Inverclyde LNCS Assessment, Kilmacolm



Carried out by



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on behalf of Inverclyde Council

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1 Introduction

1.1 Background

Starling Learning was commissioned by Inverclyde Council to carry out a Local Nature Conservation Site (LNCS) Assessment of ten sites around the village of Kilmacolm.

The non-statutory designation, Local Nature Conservation Site (LNCS), is often used by local authorities to identify sites of local importance for nature, wildlife and in some cases geology. They were previously called Sites of Importance for Nature Conservation (SINCs) by Inverclyde Council and are referred to by other local authorities by a variety of names including "Wildlife Site" and "Local Biodiversity Site".

The LNCS system is used within Local Development Plans to inform planners and developers where there are important habitats, species and natural features so to avoid damage to these areas though development.

The purpose of this study is to survey and assess these ten sites to whether they meet an LNCS standard.

Introduction

Inverclyde Council published a Main Issues Report in March 2017, being the first formal stage in the preparation of a new Local Development Plan. The Mains Issues Report identified a number of sites around Kilmacolm and Quarriers Village that had been suggested to the Council as suitable for housing development.

Table 1 below outlines the sites in the Kilmacolm/Quarriers Village area.

Reference	Site	Settlement
001	Carsemeadow	Quarriers Village
002	North Denniston	Kilmacolm
003	Knapps Loch	Kilmacolm
009	The Police Station Field	Kilmacolm
010	The ARP Field	Kilmacolm
011	West Glen Road	Kilmacolm
012	Migdale, Finlaystone Road	Kilmacolm
014	Planetreeyetts	Kilmacolm
015	West of Quarry Drive	Kilmacolm
016	Stables Wood	Kilmacolm

Table 1. Call for Site Submissions (from Inverciyde LDP 2017) in Kilmacolm area

The sites had previously been assessed on various environmental criteria, but some topics such as biodiversity interest and protected species had not been fully investigated. Consultation feedback from local residents raised a number of concerns about some of these sites, including the potential wildlife or nature conservation interest. In light of this feedback Inverclyde Council decided to commission ecological surveys of the above ten of the sites to assess the existing species and habitat interest, and to make recommendations as to whether any of the sites merited consideration as designation as Local Nature Conservation Sites (LNCS).

The survey work was commissioned to be carried out in late September and early October 2017.

Each of the ten sites was visited and the habitats were mapped using standard JNCC Phase 1 Habitat Survey methodology, and the vascular plant species were recorded for each site; at some sites adjacent habitats were also visited if considered relevant to sites habitats. Additional visits were also made to look for signs of fauna, in particular protected species, including targeted surveys for bats.

Additionally desk surveys were carried on previous survey records from any of the sites, and in particular data from the Scottish Ornithologists' Club (SOC) and the Flora of Renfrewshire (Watson, 2013) databases.

A detailed report is provided for each of the ten sites, which includes a Phase 1 map (available as GIS shape files), a set of target notes (providing information on local habitat or plant species features, or faunal observations), a summary of each site's habitat and species diversity and a summary of the nature conservation interest.

Using the data from the field surveys and any other desk survey information, the sites were assessed using criteria employed for similar assessments of LNCS in other nearby local authority areas in Scotland, in particular East Dunbartonshire, Glasgow and North Ayrshire. All of these systems employ a similar range of criteria, following those recommended by the Scottish Planning Policy and the methodology is outlined in Section 2 below.

1.2 Site description

The sites are located around the villages of Kilmacolm and Quarriers Village and are all currently within designated greenbelt.

2 LNCS site assessment methodology

2.1 Assessment Methodology

The assessment of the LNCS combined two approaches.

Method 1

The SNH Guidance on Establishing and Managing Local Nature Conservation Site Systems in Scotland (2000) providing a generic system for the conservation of LNCSs whilst enabling individual council areas to adopt area-specific approaches at the local level.

The relative values of each site are thereby assessed for the following criteria: Rarity of habitats, diversity of species, rarity of species, habitat naturalness, habitat extent, and connectivity. More details are provided in Appendix 1.

There is an assessment based on total score.

Method 2

A second method of assessing LNCSs was also used. This method involves a scoring system and has been used by Glasgow City Council and by North Ayrshire Council. Flora and faunal groups are given a score depending on their significance both nationally and locally. The score sheet is found in Appendix 2.

Combining the two methodologies allows each of the sites to be assessed against nationally recognised criteria while also retaining the value of local information and localised species of importance. This gives a more robust view of each site.

2.2 Desktop

Prior to fieldwork, a brief desk study was carried out to investigate species, habitats and nature conservation sites in the area. This included:

- National Biodiversity Network Atlas (NBN Atlas)¹;
- Flora of Renfrewshire (Watson, 2013) databases; and
- Bird data from the Scottish Ornithologists Club, Clyde Branch

2.3 Field Survey

The habitat and botanical survey work was carried out in September 2017 by Keith Watson. A visit was also made to each site by Starling Learning staff to carry out a faunal survey of the site with a short additional evening visit for bats. Previous LNCS designations were based mainly on habitat and botanical information, however for this survey it was agreed that adding faunal records would provide a more robust assessment of the wildlife value of the site. The lateness of the survey means that the breeding season for birds has been missed and surveying in spring would provide many more bird records for each site. Records from the Scottish Ornithologists Club, Clyde branch have supplemented the fieldwork records. The survey has covered the immediate boundary of each site but also a wider area of adjacent semi-natural habitats where accessible.

The report includes the following:

- Habitat descriptions of each site;
- Phase 1 style habitat maps (shown on Figures 1 to 10);
- Details of the fauna recorded at each site;
- Appendices 1 and 2 further details on methodologies
- Appendix 3 Species lists
- Appendix 4 detailed target notes for each site;
- Confidential Annex containing sensitive information.

3 Survey Results

3.1. Site 1 Carsemeadow Grid Reference: NS 36494 66530 Dates of survey: 21/09/2017

Introduction

The site, to the south of the original Quarriers Village, consists of two agriculturally improved pasture fields separated by a tree-lined avenue with housing. It is situated on a low ridge in the northern half, with a gentle slope down the southern field to poorly draining ground below, and an old track (partially inundated).

¹

https://nbn.org.uk/news/nbn-atlas-now-live/

The site is surrounded by houses to the east and west (with fences or hedges to the margins), by a road in the north (marked by an old stone wall) and to the south there is large area of rush-dominated marsh.

The farmland was shown as being improved in the 1992 Invercive survey. Apart from new housing at the old hospital site, conditions appear to be similar. Interestingly the southern rush pasture (outside the boundary) was shown as improved grassland.

The following report includes general descriptions of the habitats present, target notes, species lists for the vascular plants and additional notes on other groups and fauna.

Habitat Summary

The northern field comprises improved grassland (NVC MG6-MG7) with much Yorkshire-fog (*Holcus lanatus*), Common Bent (*Agrostis capillaris*) and perennial rye-grass (*Lolium perenne*) with common meadow buttercup (*Ranunculus acris*) and creeping buttercup (*Ranunculus repens*); other species appear limited but include common mouse-ear (*Cerastium fontanum*), cuckooflower (*Cardamine pratensis*), yarrow (*Achillea millefolium*), cock's-foot grass (*Dactylis glomerata*) and occasional tufts of soft-rush (*Juncus effusus*). The southern field is similar, appearing to have less perennial rye-grass, plus more dandelion (*Taraxacum* spp.), white clover (*Trifolium repens*) and broad-leaved dock (*Rumex obtusifolius*).

There is a very small inundation marsh (NVC M23b-S22) in the southeast with soft-rush (*Juncus effusus*) and tufted hair-grass (*Deschampsia cespitosa*), with to the centre grassy swamp supporting flote-grass (*Glyceria fluitans*) with bog stitchwort (*Stellaria alsine*) and some duckweed (*Lemna minor*).



Figure 1. Carsemeadow habitat map

Species Diversity

The core fields support low diversity improved pasture and there are few features that encourage wildlife diversity.

Flora

The core fields support a very poor sward diversity, but overall the varied margins (mainly in the southern half) help to increase the overall total (100 species were recorded on the current visit), but most are only present in small numbers.

Fauna

Birds

The open fields have breeding birds with Skylark *Alauda arvensis* and the adjacent trees provide habitat for woodland bird species. Barn Owl *Tyto alba*, Tawny Owl *Strix aluco* and Kestrel *Falco tinnunculus have* been recorded hunting over these fields (Clyde Birds records) with bats foraging along boundary and avenue trees, some of which have roost potential. These and species recorded on the day of the visit and their conservation status are outlined in Table 2 below

Species	Description	Conservation Status
Buzzard	One bird hunting over site.	
Buteo buteo		
Woodpigeon	Small flock present	
Columba palumbus		
Collared Dove	Single birds or pairs occasional around margins	
Streptopelia decaocto	and in the vicinity.	
Barn Owl	Clyde Birds record, hunt over the fields.	Schedule 1
Tyto alba		Scottish Biodiversity list
Tawny Owl	Clyde Birds record, hunt over the fields.	Amber listed
Strix aluco		
Kestrel	Clyde Birds record, hunt over the fields.	Amber listed
Falco tinnunculus		Scottish Biodiversity List
Pheasant	One bird recorded on site.	
Phasianus colchicus		
Magpie	Small numbers of birds present on the site.	
Pica pica		
Jackdaw	Small groups flying over and foraging on the site.	
Corvus monedula		
Rook	Small groups and individuals occasionally flying	
Corvus frugilegus	over.	
Carrion Crow	Several birds present.	
Corvus corone		
Blue Tit	One feeding in woodland edge.	
Cyanistes caeruleus		
Skylark	Clyde Birds record, nest in fields	Priority species, UK BAP
Alauda arvensis		Scottish Biodiversity List
		Red-listed
Wren	Occasional in tree-lined avenues, rough margins	
Troglodytes troglodytes	and hedgerows.	
Starling	Small flock feeding in fields.	Red listed
Sturnus vulgaris		
Blackbird	Small numbers along tree-lines, hedgerows and	
Turdus merula	rough margins.	

Table 2. Bird species of Carsemeadow

Song Thrush Turdus philomelos	One bird recorded in adjacent woodland.	Priority species, UK BAP Scottish Biodiversity List Red-listed
Robin Erithacus rubecula	Small numbers of birds in marginal habitats.	Scottish Biodiversity List
Dunnock Prunella modularis	One recorded in woodland	Priority species, UK BAP Amber listed
House Sparrow Passer domesticus	Small flock in adjacent garden.	Priority species, UK BAP Red listed
Meadow Pipit Anthus pratensis	Three birds recorded feeding in the fields.	Amber listed
Chaffinch Fringilla coelebs	Small groups or single birds occasionally flying over or perched in boundary trees or hedge-lines and in adjacent gardens.	
Goldfinch Carduelis carduelis	Small groups or single birds flying over.	

Mammals

Soprano Pipistrelle *Pipistrellus pygmaeus* bats and a *Myotis* bat were recorded feeding along various linear features with mature trees. No roosts were located however some trees along the southern boundary have moderate potential for bat roosts. Mole hills *Talpa europaea* were found in the small area of scrub between the two fields.

No evidence of Otter *Lutra lutra* was recorded on site; however this species is using the adjacent Gotter Water where a spraint was found on stones.

The status of the faunal groups is outlined in Table 3 below.

Table 3. Conservation status of faunal species

Species/Groups	Nature Conservation Evaluation	Comments
Bats (<i>Pipistrellus</i> and <i>Myotis</i> species)	Habitats Regulations Schedule 2 UK BAP	Soprano Pipistrelle and a <i>Myotis</i> bat were recorded foraging along tree lines. Moderate potential for roosting bats.
Otter	Habitats Regulations Schedule 2 UK BAP	Spraint on adjacent Gotter Water.
Mole		Molehills present in scrubby area between main fields.

Nature Conservation Interest

The site is of very low nature conservation value due to its long history of agricultural improvement and management. Some mature trees and local scrub provide some resource for wildlife, and there is some species diversity about the southern track, but here the water level is increasing causing tree dieback. The fields also provide foraging habitat for owls and raptors and bats hunt along the tree lines.

3.2 Site 2 North Denniston, Kilmacolm Grid reference: NS 36092 68727 Date: 21/09/2017

Introduction

The site is located on the southern edge of Kilmacolm, between the main road and the NC65 cyclepath

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which is recognised as a wildlife corridor. Open agricultural land occurs to the margins, apart from the residential houses on the north-eastern margin.

The southern field was shown as improved grassland in the 1992 Inverclyde survey, but the northern part of the site appears to be unmapped. The small section of burn in the south was coded as neutral grassland but not target noted (although a note near here refers to the value of the roadside verge).

The following report includes general descriptions of the habitats present, including target notes and species lists for the vascular plants with notes on other groups and fauna.

Habitat Summary

The southern field has been sown with ley pasture, and the northern field is well improved, neither supporting any herb diversity. There are a few small marshy areas with soft-rush (*Juncus effusus*): two below the disused railway embankment, and a large one near the former farm. There are some very small marsh elements, relic unimproved grassland and scrub in the extreme south.



