



East Dunbartonshire Council

CRAIGFOOT ALLOTMENTS

Preliminary Ecological Appraisal





East Dunbartonshire Council

CRAIGFOOT ALLOTMENTS

Preliminary Ecological Appraisal

TYPE OF DOCUMENT (V1) CONFIDENTIAL

PROJECT NO. 70012724

OUR REF. NO. V1

DATE: JANUARY 2020

WSP

110 Queen Street

Glasgow

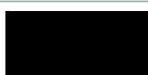
G1 3BX

Phone: +44 141 429 3555

Fax: +44 141 429 3666

WSP.com

QUALITY CONTROL

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	First draft			
Date	January 2020			
Prepared by	Katie Murphy			
Signature	 Watt, Robbie PP on behalf of Katie Murphy 2020.01.29 10:04:56 Z			
Checked by	Nikki Murray			
Signature	 Watt, Robbie PP on behalf of Nikki Murray 2020.01.29 10:05:31 Z			
Authorised by	Greg Chamberlain			
Signature	 Watt, Robbie PP on behalf of Greg Chamberlain 2020.01.29 10:05:51 Z			
Project number	70012724			
Report number	V1			
File reference	\\uk.wspgroup.com\central data\Projects\70012xxx\70012724 - Craigfoot Allotments\C Documents\Reports\Ecology			

CONTENTS

EXECUTIVE SUMMARY

1	INTRODUCTION	1
1.2	PROJECT BACKGROUND	1
1.3	SCOPE OF REPORT	1
1.4	RELEVANT LEGISLATION	1
2	METHODS	3
2.1	OVERVIEW	3
2.2	DESK STUDY	3
2.3	FIELD SURVEY	3
2.4	NOTES AND LIMITATIONS	4
3	RESULTS	6
3.1	DESK STUDY	6
3.2	HABITAT SURVEY	7
3.3	PROTECTED AND NOTABLE SPECIES ASSESSMENT	11
4	DISCUSSION AND RECOMMENDATIONS	16
4.2	ENVIRONMENTAL BEST PRACTICE	25
4.3	ECOLOGICAL ENHANCEMENT OPPORTUNITIES	25
4.4	RESURVEY	25
5	REFERENCES	26

TABLES

Table 3-1 – Statutory Designated Sites	6
Table 3-2 – Non-statutory Designated Sites	7
Table 3-3 – Phase 1 habitats recorded within the Phase 1 Survey Area	8
Table 3-4 – Protected and notable species results	13
Table 4-1 – Evaluation and Recommendations	17

APPENDICES

APPENDIX A

FIGURES

APPENDIX B

SPECIES LIST

APPENDIX C

TARGET NOTES

APPENDIX A

SURVEY PHOTOGRAPHS

EXECUTIVE SUMMARY

WSP UK were commissioned by East Dunbartonshire Council to provide an update to the ecology advice provided in 2017 in relation to a proposed allotment (hereafter the 'Proposed Development'), located in Milton of Campsie, East Dunbarton (hereafter the 'Site'). In 2017, an extended Phase 1 habitat survey was undertaken at the Site, which was found to be dominated by improved grassland with suitability to support otters, bats and birds. Himalayan balsam and Japanese knotweed were recorded along the Glazert Water which runs along the south of the Site.

In order to provide an update of the 2017 surveys, a Preliminary Ecological Appraisal (PEA) was undertaken which involved a desk study including a search for protected and notable species records and designated sites including non-statutory and statutory. Following the desk study, a field survey was undertaken which consists of an extended Phase 1 habitat survey following the standard JNCC methodology which extended to include an assessment for protected species. The survey was carried out across the Site and an additional 50m buffer (hereafter the 'Survey Area').

The desk study found one Special Area of Conservation (SAC) Endrick Water which was 9km from the Site boundary and designated for river lamprey, brook lamprey and Atlantic Salmon. Nine non-statutory nature conservation sites were identified within 2km of the Site boundary. The closest non-statutory site was Glazert Water which is a Corridor of Wildlife and Landscape Importance (CWLI) and runs along the south of the Site. Desk study records found records of bat, badger, otter, birds, invertebrates and invasive species within 2km.

The field survey identified a mix of urban and semi-natural habitats within the Survey Area this included poor semi-improved grassland, amenity grassland, residential properties, plantation and semi-natural woodland, scrub, tall ruderal and non-ruderal. Six species of bird were observed which included two species listed within the Birds of Conservation Concern 4 (BoCC4) which were dipper and bullfinch. No other evidence of protected species was recorded in the Survey Area. Habitat suitable for bats, otter, terrestrial and aquatic invertebrates, fish, badger, birds and amphibian species. Extensive Japanese knotweed was recorded along the Glazert Water, predominantly along the north bank but some present along the south bank.

Recommendations have been made for the protection of habitats and species during the construction of the Proposed Development, and include (but are not limited to) the following:

- Y Protection of habitats and avoidance of invasive non-native plant species through use of exclusion zones;
- Y Further surveys for otter, badger, birds and invasive non-native plant species; and
- Y Works near waterbodies and watercourses to be undertaken following best practice guidelines for working near water to prevent pollution.

Contact name Katie Murphy Contact details 0141 429 3555

1 INTRODUCTION

- 1.1.1. WSP UK was commissioned by East Dunbartonshire Council to undertake a Preliminary Ecological Appraisal (PEA) which would include an up to date extended Phase 1 habitat survey for a proposed allotment (hereafter the 'Proposed Development'), located in Milton of Campsie, East Dunbarton (Grid Reference NS 65366 76627) (hereafter the 'Site').

1.2 PROJECT BACKGROUND

- 1.2.1. The Proposed Development consists of allotment plots, footpaths and earthwork slopes, this is shown in **Appendix A: Drawing 2724-WSP-SK-006**. Ground investigation was undertaken at the Site in January 2018 comprising five hand dug pits and five machine excavated trial pits.
- 1.2.2. In 2017, WSP was commissioned to undertake an extended Phase 1 habitat survey of the Site, restricted to the Site boundary (WSP, 2017). The survey found that Site was dominated by improved grassland with poor species diversity, marshy grassland, tall ruderal, scattered scrub and broadleaved trees present in the west of the Site. The Glazert Water was considered suitable to support otter *Lutra lutra*, but not water vole *Arvicola amphibius* due to speed of water. The Site had limited opportunities for roosting bats but provided commuting and foraging opportunities along the Glazert Water. Eleven bird species were recorded on Site, including; one red listed within the Birds of Conservation Concern (BoCC, Eaton et al, 2015) grey wagtail *Motacilla cinerea*, and one amber listed species dunnoek *Prunella modularis*. Habitat on Site was suitable to support nesting bird species within the scattered trees and scrub. Two invasive non-native plant species were recorded on Site which were Japanese knotweed *Reynoutria japonica* and Himalayan balsam *Impatiens glandulifera* both of which were recorded along the south of the Site on the northern bank of the Glazert Water.

1.3 SCOPE OF REPORT

- 1.3.1. WSP was commissioned by East Dunbartonshire Council to undertake a PEA which would include an up to date extended Phase 1 habitat survey across the Site. The brief was:
- Y To provide up to date baseline ecological information about the Site and a surrounding Study Area with particular reference to whether legally protected and/or notable sites, species or habitats are present or likely to be present;
 - Y To provide recommendations to enable compliance with relevant nature conservation legislation and planning policy; and
 - Y If necessary, to identify the need for avoidance, mitigation, compensation or enhancement measures and/or further ecological surveys.

