Code for Sustainable Homes Ecological Assessment

Victoria Park Avenue, Leeds

Andrew McCarthy Associates

AMA ecology & environment

Code for Sustainable Homes Ecological Assessment

Victoria Park Avenue, Leeds

Client: White Design Associates
Project Number: A24.03440.00001
Revision: 00
Issue Date: 28 October 2010

Andrew McCarthy Associates Ltd

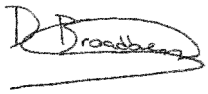
69 Polsloe Road
Exeter
EX1 2NF
Tel: 01392 490152
Fax: 01392 495572

STEP Business Centre
Wortley Road
Deepcar
Sheffield
S36 2UH
Tel: 0114 290 3628
Fax: 0114 290 3629

White House Farm Barns
Gaddesden Row
Hemel Hempstead
HP2 6HG
Tel: 01582 840471
Fax: 01582 841492

info@amaenvironment.co.uk
www.amaenvironment.co.uk

Document Verification Table

File: A24.03440.00001 Victoria Avenue, Leeds CSH report					
Revision	Date		Prepared by	Checked by	Approved by
00	28 October 2010	Name	D Broadbent	G Oliver	G Oliver
		Signature			

Disclaimer

This document has been prepared by Andrew McCarthy Associates for White Design Associates solely as a Code for Sustainable Homes Ecological Assessment Report in response to a planning application. Andrew McCarthy Associates accepts no responsibility or liability for any use that is made of this document other than by the client for the purposes for which it was originally commissioned and prepared.

NON-TECHNICAL SUMMARY

Andrew McCarthy Associates was commissioned by White Design Associates to undertake a Code for Sustainable Homes assessment on a site adjacent to Victoria Park Road, Leeds. The proposed development will involve the construction of a series of houses and flats with associated gardens and allotments.

The site consisted of a mixture of species-poor semi-improved grassland, woodland scrub and hard standing with associated ephemeral short perennial vegetation. The proposed houses are to be located in the south-east corner of the site, with allotments being created on the area of grassland in the north-west corner.

Code for Sustainable Homes Assessment

ECO 1: Ecological Value = 1 Credit Awarded

The area of land directly affected by the development, specifically the semi-improved grassland and hard standing were considered to be of low ecological value, the area of scrub woodland is to be retained and enhanced.

ECO 2: Ecological Enhancement = 1 Credit Awarded

If the key requirements and at least one of the additional requirements are implemented the credit can be awarded.

ECO 3: Protection of Ecological Features = 1 Credit Awarded

The woodland scrub on site should be fenced during construction to prevent accidental damage to the trees and the root structure, fencing of this root protection zone (RPZ) should be undertaken to BS 5837 standards. Removal of vegetation should take place outside of the bird breeding season, or following a survey in which no active bird nests are found. Should both of these occur, this credit can be awarded.

ECO 4: Change in Ecological Value = 3 - 4 Credits Awarded

Species change calculations indicate that the resulting impact from the development will result in a species change of +7.33, making it eligible for three credits. With a further increase in wildlife friendly or native species to 36 in the landscape planting this can be increased to +9.12 awarding the full four credits.

CONTENTS

1 INTRODUCTION 4
1.1 TERMS OF REFERENCE 4
2 METHODOLOGY 5
2.1 DESK STUDY 5
2.2 FIELD SURVEY 5
2.3 LIMITATIONS 6
2.4 QUALITY ASSURANCE & ENVIRONMENTAL MANAGEMENT 6
3 RELEVANT LEGISLATION & POLICY 7
3.1 LEGISLATION 7
3.1.1 Habitat Regulations 7
3.1.2 Wildlife & Countryside Act 7
3.1.3 Natural Environment & Rural Communities Act 8
3.2 POLICY 8
3.2.1 Planning Policy Statement 9 8
3.2.2 Biodiversity Action Plans 8
4 RESULTS & DISCUSSION 9
4.1 OVERVIEW 9
4.2 HABITATS 9
4.2.1 Designated Sites 9
4.2.2 Woodland & Scrub 9
4.2.3 Grassland 9
4.2.4 Hard standing and ephemeral perennial vegetation 9
4.3 PROTECTED SPECIES 10
5 CSH ECOLOGY ASSESSMENT 11
5.1 ECO1 – ECOLOGICAL VALUE OF SITE 11
5.2 ECO2 – ECOLOGICAL ENHANCEMENT 12
5.3 ECO3 – PROTECTION OF ECOLOGICAL FEATURES 14
5.4 ECO4 – CHANGE IN ECOLOGICAL VALUE OF SITE 15
6 REFERENCES & BIBLIOGRAPHY 17
APPENDIX 1 – EXTENDED PHASE 1 HABITAT PLAN 19
APPENDIX 2 – SPECIES LIST 20
APPENDIX 3 – CSH CHECKLIST 23