Figure 2. North Denniston habitat map

Species Diversity

Flora

The two core grasslands support very few species and there are only a few small features that encourage wildlife diversity. The small wetlands and the relic habitats in the extreme south serve to raise the species total (87 species recorded on current visit, boosted a little by species at the cycleway margin). No species of local rarity were recorded, although a few uncommon species occur in the small wetland features (and grassland in extreme southwest) as noted in the target notes.

Fauna

Birds

The southern field has breeding Skylark and is used seasonally by mixed goose flocks with both Canada Goose *Branta canadensis* and Greylag Goose *Anser anser* and a Common Gull flock *Larus canus*.

Species	Description	Conservation Status
Greylag Goose	Flock seasonally uses southern field. (Liz Parsons,	Amber listed
Anser anser	Alan Wood (pers. comm)	
Canada Goose	Flock seasonally uses southern field. (Liz Parsons,	
Branta canadensis	Alan Wood (pers. comm)	
Mallard	One bird on present, likely to breed.	Amber listed
Anas platyrhynchos		
Common Gull	Flock seasonally uses southern field.	Amber listed
Larus canus		
Woodpigeon	Flying over.	
Columba palumbus		
Great Spotted Woodpecker	Flying over site.	
Dendrocopos major		
Jackdaw	Flock of c85 feeding in field.	
Corvus monedula		
Magpie	Flying over.	
Pica pica		
Rook	Small flock present.	
Corvus frugilegus		
Carrion Crow	Flying over.	
Corvus corone		
Great Tit	Feeding in adjacent cycle track embankment.	
Parus major		
Skylark	Clyde Birds record, nest in fields	Priority species, UK BAP
Alauda arvensis		Scottish Biodiversity List
		Red-listed
Wren	In adjacent woodland, tall herb, scrub and	
Troglodytes troglodytes	hedgerows.	
Starling	Flock of 66 birds feeding in northern field.	Red listed
Sturnus vulgaris		
Blackbird	Several birds present on adjacent woodland and	
Turdus merula	garden habitats and lower SW corner of site.	
Song Thrush	One recorded in adjacent woodland and scrub in	Priority species, UK BAP
Turdus philomelos	southern corner of site.	Scottish Biodiversity List
		Red-listed
Robin	Common along the woodland edge.	Scottish Biodiversity List
Erithacus rubecula		
Dunnock	One recorded on adjacent embankment.	Priority species, UK BAP
Prunella modularis		Amber listed

Table 4. Bird species of North Denniston

Pied Wagtail	Flying over.	
Motacilla alba		

Mammals

Otter was recorded using the southern edge of the site; a spraint and slide were recorded at the small watercourse. Roe Deer *Capreolus capreolus* lie-ups, tracks and droppings were found in the relic unimproved grassland area. Soprano Pipistrelle bats were recorded feeding along the adjacent embankment of the cycle track. Some trees along that embankment and in neighbouring gardens have moderate potential for bat roosts. Mole hills were occasional along the field margins and in adjacent ground. Wild Rabbit *Oryctolagus cuniculus* is found extensively along the adjacent cycle track embankment where there are many holes. The animals come onto the site to forage.

Species/Groups	Nature Conservation Evaluation	Comments
Bats (<i>Pipistrellus</i> species)	Habitats Regulations Schedule 2 UK BAP	Foraging bats, moderate roost potential
Otter	Habitats Regulations Schedule 2 UK BAP	Spraint and slide recorded in south of site. No protected structures recorded within development site.
Roe Deer	Scottish Biodiversity List	Roe Deer lie-ups on site at southern end.
Wild Rabbit		There are several holes in the adjacent cycle track embankment with some foraging taking place in the rough margins of the field.
Mole		Molehills recorded in margin of field and in adjacent area to the north of the site.
Common Frog		Likely to use small wetland areas in site.

Table 5. Conservation status of faunal species

Nature Conservation Interest

The vast majority of the site is of very low nature conservation value due to its long history of agricultural improvement.

Most of the small features, which include some locally diverse wetland elements, and some old grassland species, are of value to fauna (e.g. Otter, Roe Deer and various birds), and are close to the disused railway embankment (cycleway), which is an important local wildlife corridor (and has denser scrub than in 1992, developing into scrub woodland). There is some potential interest for farmland birds, with breeding Skylark, and geese and gull flocks use the lower field.

3.3 Site 3 Knapps Loch, Kilmacolm

Grid reference: NS 36586 68770 Date: 21/09/2017

Introduction

The site comprises the pasture land to the north of Knapps Loch, a designated LNCS. It is situated on the southeastern margin of Kilmacolm. There are similar pastures to the south of Knapps Loch but to the east there is hilly ground with rough pasture, bracken and conifer plantations.

The fields were shown as being semi-improved species poor or neutral grassland in the 1992 Inverclyde survey, with pockets of scrub. Two target notes describe the sward, which seem to be more diverse than the

situation now; black knapweed (*Centaurea nigra*) is noted as being widespread and harebell (*Campanula rotundifolia*) reported at both. In the southeast the large marsh on the loch margin is shown, with mention of some of the fen elements that still occur.

The following report includes general descriptions of the habitats present, including target notes and species lists for the vascular plants with notes on other groups and fauna.

Habitat Summary

The pastures appear to have become more improved over the last 25 years (although on some ridges there are less improved areas) with a fairly uniform cover of short-grazed grasses such as Yorkshire-fog (*Holcus lanatus*) and Common Bent (*Agrostis capillaris*) with much crested dog's-tail (*Cynosurus cristatus*) or more local perennial rye-grass (*Lolium perenne*) and frequent common meadow buttercup (*Ranunculus acris*) and creeping buttercup (*Ranunculus repens*); herbs such common sorrel (*Rumex acetosa*), ribwort plantain (*Plantago lanceolata*) and white clover (*Trifolium repens*) are rare and seemingly much reduced since 1992.

The ridges may have a few herbs, indicative of former acid or neutral grassland (NVC U4-MG5), but in general the species diversity appears low and any populations are low; most of the ridges also support scattered or dense gorse scrub (subject to being periodically cleared) (NVC W23).

Marshy vegetation is represented by a few mostly soft-rush (*Juncus effusus*) dominated hollows or depressions (NVC M23b) – rarely sharp-flowered rush (*Juncus acutiflorus*) (NVC M23a). There can be, usually with some herb diversity but stock has access and can cause poaching. There are some wetter zones with flote-grass (*Glyceria fluitans*) or bottle sedge (*Carex rostrata*). The large rush dominated marsh in the southwest has a little more diversity, but lacks a number of the species of local interest found in the adjacent fen mire next to the loch.



Figure 3. Knapps Loch habitat map

Species Diversity

Flora

The grasslands are fairly uniform with a low species diversity and the most ridges or the rush dominated hollows are of limited species richness. However together the latter help to increase the overall total (107 species on current visit), but most are only present in small numbers; species include common bird's-foot trefoil (*Lotus corniculatus*), eyebright (*Euphrasia* sp.) and meadow vetchling (*Lathyrus pratensis*) – in the south a small ridge supports acid grassland bryophytes include *Hylocomium splendens*.

The rush pasture near the loch supports a few fen species such as ragged-robin (*Silene flos-cuculi*) and square-stemmed St Johns-wort (*Hypericum tetrapterum*), and there is marsh cinquefoil (*Comarum palustre*) in the central wetland (at the wall junctions) and here also a little marsh marigold (*Caltha palustris*) and a patch of bog pondweed (*Potamogeton polygonifolius*). By the drain in the north there is a small patch of ivy-leaved water crowfoot (*Ranunculus hederaceus*).

A small stand of the invasive Japanese Knotweed *Fallopia japonica* occurs along the western boundary of the site.

Fauna

Birds

The site has breeding Skylark and the large areas of Soft Rush provide a potential breeding habitat for other marshland species. Barn Owl has been recorded hunting over these fields (all Clyde Birds records). These and species recorded on the day of the visit are outlined in Table 6 below

Species	Description	Conservation Status
Sparrowhawk	One bird hunting over site.	
Accipiter nisus		
Buzzard	One bird hunting over site.	
Buteo buteo		
Woodpigeon	Small numbers flying over and foraging on site. Likely	
Columba palumbus	to breed in scrub and woodland areas.	
Barn Owl	Hunt over site, Clyde Birds record.	Schedule 1
Tyto alba		Scottish Biodiversity list
Tawny Owl	Hunt over site, Clyde Birds record.	Amber listed
Strix aluco		
Kestrel	Hunt over site, Clyde Birds record.	Amber listed
Falco tinnunculus		Scottish Biodiversity List
Jackdaw	Small flocks flying over and feeding on the site.	
Corvus monedula		
Magpie	Small numbers flying over site and perching in scrub	
Pica pica	and woodland. Likely to breed in scrubby woodland.	
Rook	Small flocks and groups flying over and foraging on the	
Corvus frugilegus	site.	
Carrion Crow	Small groups and single birds occasionally flying over	
Corvus corone	or foraging on the site. Likely to breed in scrub or	
	woodland areas.	
Blue Tit	Small numbers feeding in in scrub and woodland.	

Table 6. Bird species of Knapps Loch

Cyanistes caeruleus		
Skylark Alauda arvensis	Clyde Birds record, nest in fields	Priority species, UK BAP Scottish Biodiversity List Red-listed
Sedge Warbler Acrocephalus schoenobaenus	Clyde Bird records, breeding in wet areas.	
Grasshopper Warbler Locustella naevia	Clyde Bird records, breeding in wet areas.	Priority species, UK BAP Red listed
Wren Troglodytes troglodytes	In adjacent woodland and hedgerows.	
Starling Sturnus vulgaris	Small flock feeding in fields.	Red listed
Blackbird <i>Turdus merula</i>	Small numbers recorded flying over or perching in scrub or trees.	
Song Thrush Turdus philomelos	Small numbers recorded flying over or perching in scrub or trees.	Priority species, UK BAP Scottish Biodiversity List Red-listed
Mistle Thrush Turdus viscivorus	Flock of 30 birds.	Red listed
Robin Erithacus rubecula	Common along the woodland edge.	Scottish Biodiversity List
Dunnock Prunella modularis	One recorded in hedgerow.	Priority species, UK BAP Amber listed
Meadow Pipit Anthus pratensis	Small flock feeding in the fields.	Amber listed
Chaffinch Fringilla coelebs	Singles and small groups occasional in scrub and trees or flying over site.	
Goldfinch Carduelis carduelis	Small numbers present on site.	

Mammals

An old disused Badger *Meles meles* sett was recorded. Other holes and several mammal paths, scrapings, diggings and droppings were found variously throughout the site, none clearly attributable to Badger, but some clearly attributable to Fox *Vulpes vulpes* or to Rabbit *Oryctolagus cuniculus*. There are many active Rabbit holes along the edges of the site. Soprano Pipistrelle *Pipistrellus pygmaeus* bats were recorded feeding along the edge of the plantation woodland in the north of the site and around scrubby trees at the main road.

Other faunal species

The various wet areas in the field provide good potential Frog *Rana temporaria* habitat. Red Admiral *Vanessa atalanta* butterflies were recorded on site.

Species/Groups	Nature Conservation Evaluation	Comments
Bats (Pipistrellus)	Habitats Regulations Schedule 2 UK BAP	Foraging Soprano Pipistrelle bats were recorded. No roosts recorded. From what DG/DL could see the trees in the conifer plantation didn't look very good for roosts
Badger	Protection of Badgers Act 1992	Former Badger sett and possible Badger hole but no clear evidence found of Badger currently using the site.

Table 7. Conservation status of faunal species

Fox		Fox droppings found in one location. Several mammal	
		tracks are likely attributable to Fox.	
Rabbit		Several holes in use around site margins.	
Roe Deer	Scottish Biodiversity List	Roe Deer on site	
Red Admiral		Several recorded feeding.	

Nature Conservation Interest

The majority of the site is of low nature conservation value as the dominating pastures are mostly improved and heavily grazed. There is some potential in the local ridges and slopes but most of these appear to be of limited diversity. Herb indicators of old meadows or acid grassland seem rare or absent (although the short grazed turf may result in some species being overlooked) and past surveys or recording in this area don't indicate any significant species. Some of ridges and marginal areas support scrub that provides some shelter for wildlife, notably in the north and close the marsh by the loch.

Of the grasslands, only the field in the extreme northwest offers a cluster of features that have some local interest and potential; other grassy ridges are very small and isolated. There is evidence of badger activity, but no active sett, and also foraging by bats at the northern edge.

The marshy areas support a few species of interest, but are on the whole small and isolated. There is more diversity and scale in the southeast but this area is best viewed as a continuation (and buffer) of the loch's marginal fen, which is of very high quality with a number of species of local interest. Continued periodic grazing is likely to be an important management tool here.

3.4 Site 9 The Police Station Field and Milton Wood

Grid reference: NS 35430 69153 **Date:** 28/09/2017

Introduction

The site, located slightly west of the centre of Kilmacolm, comprises two differing habitats: the central Milton Wood and two areas of pastures: one on its east side and a longer one on the Gryfe Water north bank. Residential housing occurs to the northern edge and the east side (but where the disused railway forms the actual boundary); to the south is the Gryfe Water with open pastures and more estate woodland. The woodland is very well-used by the local community.