1.4 RELEVANT LEGISLATION

- 1.4.1. The study has been compiled with reference to the following relevant nature conservation legislation, planning policy and the UK Biodiversity Framework from which the protection of sites, habitats and species is derived in Scotland. The context and applicability of each item is explained as appropriate in the relevant sections of the report.
- Y The Conservation (Natural habitats &c.) 1994 (as amended in Scotland) (Habitats Regulations);
 - Y The Wildlife and Countryside Act (WCA) 1981 (as amended in Scotland);



- Y The Nature Conservation (Scotland) Act 2004 (NC(S)A);
- Y Code of Practice on Non-Native Species (Scottish Government, 2012);
- Y The Wildlife and Natural Environment (Scotland) Act 2011 (WANE);
- Y National Parks (Scotland) Act 2000;
- Y Salmon and Freshwater Fisheries (Consolidation)(Scotland) Act 2003; and
- Y Scottish National Planning Framework 3 (2015).

2 METHODS

2.1 OVERVIEW

- 2.1.1. This appraisal has been prepared with reference to current good practice guidance published by the Chartered Institute for Ecology and Environmental Management (CIEEM, 2017a and 2017b), and Joint Nature Conservation Committee (JNCC, 2010); and guidance contained in the British Standard - Code of Practice for Biodiversity and Development BS42020:2012 (British Standards Institute (2012).
- 2.1.2. This PEA is based on the following data sources:
- Y An ecological desk study;
 - Y A habitat survey; and
 - Y A protected/notable species assessment.

2.2 DESK STUDY

- 2.2.1. The desk study was undertaken to review existing ecological baseline information available in the public domain and to obtain information held by relevant third parties. For the purpose of the desk study exercise, records were collated within various radii around the Site. This approach is consistent with current good practice guidance published by the CIEEM (2017a). To provide the baseline data for the ecological desk study, the following information was requested from Glasgow Museum Resource Centre:
- Y Records of legally protected and notable species for nature conservation within 2km of the Site; and
 - Y Records of non-statutory sites designated for nature conservation value within 2km of the Site.
- 2.2.2. Freely downloadable datasets (available from Scottish Natural Heritage (SNH)) were consulted for information regarding the presence of national statutory designated habitats within 2km of the Site. This search was extended for internationally statutory sites for nature conservation to 10km for Natura 2000 sites (Special Areas of Conservation (SAC) and Special Protection Areas (SPA)) of European importance and internationally designated Ramsar sites.
- 2.2.3. The findings of the desk study have been incorporated within **Section 3** of this report, and statutory designated sites for nature conservation are shown in **Appendix A: Figure 1**.

2.3 FIELD SURVEY

HABITAT SURVEY

- 2.3.1. A Phase 1 habitat survey of the Site was carried out on the 12th December 2019. The survey covered the entire Site including boundary features. In addition, an approximate area of 50m around the Site was also surveyed, where accessible an overview of habitats surrounding the Site was gathered. As the area surveyed extended beyond the 'Site' it is hereafter known as the 'Survey Area'. The Phase 1 habitat survey was carried out by graduate member of CIEEM with over three years' experience of Phase 1 habitat surveys and PEA reporting.
- 2.3.2. Habitats were described and mapped following the standard Phase 1 habitat survey methodology (JNCC, 2010). Phase 1 habitat survey is a standard technique for classifying and mapping British habitats. The dominant plant species are recorded, and habitats are classified according to their

vegetation types. Where appropriate, consideration was given to whether habitats qualify, or could qualify, as a Habitat of Principal Importance in Scotland (i.e. on the Scottish Biodiversity List [SBL]¹) following habitat descriptions published by the JNCC (2011).

- 2.3.3. Plant species were recorded with relative plant species abundance estimated using the DAFOR scale². The scientific names for plant species follow those in the New Flora of the British Isles (Stace, 2019) and are also listed in **Appendix B**.
- 2.3.4. Habitats were marked on a mobile mapping computer using a Geographical Information System (GIS). Target notes (TNs) were made to provide information on specific features of ecological interest (e.g. a badger *Meles meles* sett) or habitat features too small to be mapped. These are included in **Appendix C**.
- 2.3.5. Invasive plant species which are those considered outside of their natural range, as per the WANE Act (2011), which were evident during the Phase 1 habitat survey were also target noted. This was primarily focused on the six-species considered by SNH to cause the most damage which are: rhododendron *Rhododendron ponticum*, Japanese knotweed, giant hogweed *Heracleum mantegazzianum*, Himalayan balsam, giant rhubarb *Gunnera tinctoria* and American skunk cabbage *Lysichiton americanus* (SNH, 2019). Detailed mapping of such species, or a full survey of the Survey Area for all invasive plant species is beyond the scope of this commission.

PROTECTED SPECIES ASSESSMENT

- 2.3.6. The potential for the Survey Area to support legally protected and notable species was assessed using the desk study results and combined with field observations during the habitat survey. The assessment of habitat suitability for protected and notable species was based on professional experience and judgement. This was supplemented by standard sources of guidance on habitat suitability assessment for key faunal groups including: birds (Gilbert *et al*, 1998 and Bibby *et al*, 2000), great crested newt *Triturus cristatus* (Gent and Gibson, 2003 and English Nature, 2001); reptiles (Froglife, 1999 and Gent and Gibson, 2003); bats (Collins, 2016); badger (Harris *et al*, 1991, Roper, 2010 and Scottish Badgers, 2019); otter (Chanin, 2003); water vole (Dean *et al*, 2016) and invertebrates (Drake *et al*, 2007 and Kirby, P, 2001).

2.4 NOTES AND LIMITATIONS

Every effort has been made to provide a comprehensive description of the Survey Area; however, the following specific limitations apply to this assessment:

¹ The SBL is a list of animals, plants and habitats that Scottish Ministers consider to be of principal importance for biodiversity conservation in Scotland, as required by the Nature Conservation (Scotland) Act 2004.

² The DAFOR scale has been used to estimate the frequency and cover of the different plant species as follows: Dominant (D) - >75% cover, Abundant (A) – 51-75% cover, Frequent (F) – 26-50% cover, Occasional (O) – 11-25% cover, Rare (R) – 1-10% cover., The term 'Locally' (L) is also used where the frequency and distribution of a species are patchy and 'Edge' (E) is also used where a species only occurs on the edge of a habitat type.

- Y Records held by the local biological record centres and local recording groups are generally collected on a voluntary basis; therefore, the absence of records does not demonstrate the absence of species, it may simply indicate a gap in recording coverage.
- Y The Phase 1 habitat survey provides a snap-shot of protected species presence/potential presence and is not replace the need for dedicated protected species surveys (where appropriate). Through a combination of field survey and desk study information to supplement Survey Area data, it is considered that an accurate assessment of the potential for the Site to support protected species or those of conservation concern was possible.
- Y The survey was not completed during the optimal survey season for Phase 1 habitat survey, generally accepted to be from April-September (inclusive). Botanical surveys are seasonally limited, and throughout the spring and summer period certain species will be more or less evident at different times (i.e. depending on the flowering season). However, it is considered that sufficient information was gathered to enable an assessment of the habitat types present, in line with standard Phase 1 habitat categories and the potential for these to support protected or notable species.
- Y Access was not taken within residential gardens or properties. However, it is considered that sufficient information was gathered to enable an assessment of the Survey Area.

3 RESULTS

3.1 DESK STUDY

DESIGNATED SITES

Statutory Sites

- 3.1.1. The desk study identified no national statutory nature conservation sites within 2km of the boundary of the Site and one international statutory nature conservation site within 10km of the boundary of the Site. A description of the statutory site is detailed below in **Table 3-1** and shown in **Appendix A: Figure 1**.

Table 3-1 – Statutory Designated Sites

Site name	Designation	Size (ha)	Approximate distance and orientation from Site	Description
Endrick Water	SAC	235.65	9km north	Qualifying interests for which the site is designated for are river lamprey <i>Lampetra fluviatilis</i> , brook lamprey <i>Lampetra planeri</i> and Atlantic salmon <i>Salmo salar</i> .
	Site of Special Scientific Interest (SSSI)	219.19		Large river which flows into Loch Lomond. Notified natural features include brook lamprey, river lamprey and Scottish dock <i>Rumex aquaticus</i> .