1 INTRODUCTION

1.1 Terms of Reference

Andrew McCarthy Associates was commissioned by White Design Associates to undertake a Code for Sustainable Homes Ecological Assessment of a plot of ground adjacent to Victoria Park Avenue, Leeds (approximate central OS grid reference SE 256 352) in response to a planning application for the construction of a series of flats and houses. The development is to be assessed under the Code for Sustainable Homes, 2009 criteria.

2 METHODOLOGY

2.1 Desk Study

The following websites were accessed to search for statutory designated sites and legally protected taxa within 2 km of the proposed development site:

- Multi-Agency Geographic Information for the Countryside - www.magic.gov.uk
- National Biodiversity Network Gateway – data.nbn.org.uk
- Nature on the Map – www.natureonthemap.org.uk

2.2 Field Survey

The habitat survey was carried out by Dale Broadbent BSc MIEEM on 4 October, using standard Phase 1 Habitat survey methodology (JNCC, 2003). In addition to general habitat classification and mapping, a botanical species list was also compiled for each separate habitat[1], with the abundance of each species being estimated for each main habitat-type using standard 'DAFOR' codes: **D**ominant, **A**bundant, **F**requent, **O**ccasional, **R**are (**L**ocally is used as a prefix where appropriate).

[1] Botanical nomenclature follows Stace (1997).

2.3 Limitations

The botanical survey was undertaken outside of the optimal time for botanical surveys, however this was not considered to be a significant limitation due to the urban nature and generally poor ecological value of the site.

2.4 Quality Assurance & Environmental Management

The site survey and this report were undertaken by Dale Broadbent BSc MIEEM who fulfils the criteria for a Suitably Qualified Ecologist (Qualifications available on request). He has over 5 years experience in the field of ecology and habitat management including conducting field surveys and providing advice concerning ecological protection, enhancement and other related mitigation measures for a wide range of protected habitats and species.

As a full member of the Institute of Ecology and Environmental Management (IEEM) Dale Broadbent follows the Institute's code of professional conduct when undertaking ecological work. IEEM follows a code of practice whereby full members maintain a standard of knowledge and experience monitored annually through Continuing Professional Development review.

3 RELEVANT LEGISLATION & POLICY[2]

3.1 Legislation

3.1.1 Habitat Regulations

The Conservation (Natural Habitats &c.) Regulations 1994, as amended by the Conservation (Natural Habitats &c.) (Amendment) Regulations 2007, 2009 and 2010 respectively, transpose Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna (Habitats Directive) into English law, making it an offence to deliberately capture, kill or disturb[3] wild animals protected under the Habitat Regulations. It is also an offence to damage or destroy a breeding site or resting place of such an animal (even if the animal is not present at the time).

3.1.2 Wildlife & Countryside Act

The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act (CRoW) 2000 and the Natural Environment and Rural Communities Act (NERC) 2006, consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive), making it an offence to:

- Intentionally kill, injure or take any wild bird or their eggs or nests (with certain exceptions) and disturb any bird species listed under Schedule 1 to the Act, or its dependent young while it is nesting;
- Intentionally kill, injure or take any wild animal listed under Schedule 5 to the Act; intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any wild animal listed under Schedule 5 to the Act; intentionally or recklessly disturb certain Schedule 5 animal species while they occupy a place used for shelter or protection;
- Pick or uproot any wild plant listed under Schedule 8 of the Act.

Sites of Special Scientific Interest (SSSI) are designated under this Act.

---

[2] Please note that this legal information is a summary and intended for general guidance only. The original legal documents should be consulted for definitive information. Web addresses providing access to the full text of these documents are given in the References & Bibliography section.

[3] Disturbance, as defined by the Habitat Regulations, includes in particular any action which impairs the ability of animals to survive, breed, rear their young, hibernate or migrate (where relevant); or which affects significantly the local distribution or abundance of the species.

3.1.3 Natural Environment & Rural Communities Act

The NERC 2006 places a duty on authorities to have due regard for biodiversity and nature conservation during the course of their operations.