The Milton Wood is coded as semi-natural broad-leaved woodland, reflecting it long-established origins, in 1992 Invercive survey. It is also shown in the Scottish Semi-Natural Woodland Inventory, but not in the Ancient Woodland Inventory. There are several target notes for the woodland that describe local sections of canopy and ground cover. The open fields were shown as being semi-improved neutral grassland, or as species poor (the latter for the section along the Gryfe, and the southern part of the fields east of the woodland - near former Sewage Works). There are a few target notes but they do not indicate the presence of any particular grassland species of note.

Only one of the current three marshy zones along the river margins are shown, one with a target note which lists several marsh herbs. The large wetland in the extreme west is shown and a target note lists several marsh elements still present (but no mention of the now dominant meadowsweet, indicating a recent lack of grazing).

The following report includes general descriptions of the habitats present, including target notes and species lists for the vascular plants with notes on other groups and fauna.

Habitat Summary

The woodland supports a mostly immature broad-leaved woodland canopy, with older trees more marginal or scattered but there are also several old large stumps. Sycamore is very common, often dominating, with birch (frequent pendulous) with beech and rowan; oak and ash appear scarce and there a few relic conifers (Scots pine and Norway spruce). Understorey scrub is frequent and reflects the main trees with additionally elm, holly, elder and locally dense rhododendron; grey willow occurs in wetter depressions. The woodland is presumably influenced by past policy type planting, and is best classed as a more acidic type of oak woodland (NVC W10e) with local area of increased birch (NVC W11)

The ground is fairly uniform, but limited, throughout, with some variation reflecting the undulating topography (series of ridges). Broad buckler-fern (*Dryopteris dilatata*) is often abundant indicating slightly acidic soils and heavy shade, associates include wood sorrel (*Oxalis acetosella*), tufted hair-grass (*Deschampsia cespitosa*), wood avens (Geum urbanum), dog-violet (Viola riviniana), honeysuckle (Lonicera periclymenum) and mosses include much *Kindbergia praelonga*, plus more local *Atrichum undulatum*, *Thuidium tamariscinum* and *Polytrichum* spp. There are several shaded areas with much bare ground and a few exotics also occur; Solomon's-seal (*Polygonatum x hybridum*) is local. There appear to be few ancient woodland indicator species (the time of the current survey is not easy for observation, but earlier surveys and species lists don't indicate their presence); one exception is sanicle (*Sanicula europaea*), which was noted at two places.

There are a couple of marshy depressions in the woodland NVC W7-W1), some with grey willow (coded as scrub to help distinguish), where the flora differs with tufted hair-grass (*Deschampsia cespitosa*), soft-rush (*Juncus effusus*), creeping buttercup (*Ranunculus repens*), nettle (*Urtica dioica*), lady fern (*Athyrium filix-femina*), opposite-leaved golden-saxifrage (*Chrysosplenium oppositifolium*), marsh bedstraw (*Galium palustre*), and locally bottle sedge (*Carex rostrata*); mosses include *Calliergonella cuspidata* and some *Calliergon cordifolium*, *Sphagnum squarrosum* and *Sphagnum denticulatum*.

The pastures appear to have become more improved over the last 25 years, but a few ridges have suffered less (NVC MG6-U4b). The improved or species-poor semi-improved areas support short-grazed grasses such as Yorkshire-fog (*Holcus lanatus*), Common Bent (*Agrostis capillaris*), crested dog's-tail (*Cynosurus cristatus*), perennial rye-grass (*Lolium perenne*) and frequent common meadow buttercup (*Ranunculus acris*), creeping buttercup (*Ranunculus repens*) and white clover (*Trifolium repens*). The ridges may have several herbs indicative of former acid, or neutral, grassland (see target notes for species), and some rock exposures support English stonecrop (*Sedum anglicum*) with various mosses and lichens (some *Cladonia* spp.)

Marshy vegetation is represented by a few mostly soft-rush (*Juncus effusus*) dominated hollows or depressions (NVC M23b). These are all poached and grazed by stock but the large stands by the Gryfe are much more diverse with some tall herbs such as meadowsweet (*Filipendula ulmaria*) and yellow-flag (*Iris pseudacorus*), and sometimes wetter zones with flote-grass (*Glyceria fluitans*) or bottle sedge (*Carex rostrata*). In the far west, by the Gryfe, is large area of ungrazed wetland supporting stands of meadowsweet (NVC M27) and reed canary-grass (*Phalaris arundinacea*) (NVC M28); of note here are water sedge (*Carex aquatilis*) and hemlock water-dropwort (*Oenanthe crocata*) and small area of fen-like marsh

with marsh cinquefoil (*Comarum palustre*) and of note a couple of large tussocks of the locally rare greater tussock-sedge (*Carex paniculata*).



Figure 4. The Police Station Field and Milton Wood habitat map

Species Diversity

Flora

The site is large and supports a diversity of habitats, which help to produce a high species total, which, with recent recording data, in total supports an impressive array of species. In total the combined area supports over 150 species with the woodland area and eastern pastures totalling 123 species, and the open riverbanks with 56 species; a few other species have been recorded on earlier visits. The woodland diversity however is quite low, notably through the absence of many old woodland indicators (or present in seemingly low numbers); the sanicle (*Sanicula europaea*) being one of the main exceptions; there are a few non-natives helping to lift the species total. Earlier surveys in the woods have revealed a few other woodland species e.g. wood sedge (*Carex sylvatica*), pignut (*Conopodium majus*), lesser celandine (*Ficaria verna*) and water avens (*Geum rivale*); more species have been noted by the Gryfe banks including alternate-leaved golden-saxifrage (*Chrysosplenium alternifolium*), dog's mercury (*Mercurialis perennis*) and rare colourful exotic purple toothwort (*Lathraea clandestina*).

By contrast the wetlands support many typical marsh or swamp elements and are of note for several locally uncommon species such as water sedge (*Carex aquatilis*), hemlock water-dropwort (*Oenanthe crocata*) and the greater tussock-sedge (*Carex paniculata*)

The grasslands have suffered from agricultural improvement but a few indicators of unimproved grassland persist locally, but in low numbers, such as common bird's-foot trefoil (*Lotus corniculatus*), harebell (*Campanula rotundifolia*), heath bedstraw (*Galium saxatile*), mouse-ear hawkweed (*Pilosella officinarum*) and even some blaeberry (*Vaccinium myrtillus*); previously the local rarity bulbous buttercup (*Ranunculus bulbosus*) was recorded to the south of the burn.

Fauna

Birds

There are a variety of bird habitats including the River Gryfe, scrub and woodland and a wide variety of species were noted on the survey.

Species	Description	Conservation Status
Grey Heron	Single bird flying along river, disturbed from margins.	
Ardea cinerea		
Buzzard	One bird flying over and perching in trees.	
Buteo buteo		
Woodpigeon	Small groups and single birds flying over.	
Columba palumbus		
Tawny Owl	Breeding, Clyde Birds record.	Amber listed
Strix aluco		
Great Spotted	Single bird flying over site, perching in trees.	
Woodpecker		
Dendrocopos major		
Magpie	Small numbers foraging on site.	
Pica pica		
Jackdaw	Small flock flying over.	
Corvus monedula		
Rook	Small flocks and single birds flying over.	
Corvus frugilegus		
Carrion Crow	Single birds and pairs occasionally flying over or	
Corvus corone	perched in trees.	
Goldcrest	Small numbers occasional heard calling or seen	
Regulus regulus	feeding in trees.	
Blue Tit	Feeding in woodland along River Gryfe in scrub and in	
Cyanistes caeruleus	trees often in mixed flocks with other tits.	
Great Tit	Feeding in woodland along River Gryfe and	
Parus major	throughout the site.	
Long-tailed Tit	Feeding in woodland along River Gryfe.	
Aegithalos caudatus		
Coal Tit	Foraging in trees and scrub along river, often in mixed	
Periparus ater	flocks with other tits.	
Wren	Occasional in tall vegetation, trees and scrub on site.	
Troglodytes troglodytes		
Starling	Small flocks flying over the site.	Red listed
Sturnus vulgaris		
Blackbird	Small numbers occasional in trees and scrub.	
Turdus merula		
Robin	Several birds singing and foraging on site.	Scottish Biodiversity List
Erithacus rubecula		
Dunnock	Occasional in scrub.	Priority species, UK BAP
Prunella modularis		Amber listed
Grey Wagtail	One bird flew over the site and on to the banks of the	Red listed

Table 8. Bird species of The Police Station Field

Motacilla cinerea	Gryfe Water.	
Pied Wagtail	Several birds feeding in fields.	
Motacilla alba		
Meadow Pipit	Small flock feeding in the fields.	Amber listed
Anthus pratensis		
Chaffinch	Occasional in adjacent woodland and scrubby trees.	
Fringilla coelebs		
Bullfinch	One bird calling in adjacent scrub along cycle track.	Priority species, UK BAP
Pyrrhula pyrrhula		Amber listed
Goldfinch	Small groups flying over and foraging in tall	
Carduelis carduelis	vegetation.	
Linnet	Small flock feeding on site.	Red listed
Linaria cannabina		
Lesser Redpoll	Small groups flying over.	Red listed
Acanthis cabaret		Priority species, UK BAP

Mammals

A few old spraints along the river indicate light use of the site by Otter. There was evidence of Badger using the site at various locations (diggings in grass and in cow dung) along the edge of the cyclepath but no sett was found. A Roe Deer buck was recorded on site and deer dung and lie ups in long grass adjacent to the river were found. Bats were recorded feeding along the surface of the river and along the edges of the watercourse and woodland. The species were Soprano Pipistrelle and Daubenton's bat *Myotis daubentonii*. Some features of the site were thought to provide potential for bat roosts: Ivy-covered trees and an old tree stump. A small building on adjacent ground might also support bat roosts. Molehills were found at one location. Rabbit, Grey Squirrel and Field vole *Microtus agrestis* were all recorded.

Other faunal species

The various wet areas in the field provide good potential Frog *Rana temporaria* habitat. The status of the faunal groups is outlined in Table 9 below.

Species/Groups	Nature Conservation Evaluation	Comments	
Bats (Pipistrellus and Myotis)	Habitats Regulations Schedule 2	Records are for foraging Soprano	
	UK BAP	Pipistrelle and Daubenton's bat. Not sure	
		about roost potential of trees: we did not	
		walk very far from the bridge. Bridge itself	
		might have roost potential. At two	
		locations within the site there are	
		potential bat roost features, and one other	
		is found close to the site boundary.	
Otter	Habitats Regulations Schedule 2	Old spraints indicate use of the site by	
	UK BAP	Otter. No protected structures were	
		recorded within development site.	
Badger	Protection of Badgers Act 1992	Badger foraging on site.	
Roe Deer	Scottish Biodiversity List	Roe Deer on site	
Rabbit		Present on site.	
Grey Squirrel		Recorded on site.	
Field Vole		Recorded on site.	
Mole		Present on site.	

Table 9. Conservation status of faunal species

Nature Conservation Interest

Inverclyde LNCS Assessment, Kilmacolm 2017

The site is large and varied with a substantial area of semi-natural broad-leaved woodland, which although lacking several ancient woodland indicators (including old native trees) still represents a valuable habitat of nature conservation interest, and as this is Core Path 46 has a considerable value to the local community. The bulk of the pasture present at the site is of low interest due past agricultural improvements, but they do complement the woodland, and a few ridges or depressions support some species diversity and relics of unimproved grasslands. The wetlands along the Gryfe are of note for their species diversity and include some elements of swamp, sedge mire and tall herb fen.

The woodland area is already part of the Duchal Wood LNCS.

3.5 Site 10 The ARP Field, Kilmacolm

Grid reference: NS 34686 69239 **Date:** 21/09/2017

Introduction

The site is situated to southwestern fringe of Kilmacolm, on the west side of the hedge-lined Lochwinnoch Road. The northern edge adjoins the Gryfe Water, where it is low-lying but rises to the south. It is surrounded by improved pasture fields, with a few small dwellings to the margins. The important wildlife site at Mill Dam is to the northern edge.

The land was shown as being improved or arable in the 1992 Inverclyde survey, with none of the wetland (or ridge) features, currently present, noted.

The following report includes general descriptions of the habitats present, including target notes, species lists for the vascular plants and notes on other groups and fauna.

Habitat Summary

The raised southern fields are well improved, former arable and currently sown lay pastures or hay fields. The northern fields have undulating ground with some small ridges and several lower-lying areas, some of which support marshy vegetation. The grassland is quite uniform and improved (NVC MG6) with much Yorkshire-fog (*Holcus lanatus*) plus Common Bent (*Agrostis capillaris*) and much crested dog's-tail (Cynosurus cristatus) but little perennial rye-grass (*Lolium perenne*) obvious; herbs are few except for frequent common meadow buttercup (*Ranunculus acris*) and creeping buttercup (*Ranunculus repens*).

A few ridges support relics of former less improved grassland (NVC U4-MG5) with various herbs such as cat's-ear (*Hypochoeris radicata*), yarrow (*Achillea millefolium*), knapweed (*Centaurea nigra*), harebell (*Campanula rotundifolia*) and common bird's-foot trefoil (*Lotus corniculatus*), though these mostly present sparingly.