Non-statutory Sites

- 3.1.2. The desk study identified nine non-statutory nature conservation Sites within 2km of the boundary of the Site, which were eight Local Nature Conservation Sites (LNCS) and one Corridor of Wildlife and Landscape Importance (CWLI). The name and location of these sites are detailed in **Table 3-2** below and their location shown in **Appendix A: Figure 1**.

Table 3-2 – Non-statutory Designated Sites

Site name	Designation	Distance and orientation from Site
Glazert Water	CWLI	0m south
Springfield Marsh	LNCS	750m south
Redmoss Grassland	LNCS	850m south west
Mount Dam	LNCS	880m north west
Girdle Hill Woods	LNCS	1.15km north west
Alloch Dam	LNCS	1.18km north west
Antermony Loch	LNCS	1.35km east
Woodburn Reservoir	LNCS	1.75km north east
Woodburn	LNCS	1.92km north east

HABITATS OF CONSERVATION IMPORTANCE

- 3.1.3. There are seven areas of ancient woodland within 2km of the Site boundary, the closest being approximately 265m north east of the Survey Area, known as Baldorran Wood. Semi-natural ancient woodland is present along the southern boundary of the Site, along the Glazert Waters and a second section present approximately 30m east of the Site boundary.

3.2 HABITAT SURVEY

OVERVIEW

- 3.2.1. The Survey Area consisted of 14 Phase 1 habitat types which included a mix of semi-natural and urban habitat types such as semi-natural broadleaved woodland, the Glazert Water as well as improved grassland and amenity parkland habitat. Within the Site the northern edge has a steep slope towards the Glazert Water.
- 3.2.2. **Table 3-3** provides the findings of the Phase 1 habitat survey listing all 14 Phase 1 habitat types identified during the survey. Habitats are shown in **Appendix A: Figure 2**. A description of the dominant and notable species, the composition and management of each habitat is provided below. TNs are provided in **Appendix C** and photographs shown in **Appendix D**. Alpha-numeric codes used in this section cross-refer to the JNCC Phase 1 habitat survey classification (JNCC, 2010). The order of the habitat descriptions below reflects their ordering the Phase 1 habitat survey manual and does not reflect habitat importance.

Table 3-3 – Phase 1 habitats recorded within the Phase 1 Survey Area

Phase 1 habitat	Description	Potential Ground Water Dependent Terrestrial Ecosystem ³ (GWDTE)	SBL habitat
Semi-natural broadleaved woodland (A1.1.1)	Broadleaved semi-natural woodland was present along the southern banks of the Glazert Water. This consist of a mix of semi-mature trees, with occasional mature trees. Species mix included ash <i>Fraxinus excelsior</i> , oak <i>Quercus sp</i> , beech <i>Fagus sylvatica</i> , alder <i>Alnus glutinosa</i> , lime <i>Tilia sp</i> , birch <i>Betula sp</i> and sycamore <i>Acer pseudoplatanus</i> . The understorey contained occasional hawthorn <i>Crataegus monogyna</i> , bramble <i>Rubus fruticosus</i> and ivy <i>Hedera helix</i> . The ground flora was sparse but included great wood-rush <i>Luzula sylvatica</i> along the water's edge, with occasional male-fern <i>Dryopteris filix-mas</i> , common nettles <i>Urtica dioica</i> , moss <i>Bryophyta sp</i> and creeping buttercup <i>Ranunculus repens</i> scattered across the rest of the area. Along the southern edge where the woodland met amenity grassland there was a scrub edge of bramble. This habitat was located within the semi-natural ancient woodland inventory.	n/a	Lowland mixed deciduous woodland
Plantation broadleaved woodland (A1.1.2)	Two areas of plantation broadleaved woodland were present within the Survey Area. On the north of the Glazert Water, trees were a mix of immature and semi-mature mainly consisting of ash and sycamore with occasional holly <i>Ilex aquifolium</i> , hawthorn and ivy. Ground flora was limited to occasionally brambles, ground-elder <i>Aegopodium podagraria</i> , moss species, wild raspberry <i>Rubus idaeus</i> and wild garlic <i>Allium urisnum</i> . The plantation woodland present to the south of the Glazert Water, contained a mix of sycamore, beech, <i>Prunus sp.</i> and alder.	n/a	n/a

³ Ground water dependent terrestrial ecosystems are wetlands that are dependent on groundwater. They are protected by the Water Framework Directive and are considered sensitive to hydrological and ecological changes (Scottish Environmental Protection Agency (SEPA), 2017).

Phase 1 habitat	Description	Potential Ground Water Dependent Terrestrial Ecosystem ³ (GWDTE)	SBL habitat
	Ground flora was sparse containing occasional common nettles, creeping buttercup and Yorkshire fog <i>Holcus lanatus</i> with locally abundant rosebay willowherb <i>Chamaenerion angustifolium</i> and bramble.		
Dense scrub (A2.1)	Dense scrub was present in multiple locations across the Survey Area, including within the Site itself. It was predominantly dominated by bramble with occasionally hawthorn and wild raspberry. The section present in the north west corner of the Site, also contained buddleia <i>Buddleja davidii</i> and ivy with one semi-mature ash tree. This area was a mosaic with tall ruderal species including rosebay willowherb and broad-leaved dock <i>Rumex obtusifolius</i> .	n/a	n/a
Scattered scrub (A2.2)	Scattered scrub was present within the Survey Area as occasional semi-mature hawthorn.	n/a	n/a
Parkland and scattered trees (A3.1)	Scattered trees were present across the Survey Area outwith the main woodland habitat. This included a range of immature to mature trees. Along the north banks of the Glazert Water, species present included mature and semi-mature ash, alder, and sycamore with occasional holly and ivy. Within the rest of the Site, mature sycamore, lime, prunus sp. and immature grey willow <i>Salix cinerea</i> was present.	n/a	n/a
Marshy grassland (B5)	Marshy grassland was present to the east of the centre of Site. This habitat was contained a mix of soft rush <i>Juncus effusus</i> and meadowsweet <i>Filipendula ulmaria</i> with occasional reed canary-grass <i>Phalaris arundinacea</i> and marsh violet <i>Viola palustris</i> . Other occasional species included common hogweed <i>Heracleum sphondylium</i> and male-fern which were associated with neighbouring habitats.	Yes	n/a
Poor semi-improved grassland (B6)	The largest section of the Site was poor semi-improved grassland. This was dominated by Yorkshire fog with occasional tufted hair grass <i>Deschampsia cespitosa</i>	n/a	n/a

Phase 1 habitat	Description	Potential Ground Water Dependent Terrestrial Ecosystem ³ (GWDTE)	SBL habitat
	and locally frequent cock's-foot <i>Dactylis glomerata</i> in the southern half. Other species present included abundant creeping buttercup and broadleaved dock, occasional St John's-wort <i>Hypericum perforatum</i> and ribwort plantain <i>Plantago lanceolata</i> with rare yarrow <i>Achillea millefolium</i> , common knapweed <i>Centaurea nigra</i> . Marsh violet was recorded in wetter areas to the south of Site. A small area of similar grass species composition was present in the east half of Site but contained moss species and occasional great wood-rush.		
Tall ruderal (C3.1)	<p>A large area of tall ruderal was present in the east half of the Site where it was dominated by rosebay willowherb with frequent broadleaved dock and occasional common nettle, meadowsweet and male-fern.</p> <p>Three areas of tall ruderal north of Glazert Water were dominated by Japanese knotweed <i>Reynoutria japonica</i>, this is shown in Appendix A: Figure 2.</p> <p>All other areas of tall ruderal were present as mosaics with either scrub or non-ruderal species.</p>	n/a	n/a
Non-ruderal (C3.2)	All areas of non-ruderal were present as a mosaic with tall ruderal species, the largest area is in the east of the Site with two smaller areas in the centre of the Survey Area. Species present included abundant male-fern with frequent rosebay willowherb, common hogweed and occasional brambles, creeping thistle <i>Cirsium arvense</i> and broadleaved dock. In the area south of the Glazert Water, meadowsweet was also present.	n/a	n/a
Running water (G2)	Along the south of the Site runs the Glazert Water which was approximately 3-4m wide with sloping banks. At the time of survey, the watercourse was in high spate.	n/a	n/a
Amenity (J1.2)	Amenity grassland was present across the Survey Area, and a small section in the north west of the Site. This consisted of	n/a	n/a

