more native species in raised beds	Food source and nesting habitat for birds Food source for invertebrates		At least 2 raised beds containing native species		Annual biodiversity check
Creation of new habitat	Incorporate green wall and green roof into new campus buildings	Habitat for invertebrates and birds				Annual biodiversity check
	Create pond with dipping platform in northern parking area (photograph 3)	Habitat for common amphibians, invertebrates, dragonflies & damselflies	Pond created with dipping platform & rough grassland area. Secure fence with gate built to stop dogs & small children	Pond with range of invertebrates & established vegetation. Grassland developing into wildflower area.	Pond with a diversity of species including invertebrates, amphibians & plants. Wildflower area established.	Annual pond survey for invertebrates & amphibians

	Allow wildflower area to develop along part of pond edge to provide cover for animals moving in & out of pond	Resource for university conservation group, local schools & groups	reaching the pond unsupervised (see appendix 7.5) ***Management:*** Dig out pond with gently sloping or shelved sides. Allow pond to fill naturally with rainwater to stop introduction of nutrients and algal growth. Plant with suitable vegetation. Leave fauna to colonise naturally.	***Management:*** Pond vegetation should be thinned or seed heads cut before ripening to prevent one species becoming dominate. Never remove all plants at the same time to ensure some cover is always present for wildlife. Twice yearly mowing regime established for wildflower area	***Management:*** Continue to monitor pond vegetation and maintain at an appropriate level, and continue twice a year cutting regime	
	Create small orchard in amenity grassland areas	Food source and nesting habitat for birds Food source for invertebrates Maintained by university conservation group & could sell fruit to students	At least 3 saplings planted ***Management:*** Plant saplings of native apple/plum/pear species	***Management:*** Prune as required	Productive fruit trees	Annual biodiversity check
Creation of space for wildlife	Installation of bat and bird boxes on trees	Increased roosting provision for bats and birds	Erection of at least 3 bat boxes on trees and 2 swift/swallow boxes on buildings (see appendix 7.6)	If bat boxes not being used by year 5, site in a different location		Bat & bird box check after 5 years
	Provision of log piles and/or invertebrate houses in shrubs	Increased habitat for invertebrates, particularly stag beetles	Creation of stag beetle wood pile (see appendix 7.7)	Creation/installation of at least 1 log pile or box in suitable areas		Annual biodiversity check
Student and staff engagement	Install cameras in bird boxes with web link	Insight in to natural world, foster appreciation of biodiversity actions		Cameras in at least 2 bird boxes		

	Install bird feeding station	Food source for birds Increased interaction of staff and students with local wildlife University conservation group responsible for maintaining feeders	Install bird feeding station			
Creation of greener and more 'linked' habitat	More raised beds between buildings with native species	Food source and nesting habitat for birds Food source for invertebrates		At least 1 new native species raised bed installed		Annual biodiversity check



Map 3. East Park Terrace

Biodiversity Actions

Scale 1:1000

Hampshire and Isle of Wight Wildlife Trust
Beechcroft House, Vicarage Lane
Curdridge, Hampshire
SO32 2DP

Hampshire & Isle of Wight Wildlife Trust

Amenity grassland
Introduced shrub
Building
Bare ground
Scattered broad-leaved trees
Scattered coniferous trees
Japanese knotweed
Fence
Hedge
Wall
Orchard
Stag beetle woodpile
Bat/bird boxes
Log pile/invertebrate house
Bird feeding station
Fence
Wildflower meadow
Raised bed with native species
Pond
Dipping platform

A33
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ST ANDREWS ROAD
EAST PARK TERRACE
NEW ROAD

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BAP Prionty habitat, notable species and SINC data supplied by the Hampshire Biodiversity Information Centre on behalf of the HBIC Partnership.
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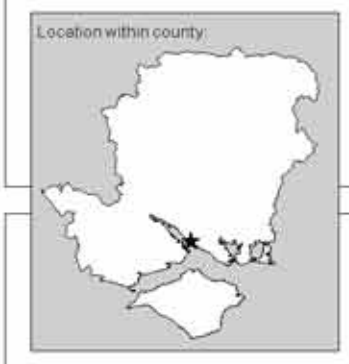
4.2 Warsash Campus

OBJECTIVE	ACTION	OUTCOME	TARGET (YEARS)			REPORTING METHOD
			1- 2	3 – 5	6 – 10	
Access to nature	Open up/improve path around pond 2	More light reaching pond edges to help vegetation growth in pond More accessible to staff and students	Vegetation blocking path cut back Improvements made to path if required			Annual biodiversity check
Increase interpretation	Create boards with info and/or QR code to link to website with more information, audio files, ID guides and recording form	Increased awareness of natural environment and biodiversity issues	Decide locations of boards and write text Develop app/webpage	Installation of interpretation boards		Visitor counter on website
Creation of habitat	Develop shrub areas into native shingle habitat /rockery reflecting the surrounding coastal environment	Cover and food source for invertebrates	Construction of rockery and planting with appropriate native species (see appendix 7.8)			Annual biodiversity check
	Create log pile near ponds 2 & 3 for reptiles and amphibians	Habitat for hibernating common reptiles (adder, grass snake, lizards and slow worm) and common amphibians		Build log pile		Annual biodiversity check
Enhance native species planting	New and replacement planting with appropriate native species	Food source and nesting habitat for birds Food source for invertebrates				Annual biodiversity check

