Hallside Wood
Ecological Constraints and Opportunities Plan (ECOP)

January 2018

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1 INTRODUCTION

1.1 Remit

EnviroCentre was commissioned by TGP Landscape Architects to undertake an Ecological Constraints and Opportunities Plan (ECOP) at a site near Hallside, Cambuslang, known as Hallside Wood. An ECOP is a useful tool/visual plan used to present ecological information to a design team to highlight ecological constraints early in the design process and can assist with gaining the best outcome for biodiversity[1].

1.2 Site Description and Proposed Development

The site is located north of Hallside at Ordnance Survey Grid Reference (OSGR) NS 66806 60188. Hallside Wood is a privately owned woodland which was planted in the 1990's as part of a housing scheme, originally planned to be harvested every 5 years for the residents[2]. The site was abandoned in 2009 however, was taken over by the Drumsagard Village Resident's Association. The area predominantly comprises of wet plantation woodland dominated by willow (*Salix sp*), areas of scrub, patches of grassland and ponds. The site is utilised as an amenity for local dog walkers and families. The wider landscapes is dominated by residential dwellings and arable fields.

The proposed development aims to create additional paths within Hallside Wood to allow for further access around the wood for members of the public.

The 'site' covers the area of potential paths demarcated by the red line boundary in the ECOP as shown in Appendix A.

[1] Chartered Institute of Ecology and Environmental Management (CIEEM) *Guidelines for Preliminary Ecological Appraisal* Second Edition (*December 2017*)

[2] The Woodland Trust, information on Hallside Wood, Available at: https://www.woodlandtrust.org.uk/visiting-woods/wood/?woodId=23126&woodName=hallside (Accessed 16/01/18)

2 METHOD

2.1 Desk Study

In order to anticipate the potential ecological sensitivities at the site, a desk study was conducted in advance of the survey. The following sources of information were used:

- Existing data on designated sites available through Scottish Natural Heritage (SNH) Sitelink website[3] (up to 5km from the site);
- South Lanarkshire Local Development Plan[4] (SLLDP) (for non-statutory designated areas up to 5km from the site);
- Records of ancient woodlands (up to 2km from the site) available from Sketchmap[5];
- South Lanarkshire Local Biodiversity Action Plan[6] (SLLBAP) (for priority species and habitats);
- Scottish Biodiversity List [7](SBL) (for habitats and species of principal importance for biodiversity conservation in Scotland);
- UK Biodiversity Action Plan[8] (BAP) (for species and habitats identified as being most threatened and requiring conservation action);
- Glasgow Museum Records Centre[9] (GMRC) (for records of protected or notable species within 2km of the development site); and
- Saving Scotland's Red Squirrel[10] (SSRS) (for records of squirrel sightings within 2km radius of the site).

2.2 ECOP Survey

The survey was undertaken by a suitably trained and competent ecologist, who is a member of the Chartered Institute of Ecology and Environmental Management (CIEEM). The survey was designed and undertaken in reference to guidelines endorsed by SNH and CIEEM[11].

An ECOP should identify the following (where relevant), in accordance with BS 42020:2013 Clause 5.4:

- areas and features that, by virtue of their importance, should be retained and avoided by both construction activities and the overall footprint of the project;
- areas and features where opportunities exist to undertake necessary mitigation and compensation;
- areas and features with potential for biodiversity enhancement; and
- areas needing protection on site and/or in adjacent areas (e.g. from physical damage on site or pollution downstream) during the construction process.

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[3] SNH (2009). SiteLink, available from http://gateway.snh.gov.uk (Accessed 10/01/2018).

[4] South Lanarkshire Local Development Plan (2015), available from https://www.southlanarkshire.gov.uk/downloads/file/7601/environmental_designations_plan_proposed_-map (Accessed 12/01/2018)

[5] http://sketchmap.co.uk/ (Accessed 10/01/2018)

[6] http://www.southlanarkshirebiodiversity.co.uk/ (Accessed 10/01/2018)

[7] http://www.biodiversityscotland.gov.uk/advice-and-resources/scottish-biodiversity-list/ (Accessed 10/01/2018)

[8] http://jncc.defra.gov.uk/page-5705 (Accessed 10/01/18)

[9] Records obtained from Glasgow Museum Records Centre on 11/01/2018

[10] Saving Scotland's Red Squirrels: https://scottishsquirrels.org.uk/ (Accessed 19/10/2017)

[11] British Standard document 42020:2013 *Biodiversity - Code of practice for planning and development* (2013)