3.2 Policy

3.2.1 Planning Policy Statement 9

Planning Policy Statement 9 (PPS9) and its accompanying document ODPM 06/2005 sets out current government policy on biodiversity and nature conservation and places a duty on planners to make material consideration to the effect of a development on legally protected species when considering planning applications. PPS9 also promotes sustainable development by ensuring that developments take account of the role and value of biodiversity and that it is conserved and enhanced within a development.

3.2.2 Biodiversity Action Plans

The UK Biodiversity Action Plan (UKBAP) (Anon, 1995) was organised to fulfil the Rio Convention on Biological Diversity in 1992, to which the UK is a signatory. A list of national priority species and habitats has been produced with all listed species/habitats having specific action plans defining the measures required to ensure their conservation. Regional and local BAPs have also been organised to develop plans for species/habitats of nature conservation importance at regional and local levels.

4 RESULTS & DISCUSSION

4.1 Overview

The results of the Phase 1 Habitat Survey are illustrated in map form (Figure 1, Appendix 1) with associated target notes listed in Appendix 2. All of the plant species recorded during the field survey are listed in Appendix 3.

The site consisted of a mixture of bare ground; semi-improved grassland, hard standing with associated ephemeral perennial vegetation communities and planted scrub woodland.

4.2 Habitats

4.2.1 Designated Sites

Leeds-Liverpool Canal SSSI was located 295 metres to the east of the site. This SSSI has been designated as it represents a unique slow flowing watercourse in West Yorkshire supporting a range of locally rare and unusual flora and fauna.

4.2.2 Woodland & Scrub

The woodland scrub on site consisted of a range of mature planted trees with secondary regeneration in the under storey. The canopy was dominated by sycamore *Acer pseudoplatanus*, hazel *Corylus avellana,* silver birch *Betula pendula* and copper beech *Fagus purpurea* with hawthorn *Crataegus monogyna*, elder *Sambucus nigra* and ash *Fraxinus excelsior,* the ground flora consisted of bramble *Rubus fruticosus*, creeping buttercup *Ranunculus repens* and wood avens *Geum urbanum.*

4.2.3 Grassland

Species-poor semi-improved grassland covered much of the site, dominated by creeping bent *Agrostis stolonifera*, cocksfoot *Dactylus glomerata* and false oat grass *Arrhenatherum elatius* with creeping thistle *Cirsium arvense*, nettle *Urtica dioca* hazel saplings and locally dominant areas of fescue grass *Festuca sp.*

4.2.4 Hard Standing and Ephemeral Perennial Vegetation

A large proportion of the site was hard standing, supporting localised areas of ephemeral short perennial vegetation; species recorded included birch saplings, creeping buttercup, ragwort *Senecio jacobaea*, and annual meadow grass *Poa annua* with ribwort plantain *Plantago lanceolata* and buddleia *Budleija davidii*.

4.3 Protected Species

The site was considered to be of value for nesting birds, and also as a potential foraging resource for bats in the area; however the trees on site were all relatively young and did not have any visible features that would support roosting bats. The desk study identified that starling *Sturnus vulgaris*, house sparrow *Passer domesticus* hedge accentor *Prunella modularis*, song thrush *Turdus philomelos* and yellowhammer *Emberiza citronella* have been recorded in close proximity to the site.

5 CSH ECOLOGY ASSESSMENT

The Code for Sustainable Homes (2009) Ecology assessment is segregated into five categories of which categories Eco1 to Eco4 apply in this report (Eco 5 regarding the building footprint is to be determined where appropriate by a suitable specialist, and is not addressed here). A detailed assessment of the credits achieved under the current scheme design is provided here, with a summary of credits that can be awarded given in Table 1 below.

Table 1. Summary of Land Use & Ecology Credits available

Credit	Description	Max. no. Credits Potentially Available	Potential Credits Achieved
Eco1	Ecological Value of Site	1 credit	1
Eco2	Ecological Enhancement	1 credit	1
Eco3	Protection of Ecological Features	1 credit	1
Eco4	Change in Ecological Value of Site	4 credits	3-4

5.1 Eco1 – Ecological value of site

"*Where the* development site[4] *is confirmed as land of inherently* low ecological value*.*"

Credit requirements

Where evidence is provided to demonstrate that the construction zone is defined as land of low ecological value (Credits available: 1).

Assessment

The site consisted of a mixture of hard standing, with associated ephemeral species; species poor semi improved grassland and a small area of scrub woodland. The areas of hard standing and grassland were all assessed as being of low ecological value, the area of scrub woodland was considered to be of high ecological value. The construction zone is restricted to the southern area of the site and only affects the areas of hard standing and the semi improved grassland.