Marshy vegetation is represented in hollows or depressions by stands dominated by soft rush (*Juncus effusus* (NVC M23b), usually with some herb diversity but stock have access and can poach the margins. Several have deeper water to the centre supporting grassy swamp (NVC S22) usually with flote-grass (*Glyceria fluitans*); the larger area in the north supports some species diversity with spike-rush (*Eleocharis palustris*), bur-reed (*Sparganium erectum*), spearwort (*Ranunculus flammula*) and bottle sedge (*Carex rostrata*).

Figure 5. The ARP Field habitat map



Species Diversity

Flora

The southern grasslands have very few species and the majority of the northern fields have a limited diversity, but the low ridges with relic herbs of acid or neutral grassland help to raise the overall total (104 species were recorded during current visit), but most are only present in small numbers e.g. cat's-ear (*Hypochoeris radicata*), tormentil (*Potentilla erecta*), knapweed (*Centaurea nigra*), mouse-ear hawkweed (*Pilosella officinarum*), harebell (*Campanula rotundifolia*) and common bird's-foot trefoil (*Lotus corniculatus*). The wetlands, particularly the larger northern one support a range of marshy species including spike-rush (*Eleocharis palustris*), bur-reed (*Sparganium erectum*) and bottle sedge (*Carex rostrata*).

Old woodland elements occur along the riverbanks including dog's mercury (*Mercurialis perennis*), wood avens (*Geum rivale*) and greater woodrush (*Luzula sylvatica*); the local rarity globeflower (*Trollius europaeus*) is known from the north side.

Fauna

Birds

The site has breeding Skylark and the large areas of Soft Rush provide a breeding habitat for Grasshopper Warbler Reed Bunting and Sedge Warbler. Barn Owl has been recorded hunting over these fields (all Clyde Birds records). These and species recorded on the day of the visit are outlined in Table 10 below.

Species	Description	Conservation Status
Buzzard	One adult and one juvenile hunting over site.	
Buteo buteo		
Woodpigeon	Small flock feeding in field	
Columba palumbus		
Barn Owl	Clyde Birds record, hunt over the fields.	Schedule 1
Tyto alba		Scottish Biodiversity list
Tawny Owl	One singing in woodland beside Gryfe Water	Amber listed
Strix aluco		
Kestrel	One flew over, hunting in the area.	Amber listed
Falco tinnunculus		Scottish Biodiversity List
Jackdaw	Small flock feeding in field.	
Corvus monedula		
Rook	Flock feeding in field.	
Corvus frugilegus		
Carrion Crow	Occasional records.	
Corvus corone		
Blue Tit	Feeding in woodland along River Gryfe, mixed	
Cyanistes caeruleus	flock with Great Tits and Long-tailed Tits.	
Skylark Alauda arvensis	Clyde Birds record, nest in fields	Priority species, UK BAP Scottish Biodiversity List
		Red-listed
Great Tit	Feeding in woodland along River Gryfe.	
Parus major		
Long-tailed Tit	Feeding in woodland along River Gryfe.	
Aegithalos caudatus		
Sedge Warbler	Clyde Bird records, breeding in wet areas.	
Acrocephalus		
schoenobaenus		
Grasshopper Warbler	Clyde Bird records, breeding in wet areas.	Priority species, UK BAP
Locustella naevia		Red listed
Wren	In adjacent woodland and hedgerows.	
Troglodytes troglodytes		
Starling	Flock of c. 80 birds feeding in fields.	Red listed
Sturnus vulgaris		
Dipper	Flew up the Gryfe Water.	Amber listed
Cinclus cinclus		
Blackbird	One in woodland, one in hedgerow.	
Turdus merula		
Song Thrush	Two recorded in adjacent woodland.	Priority species, UK BAP
Turdus philomelos		Scottish Biodiversity List
NA: 11 TI 1		Red-listed
Mistle Thrush	Three birds feeding in fields.	Red listed
Turdus viscivorus		
Robin	Common along the woodland edge.	Scottish Biodiversity List
Erithacus rubecula		
Dunnock	One recorded in hedgerow.	Priority species, UK BAP
Prunella modularis		Amber listed
House Sparrow	Small flock near bridge, in hedgerow.	Priority species, UK BAP
Passer domesticus		Red listed
Grey Wagtail	One bird flew over the site and on to the banks of	Red listed
Motacilla cinerea	the Gryfe Water.	
Pied Wagtail	Several birds feeding in fields.	
Motacilla alba		

Table 10. Bird species of The ARP Field

Meadow Pipit Anthus pratensis	Small flock feeding in the fields.	Amber listed
Chaffinch Fringilla coelebs	Occasional birds in adjacent woodland.	
Bullfinch Pyrrhula pyrrhula	One bird calling in adjacent woodland.	Priority species, UK BAP Amber listed
Goldfinch Carduelis carduelis	Two birds in hedgerow.	
Reed Bunting Emberiza schoeniclus		Amber listed Scottish Biodiversity List

Mammals

Regular use by Otter was recorded on the directly adjacent Gryfe Water. Evidence of Badger using the site was recorded in the field directly adjacent to the river and in the centre of the site. No sett was located; however the adjacent Balrossie looks to have potential for a sett. A Roe Deer buck was recorded on site and deer dung and lie ups in long grass adjacent to the river were found. Bats were recorded feeding along the edge of the watercourse and woodland, species were Soprano Pipistrelle and Mole hills were occasional, Fox dung was recorded in the field adjacent to the river. Field Vole signs were

common.

Other faunal species

The various wet areas in the field provide good potential Frog *Rana temporaria* habitat. The status of the faunal groups is outlined in Table 11 below.

Species/Groups	Nature Conservation Evaluation	Comments	
Bats (Pipistrelle species)	Habitats Regulations Schedule 2	No roosts recorded. Records are for	
	UK BAP	foraging pipistrelle species. Adjacent trees	
		along the Gryfe Water with moderate	
		potential for roosting bats.	
Otter	Habitats Regulations Schedule 2	No protected structures or Otter evidence	
	UK BAP	recorded within development site.	
Badger	Protection of Badgers Act 1992	Badger foraging on site.	
Roe Deer	Scottish Biodiversity List	Roe Deer on site	

Table 11. Conservation status of faunal species

Nature Conservation Interest

The vast majority of the site is of very low nature conservation value due to its long history of agricultural improvement. The northern field supports a few grassland ridges of increased diversity with some species-rich grassland relics, but no species of significant local rarity were noted. The larger rush pasture in the north is of interest and contains a good range of wetland species; the small area of rock exposure and drain in the extreme east (Pacemuir Bridge) also represents a compact area of high species diversity. The riverbanks are of interest, currently ungrazed (presumably were grazed in the past) and support a narrow fringe of semi-natural woodland and some open tall grass and herbs. The riverbanks are of note for providing Otter habitat and Badger, and foraging for bats including Daubenton's.

The northern section is of added potential due to its proximity to the narrow Gryfe Water corridor, and the Mill Dam LNCS to the north.

3.6 Site 11 West Glen, Kilmacolm Grid reference: NS 36560 70279 Date: 25/09/2017

Introduction

The site is an area of improved pasture on the northeastern fringe of Kilmacolm, on the West Glen Road. Residential housing occurs to the north and west with open farmland to the east and south. On the western boundary is an area of scrubby mixed plantation, along a small burn route, and there are open pines to the north roadside wall. In the south there are some rocky ridges that until very recently supported thick gorse scrub; a further feature is a small wetland in a shallow basin.

The fields were previously shown as being improved grassland in the 1992 Inverclyde survey, with the plantations and large patches of scrub noted, but the wetland is not marked.

The following report includes general descriptions of the habitats present, target notes, species lists for the vascular plants and notes on other groups and fauna.

Habitat Summary

The main pastures have remained improved of the last 25 years and support a low diversity sward with a limited number of herbs that indicate former meadow (NVC MG6). Of the short-grazed grasses Yorkshire-fog (*Holcus lanatus*) and crested dog's-tail (*Cynosurus cristatus*) are common, with perennial rye-grass (*Lolium perenne*), and seemingly less frequent common bent (*Agrostis capillaris*) and red fescue (*Festuca rubra*); herbs can be frequent but limited in diversity and some indicate enrichment but poor drainage: meadow buttercup (*Ranunculus acris*) and creeping buttercup (*Ranunculus repens*) are common with white clover (*Trifolium repens*), plus locally oval sedge (*Carex leporina*), some short rushes (*Juncus* spp.), self-heal (*Prunella vulgaris*), daisy (*Bellis perennis*) and the moss *Calliergonella cuspidata*.

On the ridges and associated slopes there can be a little more diversity with some elements of acidic bentfescue grassland (U4), again often poorly draining with some sedges indicating mire transitions (NVC M6). The picture is a little complicated by the scrub removal, as it is likely some acidic grassland is recovering following clearance (although the recently cleared areas are distinct due to the open sward and mixture of mosses, foxglove and young gorse seedlings – and piles of scrub!). There are some exposures with English stonecrop (*Sedum anglicum*), sheep's sorrel (*Rumex acetosella*) plus a range of mosses and some lichens.

There are a few local depressions with grazed and poached soft-rush (*Juncus effusus*) marsh. These grade to wetter Yorkshire-fog pasture (NVC MG10) but locally there are some mire elements (NVC M23b) such as cuckooflower (*Cardamine pratensis*), bog stitchwort (*Stellaria alsine*), common sorrel (*Rumex acetosa*), willowherbs (*Epilobium* spp.), marsh thistle (*Cirsium palustre*), with very locally, creeping bent (*Agrostis stolonifera*), flote-grass (*Glyceria fluitans*) or bottle sedge (*Carex rostrata*). Of note is the small basin wetland, which consists to two areas of open water, the southern with a much pondweed (presumably *Potamogeton natans* – but not possible to access), surrounded by a quaking mat of flote-grass swamp (NVC S22), grading to more varied small sweet-grass (*Glyceria declinata*), jointed rush (*Juncus articulatus*) and creeping bent (*Agrostis stolonifera*); of note are small patches of nodding bur-marigold (*Bidens cernua* var. *radiata*).

The scrubby plantation on the western margin supports a few areas of wet woodland (NVC W1 or W7) with various marshy species present, but also several exotics (herbs and trees), some presumably planted.



Figure 6. West Glen habitat map

Species Diversity

Flora

In total the site supports a fair range of species mostly reflecting grasslands or wetland vegetation (122 species were recorded during the current visit). The total number is helped by the relict areas of acid grassland and some indicators of better quality mire, but the latter species are only present sparingly or indeed rarely.

The pastures are fairly uniform with an overall low species diversity although the margins of the ridges, and actual rocks, support a few more species, but in low numbers e.g. heath-grass (*Danthonia decumbens*), heath rush (*Juncus squarrosus*), devil's-bit scabious (*Succisa pratensis*) and green-ribbed sedge (*Carex binervis*); two flushed areas support sedges (*Carex* spp.) and small amounts of whorled caraway (*Carum verticillatum*).

The wetter areas include a few locally uncommon species such as marsh speedwell (*Veronica scutellata*), marsh cinquefoil (*Comarum palustre*) and bog pondweed (*Potamogeton polygonifolius*). Of most note is the small population of nodding bur-marigold (*Bidens cernua* var. *radiata*), which is known from nearby Glen Moss SSSI but otherwise has very few local or regional records.

Fauna

Table 12. Bird species of West Glen

Two birds hunting over site. One flew over, hunting in the area. Likely to breed and feed in wetland habitat on site. Small numbers flying over and perching in trees. One bird was recorded singing in western woodland during bat survey. Evidence of foraging on the site and possible territorial significance.	Amber listed Scottish Biodiversity List Amber listed
Likely to breed and feed in wetland habitat on site. Small numbers flying over and perching in trees. One bird was recorded singing in western woodland during bat survey. Evidence of foraging on the site and possible territorial significance.	Scottish Biodiversity List
Likely to breed and feed in wetland habitat on site. Small numbers flying over and perching in trees. One bird was recorded singing in western woodland during bat survey. Evidence of foraging on the site and possible territorial significance.	Scottish Biodiversity List
Small numbers flying over and perching in trees. One bird was recorded singing in western woodland during bat survey. Evidence of foraging on the site and possible territorial significance.	
Small numbers flying over and perching in trees. One bird was recorded singing in western woodland during bat survey. Evidence of foraging on the site and possible territorial significance.	Amber listed
One bird was recorded singing in western woodland during bat survey. Evidence of foraging on the site and possible territorial significance.	Amber listed
One bird was recorded singing in western woodland during bat survey. Evidence of foraging on the site and possible territorial significance.	Amber listed
during bat survey. Evidence of foraging on the site and possible territorial significance.	Amber listed
during bat survey. Evidence of foraging on the site and possible territorial significance.	Amber listed
Evidence of foraging on the site and possible territorial significance.	
significance.	
	1
Clyde Bird records, breeding in wet areas.	
Clyde Bird records, breeding in wet areas	Priority species, UK BAP
	Red listed
Occasional in woodland, hedgerows and tall	
vegetation.	
Small flock feeding in fields.	Red listed
Two birds feeding in fields.	Red listed
Common along the woodland edge.	Scottish Biodiversity List
Small flock feeding in the fields.	Amber listed
Occasional birds in woodland or flying over.	
Small number of birds heard calling on site.	Priority species, UK BAP
-	Amber listed
Small numbers flying over occasionally and perching in	
woodland areas.	
Clyde Bird records, breeding in wet areas.	Amber listed
	Scottish Biodiversity List
	Occasional in woodland, hedgerows and tall vegetation. Small flock feeding in fields. Two birds feeding in fields. Common along the woodland edge. Small flock feeding in the fields. Occasional birds in woodland or flying over. Small number of birds heard calling on site. Small numbers flying over occasionally and perching in

Mammals

Possible use of the site by Otter is suggested by Common Toad *Bufo bufo* prey remains found in the south of the site. There were mammal tracks in the western part of the site. No clear evidence of Badger using the site was found . Field Vole runs were abundant in the western part of the site. Bats were recorded feeding along woodland edge and above the surface of the open water. Species were Common Pipistrelle, Soprano Pipistrelle and Brown Long-eared Bat *Plecotus auritus*. An unidentified bat was seen flying over the surface of one of the ponds, possibly a *Myotis* species.