3 RESULTS

3.1 Desk Study

Source	Information Provided			
SiteLink	**Site name**	**Designation[12]**	**Distance and orientation**	**Biological Features**
	Bothwell Castle Grounds	SSSI	Approx. 1.45km east	Upland mixed ash woodland Invertebrate assemblage
South Lanarkshire Local Development Plan (2015)	There are no designations within the site boundaries.			
Sketchmap to identify the locations of any ancient woodlands (within a 2km radius of the site)	**Woodland name**	**Distance and orientation**		**Category (Antiquity Woodland Categories[13])**
	Calder Glen	Approx. 235m east		Ancient (of Semi-natural origin) (ASNO)
	None	Approx. 465m north-west		ASNO
	Honeyhill plantation	Approx. 1km north		ASNO
	Kenmuir wood	Approx. 1.6km north		ASNO
	Borgie glen	Approx. 1.8km west		ASNO

Glasgow Museums Biological Records Centre	Group	Species name	Date and Source
	Amphibian	Common toad (*Bufo bufo*)	3 sighted by GCC Countryside Rangers 2000 – 2009; 5 sighted by Clyde Amphibian and Reptile Group (CARG); 1 sighted by Richard Weddle
	Amphibian	Palmate newt (*Lissotriton helveticus*)	64 sighted by Clyde Amphibian and Reptile Group (CARG)
	Amphibian	Smooth newt (*lissotriton vulgaris*)	5 sighted by Clyde Amphibian and Reptile Group (CARG)
	Amphibian	Common frog (*Rana temporaria*)	6 sighted by Clyde Amphibian and Reptile Group (CARG)
	Bird	Kingfisher (*Alcedo atthis*)	4 sighted by SOC Birdtrack
	Bird	Mallard (*Anas platyrhynchos*)	1 sighted by GCC Countryside Rangers 2010
	Bird	Grey Heron (*Ardea cinerea*)	4 sighted by GCC Countryside Rangers 2010
	Bird	Short-eared Owl (*Asio flammeus*)	1 sighted by GCC Countryside Rangers 2010
	Bird	Goldeneye (*Bucephala clangula*)	2 sighted by GCC Countryside Rangers 2010
	Bird	Buzzard (*Buteo buteo*)	12 sighted by GCC Countryside Rangers 2010
	Bird	Goldfinch (*Carduelis carduelis*)	1 sighted by GCC Countryside Rangers 2010
	Bird	Black-headed Gull (*Chroicocephalus ridibundus*)	1 sighted by GCC Countryside Rangers 2010
	Bird	Woodpigeon (*Columba palumbus*)	4 sighted by GCC Countryside Rangers 2010
	Bird	Carrion Crow (Corvus corone)	10 sighted by GCC Countryside Rangers 2010
	Bird	Blue Tit (*Cyanistes caeruleus*)	8 sighted by GCC Countryside Rangers 2010
	Bird	Whooper Swan (*Cygnus cygnus*)	1 sighted by GCC Countryside Rangers 2010
	Bird	Great Spotted Woodpecker (*Dendrocopos major*)	14 sighted by GCC Countryside Rangers 2010
	Bird	Robin (*Erithacus rubecula*)	8 sighted by GCC Countryside Rangers 2010
	Bird	Jay (*Garrulus glandarius*)	2 sighted by SOC Birdtrack
	Bird	Swallow (*Hirundo rustica*)	4 sighted by GCC Countryside Rangers 2010
	Bird	Goosander (Mergus merganser)	10 sighted by GNHS misc 2010
	Bird	Great Tit (*Parus major*)	9 sighted by GCC Countryside Rangers 2010
		Coal Tit (*Periparus ater*)	5 sighted by GCC Countryside Rangers 2010
	Bird	Pheasant (*Phasianus colchicus*)	1 sighted by GCC Countryside Rangers 2010
	Bird	Willow Warbler (*Phylloscopus trochilus*)	18 sighted by GCC Countryside Rangers 2010
	Bird	Magpie (*Pica pica*)	8 sighted by GCC Countryside Rangers 2010
	Bird	Slavonian Grebe (*Podiceps auritus*)	1 sighted by SOC Birdtrack

[12] Site of Special Scientific Interest (SSSI).