Develop coastal grassland area	Plant native species hedgerow Suitable cutting regime to allow development of wild flowers	Habitat for nesting birds, and food source for birds and invertebrates	Saplings present along boundary ***Management:*** Use native fruit and flower producing species. Allow understorey to develop at base of hedge by not allowing long grass and weeds to dominate, seed if necessary. Good understorey species are foxglove, primrose, red & white campions, and hedge garlic.	Hedgerow starting to develop, fill in any gaps if present. Presence of at least 1 understorey species ***Management:*** Cut hedge every other year as some species only fruit/flower on year old twigs which are removed on annual cutting regimes. Cutting in January or February. Introduce honeysuckle	Intact, dense hedge with fruit & flower producing species. Height of 1.5m and width of 1.2m ***Management:*** Continue cutting regime	Annual biodiversity check
Maintain long grassland areas	Continue with current cutting regime allowing vegetation to be longer around boundaries, ponds, shrubs and trees	Food source and nesting habitat for birds Food source for invertebrates Cover for small mammals				Annual biodiversity check
Remove non-native species	Remove all Japanese knotweed from site	Stop spread of non-natives	All Japanese knotweed plants removed			Annual biodiversity check
Enhancement of ponds 2 & 3	Create more space for native species	Habitat for common amphibians, invertebrates, dragonflies & damselflies		Create “shelves” in pond so shallow/sheltered areas where fish can’t reach	Plant native species on “shelve” to create habitat for native wildlife	Annual biodiversity check Dragonfly & damselfly survey



Map 4. Warsash Campus

Biodiversity Actions

Scale 1:1500

Hampshire and Isle of Wight Wildlife Trust
Beechcroft House, Vicarage Lane
Curdridge, Hampshire
SO32 2DP

Hampshire & Isle of Wight Wildlife Trust

Dense/continuous scrub
Scattered scrub
Semi-improved neutral grassland
Non-ruderal tall herbs
Standing open water
Amenity grassland
Introduced shrub
Building
Bare ground
Scattered broad-leaved trees
Scattered coniferous trees
Fence
Hedge
Wall
Log pile
Native species planted on pond shelf
Interpretation board
Native species hedgerow
Shingle rockery
Wildflower meadow with ant hills

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Produced by Hampshire and Isle of Wight Wildlife Trust on 20 August 2014 by Sarah Jackson. For enquiries relating to the Wildlife Trust's GIS data contact Catherine McGuire, email Catherine.McGuire@hiwwt.org.uk, tel: 01489 774455

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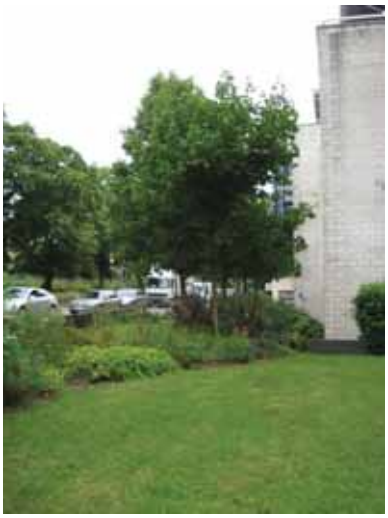
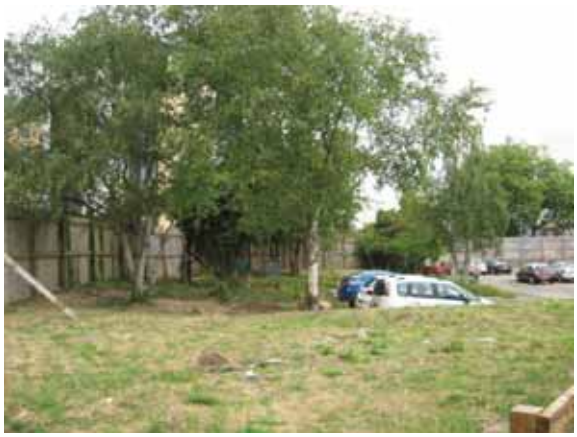
6. PHOTOGRAPHS

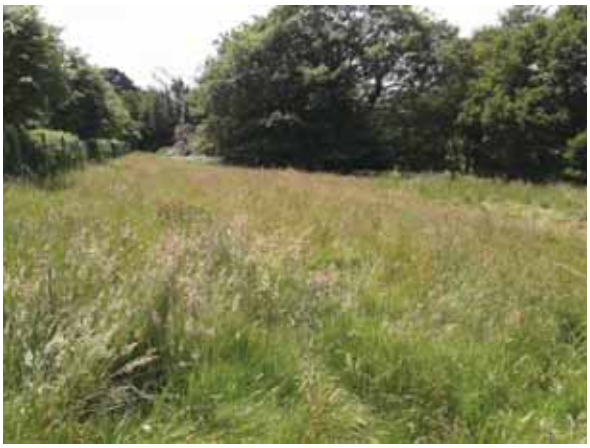
Photograph 1. Raised bed in quadrant at East Park Terrace