Phase 1 habitat	Description	Potential Ground Water Dependent Terrestrial Ecosystem ³ (GWDTE)	SBL habitat
	<p>parkland and residential gardens. The parkland grassland was dominated by perennial ryegrass <i>Lolium perenne</i> with occasional ribwort plantain, dandelion species <i>Taraxacum sp</i>, white clover <i>Trifolium repens</i>, creeping buttercup and daisy <i>Bellis perennis</i>. Within the section in the south east of the Survey Area springy turf-moss <i>Rhytidiadelphus squarrosus</i> was present.</p> <p>Amenity grassland was also present in small 0.5-1m strips along paths in the Survey area, these were not mapped.</p>		
Buildings (J3.6)	Residential and commercial buildings were present within the Survey Area, no buildings were present within the Site boundary.	n/a	n/a
Other: hardstanding (J5)	Hardstanding present across the Survey Area consisted of road and footpaths, none present within the Site.	n/a	n/a
Species-poor intact hedgerow (J2.1.2)	Species-poor intact hedges were present in the Survey Area associated with residential properties including an immature beech hedgerow in the east of the Survey Area and Leyland cypress <i>Cupressus x leylandii</i> hedge.	n/a	n/a
Fence (J2.4)	Fences were present associated with residential and commercial buildings which were a mix of wood, wood posts with wire and metal fencing.	n/a	n/a
Wall (J2.5)	Walls were present associated with residential buildings.	n/a	n/a

3.3 PROTECTED AND NOTABLE SPECIES ASSESSMENT

3.3.1. Habitats present within the Survey Area or immediately adjacent to the Survey Area are suitable for the following species; further consideration is given below to the likelihood for these species to be present within the Survey Area or immediate adjacent:

- Y Badger;
- Y Bats;
- Y Otter;
- Y Water vole;



- Y Amphibians;
- Y Birds;
- Y Invertebrates;
- Y Fish; and
- Y Invasive and non-native plant species

3.3.2. The Survey Area and surround habitat does not provide suitable habitat for other protected or notable species, beyond those listed above, therefore will not be considered further in this report.

Table 3-4 – Protected and notable species results

Feature	Desk Study	Field Survey
Badger	Four records of badger were present within 2km of the Site boundary. These records are held by Scottish Badgers, therefore exact location and detailed information was not provided.	No evidence of badger was recorded during the survey. The east half of the Survey Area was considered suitable for badgers with adequate slope for sett construction and connected to wider area including agricultural grazing fields which would provide suitable foraging habitat.
Bat	No records of bats were provided.	<p>Potential suitable bat roosts was limited within the Survey Area to residential houses and occasional mature trees. Moderate foraging and commuting habitat was identified within the Survey Area. The combination of the Glazert water lined by trees, woodland edge, marshy grassland and tall ruderal habitat considered to provide foraging resource which can be classified as 'moderate under Bat Conservation Trust (BCT) guidance (2016).</p> <p>The residential houses and supermarket building (TN 1, 2, 3, 4, 5, 16, 17, 18, 19 and 20) were generally in good condition with low suitability. South of Glazert Water, one mature ash tree (TN22) was recorded with extensive basal rot creating a cavity, however it was wet within. This Potential Roost Feature (PRF) was not fully inspected due to proximity to watercourse. Other features present which may support roosting bats was small bird boxes on trees south of Glazert Water (TN21 and 27) and a wall on the south side of the Glazert Water (TN11) which was not fully inspected due to proximity to water.</p>
Otter	One record of otter on the Glazert Water approximately 1km south of the Site. The record was of two adults and three immature otters recorded in 2009.	No evidence of otter was recorded during the survey. The Glazert Water provides suitable habitat to support otters with potential resting locations on the banks within vegetation or under roots of overhanging trees. The eastern half of the Site has more potential for sheltered otter resting locations, compared with the western half which has exposed banks.

Feature	Desk Study	Field Survey
		The Glazert Water connects to the River Kelvin approximately 1.8km south of the Site, therefore good connectivity to the wider landscape and likely to provide abundant foraging opportunities.
Water vole	No records of water vole provided	No signs of water vole were recorded during the survey, the Glazert Water was considered sub-optimal due to fast flowing nature, however the banks were suitable with abundant food sources.
Amphibians	No records of great crested newts provided within the past 10 years. Palmate newt <i>Lissotriton helveticus</i> and common frog <i>Rana temporaria</i> records provided for ponds within 2km of the Site with nearest record approximately 850m west. Four records of great crested newts from 2008 were all greater than 1km from the Site boundary.	No evidence of amphibians was identified within the Survey Area; however, the Survey Area did contain suitable habitat for common species. Habitats included tall ruderal, scrub, marshy grassland and ephemeral pools.
Birds	A total of 283 records of birds were returned which accounted for 55 species. This included 14 species that are listed within Schedule 1.1 or Schedule 1.2 of the WCA 1981 (as amended) including kingfisher <i>Alcedo atthis</i> , pintail <i>Anas acuta</i> and greylag goose <i>Anser anser</i> . As well as 24 species listed as amber within the Birds of Conservation Concern 4 (BoCC4) and eight red listed species (Eaton <i>et al</i> , 2015).	Areas of scrub, trees and tall ruderal vegetations were present in the Survey Area, these would provide suitable nesting habitat for birds. During the survey, six bird species were observed which included two species listed within the BoCC4 (Eaton <i>et al</i> , 2015), dipper <i>Cinclus cinclus</i> and bullfinch <i>Pyrrhula pyrrhula</i> which are both amber listed.

Feature	Desk Study	Field Survey
Invertebrates	Ten invertebrate records were provided, nine of which are from Redmoss Grasslands and one from Redmoss Farm. Species included large red-tailed bumblebee <i>Bombus lapidarius</i> , white-tailed bumblebee <i>Bombus lucorum</i> , common carder bee <i>Bombus pascuorum</i> and latticed heath <i>Chiasmia clathrata</i> .	The east of the Site was considered highly suitable for a range of mainly terrestrial invertebrates due to the presence of mosaic habitats including ephemeral pools for breeding, long grass for shelter and bare sections for basking.
Fish	No records of fish within the last 10 years, however there was one record of Atlantic salmon in the Glazert Water in 2008.	No fish or evidence of fish was recorded during the Survey. However, the Glazert Water was suitable to support migratory fish given limited barriers to fish movements and water quality ⁴ .
Invasive and non-native plant species	There were eight records of invasive species recorded in 2019 850m west of the Site, which included Japanese knotweed, Himalayan balsam and Japanese rose <i>Rosa rugosa</i> , as well as other non-native species cherry laurel <i>Prunus laurocerasus</i> , monkey flower <i>Mimulus guttatus</i> , snowberry <i>Symphoricarpos albus</i> , piggyback plant <i>Tolmiea menziesii</i> and lesser periwinkle <i>Vinca minor</i> . The Site is connected to this location via the Glazert Waters, with the Site downstream.	Extensive Japanese knotweed was present within the Survey Area (TN8, 10, 12, 13, 14, 15, 23, 24 and 28), including within the Site boundary. This was concentrated along Glazert Water predominantly on the north banks with large areas dominated by Japanese knotweed. Buddleia was also recorded within the Site boundary (TN6). Himalayan balsam was not recorded during the survey however the survey was undertaken out of season for botanical surveys, therefore this does not imply absence from the Site.

⁴ SEPA Classification hub available online <https://www.sepa.org.uk/data-visualisation/water-classification-hub/>

4 DISCUSSION AND RECOMMENDATIONS

- 4.1.1. This section considers the potential for effects on designated sites, legally protected species, notable species and notable habitats as a consequence of the Proposed Development. Where further surveys or detailed assessment of potential effects are required to design suitable mitigation, this is identified.