[13] Definition of antiquity categories, available from: http://www.snh.org.uk/publications/on-line/advisorynotes/95/95.html (Accessed 12/01/2018)

Source	Information Provided				
	Bird	Dunnock (*Prunella modularis*)	1 sighted by GCC Countryside Rangers 2010		
	Bird	Bullfinch (*Pyrrhula pyrrhula*)	3 sighted by GCC Countryside Rangers 2010		
	Bird	Woodcock (*Scolopax rusticola*)	1 sighted by GCC Countryside Rangers 2010		
	Bird	Starling (*Sturnus vulgaris*)	25 sighted by GCC Countryside Rangers 2010		
	Bird	Little Grebe (*Tachybaptus ruficollis*)	3 sighted by GCC Countryside Rangers 2010		
	Bird	Wren (*Troglodytes troglodytes*)	4 sighted by GCC Countryside Rangers 2010		
	Bird	Blackbird (*Turdus merula*)	16 sighted by GCC Countryside Rangers 2010		
	Bird	Song Thrush (*Turdus philomelos*)	3 sighted by GCC Countryside Rangers 2010		
	Bird	Nuttall's Waterweed (*Elodea nuttallii*)	3 locations sighted by Stirling University Hydroscape Surveys		
	Plant	Japanese Knotweed (*Fallopia japonica*)	Multiple locations sighted by Molluscs and other records		
	Plant	Bluebell (*Hyacinthoides non-scripta*)	3 locations sighted by GCC Countryside Rangers 2010		
	Plant	Indian (Himalyan [edited from records]) Balsam (*Impatiens glandulifera*)	Multiple locations sighted by Molluscs and other records		
	Invertebrate	Small Heath (*Coenonympha pamphilus*)	4 sighted by GCC Countryside Rangers 2010		
	Invertebrate	Common Blue Damselfly (*Enallagma cyathigerum*)	Multiple sighted by Richard Weddle - other		
	Invertebrate	Blue-tailed Damselfly (*Ischnura elegans*)	Multiple sighted by Richard Weddle - other		
	Invertebrate	Brown-spot Pinion (*Agrochola litura*)	1 sighted by VC77 moth records		
	Invertebrate	Green-brindled Crescent (*Allophyes oxyacanthae*)	1 sighted by VC77 moth records		
	Invertebrate	Garden Tiger (*Arctia caja*)	1 sighted by VC77 moth records		
	Invertebrate	Mottled Rustic (*Caradrina morpheus*)	1 sighted by VC77 moth records		
	Invertebrate	Latticed Heath (*Chiasmia clathrata*)	2 sighted by VC77 moth records		
	Invertebrate	Sallow (*Cirrhia icteritia*)	3 sighted by VC77 moth records		
	Invertebrate	Small Square-spot (*Diarsia rubi*)	5 sighted by VC77 moth records		
	Invertebrate	Small Phoenix (*Ecliptopera silaceata*)	2 sighted by VC77 moth records		
	Invertebrate	Autumnal Rustic (*Eugnorisma glareosa*)	3 sighted by VC77 moth records		
	Invertebrate	Double Dart (*Graphiphora augur*)	2 sighted by VC77 moth records		
	Invertebrate	Narrow-bordered Bee Hawk-moth (*Hemaris tityus*)	1 sighted by VC77 moth records		
	Invertebrate	Ghost Moth (*Hepialus humuli*)	2 sighted by VC77 moth records		
	Invertebrate	Rustic (*Hoplodrina blanda*)	9 sighted by VC77 moth records		
	Invertebrate	Rosy Rustic (*Hydraecia micacea*)	4 sighted by VC77 moth records		
	Invertebrate	White Ermine (*Spilosoma lubricipeda*)	3 sighted by VC77 moth records		
	Invertebrate	Cinnabar (*Tyria jacobaeae*)	1 sighted by VC77 moth records		
	Invertebrate	Yellow-legged Black Legionnaire (*Beris morrisii*)	1 sighted by Richard Weddle - other		
	Mammal	Roe Deer (*Capreolus capreolus*)	Multiple sighted by GCC Countryside Rangers 2010		
	Mammal	Badger (*Meles meles*)	Multiple sighted by Scottish Badgers		
	Mammal	Water Shrew (*Neomys fodiens*)	2 sighted by GCC Countryside Rangers 2010		
Saving Scotland's red Squirrels (SSRS)	No recorded sightings within the site and 2km radius of the site				
South Lanarkshire Biodiversity Action Plan	South Lanarkshire Biodiversity Strategy does not contain lists of local priority species but instead views all national priority species as local priorities.				
Scottish Biodiversity List (SBL)	The below feature on the SBL and are potentially relevant to the site:			**SBL**	**UKBAP**
	Mammals	• European hedgehog (*Erinaceus europaeus*)		✓	✓
		• Brown Hare (Lepus europaeus)		✓	✓
		• European mole (*Talpa europaea*)		✓	
		• Brown long-eared bat (*Plecotus auritus*)		✓	✓
		• Common pipistrelle (*Pipistrellus pipistrellus*)		✓	
		• Daubenton's bat (*Myotis daubentonii*)		✓	
		• Natter's bat (*Myotis nattereri*)		✓	
		• Soprano pipistrelle (*Pipistrellus pygmaeus*)		✓	✓
		• Noctule (*Nyctalus noctula*)		✓	✓
		• Whiskered bat (*Myotis mystacinus*)		✓	