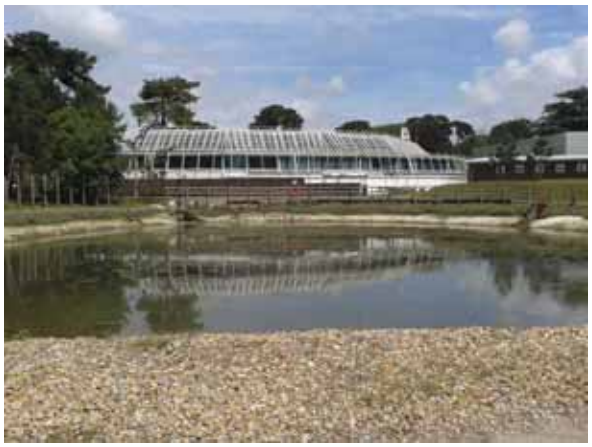
Photograph 2. Amenity grassland surrounding East Park Terrace



Photograph 3. Northern parking area, which could be potential area for pond



Photograph 4. Semi-improved grassland at Warsash



Photograph 5. Tidal pool at Warsash

Photograph 6. Ponds 2 and 3 at Warsash

7. APPENDIX

7.1 Designation Types

SPA: A **Special Protection Area (SPA)** is a site designated under Article 4 of EC Directive 79/409 on the conservation of wild birds. Together SACs and SPAs form a network of European sites known as Natura 2000.

SAC: A **Special Area of Conservation (SAC)** is a site designated by the UK Government under EC Directive 92/43 on the conservation of natural habitats and of wild fauna and flora.

Ramsar: The **Ramsar Convention** (The Convention on Wetlands of International Importance, especially as Waterfowl Habitat) is an international treaty for the conservation and sustainable utilisation of wetlands i.e. to stem the progressive encroachment on and loss of wetlands now and in the future, recognising the fundamental ecological functions of wetlands and their economic, cultural, scientific, and recreational value. It is named after the town of Ramsar in Iran.

SSSI: A **Site of Special Scientific Interest (SSSI)** is an area of land notified under the Wildlife and Countryside Act 1981 as being the country's best wildlife and geological sites. The SSSI designation applies in England, Wales and Scotland. Sites are notified by the appropriate country conservation agency, in England this is Natural England.

SINC: Site of Importance for Nature Conservation (SINC) - A non-statutory designation of sites at the county/district level. Sites are generally assessed by either local authorities or county wildlife trusts, and adopted in local plans.

7.2 Protected & Notable Species

7.2.1 East Park Terrace Campus

Group	Common Name	Taxon	Last Recorded
Birds	Common Starling	*Sturnus vulgaris*	2011
Birds	Eurasian Wryneck	*Jynx torquilla*	2010
Birds	Firecrest	*Regulus ignicapilla*	2011
Birds	Herring Gull	*Larus argentatus*	1999
Birds	Northern Wheatear	*Oenanthe oenanthe*	2011
Birds	Peregrine Falcon	*Falco peregrinus*	2010
Birds	Redwing	*Turdus iliacus*	2011
Birds	Slavonian Grebe	*Podiceps auritus*	2012
Birds	Song Thrush	*Turdus philomelos*	2011
Birds	Spotted Flycatcher	*Muscicapa striata*	2010
Higher plants - Flowering Plants	Corn Spurrey	*Spergula arvensis*	1998
Invertebrates - Coleoptera	Adonis' Ladybird	*Hippodamia (Adonia) variegata*	2009
Invertebrates - Diptera	Callicera aurata	*Callicera aurata*	2012
Invertebrates - Hymenoptera	Girdled Mining Bee	*Andrena (Poecilandrena) labiata*	2007

7.2.2 Warsash Campus

Group	Common Name	Taxon	Last Recorded
Birds	Arctic Skua	*Stercorarius parasiticus*	2003
Birds	Arctic Tern	*Sterna paradisaea*	2004
Birds	Barn Owl	*Tyto alba*	2004
Birds	Barnacle Goose	*Branta leucopsis*	2005
Birds	Bar-tailed Godwit	*Limosa lapponica*	2005
Birds	Bearded Tit	*Panurus biarmicus*	2006
Birds	Black Redstart	*Phoenicurus ochruros*	2005
Birds	Black Tern	*Chlidonias niger*	2003
Birds	Black-headed Gull	*Chroicocephalus ridibundus*	2007
Birds	Black-necked Grebe	*Podiceps nigricollis*	2003
Birds	Black-tailed Godwit	*Limosa limosa*	2007
Birds	Black-throated Diver	*Gavia arctica*	1998
Birds	Bluethroat	*Luscinia svecica*	2002
Birds	Brambling	*Fringilla montifringilla*	1998
Birds	Cetti's Warbler	*Cettia cetti*	1998
Birds	Common Bullfinch	*Pyrrhula pyrrhula*	2011
Birds	Common Cuckoo	*Cuculus canorus*	2003
Birds	Common Grasshopper Warbler	*Locustella naevia*	2002
Birds	Common Greenshank	*Tringa nebularia*	2007
Birds	Common Kingfisher	*Alcedo atthis*	2007
Birds	Common Linnet	*Carduelis cannabina*	2011
Birds	Common Nightingale	*Luscinia megarhynchos*	2005
Birds	Common Pochard	*Aythya ferina*	2007
Birds	Common Redshank	*Tringa totanus*	2007
Birds	Common Redstart	*Phoenicurus phoenicurus*	2003
Birds	Common Scoter	*Melanitta nigra*	2002
Birds	Common Shelduck	*Tadorna tadorna*	2003
Birds	Common Snipe	*Gallinago gallinago*	1999
Birds	Common Starling	*Sturnus vulgaris*	1998
Birds	Common Tern	*Sterna hirundo*	2006
Birds	Dartford Warbler	*Sylvia undata*	2002
Birds	Dunlin	*Calidris alpina*	2002
Birds	Eurasian Curlew	*Numenius arquata*	2007
Birds	Eurasian Hobby	*Falco subbuteo*	2007
Birds	Eurasian Marsh Harrier	*Circus aeruginosus*	2003
Birds	Eurasian Oystercatcher	*Haematopus ostralegus*	2002
Birds	Eurasian Reed Warbler	*Acrocephalus scirpaceus*	2001
Birds	Eurasian Siskin	*Carduelis spinus*	2004
Birds	Eurasian Spoonbill	*Platalea leucorodia*	2003