Table 4-1 – Evaluation and Recommendations

Feature	Legal Context	Evaluation	Recommendations
Endrick Water Special Area of Conservation	<p>Certain species have protection under the European Union (EU) Habitats Directive (Council Directive 92/43/EEC) transposed in Scotland as the Conservation (Natural Habitats, &c) Regulations 1994, and known as the Habitats Regulations.</p> <p>The Habitats Regulations make provision for the designation of sites important to species in Schedule 2 as SACs.</p> <p>Where a plan or project could affect a SAC, this must be appropriately assessed. Should operations result in Likely Significant Effects (LSE), then operations may only be undertaken if the competent authority is satisfied that there is no satisfactory alternative and the plan or project is of overriding public interest.</p>	As the Glazert Water flows west to east away from Endrick Water SAC and is 9km away. There is no anticipated impact on the qualifying species due to no hydrological connection between the SAC and Site.	No further recommendations.
Glazert Water Corridor of Wildlife and Landscape Importance	CWLIs and LNCS are both non-statutory designated sites. These sites can be protected by local authorities by planning. Planning policies are generally based on The Nature Conservation (Scotland) Act 2004; which places	Glazert Water may be affected by noise, light, dust and chemical pollution associated with the Proposed Development; and the species supported by the CWLI may also be affected through killing, injury or disturbance of supporting habitat.	Measures for site-specific application of SEPA Guidelines for Pollution Prevention (GPP) should be set out within a Construction Environmental Management Plan (CEMP); to be inclusive of dust, noise, lighting, vibration as well as chemical prevention controls.

Feature	Legal Context	Evaluation	Recommendations
Local Nature Conservation Sites	a statutory duty on all public bodies to further biodiversity.	The nearest LNCSS present is 750m away from the Site boundary, there is no anticipated effects on the LNCSSs as there is no connection including hydrological between the Site and LNCSSs.	No further recommendations.
Lowland mixed deciduous woodland	Policy protection as SBL habitat.	Lowland mixed deciduous woodland is located outwith the Site boundary within the 50m buffer to the south. As the Glazert Water is present between the Site and woodland there is no potential for impacts from the Proposed Development on the woodland.	No further recommendations.
Ground Water Dependent Terrestrial Ecosystems	GWDTEs are protected under the Controlled Activity Regulations (CAR) due to their sensitive hydrological and ecological nature.	Marshy grassland within the Site has the potential to be GWDTE. The Proposed Development could result in changes to the hydrological regime and thus negatively affect this habitat.	Consultation with an ecologist together with a hydrologist to identify effects of the Proposed Development on the hydrological regime, should be undertaken. Following consultation, further survey, mitigation/enhancement measures should be designed and implemented as appropriate.
Other habitats	No specific legal protection	Other habitats identified within the Site boundary during the Phase 1 habitat survey are not afforded legal / policy protection. However, these habitats provide suitable habitat for wildlife therefore hold ecological value. The Proposed Development is primarily located	A minimal construction footprint should be kept. Compounds should be located on low value habitat considered to consist of amenity grassland in the north. No removal of mature trees and protection of root area in accordance with BS 5837:2012

Feature	Legal Context	Evaluation	Recommendations
		within the west half of the Site, which has less value due to short nature of the grass and limited habitat types.	Trees in relation to design, demolition and construction- Recommendations (BSI, 2012).
Badger	<p>The Protection of Badgers Act 1992 makes it illegal to wilfully kill, injure or take any badger, or attempt to do so.</p> <p>It also makes it an offence to intentionally or recklessly damage, destroy or obstruct access to any part of a badger sett. Disturbance to a badger while it is in a sett also constitutes an offence.</p> <p>Activities that would otherwise constitute an offence under this legislation may be licensed by SNH for certain purposes. It is noted that licences are not generally issued during the badger breeding season (30 November to 1 July) without suitable justification and consultation with SNH.</p> <p>It is recognised that any work within 30m of an entrance to a badger sett (or 100m for pile driving and blasting work) could result in disturbance of a badger in the sett, or block or damage tunnels that radiate from the entrance to the sett.</p>	<p>Badger records were returned within the desk study; however, the exact location and details will be required to be obtained from Scottish Badgers.</p> <p>The Site and wider area do contain habitat to support badgers and may use the Site for foraging and commuting.</p>	<p>Badger records should be obtained from Scottish Badgers for up to 1km from the Site boundary.</p> <p>Following on from the record search a dedicated badger survey should be conducted up to 30m.</p> <p>All pipes should be capped overnight to prevent animals entering and becoming trapped. Exit ramps of <45-degree slope to be provided from exposed tranches or holes that might trap an animal overnight.</p>

Feature	Legal Context	Evaluation	Recommendations
Bats	<p>All species of bats recorded within the UK are protected from killing, injury and disturbance and their roosts protected from damage or destruction under the Habitats Regulations. Protection is also afforded under the WCA 1981 (as amended) with respect to disturbance of individuals occupying places of rest or shelter and obstruction of access to these.</p> <p>Activities that would otherwise constitute an offence under this legislation may be licensed by SNH for certain purposes.</p> <p>It is recognised that general construction works within 30m of a bat roost have potential to disturb bats within the roost. This distance is increased to 100m for pile driving and blasting works.</p>	<p>The Glazert Water presents suitable foraging and commuting habitat for bats. Within the Site there was limited roosting potential, with no PRFs recorded. Within 30m of the Site, one tree, two bird boxes and a wall with PRFs were recorded as well as seven residential and one commercial building. However, the works will not directly impact any of these features and the works are limited to earth works with limited vibrations. Therefore, it is unlikely that works will adversely affect roosting bats.</p>	<p>Artificial lighting has been proven to have negative impact on bats. Any additional artificial lighting (other than existing street lighting) that is included in the Proposed Development should follow the latest guidance in relation to bats and lighting (BCT and Institution of Lighting professionals [ILP], 2018). Lighting should be of the lowest lux possible, of low elevation, directed away from the Glazert Water and retained woodland edges, as well as hooded and motion detecting where possible.</p> <p>During construction lighting should also follow latest guidance and be directed away from the Glazert Water and woodland edges.</p>
Otter	<p>Otters are protected from killing, injury and disturbance and its place of rest or shelter (couch, holt) is protected from damage or destruction under the Habitats Regulations. Protection is also afforded under the WCA 1981 (as amended) with respect to disturbance of individuals occupying places of rest or shelter and obstruction of access to these.</p>	<p>The Glazert Water is known to have otters present based on the desk study records, with the Proposed Development directly next to the Glazert Water there is the potential to disturb otters utilising resting sites adjacent to the Site.</p>	<p>To ensure the Proposed Development does not cause disturbance to otter and disturbance or destruction to an otter resting site, a dedicated otter survey is recommended up to 250m from the Site along the Glazert Water.</p> <p>All pipes should be capped overnight to prevent animals entering and becoming trapped. Exit ramps of <45-degree slope to</p>

Feature	Legal Context	Evaluation	Recommendations
	<p>Activities that would otherwise constitute an offence under this legislation may be licensed by SNH for certain purposes. For otter resting sites, the disturbance distance for general construction activities is 30m, however this is increased to 200m for natal holts.</p> <p>Otter is a priority species listed under the SBL</p>		be provided from exposed tranches or holes that might trap an animal overnight.
Water vole	<p>The water vole is protected from killing and injury and its place of rest or shelter (burrow) is protected from damage, destruction or obstruction under the WCA 1981 (as amended). Additional protection from disturbance is extended to individuals occupying places of rest or shelter. Activities that would otherwise constitute an offence under this legislation may be licensed by SNH certain purposes.</p> <p>It is recognised that works within 10m of a water vole burrow entrance could result in disturbance of a water vole in the burrow, or block or damage tunnels that radiate from the entrance to the burrow.</p> <p>Water vole is a priority species listed under the SBL.</p>	<p>The potential for water vole to be using the Glazert water is low due to the fast-flowing water making it suboptimal. No slow flowing tributaries were found within 50m of the Site boundary. Therefore, it is unlikely that the Proposed Development will have an impact on water voles.</p>	No further recommendations.