Source	Information Provided			
		• Brandt's bat (*Myotis brandtii*)	✓	
		• Water vole (*Arvicola amphibious*)	✓	✓
		• Otter (*Lutra lutra*)	✓	✓
		• Red Squirrel (*Sciurus vulgaris*)	✓	✓
	Birds	• Blackbird (Turdus merula)	✓	
		• House sparrow (Passer domesticus)	✓	✓
		• Bullfinch (Pyrrhula pyrrhula)	✓	
		• Tree pipit (*Anthus trivialis*)	✓	✓
		• Kestrel (*Falco tinnunculus*)	✓	
		• Song thrush (*Turdus philomelos*)	✓	✓
		• Brambling (*Fringilla montifringilla*)	✓	
	Amphibians	• Common toad (*Bufo bufo*)	✓	✓
		• Great crested newt (*Triturus cristatus*)	✓	✓
	Habitats	• Hedgerows	✓	✓
		• Wet Woodland	✓	✓

3.2 ECOP

Habitat Description

The site predominantly comprises of broad-leaved wet plantation woodland, dominated by willow (*Salix sp*) with other species including alder (*Alnus glutinosa*), downy and silver birch (*Betula pubescens* and *Betula pendula*) and marshy grassland. Wet Woodlands are classified as UK BAP priority habitats and SBL habitat and marshy grassland is classified as a Ground Water Dependent Terrestrial Ecosystem (GWDTE). Individual Scot's pine (*Pinus sylvestris*) trees and stands are distributed throughout the site in small sections.

Continuous scrub is present along the northern boundary and throughout the site, consisting of species, such as broom (*Cytisus scoparius*), hawthorn (*Crataegus monogyna*) and bramble (*Rubus fruticosus*). Stands of tall ruderal vegetation are distributed throughout the site, including species such as common hogweed (*Heracleum sphondylium*) and broad-leaved doc (*Rumex obtusifolius*).

Areas of standing water and ponds are present within the north west of the site.

The Newton Railway line is present along the northern boundary of the site and Manse Brae road is adjacent to the eastern boundary of the site. Residential developments border the west and south boundary of the site. The Rotten Calder River flows south to north approximately 300m east of the site.

Site Constraints

No evidence of protected or notable species was observed during the ECOP. The habitats within and adjacent to the site offer typical resources for a range of protected species including, but not limited to:

- Woodland habitat and ponds on site which connect to woodland and the Rotten Calder River to the east of the site could offer foraging, commuting and resting habitat for a range of species, including bat, otter, badger, amphibians (including Great Crested Newt (GCN)), bird and invertebrate species.
- The established scrub and grassland on site offer secondary foraging and commuting habitat for badger, and Newton Railway line along the northern boundary provides opportunities for sett creation due to the sloping embankments with free draining soil on either side.
- Woodland within and adjacent to the site provides nesting and foraging habitat for birds. Grassland and scrub habitats provide opportunities to feed on insects, seeds and small mammals within the site.

Following an appraisal of the site's habitats and the surrounding landscape, it is suggested that further survey will be likely be required to inform the planning process. Recommendations are detailed in Table 1 below.

Table 1: Summary of Recommendations

Item	Timescale
Phase 1 Habitat Survey of the site[14] including a search for invasive plants.	Optimal survey period extends from April to August
National Vegetation Classification (NVC) to investigate botanical indicators, search for bluebells to ascertain if native and identify areas of Ground Water Dependant Terrestrial Ecosystems (GWDTE)*	Optimal survey period extends from May to July
Undertake nesting bird checks prior to vegetation clearance should this take place within the breeding season	Bird breeding season extends from March to August
Protected species survey, with specific focus on:	
• Badger survey of the site plus 50m buffer[15]	Badger surveys can be undertaken year-round. Optimal survey period extends from February to April. And November/December
• Otter[16,17] survey of woodland and ponds within the site boundary as no watercourses are present within the site	Otter surveys are limited by vegetation cover rather than seasonality
• Undertaking Habitat Suitability Index (HSI) of ponds for GCN	Optimal survey period for HSI extends from late March to August
Tree survey of trees and tree groups within and adjacent to the site boundary within influence of the development	Tree survey can be undertaken year-round

* GWDTE assessment may be combined with Phase 1 Habitat survey, however, also occasionally require input from a hydrologist.