1 Credit Potentially Available

[4] The development site is the whole site up to and including the boundary. The construction zone includes any land used for buildings , hard standing, landscaping, site access and any land where construction work is carried out (or land being disturbed in any other way), *plus a 3 m boundary* in either direction around these areas.

5.2 Eco2 – Ecological Enhancement

"*Where a Suitably Qualified Ecologist has been appointed to recommend appropriate ecological features that will positively enhance the ecology of the site and where the developer adopts all key recommendations and 30% of additional recommendations*."

Credit Requirements

This credit also requires confirmation that all current EU and UK legislation in relation to protected species has been met (Credits Available: 1).

Assessment

Key Recommendations

- Use Native or Beneficial Species in the Landscape Planting and Pond Creation. Planting in the garden areas and around the pond should contain only native plants or non-native species that are nectar-rich or fruiting. It is expected that the landscaping will introduce 30 new native/beneficial species onto the site, and a further 17 aquatic, emergent and marginal species around the pond/SUDS area. Species selection can be guided by the English Nature publication 'Plants for Wildlife-Friendly gardens' (ISBN 1 85716) catalogue code IN18.7 (Anon, 2005).

- Woodland Enhancement Planting.
  Introduce five native species of tree into the woodland area. The following species are recommended for inclusion into the woodland: Geulder Rose *Vibirnum opulous*, dogwood *Cornus sanguinea,* English elm *Ulmus procera* and beech *Fagus sylvatica.* Additionally the sowing of a woodland ground flora seed mixture such as Woodland Mixture EW1 supplied by Emmorsgate (www.wildseed.co.uk/mixtures/view/11) which would introduce a further 20 species into the woodland area.

Additional Recommendations

- Bird Boxes

  Bird boxes to be installed on each of the new buildings. All bird boxes to be installed at least 5 meters high with a northerly aspect. It is recommended that three sparrow terraces and three generic bird boxes be installed in total, with one on each building. Bird Boxes are available from Alana Ecology (www.alanaecology.com) product code CPM.

- Bat Boxes

  Three Schwegler 2F bat boxes to be installed within the area of scrub woodland, boxes should be located five metres high with a southerly aspect. Bat Boxes are available from Alana Ecology product code 002002D

- General Ecology Enhancement

  Incorporate the following general ecology enhancement works into the development. A general purpose insect house in proximity to the pond will provide a suitable refuge for overwintering insects including ladybirds and lacewings Alana Ecology product code 002081. Create a small rockery near the pond / SUDS area will provide a suitable hibernacula and refuge for any amphibians attracted by the pond, and the creation of small suitably located log piles within the scrub woodland will provide valuable dead wood and act as a potential hibernacula and refuge for wildlife.

If both key and one of the additional recommendations are implemented

1 Credit Potentially Available

5.3 Eco3 – Protection of Ecological Features

"Where all existing features of ecological value on the development site potentially affected by the works, are maintained and adequately protected during site clearance, preparation and construction works." (Credits Available: 1)

Assessment

The area of scrub woodland on the site will need to be protected with a suitable Root protection zone (RPZ) as defined by BS 5837 to prevent damage to the trees and roots. This RPZ is roughly defined as being the extent of the canopy spread. This area should be fenced for the duration of the construction to ensure no accidental intrusion into the RPZ by heavy plant equipment.

All scrub clearance works should be timetabled to avoid the bird breeding season (March to August Inclusive) or a breeding bird survey undertaken by a suitably experienced ecologist.

1 Credit Potentially Available

5.4 Eco4 – Change in Ecological Value of Site

"The ecological value before and after development is measured, and the overall value in species per hectare is greater than -9."

Credit Requirements

Where the calculation achieved via the 'Change in Ecological Value Calculator' provided by the assessor results in an ecological change of between -9 and +9. (Credits Available: 4).

Assessment

The ephemeral vegetation associated with the hard standing was not considered to be of sufficient size to be assessed as a functional habitat *per se* and has therefore been discounted from the species calculations.