Feature	Legal Context	Evaluation	Recommendations
Amphibians (not including great crested newts)	No specific legal or policy protection.	The marshy grassland and ephemeral pool present in the Site presents suitable habitat for amphibians. Removal or direct impact upon these habitats (including pollution) could kill all amphibians present.	<p>It is recommended that this area is avoided in the first instance, where not possible works should be undertaken in autumn and winter where amphibians will not be using this habitat.</p> <p>It is also recommended that all works should follow GPP especially when within 10m of any waterbody or watercourse.</p>
Birds	Under the WCA 1981 (as amended), all wild birds are protected from killing and injury, and their nests and eggs protected from taking, damage and destruction whilst in use. Additional protection is extended to species listed under Schedule 1 of the Act, meaning it is also an offence to disturb these species at or near the nest, or whilst they have dependent young.	Birds are known to be present within the Site and Survey Area and are likely to be nesting on Site. Thus, there is potential for works to affect nesting birds if undertaken during the nesting bird season (recognised as March and September inclusive).	<p>Vegetation clearance should avoid the nesting bird season (recognised as between March and September inclusive) where possible. Where this is not possible, it will be necessary for a Suitability Qualified Ecologist (SQE) to undertake a check of vegetation prior to clearance in search of nests and nesting activity no more than 48 hours prior.</p> <p>In the event evidence of nesting birds and/or nests are observed the SQE will implement an exclusion buffer around the nest, within which no works can take place. The size of the buffer will be determined by the SQE and influenced by the species of bird encountered. Only once the nest has been deemed inactive by the SQE (i.e. eggs have hatched, and chicks fledges the nest) will the</p>

Feature	Legal Context	Evaluation	Recommendations
			<p>exclusion buffer be rescinded and works allowed to proceed.</p> <p>The SQE will be of 'Basic' to 'Capable' level as per 'Surveying' of the CIEEM competency framework (CIEEM, 2019a).</p>
Terrestrial and Aquatic Invertebrates	<p>Some invertebrate species are afforded protection on Schedule 5 WCA 1981 (as amended). This includes marsh fritillary butterfly <i>Euphydryas aurinia</i>. It is an offence to intentionally or recklessly kill, injure or take a wild animal; damage, destroy or obstruct access to any structure or place which such animal uses for shelter and disturb it when occupying a structure or place of shelter/protection.</p> <p>It is also an offence to possess or sell a living or dead schedule 5 invertebrate.</p>	Vegetation clearance of grassland is likely to affect invertebrates, in particular larvae. Works will directly affect invertebrate habitat; however, this will be limited to a small area.	Works should keep a minimal footprint. Works should avoid mature trees and ephemeral ponds, as far as possible, which are likely to be of particular value for breeding and shelter for a range of terrestrial and aquatic invertebrates.
Fish	<p>Atlantic salmon, sea lamprey, river lamprey and brook lamprey are listed as SBL priority species.</p> <p>Atlantic salmon spawn, spawning grounds and the movement of adult fish are protected under the Salmon and Freshwater Fisheries (Consolidation) (Scotland) Act 2003). The passage of adult fish to spawning grounds is also protected</p>	The Proposed Development is directly on the banks of the Glazert Water. Direct or indirect (pollution) impacts on this watercourse could impact the fish population.	If any works are undertaken within the channel of the Glazert Water or to the banks of the Glazert Water, SEPA should be consulted on works method. All applicable guidance and/or authorisations, as detailed in the Water Environment (controlled activities) (Scotland) Regulations 2011 (as amended), should be adhered to or obtained. Such measures will minimise the

Feature	Legal Context	Evaluation	Recommendations
	under this act. Therefore, any obstruction to salmon migration during spawning and migratory periods is an offence under this act.		potential for the release of pollutants or debris into the Glazert Water during works. Relevant guidance includes that detailed in GPP 5- works and maintenance in or near water (SEPA, 2017).
Invasive and non-native plant species	Under the WCA 1981 (as amended by the WANE (Scotland) Act 2012) and the Non-Native Species: Code of Practice (Scottish Government, 2012), it is an offence to cause any species to grow outwith its native range.	Japanese knotweed recorded in extensive patches along the Glazert Water, consistent with previous surveys. Himalayan balsam was not recorded, however was recorded on previous surveys. The absence during this survey is likely due to time of year (outwith the botanical season). Therefore, is likely still present.	<p>A pre-works survey consisting of a search for invasive species should be undertaken by an SQE of 'Capable' level as per 'Surveying' of the CIEEM competency framework (CIEEM, 2019a). This survey should be undertaken between April and September and follow best practice guidelines.</p> <p>Areas of Japanese should be avoided with an exclusion of at least 7m around the stands. Where this is not possible a specialist contractor will be required to remove it and prevent further spread.</p> <p>The Non-Native Species: Code of Practice (Scottish Government, 2012) must be practised and biosecurity measures related to all contractors in advance of works on Site.</p>

4.2 ENVIRONMENTAL BEST PRACTICE

- 4.2.1. In addition, general environmental protection measures must be implemented during the enabling works (including Site Investigation works) and construction phases of the Proposed Development. Such measures include best environmental practice guidance outlined in the SEPA GPPs and those outlined by the Construction Industry Research and Information Association guidance (CIRIA, 2015). The following minimum standards must be adhered to prevent ecological impacts beyond the Site boundary:
- Y Measures must be taken to prevent dust and other emissions from construction affecting land beyond the Site.
 - Y Chemicals and fuels must be stored in secure containers located away from watercourses or water bodies. Spill kits must be available.
 - Y Excavations must be covered or securely fenced (with no potential access points beneath fencing) when the Site is closed (e.g. overnight) to prevent entrapment of animals.
 - Y Retained trees must be protected in accordance with BS5837:2012.
 - Y Noise and vibration must be controlled and kept to the minimum necessary.
 - Y Lighting used for construction must be switched-off when not in use and positioned so as not to spill on to adjacent land or retained vegetation within the Site.
 - Y Due to the close proximity to Glazert Water it is recommended that allotment owners are advised to use organic fertilizers, pesticides and herbicides.

4.3 ECOLOGICAL ENHANCEMENT OPPORTUNITIES

- 4.3.1. Under the National Planning Framework 3 (Scottish Government, 2014), the Scottish Government's strategy for rural areas is to provide important ecosystems services and the National Parks are to marry sustainable development, environmental assets and natural resources.
- 4.3.2. To encourage compliance with planning policy, the following measures are recommended for inclusion within the Proposed Development:
- Y Inclusion of bird and bat boxes within the Site;
 - Y Planting of native species favoured by native pollinators within the Site;
 - Y Allotment owners should be encouraged to plant native species and carry out natural composting on Site;
 - Y Construction of shelter features for amphibians, reptiles and invertebrates such as hibernacula and bug hotels.

4.4 RESURVEY

- 4.4.1. If works have not commenced within 18 months of the survey undertaken in this report, then a re-survey is recommended, to provide up-to-date ecological information and reduce risk of non-compliance with nature conservation legislation and policy (CIEEM, 2019b).