Mole hills were found in the eastern part of the site.

Table 13. Conservation status of faunal species

Species/Groups	Nature Conservation Evaluation	Comments

Bats	Habitats Regulations Schedule 2	Records are for foraging pipistrelle species and	
(Pipistrellus and	UK BAP	Brown Long-eared Bat.	
Plecotus species)			
Otter	Habitats Regulations Schedule 2	Prey remains of Common Toad were found that	
	UK BAP	may indicate use of the site for foraging by Otter.	
		No protected structures were found.	
Badger	Protection of Badgers Act 1992	No clear evidence of Badger foraging on site.	
Mole		Molehills found in the eastern part of the site.	
Field Vole		Runs abundant in the western part of the site.	
Wild Rabbit		Rabbit warren in the south of the site.	
Roe Deer	Scottish Biodiversity List	Roe Deer on site	
Common Toad		Remains found on site. The wetland areas are	
Bufo bufo		likely to support amphibians.	
Common Frog		The wetland areas are likely to support	
Rana temporaria		amphibians.	

Nature Conservation Interest

The northern pasture and the pine plantations are of very low nature conservation value being well improved and heavily grazed. The same is true for much of the southern field but here the presence of the rocky ridges and the wetlands produce an area of local nature conservation interest, although again species of note are very sparsely represented. The marginal scrubby plantation adds some additional diversity. There is some value in the species diversity at the site and a couple of species (the nodding bur-marigold and whorled caraway) are of local and regional importance.

However in isolation the habitats lack the scale and quality to be an important nature conservation site, although the proximity to Glen Moss SSSI and Overton Grassland LNCS and its associate quality habitats could help the viability of the southern section, which with positive management could be of some value and represent a buffer or extension to the main wetland.

The recent removal of the dense scrub will have been destructive of potential invertebrate and bird breeding habitat, but there may be some compensation in acid grassland recovery, which has suffered due to the improvement treatments.

3.7 Site 12 Migdale, Kilmacolm

Grid reference: NS 35887 70943 Date: 25/09/2017

Introduction

The site is a small area of grassland on a steep embankment at the extreme northern tip of Kilmacolm. Open pasture land occurs to the north and west. The site is bounded to the west and south by hedgerow or trees, with an old stone wall in the north, where there is some scrub and a few trees. The grassland has been recently cut for hay.

The field was previously shown as being species poor semi-improved grassland in the 1992 Inverclyde survey, with note of the scrub hedgerow and trees.

The following report includes general descriptions of the habitats present, target notes, species lists for the vascular plants and notes on other groups and fauna.

Habitat Summary

The core area of the site is the hay meadow on the steep slope. It is a little difficult to assess due to very recent cutting but it appears to have received some improvement treatment (and was considered improved 25 years ago) although there is some herb diversity indicating lower enrichment than more intensively improved pastures or leys; perhaps it has been less intensively managed in recent years allowing some recovery? It has been coded as semi-improved and perhaps best considered intermediate between NVC MG6 and NVC MG5. The grasses appear to be mainly Common Bent (*Agrostis capillaris*), red fescue (*Festuca rubra*), sweet vernal-grass (*Anthoxanthum odoratum*) and some cock's-foot (*Dactylis glomerata*). Yorkshire-fog (*Holcus lanatus*) is seemingly rare. Herbs are well represented but mostly common species such as meadow buttercup (*Ranunculus acris*), Ribwort plantain (*Plantago lanceolata*), common sorrel (*Rumex acetosa*), yarrow (*Achillea millefolium*) and white clover (*Trifolium repens*), with more local cat's-ear (*Hypochoeris radicata*) and yellow rattle (*Rhinanthus minor*). These latter species are more obvious to the margins, which have escaped the recent cut (and thus may be misleading if truly scarce from the core field).

To the field margin there are wide strips of uncut grass (NVC MG1), becoming rank with tall herbs and bramble scrub developing (NVC W24). Along the north edge there are some elements of unimproved, slightly acidic grassland (NVC U4).

There is one large patch of gorse scrub on the northwestern embankment (NVC W23), where the plantation is a little more semi-natural with oak and small area of bluebell (*Hyacinthoides non-scripta*) plus foxglove (*Digitalis purpurea*) and wood sage (*Teucrium scorodonia*)



Figure 7. 012 Migdale habitat map

Species Diversity

Flora

The site is small and comprised mostly of a limited diversity herb meadow, but the overall species total is increased by the marginal habitats notably along the northern edge where is there is a steep embankment. The presence of cat's-ear (*Hypochoeris radicata*) and yellow rattle (*Rhinanthus minor*) indicates relic unimproved grassland but other species appear absent. The presence of field scabious (*Knautia arvensis*) is potentially highly significant; it is very rare in west Scotland and only modern records are from presumed seed mixes. It was known from local meadows last century and was reported from Kilmacolm in 1933 (in Lee's Clydesdale Flora).

Fauna

Birds

Very few species were recorded during the survey; however the site has potential for various breeding farmland and woodland species.

Species	Description	Conservation Status
Buzzard	One bird hunting over site.	
Buteo buteo		
Woodpigeon	Small flock feeding in field flew over.	
Columba palumbus		
Long-tailed Tit	Small numbers flying over and foraging in trees and	
Aegithalos caudatus	scrub.	
Treecreeper	One bird foraging on tree in site.	
Certhia familiaris		
Wren	Several birds foraging in woodland, tall vegetation	
Troglodytes troglodytes	hedgerows.	
Blackbird	Occasional bird in scrub and hedgerows.	
Turdus merula		
Song Thrush	Two recorded in adjacent woodland.	Priority species, UK BAP
Turdus philomelos		Scottish Biodiversity List
		Red-listed
Robin	Several birds along the woodland edge and hedgerow.	Scottish Biodiversity List
Erithacus rubecula		
Dunnock	One recorded in hedgerow.	Priority species, UK BAP
Prunella modularis		Amber listed
Chaffinch	Occasional birds in woodland and scrub or flying over.	
Fringilla coelebs		

Table 14. Bird species of Migdale

Mammals

See Confidential Annex. Soprano Pipistrelle bats were recorded feeding along the woodland strip on the north edge of the site. They are also likely to feed along the avenue of trees leading to old hall. Fox was recorded using the site. Peacock *Aglais io* and Red Admiral *Vanessa atalanta* butterflies were recorded.

Species/Groups	Nature Conservation Evaluation	Comments	
Bats (Pipistrelle species)	Habitats Regulations Schedule 2	Soprano pipistrelle bats recorded foraging	
	UK BAP	along edge of woodland strip. Likely to feed	
		along tree-lined avenue leading to Old Hall.	
		Those trees, some ivy-covered, have high	

Table 15. Conservation status of faunal species

		potential for bat roosts.	
Otter	Habitats Regulations Schedule 2	No protected structures or otter evidence	
	UK BAP	recorded within development site.	
Rabbit		Warren in south east corner of site.	
Fox		Signs of fox using site.	
Roe Deer	Scottish Biodiversity List	Roe Deer on site	
Red Admiral butterfly		Recorded flying over site.	
Peacock butterfly		Recorded flying over site.	

Nature Conservation Interest

The site overall is of limited current nature conservation value due in part to its small size, and overall lack of high quality habitats. The grasslands are of some interest, and perhaps more potential, as they are relatively unimproved and represent a lowland remnant of a once more widespread habitat; the presence of *Knautia arvensis*, if unsown (which seems unlikely) is of considerable high interest. The wide field margins and scrub and trees are good examples of peripheral farmland features that are encouraged for the promotion of biodiversity.

3.8 Site 14 Planetreeyetts, Kilmacolm

Grid reference: NS 35741 70834 Date: 27/09/2017

Introduction

The site is located on the northern fringe of Kilmacolm, with residential development to the southern and eastern boundaries; to the north and west is agricultural pasture, although there is also a large wetland in the northwest. The majority of the site consists of a large area of improved pasture, with marsh and some trees (or woodland) to the western side.

There is a large wetland area (basin mire) adjacent to the northwestern boundary, which adjoins to a ridge of acid grass and gorse scrub, which in turn is linked to a strip of coarse marshy grassland running parallel to the sites western marsh. This area has been surveyed since it is important to assess these areas along with the marshes on the current site (and contiguous West Quarry). The Spring Wood above the wetland was also briefly visited.

The large main pasture was shown as being improved grassland in the 1992 Inverclyde survey, with a few areas of tree or plantation to the west side; curiously the marshy area in the west, including the long established basin fen are not shown (the area is not coded at all).

The following report includes general descriptions of the habitats present, including target notes and species lists for the vascular plants with notes on other groups and fauna.

Habitat Summary

The main pasture has been agriculturally improved and is currently short grazed by horses (NVC MG6). It has a fairly uniform of short-grazed grasses such as Yorkshire-fog (*Holcus lanatus*), Common Bent (*Agrostis capillaris*), crested dog's-tail (*Cynosurus cristatus*), perennial rye-grass (*Lolium perenne*) and red fescue

Inverclyde LNCS Assessment, Kilmacolm 2017

(*Festuca rubra*), with usually much meadow buttercup (*Ranunculus acris*), creeping buttercup (*Ranunculus repens*) and white clover (*Trifolium repens*); locally there can be some self-heal (*Prunella vulgaris*), yarrow (*Achillea millefolium*), mouse-ear (Cerastium fontanum), ribwort plantain (*Plantago lanceolata*), ragwort (*Senecio jacobaea*), broad-leaved dock (*Rumex obtusifolius*) and red bartsia (*Odontites vernus*). The occasional rocky ridge supports some additional herbs including English stonecrop (*Sedum anglicum*) with mosses and lichens (NVC U1), and there are acid grassland elements (NVC U4) in the extreme southwest and at drier parts of the western margin marshes.

The narrower western side of the site by contrast supports a very diverse marsh mostly dominated by sharp-flowered rush (*Juncus acutiflorus*) (NVCM23a); associates include greater bird's-foot trefoil (*Lotus pedunculatus*), marsh bedstraw (*Galium palustre*), cuckooflower (*Cardamine pratensis*) short-fruited willowherb (*Epilobium obscurum*), and marsh thistle (*Cirsium palustre*). In the extreme south there are more acidic mire indicators (NVC M6), such as carnation sedge (*Carex panicea*), star sedge (*Carex echinata*) and devil's-bit scabious (*Succisa pratensis*), and below various fen mire species (NVC M9b or M27) including bottle sedge (*Carex rostrata*), marsh cinquefoil (*Comarum palustre*), bog bean (*Menyanthes trifoliata*) and marsh pennywort (*Hydrocotyle vulgare*). There is also an area of willow carr with the locally uncommon purple osier (*Salix purpurea*) and bay willow (*Salix pentandra*).

On the western boundary there is row of broad-leaved trees, following an old stone wall; which is broader in the southwest along an embankment; in the centre there are is a ridge with two types of grazed woodland (one of birch, the other mixed) but both over an acid grassland cover (NVC W11). There is also a small patch of gorse scrub (NVC W23). In the southwest is a low ridge with a margin of old broad-leaved trees (coded as plantation) with acid grassland elements (NVC U4).

The northwestern basin mire is of special note and of very high species interest (NVC M9b). It supports a diverse fen mire habitat with various sedges and herbs over a bryophyte layer, although the latter has been affected by recent rain. Stock has access and grazed the more accessible margins. Bottle sedge (*Carex rostrata*) is common with a range of other species such as marsh cinquefoil (*Comarum palustre*), bog bean (*Menyanthes trifoliata*) and marsh pennywort (*Hydrocotyle vulgare*), ragged-robin (*Silene flos-cuculi*), marsh marigold (*Caltha palustris*), cotton-grass (*Eriophorum angustifolium*), and local lesser-tussock sedge (*Carex diandra*) and white sedge (*Carex canescens*); the bryophyte layer includes *Calliergon cordifolium*, Bryum pseudotriquetrum, Plagiomnium ellipticum and some Marchantia polymorpha (no Sphagnum noted).