Birds	Eurasian Wryneck	*Jynx torquilla*	2010
Birds	European Golden Plover	*Pluvialis apricaria*	2007
Birds	European Nightjar	*Caprimulgus europaeus*	2001
Birds	European Turtle Dove	*Streptopelia turtur*	2000
Birds	Fieldfare	*Turdus pilaris*	2006
Birds	Firecrest	*Regulus ignicapilla*	2005
Birds	Gadwall	*Anas strepera*	2003
Birds	Garganey	*Anas querquedula*	1998
Birds	Glossy Ibis	*Plegadis falcinellus*	2012
Birds	Goosander	*Mergus merganser*	2007
Birds	Great Bittern	*Botaurus stellaris*	2005
Birds	Great Black-backed Gull	*Larus marinus*	2007
Birds	Great Crested Grebe	*Podiceps cristatus*	2007
Birds	Great Northern Diver	*Gavia immer*	2000
Birds	Greater Scaup	*Aythya marila*	2009
Birds	Green Sandpiper	*Tringa ochropus*	2005
Birds	Grey Heron	*Ardea cinerea*	2007
Birds	Grey Plover	*Pluvialis squatarola*	2000
Birds	Hawfinch	*Coccothraustes coccothraustes*	2005
Birds	Herring Gull	*Larus argentatus*	2007
Birds	Hoopoe	*Upupa epops*	2006
Birds	House Sparrow	*Passer domesticus*	2011
Birds	Leach's Storm-petrel	*Oceanodroma leucorhoa*	2010
Birds	Lesser Black-backed Gull	*Larus fuscus*	2006
Birds	Lesser Redpoll	*Carduelis cabaret*	2005
Birds	Lesser Spotted Woodpecker	*Dendrocopos minor*	2006
Birds	Little Bittern	*Ixobrychus minutus*	2003
Birds	Little Egret	*Egretta garzetta*	2002
Birds	Little Gull	*Hydrocoloeus minutus*	2010
Birds	Little Plover	*Charadrius dubius*	2005
Birds	Little Tern	*Sternula albifrons*	2001
Birds	Long-tailed Duck	*Clangula hyemalis*	2009
Birds	Mediterranean Gull	*Larus melanocephalus*	2007
Birds	Merlin	*Falco columbarius*	1999
Birds	Northern Lapwing	*Vanellus vanellus*	2005
Birds	Northern Shoveler	*Anas clypeata*	2003
Birds	Northern Wheatear	*Oenanthe oenanthe*	2003
Birds	Osprey	*Pandion haliaetus*	2000
Birds	Peregrine Falcon	*Falco peregrinus*	2002
Birds	Pied Avocet	*Recurvirostra avosetta*	2004
Birds	Pied Flycatcher	*Ficedula hypoleuca*	2001
Birds	Red Kite	*Milvus milvus*	2009