Pre Construction Assessment

Plot type	Area (m^2)	Species no	X	Total
Hard Standing	2410	0		0
SI Grassland	3870	22		85140
Woodland Scrub	880	15		13200
		Total:		98340
Total Site Area	7160			
Total species score divided by total site area:				13.73

Post Construction Assessment

Plot type	Area (m^2)	Species no	X	Total
Hard Standing	1205	0		0
Buildings	910	0		0
Allotments	390	0		0
SI Grassland	695	22		15290
Woodland Scrub	1758	40		70320
Pond	67	17		1139
Landscaping and garden planting	2135	30		64050
		Total:		150799
Total Site Area	7160			
Total species score divided by total site area:				21.06

Species change from the development is calculated as 21.06 – 13.73 = -+7.33, indicating a slight increase and therefore 3 credits would be awarded.

To achieve the maximum four credits solely through planting, the following species numbers would need to be introduced.

Post Construction Assessment (to maximise points)

Plot type	Area (m^2)	Species no	X	Total
Hard Standing	1205	0		0
Buildings	910	0		0
Allotments	390	0		0
SI Grassland	695	22		15290
Woodland Scrub	1758	40		70320
Pond	67	17		1139
Landscaping and garden planting	2135	36		76860
		Total:		163609
Total Site Area	7160			
Total species score divided by total site area:				22.85

The most effective way of increasing the specie score is by increasing the species introduced through landscaping to 36. This will result in a species change of +9.12 and the full four credits could be awarded.

3 or 4 Credits Potentially Available

6 REFERENCES & BIBLIOGRAPHY

Anon (1995) *Guidelines for Baseline Ecological Assessment*. Institute of Environmental Assessment. Chapman & Hall.

Anon (1995) *The UK Biodiversity Action Plan*. Joint Nature Conservation Committee, Peterborough.

Anon (1999) *Advice Sheet 10: Reptile Survey*. Froglife, Peterborough.

Anon (2002) *Badgers and Development*. English Nature, Peterborough.

Anon (2003) *Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit* (Revised reprint). Joint Nature Conservancy Council, Peterborough.

Anon (2004) *Reptiles: Guidelines for Developers*. English Nature, Peterborough.

Anon (2005) *Wildlife Friendly Gardening* English Nature

Anon (2007) *Bat Surveys – Good Practice Guidelines*. Bat Conservation Trust, London.

BRE (2009) Code for Sustainable Homes Technical Guide Version 2.

Bright, P.W., Morris, P.A. & Mitchell-Jones, A.J. (2006) *The Dormouse Conservation Handbook*. English Nature, Peterborough.

Foster, J. (2001) *Great Crested Newt Mitigation Guidelines*. English Nature, Peterborough.

Gent, T. & Gibson, S. (1998) *Herpetofauna Workers Manual*. Joint Nature Conservation Committee, Peterborough.

Gregory, R.D., Wilkinson, N.I., Noble, D.G., Robinson, J.A., Brown, A.F., Hughes, J., Procter, D., Gibbons, D.W. & Galbraith, C.A. (2002) The population status of birds in the United Kingdom, Channel Islands and Isle of Man: an analysis of conservation concern 2002-2007. *British Birds* 95: 410-450.

Mitchell-Jones, A.J. (2004). *Bat Mitigation Guidelines*. English Nature, Peterborough.

Mitchell-Jones, A.J. & McLeish, A.P. [Eds.] (2004). *The Bat Workers Manual* (3rd edition). Joint Nature Conservancy Council, Peterborough.

Oldham, R.S., Keeble, J., Swan, M.J.S., and Jeffcote, M. (2000) Evaluating the Suitability of Habitat for the Great Crested Newt (Triturus cristatus). *Herpetological Journal* 10: 143-155.

Stace, C. (1997) *New Flora of the British Isles* (2nd edition). Cambridge University Press, Cambridge.

Strachan (1998) *Water Vole Conservation Handbook*. Wildlife Conservation Research Unit, Oxford.

www.magic.gov.uk (Accessed 05/10/2010)

www.naturalengland.org.uk (Accessed 05/10/2010)

www.nbn.org.uk (Accessed 05/10/2010)

Web addresses for access to full UK legislation and policy text:

Conservation (Natural Habitats &c.) Regulations 1994:
http://www.opsi.gov.uk/si/si1994/uksi_19942716_en_1

Conservation (Natural Habitats &c.) (Amendment) Regulations 2007:
http://www.opsi.gov.uk/si/si2007/uksi_20071843_en_1

Conservation (Natural Habitats &c.) (Amendment) Regulations 2009:
http://www.opsi.gov.uk/si/si2009/pdf/uksi_20090006_en

Habitats Directive:
www.europa.eu.int/eur-lex/en/lif/dat/1992/en_392L0043

Birds Directive:
eur-lex.europa.eu/LexUriServ/site/en/consleg/1979/L/01979L0409-20070101-en