Figure 8. 014 Planetreeyetts habitat map



Species Diversity

Flora

The bulk of the eastern section of the site comprises a rather uniform low diversity grassland, contrasted with the more diverse marsh on the western side. In total over 100 species were recorded during the current visit; 40 species were noted in the brief visit to the fen. Together with other marginal land there is a good total of species recorded, several of local rarity, and a good array of mire species many being indicators of a less enriched water table: lesser-tussock sedge (*Carex diandra*), bog bean (*Menyanthes trifoliata*), marsh pennywort (*Hydrocotyle vulgare*), white sedge (*Carex canescens*), whorled caraway (*Carum verticillatum*) and the bay and purple willows.

Fauna

Birds

The site has a variety of bird habitats including mature hedgerows, woodland and marsh. There is a directly adjacent marsh with good potential for breeding marsh species. There is a rookery in the trees adjacent to the farm.

Species	Description	Conservation Status
Buzzard	Single bird flying over site.	
Buteo buteo		
Woodpigeon	Small groups flying over and feeding in field	
Columba palumbus		
Barn Owl	There is good foraging habitat for Barn Owl in the site	Schedule 1
Tyto alba	and also in the adjacent 15 West of Quarry Drive. The	Scottish Biodiversity list

Table 16. Bird species of Planetreeyetts

	buildings at Planetreeyetts Farm might possibly support nesting Barn Owl. Barn Owls have been recorded hunting (Clyde Birds).	
Jackdaw <i>Corvus monedula</i>	Small flocks flying over and feeding in field.	
Rook Corvus frugilegus	The trees around Planetree Yetts farm support a rookery.	
Swallow Hirundo rustica	Small number of birds flying over the site.	
Grasshopper Warbler Locustella naevia	Breeding in wetland (Clyde Birds)	Priority species, UK BAP Red listed
Wren Troglodytes troglodytes	Common in hedges, woodland and tall vegetation.	
Starling Sturnus vulgaris	Small flock feeding in fields.	Red listed
Song Thrush Turdus philomelos	Two recorded woodland.	Priority species, UK BAP Scottish Biodiversity List Red-listed
Mistle Thrush Turdus viscivorus	Small feeding on site.	Red listed
Robin Erithacus rubecula	Common along the woodland edge and in hedgerows.	Scottish Biodiversity List
Dunnock Prunella modularis	One recorded in hedgerow.	Priority species, UK BAP Amber listed
Chaffinch Fringilla coelebs	Occasional birds in hedgerow and woodland.	
Goldfinch Carduelis carduelis	Small group of birds flying over and perched in scrub.	

Mammals

There was much evidence of Field Vole. Roe deer lie-ups and dung were found in several places. Several paths and diggings in the fields suggest Badger activity. Soprano pipistrelle and Brown Long-eared bats were recorded using the site. Several large mature trees were identified to have potential for roosting sites for bats and the site has much good woodland or hedgerow edge foraging habitat for them.

Other faunal species

Wetland habitat in the northeast corner is likely to support Frog *Rana temporaria* habitat. A Peacock butterfly *Aglais io* was noted during survey.

Species/Groups	Nature Conservation Evaluation	Comments
Badger	Protection of Badgers Act 1992	Badger foraging on site.
Bats (Pipistrellus and Plecotus)		Soprano Pipistrelle and Brown Long-eared bats were recorded during survey. There is good foraging habitat within the site and potential roost sites.
Roe Deer	Scottish Biodiversity List	Lie-ups and droppings in several places.
Field Vole		Vole runs.
Frog		Recorded by local residents.
Peacock butterfly		Recorded flying over site.

Table 17.	Conservation s	status of fauna	species
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Nature Conservation Interest

The eastern part of the site is of low nature conservation value as the pasture has long been improved and is heavily grazed. The western side by contrast is of high interest, notably the area of fen and carr in the extreme south. If this section is considered along with the marsh within the West Quarry survey area and acid grassland north to the large basin mire, then a block of high nature conservation value is formed. Several bat species have been recorded and there is good roost potential in both trees and the building.

3.9 Site 15 West Quarry, Kilmacolm

Grid reference: NS 35450 70566 Date: 28/09/2017

Introduction

The site chiefly comprises open grassland on the northwest fringe of Kilmacolm. To the north is the cemetery with pasture and some woodland beyond. Residential houses occur to the south and west, with further farmland in the southwest. There is an old quarry in the west, recently reopened, and above an area of rough marshy grassland and scrub; in the extreme east is a similar appearing area. The latter is contiguous with the Planetreeyetts site, and there is a small strip of pasture and marsh that is excluded from both, but is here mapped with notes.

The fields were shown as being improved in the 1992 Inverclyde survey, with hedgerows and stone walls (most now non-functional) and some trees; the marshy area above the quarry was coded as improved and the no other marshes are noted (including the areas to the east by Planetreeyetts).

The following report includes general descriptions of the habitats present, target notes, species lists for the vascular plants and notes on other groups and fauna.

Habitat Summary

The grasslands adjacent to the cemetery have been ploughed and reseeded with well-improved lay grass (cut for silage or hay). The central two fields in the south are on undulating ground and are only occasionally grazed, resulting in fairly coarse sward developing, but presumably due to low intensity management recently there may be some reversion to a more diverse meadow flora (MG6 to NVC MG5). This is mainly represented on a series of low ridges (presumably shallower soil), although there is much intergradation, to areas of more enriched turf; the latter can be locally flushed with much Yorkshire-fog (*Holcus lanatus*) and creeping buttercup (*Ranunculus repens*) – occasional smooth lady's-mantle (*Alchemilla glabra*) and greater bird's-foot trefoil (*Lotus pedunculatus*).

The more diverse ridges are shown on the habitat map (indicative only, as difficult to be precise) and generally support more red fescue (*Festuca rubra*) and common bent (*Agrostis capillaris*) plus there is some crested dog's-tail (*Cynosurus cristatus*) and sweet vernal-grass (*Anthoxanthum odoratum*); the herb diversity and frequency is higher (i.e. towards NVC MG5) and typically includes much meadow buttercup (*Ranunculus acris*), ribwort plantain (*Plantago lanceolata*), yarrow (*Achillea millefolium*), and occasional knapweed (*Centaurea nigra*), red clover (*Trifolium pratense*) and meadow vetchling (*Lathyrus pratensis*), plus rarely germander speedwell (*Veronica chamaedrys*), yellow rattle (*Rhinanthus minor*), devil's-bit scabious (*Succisa pratensis*), common spotted-orchid (*Dactylorhiza fuchsii*) and greater butterfly-orchid

(Platanthera chlorantha).

To the pasture margins there are some poorly draining marshy zones, most with soft-rush (*Juncus effusus*) but with varied associates including some short sedges (*Carex* spp.) and orchids (*Dactylorhiza* spp.). In the east (outside the survey boundary) there is species-rich flushed grassland that in addition to supporting various sedges also has a very large population of the local speciality whorled caraway (*Carum verticillatum*).

In the extreme west and also extreme east (adjacent to Planetreeyetts) are two area of similar ungrazed marshy grassland, both formerly drained and grazed, with a coarse sward (NVC M23a or NVC MG10) with much sharp-flowered rush (*Juncus acutiflorus*) and tufted hair-grass (*Deschampsia cespitosa*), plus locally meadowsweet (*Filipendula ulmaria*) (NVC M27); these flushes can support a few small relic mire elements (NVC M6) and even a few tufts of purple moor-grass (*Molinia caerulea*) (NVC M25); and there are some coarse, ungrazed acid grassland species present in the drier turf. There are also some patches of gorse or bramble scrub (NVC W23 or W24).

Figure 9. 015 West Quarry habitat map



Species Diversity

Flora

The site consists of somewhat improved, or formerly so, grasslands, with some marshy areas, which limits the overall species diversity. However there are some relics of old meadow species persisting (perhaps recovering) on the low ridges, and about the marginal walls, which together with marsh elements help to
increase the overall total (127 species); however many of the species are only present in small numbers. The total includes some records from a previous visit in 2011 and some verification of field observation of vegetative plants from photographs provided by local residents.

The grassland elements include indicators of old meadows e.g. yellow rattle (*Rhinanthus minor*), devil's-bit scabious (*Succisa pratensis*), harebell (*Campanula rotundifolia*), meadow vetchling (*Lathyrus pratensis*), eyebright (*Euphrasia* sp.), lady's bedstraw (*Galium verum*) and of note a few spikes of greater butterfly-orchid (*Platanthera chlorantha*), common spotted-orchid (*Dactylorhiza fuchsii*) and northern marsh-orchid (*Dactylorhiza purpurella*).

Wetland elements are similarly species frequent in relict marshes locally, but include some mire elements (i.e. indicators of low nutrient enrichment) such as marsh cinquefoil (*Comarum palustre*), purple moor-grass (*Molinia caerulea*) and various sedges (*Carex* spp.); at the extreme western boundary is a small patch of ivy-leaved water crowfoot (*Ranunculus hederaceus*). Also of note is the occurrence of whorled caraway (*Carum verticillatum*).

Fauna

Birds

Species	Description	Conservation Status
Buzzard	One bird flying over site.	
Buteo buteo		
Barn Owl	Recorded hunting (Clyde Birds).	Schedule 1
Tyto alba		Scottish Biodiversity list
Tawny Owl	One recorded singing in woodland during the bat	Amber listed
Strix aluco	survey.	
Magpie	One bird alarming in hedge.	
Pica pica		
Blue Tit	One bird calling from hedge.	
Cyanistes caeruleus		
Wren	Occasional in scrubby habitat and tall vegetation.	
Troglodytes troglodytes		
Song Thrush	Song Thrush 'anvil' found.	Priority species, UK BAP
Turdus philomelos		Scottish Biodiversity List
		Red-listed
Robin	Common along the woodland edge.	Scottish Biodiversity List
Erithacus rubecula		
Chaffinch	Occasional birds calling from hedges.	
Fringilla coelebs		
Goldfinch	One bird calling.	
Carduelis carduelis		

Table 18. Bird species of West Quarry

Mammals

There was much evidence of Field Vole. Signs of feeding and many runs were noted. A Badger track was recorded in the northeastern corner and other tracks occur that were not clearly attributable to any species. No bats were recorded using the site.

Other faunal species

Wetland habitat in the northeast corner is likely to support amphibians. A Water Cricket *Velia caprai* was noted in the wetland. A Red Admiral *Vanessa atalanta* butterfly was recorded during survey.

Species/Groups	Nature Conservation	Comments
Species/ Gloups	Evaluation	comments
Badger	Protection of Badgers Act 1992	Badger path near boundary with adjacent
		Planetreeyetts.
Field Vole		Vole runs abundant.
Water Cricket		In the wetland.
Red Admiral butterfly		Recorded flying over site.

Nature Conservation Interest

The site consists primarily of recent or past improved pasture which has resulted in a loss of species diversity, and is thus of limited nature conservation value. There is some additional diversity provided by the western and eastern marshes and there are two other marshy areas to the margins of the fields, which together support a good range of wetland species. Of particular note is whorled caraway, which although frequent in this part of (old) Renfrewshire is quite rare in Scotland overall; a few other mire elements are also of note.

However there is a good range of species found in the grasslands, including a number of increasingly rare old meadow plants, although many of the latter are found in low numbers. The grasslands support several areas (mostly low ridges) where there are relics of former unimproved lowland meadows, a habitat that is variously quoted as having undergone a decline of more than 95% over the last 60 years or so. The diversity lacks a number of characteristic indicators of high quality meadow (or are present in very low numbers). However the presence of butterfly-orchid is of note and it is a (wider) Renfrewshire LBAP species.

In isolation the fields may not meet LNCS criteria on purely vegetation quality or rare or notable species. There is some merit in its lowland location (i.e. most lowland grasslands have been lost or damaged) and its value to the local community as an experience of nature. The marshy areas add value but lack high quality features (as found at nearby Planetreeyetts).

3.10 Site 16 Stable Wood, Kilmacolm Grid reference: NS 34857 70804 Date: 28/09/2017

Introduction

The site is a small area of woodland, scrub and tall herb vegetation occurring at the site of the former Auchenbothie House. It is located on the sloping western side, extending down to the road. New housing has been constructed in the upper section. Access is difficult to some areas due to private housing, and the vegetation at these places is somewhat mixed and often difficult to code or map (e.g. mosaics of scrub and relic planting, tall herbs and also garden areas). The habitat map includes some of these areas outside the precise survey boundary. The southern part of the site was shown as broad-leaved plantation in the 1992 Inverclyde survey (although the base OS map used shows it as a conifer plantation), but the northwestern part (to both sides of the entrance track) is shown as semi-improved neutral grassland, with some scattered trees or scrub. A target note describes the area to the north of the old entrance as "Mature silver birch and beech; badly undergrazed"; to the south of the entrance is a longer target note which notes wet tussocky grassland as well as birches and beech in the wooded part. A rather long target note described the habitat mosaic about the derelict house (before the new build and scrub expansion) with mention of some open habitat.

The following report includes general descriptions of the habitats present, including target notes and species lists for the vascular plants with notes on other groups and fauna.

Habitat Summary

The site is mostly wooded comprising some mixed planting near the housing (including various exotic shrubs), mature policy type trees mainly beech or sycamore (some lining tracks or boundaries) and younger semi-natural woodland. The latter consists of mostly immature sycamore with birch and beech over much broad buckler-fern (*Dryopteris dilatata*) with more local bramble (*Rubus fruticosus* agg.), wood sorrel (*Oxalis acetosella*), dog-violet (*Viola riviniana*), male fern (*Dryopteris filix-mas*), rare bluebell (presumed to be *Hyacinthoides non-scripta*) and mosses include much *Kindbergia praelonga*.