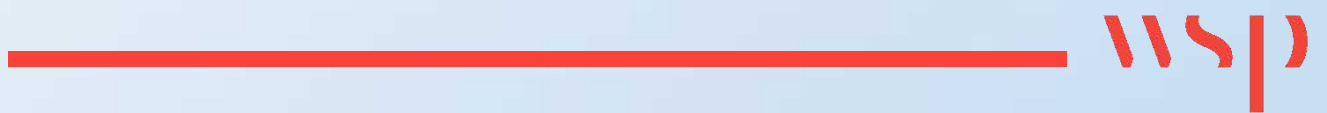
5 REFERENCES

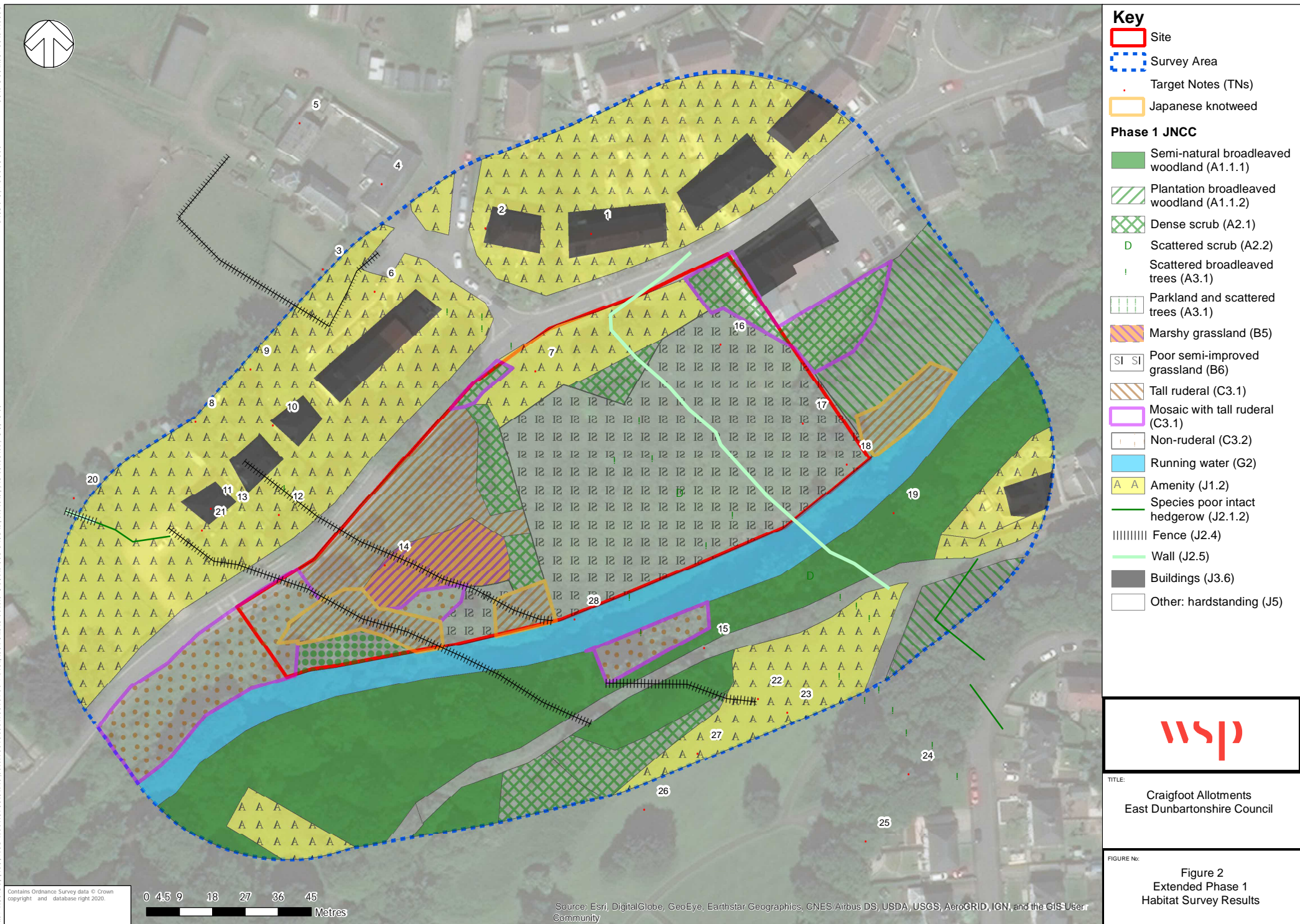
- Y British Standards Institution (2012). BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations. BSI, London.
- Y Bibby C.J, Burgess N.D, Hill D.A, Mustoe S.H. (2000) Bird Census Techniques. Second Edition. Elsevier Ltd.
- Y Chanin P (2003). Monitoring the Otter *Lutra lutra*. Conserving Natura 2000 Rivers Monitoring Series No. 10, English Nature, Peterborough
- Y CIEEM (2017a). Guidelines for Preliminary Ecological Appraisal. Second Edition. CIEEM, Winchester.
- Y CIEEM (2017b). Guidelines for Ecological Report Writing. CIEEM, Winchester.
- Y CIEEM (2019a). Competency Framework [online]. Available at https://www.cieem.net/data/files/Resource_Library/Membership/CIEEM_Competency_Framework_low_resolution.pdf [Accessed 05/12/2019]
- Y CIEEM (2019b). Advice note: on the lifespan of ecological reports and surveys, CIEEM. Winchester
- Y CIRIA (2015) Environmental good practice on site (fourth edition) (C741) Charles, P., Edwards, P (eds). CIRIA, London.
- Y Collins J. (ed.) (2016). Bat Surveys for Professional Ecologists, Good Practice Guidelines (3rd Edition). The Bat Conservation Trust, London.
- Y Dean, M., Strachan, R., Gow, D. and Andrews R. (2016). The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series). Eds. Fiona Matthews and Paul Chanin. The Mammal Society, London.
- Y Drake CM, Lott DA, Alexander KNA and Webb J (2007). Surveying terrestrial and freshwater invertebrates for conservation evaluation. Natural England Research Report NERR005. Natural England, Peterborough.
- Y Eaton, M.A., Brown, A.F., Noble, D.G., Musgrove, A.J., Hearn, R.D., Aebischer, N.J., Gibbons, D.W., Evans, A. and Gregory, R.D. (2015). Birds of conservation concern 4. The population status of birds in the United Kingdom, Channel Islands and Isle of Man, British Birds 108: 708-746.
- Y English Nature (2001). Great Crested Newt Mitigation Guidelines. English Nature, Peterborough.
- Y Froglife (1999). Reptile Survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice sheet 10. Froglife, Halesworth
- Y Gent, A. and Gibson, S. (2003). Herpetofauna Workers Manual. JNCC. Peterborough
- Y Gilbert, G., Gibbons, D.W. and Evans, J. (1998). Bird Monitoring Methods: A Manual of Techniques for Key UK Species. RSPB
- Y Harris S, Cresswell P and Jefferies D (1991). (Report) Surveying Badgers. The Mammal. Society, Bristol.
- Y JNCC (2010). Handbook for Phase 1 habitat survey – a technique for environmental audit. JNCC, Peterborough.
- Y JNCC (2011). UK Biodiversity Action Plan Priority Habitat Descriptions [online]. Available at: http://jncc.defra.gov.uk/PDF/UKBAP_PriorityHabitatDesc-Rev2011.pdf [Accessed 05/12/2019]
- Y Kirby, P. (2001). Habitat Management for Invertebrates: A Practical Handbook. RSPB Management Guides
- Y Roper, T.J. (2010). Badger. Harper Collins.