Wildlife and Countryside Act 1981:
www.opsi.gov.uk/RevisedStatutes/Acts/ukpga/1981/cukpga_19810069_en_1

Countryside and Rights of Way Act 2000:
www.legislation.hmso.gov.uk/acts/acts2000/20000037

Natural Environment and Rural Communities Act 2006:
http://www.opsi.gov.uk/acts/acts2006/ukpga_20060016_en_1

Protection of Badgers Act 1992:
http://www.opsi.gov.uk/ACTS/acts1992/ukpga_19920051_en_1

National Parks and Access to the Countryside Act 1949:
http://www.opsi.gov.uk/RevisedStatutes/Acts/ukpga/1949/cukpga_19490097_en_1

Planning Policy Statement 9:
www.communities.gov.uk/documents/planningandbuilding/pdf/147408

APPENDIX 1 – EXTENDED PHASE 1 HABITAT PLAN

APPENDIX 2 – SPECIES LIST

Semi improved grassland (22 Species)

Common Name	Latin name	DAFOR
Cocksfoot	*Dactylus glomerata*	D
Yorkshire fog	*Holcus lanatus*	O
Fescue	*Festuca Sp*	LA
Creeping thistle	*Cirsium arvense*	O
Creeping bent	*Agristis stolonifera*	D
False oat grass	*Arrehenatherum elatius*	D
Bramble	*Rubus fruticosus*	O
Hazel (saplings)	*Corylus avellana*	R
Dandelion	*Taraxacum officinallis agg*	O
Broom	*Cytisus scoparius spp*	R
Nettle	*Urtica dionca*	O
Broad leaved dock	*Rumex obtusifolius*	O
Buddleia	*Budleija davidii*	O
Greater willowherb	*Epilobium hirsuta*	LA
Sycamore (saplings)	*Acer pseudoplatanus*	O
White clover	*Trifolium repens*	A
False acacia	*Rhobinia pseudoacasia*	R
Ragwort	*Senecio jacobaea*	R
Black medick	*Medicago lupulina*	LA
Timothy	*Phleun pratense*	R
Mugwort	*Artemesia vulgaris*	R
Teasel	*Dipsacus fullonum*	R

Woodland Scrub (15 Species)

Common Name	**Latin Name**	**DAFOR**
Sycamore	*Acer pseudoplatanus*	F
Birch	*Betula pendula*	A
Ash	*Fraxinus excelsior*	R
Copper beech	*Fagus purpurea*	A
Hazel	*Corylus avellana*	A
Hawthorn	*Crataegu monogyna*	R
Elder	*Sambucus nigra*	R
Wood avens	*Geum urbanum*	O
Bramble	*Rubus fruticosus*	F
Creeping buttercup	*Ranunculus repens*	F
Rowan	*Sorbus aucuparia*	R
Wild cherry	*Prunus avium*	O
Cocksfoot	Dactylus glomerata	R
Dog rose	Rosa canina	R
Crab apple	Malus sylvestris	R

Hard Standing Ephemeral Vegetation (24 species), but not classed as being a 'viable habitat' due to very low density of plants present

Common Name	**Latin Name**	**DAFOR**
Annual meadow grass	*Poa annua*	F
Ragwort	*Senecio jacobaea*	O
Ribwort plantain	*Plantago lanceolata*	O
Buddleia	*Buddleija davidii*	O
Rosebay willow herb	*Chamerion angustifolium*	O
Cocksfoot	*Dactylus glomerata*	O
Yorkshire fog	*Holcus lanatus*	R
Creeping thistle	*Cirsium arvense*	O
Dandelion	*Taraxacum officinale ag*	O
Stinging nettle	*Urtica dioca*	O
Broad leaved dock	*Rumex obtusifolius*	F
Buddleia	*Buddleija davidii*	O
Birch (Saplings)	*Betula pendula*	F
Creeping buttercup	*Ranunculus repens*	F
Dog rose	*Rosa canina*	R
Hogweed	*Heracleum sphondylium*	F
Black medick	*Medicago lupulina*	O
Red clover	*Trifolium pratense*	O
Hedge mustard	*Sisymbrium officinale*	R
Weld	*Reseda luteola*	R
Greater celandine	*Chelidonium majus*	O
Herb Roberts	*Geranuim robertianum*	O
Prickly sow thistle	*Soncha asper*	R
Wild mignonette	*Reseda lutea*	R

APPENDIX 3 – CSH CHECKLIST