Birds	Red Knot	*Calidris canutus*	2007
Birds	Red-breasted Merganser	*Mergus serrator*	2004
Birds	Red-throated Diver	*Gavia stellata*	2002
Birds	Redwing	*Turdus iliacus*	2007
Birds	Reed Bunting	*Emberiza schoeniclus*	2007
Birds	Rock Pipit	*Anthus petrosus*	2005
Birds	Ruddy Turnstone	*Arenaria interpres*	2007
Birds	Ruff	*Philomachus pugnax*	2000
Birds	Sand Martin	*Riparia riparia*	2002
Birds	Sanderling	*Calidris alba*	2001
Birds	Sandwich Tern	*Sterna sandvicensis*	2001
Birds	Short-eared Owl	*Asio flammeus*	2004
Birds	Sky Lark	*Alauda arvensis*	2007
Birds	Slavonian Grebe	*Podiceps auritus*	2002
Birds	Smew	*Mergellus albellus*	2010
Birds	Snow Bunting	*Plectrophenax nivalis*	1998
Birds	Song Thrush	*Turdus philomelos*	2003
Birds	Spotted Crake	*Porzana porzana*	2003
Birds	Spotted Flycatcher	*Muscicapa striata*	2002
Birds	Tree Pipit	*Anthus trivialis*	2005
Birds	Water Rail	*Rallus aquaticus*	2006
Birds	Whimbrel	*Numenius phaeopus*	2005
Birds	Whinchat	*Saxicola rubetra*	2005
Birds	Wood Lark	*Lullula arborea*	2005
Birds	Wood Sandpiper	*Tringa glareola*	2004
Birds	Yellow Wagtail	*Motacilla flava*	2004
Higher plants - Flowering Plants	Alexanders	*Smyrnium olusatrum*	1997
Higher plants - Flowering Plants	Bird's-foot Clover	*Trifolium ornithopodioides*	2012
Higher plants - Flowering Plants	Corky-fruited Water-dropwort	*Oenanthe pimpinelloides*	1993
Higher plants - Flowering Plants	Curled Dock	*Rumex crispus subsp. littoreus*	2011
Higher plants - Flowering Plants	Lesser Chickweed	*Stellaria pallida*	1997
Higher plants - Flowering Plants	Long-spiked Glasswort	*Salicornia dolichostachya*	2011
Higher plants - Flowering Plants	Reflexed Saltmarsh-Grass	*Puccinellia distans*	1997
Higher plants - Flowering Plants	Slender Hare's-ear	*Bupleurum tenuissimum*	1993
Higher plants - Flowering Plants	Slender Thistle	*Carduus tenuiflorus*	1997
Higher plants - Flowering Plants	Wild Celery	*Apium graveolens*	1993
Higher plants - Flowering Plants	Yellow Glasswort	*Salicornia fragilis*	2011
Higher plants - Flowering Plants	Yellow Horned-poppy	*Glaucium flavum*	1997

Invertebrates - Coleoptera	Cantharis fusca	*Cantharis fusca*	2012
Invertebrates - Coleoptera	Cerapheles terminatus	*Cerapheles terminatus*	2006
Invertebrates - Coleoptera	Dasytes niger	*Dasytes niger*	2012
Invertebrates - Coleoptera	Helops caeruleus	*Helops caeruleus*	2002
Invertebrates - Coleoptera	Lixus (Eulixus) scabricollis	*Lixus (Eulixus) scabricollis*	2003
Invertebrates - Coleoptera	Longitarsus dorsalis	*Longitarsus dorsalis*	2001
Invertebrates - Coleoptera	Magdalis (Porrothus) cerasi	*Magdalis (Porrothus) cerasi*	2012
Invertebrates - Coleoptera	Malthinus balteatus	*Malthinus balteatus*	2006
Invertebrates - Coleoptera	Neocoenorrhinus interpunctatus	*Neocoenorrhinus interpunctatus*	2001
Invertebrates - Coleoptera	Oedemera (Oncomera) femoralis	*Oedemera (Oncomera) femoralis*	2002
Invertebrates - Diptera	Leopoldius signatus	*Leopoldius signatus*	2008
Invertebrates - Hemiptera	Lygus pratensis	*Lygus pratensis*	2006
Invertebrates - Hemiptera	Orthotylus (Melanotrichus) moncreaffi	*Orthotylus (Melanotrichus) moncreaffi*	2001
Invertebrates - Lepidoptera	Beaded Chestnut	*Agrochola lychnidis*	2001
Invertebrates - Lepidoptera	Blackthorn Case-bearer	*Coleophora coracipennella*	1998
Invertebrates - Lepidoptera	Cinnabar	*Tyria jacobaeae*	2006
Invertebrates - Lepidoptera	Dark Elm Case-bearer	*Coleophora limosipennella*	2012
Invertebrates - Lepidoptera	False Cacao Moth	*Ephestia parasitella*	2000
Invertebrates - Lepidoptera	Feathered Ranunculus	*Polymixis lichenea*	2002
Invertebrates - Lepidoptera	Grayling	*Hipparchia semele*	2001
Invertebrates - Lepidoptera	Lackey	*Malacosoma neustria*	2006
Invertebrates - Lepidoptera	Large Wainscot	*Rhizedra lutosa*	2002
Invertebrates - Lepidoptera	Little Grass-veneer	*Platytes cerussella*	2006
Invertebrates - Lepidoptera	Mallow	*Larentia clavaria*	2005
Invertebrates - Lepidoptera	Mullein Wave	*Scopula marginepunctata*	2000
Invertebrates - Lepidoptera	New Marsh Cosmet	*Cosmopterix scribaiella*	2004
Invertebrates - Lepidoptera	Sallow	*Xanthia icteritia*	2000
Invertebrates - Lepidoptera	Saltern Groundling	*Scrobipalpa instabilella*	2000
Invertebrates - Lepidoptera	Sea-purslane Case-bearer	*Coleophora salinella*	2000

Invertebrates - Lepidoptera	Silver Carrot Conch	*Aethes williana*	2006
Invertebrates - Lepidoptera	Small Heath	*Coenonympha pamphilus*	2010
Invertebrates - Lepidoptera	Small Yellow Underwing	*Panemeria tenebrata*	2006
Invertebrates - Lepidoptera	Treble-spot Tubic	*Telechrysis tripuncta*	1998
Invertebrates - Lepidoptera	Unmarked Neb	*Eulamprotes unicolorella*	2000
Invertebrates - Lepidoptera	White Admiral	*Limenitis camilla*	2001
Invertebrates - Lepidoptera	White-letter Hairstreak	*Satyrium w-album*	2001

7.3 Questionnaire Responses

How important to you are areas that support wildlife and nature? E.g. nature reserves, parks

Very important	**90%**
Quite important	5%
A little	5%
Not at all	0

How often do you visit wildlife areas?