- Y Scottish Badgers (2018). Surveying for Badgers Good Practice Guidelines [online]. Available at: https://www.scottishbadgers.org.uk/userfiles/file/planning_guidelines/Surveying-for-Badgers-Good-Practice-Guidelines_V1.pdf
- Y SEPA, 2017. Land Use Planning System: SEPA Guidance Note 31: Guidance on assessing the impacts of development proposals on groundwater abstractions and groundwater dependent terrestrial ecosystems. Available online: <https://www.sepa.org.uk/media/144266/lups-gu31-guidance-on-assessing-the-impacts-of-development-proposals-on-groundwater-abstractions-and-groundwater-dependent-terrestrial-ecosystems.pdf>
- Y Scottish Government (2012). Non-native Species: Code of Practice [online]. Available at: <https://www.gov.scot/publications/non-native-species-code-practice/> [Accessed 06/01/2020]
- Y Scottish Government, 2004. Scotland's biodiversity: it's in your hands [online]. Available at: <https://www.gov.scot/publications/scotlands-biodiversity---its-in-your-hands/> [Accessed 06/01/2020]
- Y Stace C. A. (2019). New Flora of the British Isles. Fourth Edition. C&M Floristics, Suffolk
- Y WSP (2017). Craigfoot Allotment Development: Extended Phase 1 Habitat Survey. Report No 70012724

Appendix A

FIGURES





- Key**
- Site
 - Survey Area
 - Target Notes (TNs)
 - Japanese knotweed
- Phase 1 JNCC**
- Semi-natural broadleaved woodland (A1.1.1)
 - Plantation broadleaved woodland (A1.1.2)
 - Dense scrub (A2.1)
 - Scattered scrub (A2.2)
 - Scattered broadleaved trees (A3.1)
 - Parkland and scattered trees (A3.1)
 - Marshy grassland (B5)
 - Poor semi-improved grassland (B6)
 - Tall ruderal (C3.1)
 - Mosaic with tall ruderal (C3.1)
 - Non-ruderal (C3.2)
 - Running water (G2)
 - Amenity (J1.2)
 - Species poor intact hedgerow (J2.1.2)
 - Fence (J2.4)
 - Wall (J2.5)
 - Buildings (J3.6)
 - Other: hardstanding (J5)



TITLE:
Craigfoot Allotments
East Dunbartonshire Council

FIGURE No:
Figure 2
Extended Phase 1
Habitat Survey Results

Contains Ordnance Survey data © Crown copyright and database right 2020.

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Appendix B

SPECIES LIST

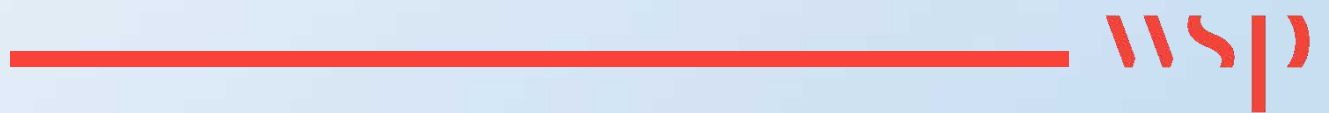


Table B-1 – Species list

Common Name	Latin Name
Alder	<i>Alnus glutinosa</i>
Ash	<i>Fraxinus excelsior</i>
Beech	<i>Fagus sylvatica</i>
Birch species	<i>Betula sp</i>
Brambles	<i>Rubus fruticosus</i>
Broad-leaved dock	<i>Rumex obtusifolius</i>
Buddleia	<i>Buddleja davidii</i>
cherry	<i>Prunus avium</i>
Cock's-foot	<i>Dactylis glomerata</i>
Common hogweed	<i>Heracleum sphondylium</i>
Common knapweed	<i>Centaurea nigra</i>
Common nettle	<i>Urtica dioica</i>
Creeping buttercup	<i>Ranunculus repens</i>
Creeping thistle	<i>Cirsium arvense</i>
Daisy	<i>Bellis perennis</i>
Dandelion species	<i>Taraxacum sp</i>
Great wood-rush	<i>Luzula sylvatica</i>
Grey willow	<i>Salix cinerea</i>
Ground-elder	<i>Aegopodium podagraria</i>
Hawthorn	<i>Crataegus monogyna</i>
Holly	<i>Ilex aquifolium</i>
Ivy	<i>Hedera helix</i>
Japanese knotweed	<i>Reynoutria japonica</i>
Leyland cypress	<i>Cupressus x leylandii</i>
Lime species	<i>Tilia sp</i>
Male-fern	<i>Dryopteris filix-mas</i>

Common Name	Latin Name
Marsh violet	<i>Viola palustris</i>
Meadowsweet	<i>Filipendula ulmaria</i>
Moss species	<i>Bryophyta sp</i>
Oak species	<i>Quercus sp</i>
Perennial ryegrass	<i>Lolium perenne</i>
Reed canary-grass	<i>Phalaris arundinacea</i>
Ribwort plantain	<i>Plantago lanceolata</i>
Rosebay willowherb	<i>Chamaenerion angustifolium</i>
Soft rush	<i>Juncus effusus</i>
Springy turf moss	<i>Rhytidiadelphus squarrosus</i>
St John's-wort	<i>Hypericum perforatum</i>
Sycamore	<i>Acer pseudoplatanus</i>
Tufted hair-grass	<i>Deschampsia cespitosa</i>
White clover	<i>Trifolium repens</i>
Wild garlic	<i>Allium urisnum</i>
Wild raspberry	<i>Rubus idaeus</i>
Yarrow	<i>Achillea millefolium</i>
Yorkshire fog	<i>Holcus lanatus</i>

Appendix C

TARGET NOTES



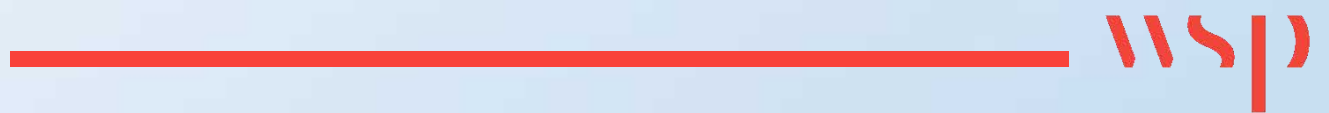
Table C-1 – Target Notes

Target Note Number	Description
1	Two storey semi-detached houses. Rough cast walls with some small gaps present in slates and along ridge tiles. Flashing at chimney well sealed and overall the building is in good condition.
2	Two storey houses with rough cast walls. No visible gaps in good condition overall.
3	Co-op building appears new with flat felt roof. No visible gaps in good condition.
4	Two storey houses with rough cast walls in good condition.
5	Two storey houses with rough cast and in good condition. Small gaps at flashing around chimney.
6	Buddleia scattered multiple plants.
7	Mole hills abundant on slope within the Site.
8	Large area around 4m by 10m of mature dense Japanese knotweed.
9	Pile of cut trees, wood etc suitable as a habitat pile. Very damp with fungus growing on it.
10	Japanese knotweed - small scattered plants.
11	Crumbling brick wall on south of bank. PRF for bats possible but unable to inspect due to location right on banks of water course with slope.
12	Japanese knotweed scattered along north banks.
13	Occasional Japanese knotweed scattered along south bank.
14	Japanese knotweed along north bank, mature, metre wide strip, goes right along Site boundary
15	Japanese knotweed stand 2-3m by 10m on north bank.
16	Two storey house with rough cast. Good condition low PRF for bats, no gaps noted.
17	Residential property unable to see from road due to wall along pavement.
18	Two storey residential house, possible gaps in slates but viewed from a far.
19	Residential house possible gaps in slates but viewed from a far
20	Residential property ~20 years old, good condition no visible gaps.
21	Small bird box (circle entrance) on tree– PRF for bats.
22	Mature ash tree with major basal cavity rot. Extensive cavity which may be too wet but right on waters edge so could not inspect closely.

Target Note Number	Description
23	Small stand of Japanese knotweed.
24	Small stand of Japanese knotweed.
25	Patch of brambles within woodland, dense but too small to map.
26	Ephemeral ponds no aquatic species within but common reed around it.
27	Small bird box with bat PRF on tree.
28	Mature Japanese knotweed stand.



Appendix D

SURVEY PHOTOGRAPHS



Description	Photo
View of the Site taken from south of the Glazert Water within the Survey Area.	
West section of Site showing poor semi-improved and amenity grassland.	
Tall ruderal and non-ruderal mosaic habitat in the east of Site.	

Description	Photo
<p>Woodland to the west of the Site, extensive Japanese knotweed shown in the back of the photo.</p>	
<p>Example of bird boxes present in the Survey Area.</p>	

Description	Photo
<p>Woodland path south of Glazert Water.</p>	
<p>Japanese knotweed along the Glazert Water along the south of the Site boundary.</p>	



110 Queen Street
Glasgow
G1 3BX

wsp.com

CONFIDENTIAL