Opportunities for Ecological Enhancement

The site has opportunities to create, enhance and maintain habitats.

Opportunities exist to maintain areas of wet woodland through coppicing, scrub-cutting and raising awareness about their value for both wildlife and people. Developing a woodland management plan would aid in the maintenance and management of the woodland. Managing these areas of wet woodland and the inclusion of nest and roost boxes would benefit biodiversity through the maintenance and provision of suitable breeding, foraging and nesting habitat for species including otter, bats and birds. Any areas where deadwood is present should be retained to provide habitat for invertebrates and foraging and nesting opportunities for birds and mammals.

The enhancement of the woodland within the east of the site could play an important role in increasing biodiversity within the site. The inclusion of a range of water tolerant native tree species such as woolly willow (*Salix lanata*) and black poplar (*Populus nigra*) could increase connectivity between the east of site and adjacent habitat in the surrounding area. This could also enhance and diversify the woodland habitat by creating further areas of shelter, foraging and nesting opportunities for species including badger, birds, bats and invertebrates.

[14]JNCC (2010). *Handbook for Phase 1 habitat survey; a technique for environmental audit*. Peterborough: Joint Nature Conservation Committee

[15] Scottish Badgers (2005). *Level 1 Badger Awareness Training Manual*. Scottish Badgers.

[16] Chanin, P. (2003). *Ecology of the European Otter. Conserving Natura 2000 Rivers Ecology* (No. 10). Peterborough: EN, CCW, EA, SEPA, SNH & SNIFFER.

[17] Bassett, S., & Wynn, J. (2010). Otters in Scotland: How Vulnerable Are They to Disturbance? *CIEEM In Practice*, (70), 19–22. Retrieved from file:///M:/Library/_By%20author/CIEEM/In-Practice-IP70_Dec_2010.pdf

Wetland creation and enhancement is recognised as a Rural Priority by the Scottish Government such is its significance as a habitat. There are opportunities to enhance wetland habitat within the site, for example through reduction of dominating vegetation or vegetation removal within the ponds, which would support and increase associated invertebrates, amphibians, mammals and plants.

New paths within the woodland may be created using Geoweb[18] , porous gravel, vegetated surfacing or well demarcated raised boardwalks, all of which are suitable for low impact development and green infrastructure design and to protect tree rooting systems, avoid soil compaction and allow exchange of water and gas to root systems. Information signs to allow residents to appreciate the wildlife, such as dragonflies, damselflies and butterflies may also be incorporated, as such proximity to nature enriches lives and strengthens the appreciation of nature.

Opportunities exist to enhance grassland habitats within the site. Including mowing regimes to encourage structural diversity, increase biodiversity and provide habitats for birds, invertebrates and mammals. Including species-rich grassland and habitat mosaic management would encourage invertebrate species, specifically butterflies and moths. Introducing areas of wildflowers would provide habitat for pollinators and other beneficial insects.

Retaining and managing scrub habitat throughout the site and along the boundaries would ensure habitat provision for species, such as mammals, birds and invertebrates, whilst reducing its spread into wet woodland habitat.

[18] Information on Geoweb. Available at: https://www.prestogeo.com/wp-content/uploads/2016/10/GWLS-Geoweb-Tree-Root-Protection.pdf. Accessed on 16/01/18

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Retaining and managing scrub habitat would ensure habitat provision for species, such as mammals, birds and invertebrates, whilst reducing its spread into wet woodland habitat.

Maintanance of wet woodland through coppicing, scrub-cutting and raising awareness of their value for both wildlife and people. Management would benefit biodiversity through the maintenance of suitable breeding, foraging and nesting habitat for species including otter, bats and birds.

Enhancement of the woodland within the east of the site by including a range of native tree species such as woolly willow (Salix lanata) and black poplar (Populus nigra) could enhance and diversify the woodland by creating shelter, foraging and nesting opportunities for species including birds, bats and invertebrates.

Opportunities to enhance wetland habitat, for example through reduction of dominating vegetation or vegetation removal, which would support and increase associated invertebrates, amphibians, mammals and plants.

Opportunities to enhance grassland habitats through mowing regimes, species-rich grassland and habitat mosaic management and widlflower or green roof planting to encourage structural diversity, increase biodiversity and provide habitats for birds, invertebrates (specifically moths and butterflies) and mammals.

Legend

- Site Boundary
- Recommended Phase 1 Habitat Survey
- Recommended National Vegetation Classification (NVC) Survey
- Recommended Badger Survey
- Recommended Otter Survey
- Recommended Habitat Suitability Index (HSI) Survey

Do not scale this map

Client
TGP Landscape Architects

Project
Hallside Wood

Title
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Status
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