Daily	16%
Several times a week	16%
Once a week	21%
Once or twice a month	**37%**
Less frequently	10%
Never	0

What activities to you undertake in open spaces such as nature reserves or parks?

Walking	**49%**
Exercise	17%
Wildlife-spotting	8%
Quiet enjoyment	3%
Conservation work parties	0
Informal recreation	17%
Other	6%

Would you like to see more areas for wildlife on campus?

Yes	**84%**
No	16%

If you could do one thing to help wildlife on campus, what would you do?

Join a conservation group	10%
Take part in a wildlife survey	30%
Sign up to a wildlife campaign	5%
Would do something, but not sure what	**35%**
Other (please state) (Put a bird feeder on their window)	5%
Not interested	15%

7.4 Extended Phase 1 Survey – Species List

7.4.1 East Park Terrace

Target Note 1 – Raised bed in quadrant

Common Name	Scientific Name
Bamboo	
Rhododendron	*Rhododendron ponticum*

Target Note 2 – Raised beds

Common Name	Scientific Name
Buddleia	
Hazel	*Corylus avellana*
Hedge bindweed	*Calystegia sepium*
Holly	*Ilex aquifolium*
Ivy	*Hedera helix*
Rhododendron	*Rhododendron ponticum*

Target Note 3 – Green areas around boundary of campus

Common Name	Scientific Name
Annual meadow grass	*Poa annua*
Bamboo	
Beech	*Fagus sylvatica*
Broad-leaved willowherb	*Epilobium montanum*
Buckthorn	*Rhamnus cathartica*
Buddleia	
Cherry	*Prunus avium*
Cotoneaster sp.	
Creeping bent	*Agrostis stolonifera*
Creeping buttercup	*Ranunculus repens*
Creeping cinquefoil*	*Potentilla reptans*
Creeping thistle	*Cirsium arvense*
Daisy	*Bellis perennis*
Dandelion	*Taraxacum agg.*
Field maple	*Acer campestre*
Fuschia	*Fuschia*
Geranium sp.	
Ground ivy	*Glechoma hederacea*
Hebe sp.	*Hebe sp.*
Hedge bindweed	*Calystegia sepium*
Hoary plantain	*Plantago media*
Japanese maple	*Acer palmatum*
Laurel	*Prunus laurocerasus*

Lavender	*Lavandula sp.*
Lime	*Tilia x europaea*
London plane	*Platanus × acerifolia*
Mock orange blossom	*Choisya ternata*
Moss sp.	
Oak sapling	*Quercus robur*
Opium poppy	*Papaver somniferum*
Palm sp.	
Ragwort	*Senecio jacobea*
Rhododendron	*Rhododendron ponticum*
Rose sp.	
Rowan	*Sorbus aucuparia*
Scarley pimpernel	*Anagallis arvensis*
Snowberry	*Symphoricarpos albus*
Sow thistle	*Sonchus oleraceus*
Sweet chestnut	*Castanea sativa*
Sycamore	*Acer pseudoplatanus*
Thyme-leaved speedwell	*Veronica serpyllifolia*
White clover	*Trifolium repens*
Wood spurge	*Euphorbia amygdaloides*
Yarrow	*Achillea Millefolium*

Target Note 4 – Northern parking area

Common Name	**Scientific Name**
Annual meadow grass	*Poa annua*
Bracken	*Pteridium aquilinum*
Bramble	*Rubus fruticosus*
Buddleia	
Cock's-foot	*Dactylis glomerata*
Copper beech	*Fagus sylvatica f. purpurea*
Creeping thistle	*Cirsium arvense*
Dandelion	*Taraxacum agg.*
Dove's-foot crane's-bill	*Geranium molle*
Ivy	*Hedera helix*
Perennial rye grass	*Lolium perenne*
Pine sp.	
Ragwort	*Senecio jacobea*
Ribwort plantain	*Plantago lanceolata*
Rowan	*Sorbus aucuparia*
Silver birch	*Betula pendula*
Sycamore	*Acer pseudoplatanus*
Thyme-leaved speedwell	*Veronica serpyllifolia*
Yarrow	*Achillea Millefolium*