There is much scrub elsewhere at the site, notably about the old walled garden and other ruins, where there are stands of tall herbs or dense bramble plus regenerating scrub (willow, birch, sycamore etc.).

Grassland is absent except for narrowly along the now informal path along the entrance track and there is some mown amenity grassland along the roadside.



Figure 10. 016 Stable Wood habitat map

Species Diversity

Flora

The site supports a limited range of species, but the total is increased by the various marginal habitats including the weedy elements by the roadside (107 species were recorded during the current visit, but this includes marginal area outside survey boundary). The woodlands are immature, acidic and with few old woodland indicators in the immediate survey area.

The small pool supports a few wetland species including exotics such as skunk cabbage (*Lysichiton americanus*) and the highly invasive swamp stonecrop (*Crassula helmsii*). Other troublesome invasives include much rhododendron below the housing.

The roadside strip (outside the survey boundary) supports a small population of the local rarity field madder (*Sherardia arvensis*), first reported in 1998, and at one of only two known sites in the old county of Renfrewshire; it has always appeared to be rare in the county, although being small it is likely to be overlooked.

Fauna

Birds

A mature woodland with the potential to hold a good selection of nesting woodland bird species.

Species	Description	Conservation Status
Sparrowhawk	One bird hunting over site.	
Accipiter nisus		
Buzzard	One bird flying over site.	
Buteo buteo		
Woodpigeon	Small numbers flying over and perched in trees.	
Columba palumbus		
Tawny Owl	One singing in woodland during bat survey.	Amber listed
Strix aluco		
Great Spotted	One bird flying over and perching in trees.	
Woodpecker		
Dendrocopos major		
Goldcrest	Occasional birds foraging in trees.	
Regulus regulus		
Blue Tit	Small groups and occasional individuals foraging in	
Cyanistes caeruleus	trees.	
Great Tit	Feeding in woodland.	
Parus major		
Wren	Occasional in woodland and tall vegetation.	
Troglodytes troglodytes		
Song Thrush	One bird flying through trees.	Priority species, UK BAP
Turdus philomelos		Scottish Biodiversity List
		Red-listed
Robin	Common along the woodland edge and in scrub.	Scottish Biodiversity List
Erithacus rubecula		
Pied Wagtail	Small group flying over site.	
Motacilla alba		
Chaffinch	Occasional birds calling from woodland edge and	
Fringilla coelebs	scrub.	

Table 20. Bird species of Stable Wood

Mammals

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Soprano Pipistrelle and Brown Long-eared bats were recorded using the site. There are several old outbuildings, mature trees and standing deadwood that have potential for supporting bat roosts. In the west of the site a combination of scattered mature trees within more open grasslands and scrub gives habitat suitable for the Noctule bat *Nyctalis noctula*, though none were detected during survey. There was evidence of Fox, Grey Squirrel and Roe Deer using the wood.

Species/Groups	Nature Conservation Evaluation	Comments
Bats (<i>Pipistrellus</i> and <i>Plecotus</i>)		Soprano Pipistrelle and Brown Long-eared bats were recorded during bat survey. Old buildings, mature and dead trees provide much roosting potential.
Grey Squirrel		One animal observed on tree.
Roe Deer	Scottish Biodiversity List	One animal seen in woodland.
Fox		Fox droppings found.

Table 21. Conservation status of faunal species

Nature Conservation Interest

See Confidential Annex. The strict survey site alone is small and of limited nature conservation interest at the county level, the site is of value for bats, both foraging and as potential roost trees. The wider woodlands are mostly immature but with a developing canopy, which includes much sycamore, but there are indications of a potential oak-birch type woodland (NVC W11) developing (with management intervention). The latter occurs to the south and east at the old Auchenbothie Wood, where there are bluebells and some oak, although in general the diversity even there is apparently limited (but there is little recent survey data). The narrow roadside woodland areas could be considered as part of a larger seminatural woodland extending from the Auchenbothie Wood (part of a larger woodland LNCS) in the north; any further developments here could provide a stimulus for more sympathetic woodland management.

4. Nature Conservation Interest and Assessments

4.1 Nature Conservation Summary

The results from the field surveys, supported by other available records and baseline data from the 1992 Inverclyde Habitat Survey, have been used to assess the ten sites for their existing nature conservation interest, and in particular whether the sites could qualify for designation as an LNCS.

Nine of the sites are situated on the urban fringes of Kilmacolm, four large sites to the south, four smaller ones to the north and one in the northwest; an outlier site occurs on the southern fringe of the Quarriers Village. All but one of the sites has been subject to a long history of agricultural usage. In a number of cases that accounts for the majority of the land surveyed. Over the last 60 years or so the intensity of agricultural management has increased resulting in often severe changes to the land, usually to the detriment of any natural or semi-natural habitat present. Wetlands have been drained or enriched by nutrient run-off, woodlands felled, grazed or planted with non native trees and grasslands heavily fertilised, over-grazed or ploughed and reseeded.

As a result of the many years of agricultural improvement the open grasslands, which comprise the bulk of the land use at most sites, is now of a low nature conservation interest. This view is supported by the Inverclyde Survey in 1992, which showed most of the sites to be improved 25 years ago, but for a few (e.g. Knapps Loch and by the Gryfe Water – Milton Wood site) there appears to be have been an increase in intensification of agricultural treatment (mainly enrichment and heavy grazing) in more recent times.

At several of the sites there are a few low ridges that still support some species indicative of former less improved grasslands. Two sites (Migdale and West Quarry) do support some relatively unimproved grassland. Migdale is relatively small site, and difficult to assess fully due to a very recent and short hay cut. Its overall herb diversity seems to be quite low but there is one species recorded which appears to be of high local interest. West Quarry supports a few species that are indicators of old grassland, but only locally, and often in low numbers. This conservation interest may reflect some recovery due to currently less intensive management but there is equally some concern over a current lack of a sympathetic grazing regime.

At most sites the habitat, and plant diversity, interest is now mostly centred on a few small marginal habitats, usually scrubby ridges or marshy hollows too difficult to drain and to which stock have limited access (although some light grazing is likely beneficial). The scrub can be a valuable resource for fauna utilising the rest of the site and neighbouring land. It provides shelter and foraging opportunities for mammals, birds and invertebrates and can support Badger setts and offer nesting habitat for important songbirds such as Linnet, Song Thrush and Yellowhammer.

The often marginal marsh or related wetlands can support a good range of typical wetland species, and include some uncommon or rare species as at the Police Station Field (by the Gryfe Water), West Glen, Knapps Loch (margin), the ARP Field (north end), West Quarry and Planetreeyetts sites. Planetreeyetts is of considerable interest due to the adjacent relic basin mire. The marsh habitat can support significant songbirds such as reed bunting, sedge warbler and grasshopper warbler, and amphibians which can also provide foraging opportunities for Otter.

Mature semi-natural woodland is not well represented at most of the survey sites but forms a major part of the Police Station Field site (i.e. Milton Wood – part of an existing LNCS) and of Stables Wood. At neither site can the woodland be described as ancient, but they are long established and semi-natural (mainly), but both lack a number of floristic indicators of ancient woodlands. Local trees or scrub provide some additional diversity at several other sites (e.g. Planetreeyetts, West Glen, Knapps Loch and Migdale). At Planetreeyetts there is very small area of diverse willow carr (wet woodland). Woodland and scrub give important shelter, breeding and foraging opportunities for all faunal groups. Badger setts most often are located in woodland and various species of bat use crevices, cracks and holes in older trees for roosting and sometimes as breeding nurseries. Active Badger setts were found and trees with features suitable for roosting by bats were identified during the faunal survey visits.

4.2 Site Assessments and Recommendations

Site Assessments and Recommendations

The assessment scores of the ten sites using Method 1 - the SNH (ED) methodology (Appendix 1) are shown in Table 22. The table shows all the 10 sites scored by each criterion. There is always a degree of caution needed over scoring but local knowledge of habitat and species in the local area has allowed from some

measure of confidence and robustness in the data. It should also be noted that many of the larger sites have large areas of relatively limited interest but there are local areas of higher interest, which can be diluted by the scale of the site; their location as marginal features adjacent to other nearby habitats or occurrence in local clusters can give weight to their value.

				Police						
Site	Carse	ND	Knapp	St Fld	ARP	West	Mig	Stable	WQ	Plane
	001	002	003	009	010	011	012	016	014	015
Rarity of Habitats	0	0	1	2	1	1	2	1	2	2
Diversity of Species	1	1	2	2	1	2	1	1	2	2
Rarity of Species	3	3	3	3	3	3	3	3	1	3
Habitat Naturalness	0	1	1	2	1	1	1	1	1	2
Habitat Extent	0	0	0	1	0	0	0	0	1	2
Connectivity	2	2	2	4	2	2	2	3	2	2
TOTAL	6	7	9	14	8	9	9	9	9	13

 Table 22. Scoring Using Method 1.

Using the scoring system of the methodology (0 to 19) it can be seen that none of the sites are in the category of "in a very poor condition" and considered too low to qualify as an individual LNCS. However three of the sites, Carsemeadow, North Denniston and the ARP Field are considered to be in poor condition. Seven of the sites score high enough to be considered as to be in moderate to good condition (one of these is already an LNCS), Knapps, the Police Station Field, West Glen Road, Migdale, Stables Wood, West Quarry Road, Stable Wood and Planetreeyetts.

The scoring using <u>Method 2</u>, used by Glasgow and North Ayrshire Councils, is shown below in Table 24. The sites scoring lowest, below 400 are Carsemeadow, North Denniston, the ARP Field, West Glen Road, Stables Wood and West Quarry Road. Migdale scored between 400 and 500, the Knapps and the Police Station Field scoring over 500 and Planetreeyetts scoring the highest with 840.

Table 23 combines both methods.

Table 23. Total scores Method 1 and Method 2.

				Police						
Site	Carse	ND	Knapps	St Fld	ARP	West	Mig	Stable	WQ	PlaneTY
	001	002	003	009	010	011	012	016	014	015
Method 1 Totals	6	7	9	14	8	9	9	9	9	13
Method 2 Totals	340	160	500	600	340	350	440	340	380	840

Table 24. Scoring using Method 2	Site	Carse	ND	Knapps	Police St Fld	ARP	West	Mig	Stable	WQ	Plane
Plants	Points										
At least one nationally scarce/rare plant species	100									100	
At least two Renfrewshire rarities	50 each				50		50	50			100
At least five plants uncommon in Inverclyde	20 each	0	20	60	60	0	40	0	20	40	100
An outstanding (<i>e.g.</i> the largest known) population of any one of the above species	100							100			
Mostly open habitats or mosaics - A species list of 150 or more vascular plants	100										
Mostly woodland - A species list of 100 or more vascular plants	100				100				100		
Site with nationally scarce/rare lower plants, lichen or fungi	100										
Site with locally important populations of lower plants, lichen or fungi	100										100
Invertebrates											
At least one nationally rare/scarce invertebrate	100										
At least two locally rare invertebrate species	50 each										
An outstanding example of an invertebrate community (<i>e.g.</i> 200 <i>Lepidoptera</i> , outstanding population of a locally uncommon species or significant list of invertebrates from any group - expert opinion acceptable)	100										
At least four locally uncommon butterfly/moth (Lepidoptera) species	25 each										
At least ten butterfly species (including migrants), at least seven of which regularly breed	100										
Vertebrates		Carse	ND	Knapps	Police St Fld	ARP	West	Mig	Stable	wq	Plane
At least one nationally rare/scarce fish species (Schedule 5 of Wildlife & Countryside Act 1981)	100										
At least one locally rare fish species or UK BAP Priority Species	100										
A community of seven or more freshwater fish species	100										

All four species of breeding amphibian (frog, toad, palmate newt, smooth newt)	25 each										
An outstanding (e.g. the largest known) population of any amphibian species	100										
Any species of reptile	100										
Any Schedule 1 bird species breeding or using site as part of its breeding territory	100	100		100						100	100
At least two breeding Red List Bird species	50 each	100		100	100	100	100				100
At least five non-breeding Red List Bird species	20 each										
At least ten Amber List Bird species	50										
At least 5% of the known Inverclyde Area breeding or non-breeding population of any bird species	100										
At least 10% of the known Inverclyde breeding or non-breeding population of any bird species	100										
A site list of 70 or more bird species	100										
An outstanding example (in terms of diversity or density) of any bird community	100										
At least one nationally rare/scarce mammal (Schedule 5 of Wildlife & Countryside Act 1981)	100	100	100	100	100	100	100	100	100		100
A protected structure of a mammal that is not Schedule 5 e.g. Badger sett	50							50	50		
An outstanding population of any mammal species	100										
Habitats		Carse	ND	Knapps	Police St Fld	ARP	West	Mig	Stable	wq	Plane
Ancient or Long Established Woodland, as per official inventory, >1 hectare with a bonus 50 if the wood is actually semi-natural	50-100				50				50		
Wet (Carr) Woodland (>1 hectare)	100										100
Mature and bushy Hedgerows (>200 metre)	100										
Unimproved / Species Rich Grassland (>0.5 hectare)	100							100		100	
Dwarf Shrub Heath (>0.25 hectare)	100										
Fen, Marsh or Swamp (>0.25 hectare)	100			100	100	100					100
Peat bog (>1ha)	100										

Sand-based habitat of any size with a bonus 50 for >1ha	50-100										
Open Water of any size with a bonus 50 for >1ha and bonus of 100 for >10ha	50-100										
River or Stream (Water Course) wider than 2m and longer than 100m	100										
Rock Exposure more than or equal to 500 sq m	100										
Saltmarsh/Mudflat of any size with bonus 100 for >1ha	100-200										
Miscellaneous		Carse	ND	Knapps	Police St Fld	ARP	West	Mig	Stable	wq	Plane
Continuity with a Site of Special Scientific Interest (SSSI).	20						20				
Any site in public, NGO or similar ownership which has outstanding potential to achieve, through effective conservation management, LNCS quality.	20										
Is used formally for environmental education.	20										
Is used by the local community.	20	20	20	20	20	20	20	20		20	20
Within a wildlife corridor or linked to other LNCSs.	20	20	20	20	20	20	20	20	20	20	20
Total		340	160	500	600	340	350	440	340	380	840

4.3 Potential LNCSs

Using the two scoring methods above, there are still difficulties in deciding on thresholds and therefore which sites should have LNCS designation and those that should not. In all of them there were areas with great wildlife interest but also with sections of very low value. They also had adjacent areas with wildlife interest. Therefore the following section proposes altering the boundaries of the ten sites by including adjacent areas of wildlife interest and therefore suggests potential areas for designation as LNCSs.