7.4.2 Warsash

Target Note 1 – Amenity grassland

Common Name	**Scientific Name**
Annual meadow grass	*Poa annua*
Black medick	*Medicago lupulina*
Bracken	*Pteridium aquilinum*
Bramble	*Rubus fruticosus*
Bristly oxtongue*	*Picris echioides*
Broad-leaved dock	*Rumex obtusifolius*
Cat's-ear	*Hypochaeris radicata*
Cherry	*Prunus avium*
Common fleabane	*Pulicaria dysenterica*
Common vetch	*Vicia sativa*
Cotoneaster	
Cow parsley	*Anthriscus sylvestris*
Creeping bent	*Agrostis stolonifera*
Creeping buttercup	*Ranunculus repens*
Creeping cinquefoil*	*Potentilla reptans*
Creeping thistle	*Cirsium arvense*
Crested dog's tail	*Cynosurus cristatus*
Daisy	*Bellis perennis*
Dandelion	*Taraxacum agg.*
Dove's-foot crane's bill	*Geranium molle*
Garlic mustard	*Alliaria petiolata*
Germander speedwell	*Veronica chamaedrys*
Goat's-beard*	*Tragopogon pratensis*
Great willowherb	*Epilobium hirsutum*
Greater plantain	*Plantago major*
Ground ivy	*Glechoma hederacea*
Hawkbit sp.	*Leontodon sp.*
Herb robert*	*Geranium robertianum*
Japanese knotweed	*Fallopia japonica*
Kidney vetch	*Anthyllis vulneraria*
Lesser stitchwort	*Stellaria graminea*
Meadow buttercup	*Ranunculus acris*
Meadow foxtail	*Alopecurus pratensis*
Moss sp.	
Nipplewort*	*Lapsana communis*
Oxeye daisy	*Leucanthemum vulgare*
Perennial rye grass	*Lolium perenne*
Pine sp.	
Ragwort	*Senecio jacobea*
Red clover	*Trifolium pratense*
Ribwort plantain	*Plantago lanceolata*
Scarlet pimpernel	*Anagallis arvensis*
Silver birch	*Betula pendula*
Spear thistle	*Cirsium vulgare*
Spotted medick	*Medicago arabica*
Sweet vernal grass	*Anthoxanthum odoratum*
White clover	*Trifolium repens*

Wood avens	*Geum urbanum*
Wood speedwell	*Veronica montana*
Yarrow	*Achillea Millefolium*
Yorkshire fog	*Holcus lanatus*

(* on bund)

Target Note 2 - Hedge

Common Name	**Scientific Name**
Beech	*Fagus sylvatica*
Blackthorn	*Prunus spinosa*
Bramble	*Rubus fruticosus*
Copper beech	*Fagus sylvatica f. purpurea*
Hedge bindweed	*Calystegia sepium*
Holly	*Ilex aquifolium*
Sycamore	*Acer pseudoplatanus*

Target Note 3 – Introduced shrub

Common Name	**Scientific Name**
Cherry laurel	*Prunus laurocerasus*
Dwarf gorse	*Ulex minor*
Great willowherb	*Epilobium hirsutum*
Ivy	*Hedera helix*
Sycamore	*Acer pseudoplatanus*

Target Note 4 – Scrub and trees forming western boundary

Common Name	**Scientific Name**
Alder	*Alnus glutinosa*
Bamboo	
Bramble	*Rubus fruticosus*
Butchers broom	*Ruscus aculeatus*
Cherry	*Prunus avium*
Cleavers	*Galium aparine*
Cock's-foot	*Dactylis glomerata*
Common sorrel	*Rumex acetosa*
Creeping bent	*Agrostis stolonifera*
Cut-leaved crane's-bill	*Geranium dissectum*
Dog's mercury	*Mecurialis perennis*
Dogwood	*Cornus sanguinea*
Foxglove	*Digitalis purpurea*
Gorse	*Ulex europaeus*
Hawthorn	*Crataegus monogyna*
Hemlock water dropwort	*Oenanthe crocata*
Hogweed	*Heracleum sphondylium*
Honeysuckle	*Lonicera sp.*
Horsetail sp.	*Equisetum sp.*
Ivy	*Hedera helix*
Nettle	*Urtica dioica*
Pedunculate oak	*Quercus robur*
Pine sp.	
Privet	*Ligustrum sp.*

Rhododendron	*Rhododendron ponticum*
Violet sp.	*Viola sp.*
Willow sp.	*Salix*
Yorkshire fog	*Holcus lanatus*

Target Note 5 – Area of semi-improved, rough grassland

Common Name	**Scientific Name**
Annual meadow grass	*Poa annua*
Bramble	*Rubus fruticosus*
Buddleia	
Cleavers	*Galium aparine*
Common vetch	*Vicia sativa*
Greater stitchwort	*Stellaria holostea*
Hawkbit sp.	*Leontodon sp.*
Holly	*Ilex aquifolium*
Horsetail sp.	*Equisetum sp.*
Ivy	*Hedera helix*
Pedunculate oak	*Quercus robur*
Privet	*Ligustrum sp.*
Red fescue	*Festuca rubra*
Ribwort plantain	*Plantago lanceolata*
Sweet vernal grass	*Anthoxanthum odoratum*
Yorkshire fog	*Holcus lanatus*

Animal Target Notes

Target Note 1 – Molehills
Target Note 2 – Holes in willow with bat roost potential. One hole contained a blackbird nest with chick(s) at time of survey.
Target Note 3 – Crabs and fish seen in pond 4
Target Note 4 – Grasshoppers
Target Note 5 – Ant hills

7.5 Pond Creation

Ponds do not need to be deep to attract wildlife, those with gently sloping sides and a depth of around 30cm are suitable for a range of invertebrates and amphibians, it also keeps the pond well oxygenated and lit. However, it is good to have one deeper area as this will prevent it from freezing over in winter, a suitable depth is 80cm.

It is advisable to line the pond for water retention and then put a layer of children's play sand or washed gravel to provide a substrate for plants and burrowing invertebrates.

Planning permission may be required, therefore talk to the planning authority before starting the project to establish if it is necessary, or any other possible constraints.

Suitable Plants for Ponds
(Taken from 'Creating garden ponds for wildlife' by Pond Conservation & World of Water, 2011)

Type of Plant	**Species**	**Comments**
Plants next to the pond (for use in wildflower areas adjacent to pond)	• Cow parsley • Devil's-bit scabious • Hemp agrimony • Teasel • Purple loosestrife • Red valerian • Yarrow	Provision of food and cover next to the pond Links to other habitats e.g. hedgerows
Low-growing wetland grasses (planted on dry ground or in a few cm of water)	• Creeping bent • Small sweet-grasses	
Marginal herbs & rushes (2-10cm depth of water)	• Lesser spearwort • Marsh pennywort • Water forget-me-not • Water mint • watercress	
Marginal plants with attractive flowers & architecture (2-10cm depth of water)	• Marsh cinquefoil • Marsh woundwort • Marsh-marigold • Pendulous sedge • Purple loosestrife • Ragged-robin • Water dock • Yellow iris	
Tall emergents (2-10cm depth of water)	• Branched bur-reed • Bulrush • Greater pond-sedge • Hard rush • Lesser reedmace • Reed sweet-grass • Soft rush	Can become dominant in small ponds so regular cutting back necessary
Floating-leaved plants (15-30cm of water)	• Amphibious bistort • Broad-leaved pondweed • Fringed water-lily • Yellow water-lily	
Submerged plants	• Common water-starwort	

(Float in deep water)	• Curled pondweed • Rigid hornwort • Spike water-milfoil • Water-crowfoot	

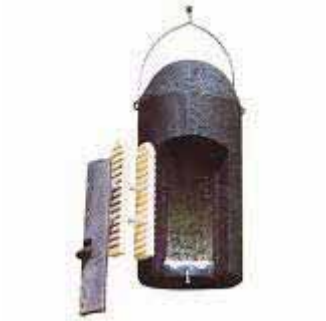
Further advice on pond creation is available for sources such as Pond Conservation www.pondconservation.org.uk

7.6 Bat Boxes

Bat boxes should be installed on mature trees, with 1 or 2 boxes per tree. They should be positioned so that they receive sunlight for at least part of the day, therefore south, east or west facing. Not all boxes should be facing the same way as bats will move between roosts if they become too hot or cold depending on time of year and angle/intensity of the sun, therefore by having various orientations of boxes a range of internal environments will be created.

To avoid disturbance boxes should be positioned where members of the public can not reach or climb to them. They should be on an area of the tree without too many branches which will block the flight path into the box, as bats do not like "clutter" outside the roost entry/exit point. Schwegler bat boxes are the most suitable to use because they last longer than wooden boxes (up to 25 years) as they are made from woodcrete, a wood and concrete mix. Both Schwegler 2F and 1FD bat boxes should be used, which are suitable for smaller bat species. The boxes have different styles of interior, the 2F is open and the 1FD has 2 panels creating crevices and a different internal environment.

Schwegler 2F bat box



Schwegler 1FD bat box

7.7 Stag Beetle Log Pile

Example of a stag beetle log pile taken from the PTES Stepping stones for stags leaflet (http://www.ptes.org/files/1871_stepping_stones_final_lowres.pdf)

7.8 Creating a native species rockery

The design of the rockery can be approached in two ways, either to create a 'traditional' rockery with low growing species, or to create a shingle habitat like that found along the Southampton Water/Solent shoreline. In all cases the rockery should be planted with plenty of areas of bare ground.

To create a rockery that is similar to the local environment a mixture of rocks and shingle should be used to create different growing mediums. The soil needs to be well drained for this habitat. The list below gives suitable plants that are found on the local shoreline.

Local shingle species that could be used in rockery

Armeria maritima spp *maritima*	Thrift
Crambe maritima	Sea-kale
Eryngium maritimum	Sea-holly
Euphorbia paralias	Sea Spurge
Glaucium flavum	Yellow Horned-poppy
Inula crithmoides	Golden Samphire
Leymus arenarius	Lyme-grass*
Seriphidium maritimum	Sea Wormwood
Silene nutans	Nottingham catch-fly

*Lyme-grass should only be used if it can be contained in a planter that is covered by rocks, otherwise it will spread and dominate the area.

Species that could be used for the traditional rockery are not necessarily found in the south of England, but are native to the UK.

Native species to the UK suitable for use in a rockery

Anthyllis vulneraria	Kidney Vetch
Arctostaphyllos uva-ursi	Bearberry
Armeria maritima	Thrift
Calluna vulgaris	Heather
Campanula rotundifolia	Harebell
Cenaurium erythraea	Common Centuary
Dianthus gratianopolitanus	Cheddar Pink
Empetrum nigrum	Crowberry
Erica ciliaris	Dorset Heath
Erica cinerea	Bell Heather
Erica tetralix	Cross-leaved Heath
Geranium sanguineum	Bloody Crane's-bill
Helianthemum nummularium	Common Rockrose
Polygonum viviparum	Alpine Bistort
Potentilla crantzii	Alpine Cinquefoil
Saxifraga hypnoidoes	Mossy Saxifrage
Sedum acre	Biting Stonecrop
Solidago virgaurea	Goldenrod
Thalicatrum minus	Lesser Meadow Rue
Veronica officinalis	Heath Speedwell