The site at the Quarriers Village (Carsemeadow) and four of the sites on the fringe of Kilmacolm (North Denniston, Knapps Loch and the ARP Field, and in the northeast West Glen) are largely intensively managed agricultural land, which diminishes their potential as wildlife site designation, but there is some marginal interest at several, notably local wetlands, grassy ridges or scrub patches.

001 Carsemeadow has very little habitat or floristic interest but the site is of value as foraging for bats, related to boundary trees, some of which have roost potential. This site struggles to meet the criteria for LNCS designation.

002 North Denniston is intensively managed and thus of low habitat or botanical interest, unless changes in management were to be introduced, that could encourage breeding birds (such as Skylark) or wintering geese flocks this site too struggles to meet LNCS criteria. There are only a few small or marginal features noted, which provide some floristic interest and potential for fauna.

003 Knapps Loch is largely pasture but appears to have lost some of the interest previously noted, but some local ridges and wetter hollows retain some interest. The northern field, which supports a cluster of less intensely managed habitats, but of limited quality, could benefit from more sympathetic management, but it does not merit any designation in isolation and in its current condition as it is isolated. However it has value for foraging bats and Badgers. However, it is proposed that the southern wetland and adjacent scrubby ridges section is included and becomes part of the Knapps Loch LNCS. The proposed new LNCS boundary for Knapps Loch is shown on Figure 11.

010 ARP field is largely intensively managed grassland with very little botanical or habitat interest, although there could be potential for farmland birds with more sympathetic management. However the small section in the north supports some wetland interest and a few areas of less improved grassland, which given its proximity to the Gryfe Water (and adjacent LNCS at Mill Dam), provide a strong case for inclusion as part of a Gryfe Water corridor site, or perhaps as part of a broader Mill Dam LNCS. It would also make sense to extend this to the south and include the area adjacent to the Gryfe that is within the **009 Police Station Field** survey area. Some of the less diverse pasture away from the immediate Gryfe corridor and similar pasture to the east of the woodland, except for the high ridge grazed birch woodland and adjacent relatively unimproved grassland in the centre of this strip are of low nature conservation interest. The proposed LNCS boundary is shown on Figure 12.

009 Police Station Field survey site supports a substantial area of well developed woodland, but also includes a section of the Gryfe Water habitat corridor, producing a combined site of high interest. It is suggested this remains part of the existing Duchal Wood LNCS.

011 West Glen has large areas of low diversity pasture but there is a cluster of habitats in the southern portion which help to increase the overall species diversity and the proximity to Glen Moss enhances the site's potential, but again sympathetic management is needed. However it is hard to justify any designation given its current condition, but any development here should try to retain and enhance the interest of the southern section. The southern section could perhaps become an extension of the existing Overton Grassland LNCS (although divided by an area of woodland). There is some conservation value in its proximity to Glen Moss SSSI and this should be acknowledged. However this site has not been proposed as an LNCS.

016 Stables Wood is small and somewhat mixed site, but with little evidence of it being old woodland. In isolation it does not merit consideration, but it is contiguous with woodlands linked to the Auchenbothie Wood LNCS. There is good bat foraging habitat and potential roost trees. Therefore there is potential for retention of parts and sympathetic woodland management during any developments. It is proposed it becomes part of the existing Auchenbothie Burn/Windmill Wood/Auchenbothie Wood LNCS. It is also proposed that the adjacent Craigmarloch Marsh is included within this boundary. This sedge bed, rushy area and marshy fields have breeding Water Rail, Reed Bunting, Sedge Warbler, Grasshopper Warbler and Lapwing. When flooded in winter Whooper Swans and other wildfowl have been recorded using it. The proposed LNCS boundary is shown on Figure 13.

To the northern edge of Kilmacolm there are three sites (roughly contiguous) which have been agriculturally managed but in parts at least have been less intensively managed and retain some features of interest.

012 Migdale is a very small site on sloping ground, which is hard to score highly in isolation. It does have some indicators of relatively unimproved lowland meadow, which is now a very rare sight locally (or nationally), and there is one species record (field scabious) that is of high local significance. There is also the presence of an active Badger sett plus foraging for bats and potential roosts in the adjacent mature trees. It would be preferable to reassess this site in early summer but any future interest will be dependent on continuous sympathetic agricultural management. Any development in this area should take into account the active Badger sett.

015 Planetreeyetts includes a large low diversity, horse grazed pasture field along its eastern half, and the immediate land by the buildings is of low interest; these can be excluded from any site designation. However the marsh along itswestern boundary has considerable interest. This marshis contiguous with a marshy strip (with some scrub and grassland) surveyed as part of the West Quarry site. The Planetreeyetts and West Quarry sites are closely linked and to some extent complicated by adjacent contiguous land (broad strip field) that is not included within either site boundary (but is target noted), but is integral to assessing the nature conservation interest at both sites.

This mire adjacent to the site ('Spring Mire') is of very high quality, and part of a suite of such mires that are a feature of this part of the old county of Renfrewshire (e.g. Glen Moss, Shovelboard, Lawfield Dam and Dargarvel Glen – most of which are designated as SSSIs). It is a basin mire and when combined with the marshes included in parts of both of the two contiguous survey sites constitutes a site worthy of designation as an LNCS. The marshy strip extends slightly into a 'broad strip field' that is excluded from both surveys. At the western end of this strip field is a flushedslope of high diversity, but it is isolated by improved and poached pasture in the middle section of the field. It is recommended that the wetland areas have LNCS designation and the proposed site is shown on Figure 14.

014 The West Quarry site in isolation scored relatively low, in part due to a lack of fauna data. However it does have some localised features of conservation value but they occupy a small area relative to the large amounts of arable (ploughed) ground and more improved pasture within the site boundary. The large arable area in the north is of very little value for conservation but there is some interest in the relic area of (semi-improved) meadow grassland in the south east and this area has considerable potential for the restoration of a more diverse lowland meadow. Lowland meadow is a UK BAP priority habitat and its decline in the UK is well documented. Some species rich grasslands persist in Inverclyde but many are more acidic pastures and few are of the more neutral lowland type. Several relic lowland meadow species have survived, including the nationally rare and endangered greater butterfly-orchid and whorled caraway, a species with a very local distribution in Scotland. The site represents one of high potential for the restoration of a flower-rich meadow as it supports a reservoir of old grassland indicator species and the soil ecology will be more amenable to restoration contrasted with other sites used in grassland creation projects. The meadow relics along with the scrub and marshy grassland would be of value for local people who already appreciate the site and use it often.

It is proposed that a small wetland section of West Quarry is included in the proposed LNCS (at Planetreeeyetts) shown on Figure 14. The potential for enhancement has not been raised at any of the other sites, however it is of some significance at this site. With restoration efforts, and longer term sympathetic management, the core areas of relic grassland, and the adjacent marshy areas, could be considered as extensions to the proposed LNCS site comprising the western side of Planetreeyetts.

Figure 11. Proposed Knapps Loch LNCS (extended Knapps Loch SINC 20) The purple line shows the survey area and the red line shows the proposed LNCS.



Figure 12. Proposed ARP/Police Station Field/Gryfe LNCS



Figure 13. Proposed Burn/Windmill Wood/Auchenbothie Wood/Stables Wood/Craigmarloch Marsh LNCS



Figure 14. Proposed Planetreeyetts/Migdale/West Quarry Road LNCS



Appendix 1 Method 1 for LNCS Scoring

Habitat rarity. This factor refers to the rarity of a habitat within the national and local context.

Species diversity. This factor refers to the number of different species found on a site. A comparative assessment should be made of the number of species recorded against what might be expected to occur within the habitats present in that area.

Rarity of species

This is a measure determining species that are rare, endangered or vulnerable in the national or local context. These classifications are partly based on UKBAP, Scottish BAP and LBAPs. Whilst these lists do not determine rarity per se they recognise species that are either in decline or else of conservation concern. A scoring system is used for this element, where:

No rarities = 0 A few local rarities = 1 Many local rarities = 2 Nationally rare species present = 3

Habitat naturalness

This is a measure of the degree of current or historic human intervention. Unimproved habitats are generally rare in Scotland, although appreciation should be given to habitats such as quarries or bings, where habitats would not exist without the intervention of human activities. A scoring system exists for this element, although the case for wholly or partially artificial habitats can be made, where they represent rare habitats of local importance.

Wholly artificial = 0 Partially natural = 1 Mainly natural = 2 Known to be natural or semi-natural = 3

Habitat extent

This is a measure of the amount of habitat on the site relative to the total present in the local area. This allows the relative importance of the LNCS to be judged against similar habitats elsewhere in the locale. A scoring system is applied to this measure, taking a lead from the SNH guidance rather than the SWT criteria:

Less than 1% of this type of habitat in the local area = 0 1-4% of this type of habitat in the local area = 1 5-19% of this type or habitat in the local area = 2 >20% of this type of habitat in the local area = 3

Connectivity

This is a measure of the physical links between broadly similar habitats on the site and in the surrounding area. This measure allows the assessment for potential new links to be formed through off-site management to improve the connectivity. A scoring system is proposed for this element:

Unconnected to similar habitats with no potential to create links to habitats within 1km = 0 Unconnected to similar habitat with potential to create links to habitats within 1km = 1 Limited connection to similar habitat with no potential to create additional links to unconnected habitats within 1km = 2

Extensive connection to similar habitat within 1km or forming a key part of important network = 4

Assessment based on total score

Scoring 0/19 to 5/19: The site is in very poor condition and should no longer be classified as an LNCS. Alternatively, it may represent an important open space that could be managed for the benefit of the community. Such sites may be open spaces within inner cities that can be planted for community woodlands, or as wild flower meadows. Whilst these are likely to represent wholly artificial habitats for the foreseeable future, naturalisation may eventually lead to them becoming valuable islands for wildlife in the wider landscape.

Scoring 6/19 to 8/19: If the site is:

- seriously vulnerable to known threats,
- represents significant amenity or educational value, or
- if the site does or potentially could link similar habitats to create a mosaic of similarly vulnerable habitat.

The site is assessed to be in poor condition but should be subject to management to increase the condition of the site.

Scoring 9/19 to 15/19: The site is assessed to be in moderate or good condition, but should be subject to ongoing management where this is required to conserve the condition or improve it.

Scoring 16/19 or higher: The site is in very good condition. Management prescriptions may be considered to conserve the condition of the site, and it should be protected from negative impacts that may occur from neighbouring land use.

Appendix 2 Method 2 for LNCS Scoring- the Glasgow and North Ayrshire Method

	Plants	Points	Score
1	At least one nationally scarce/rare plant species	100	
2	At least two Inverclyde rarities	50 each	
3	At least five plants uncommon in Inverclyde	20 each	
4	An outstanding (<i>e.g.</i> the largest known) population of any one of the above species	100	
5	Mostly open habitats or mosaics - A species list of 150 or more vascular plants	100	
6	Mostly woodland - A species list of 100 or more vascular plants	100	
7	Site with nationally scarce/rare lower plants, lichen or fungi	100	
8	Site with locally important populations of lower plants, lichen or fungi	100	
	Invertebrates		
9	At least one nationally rare/scarce invertebrate	100	
10	At least two locally rare invertebrate species	50 each	
11	An outstanding example of an invertebrate community (<i>e.g.</i> 200 <i>Lepidoptera</i> , outstanding population of a locally uncommon species or significant list of	100	
	invertebrates from any group - expert opinion acceptable)		
12	At least four locally uncommon butterfly/moth (Lepidoptera) species	25 each	
13	At least ten butterfly species (including migrants), at least seven of which regularly breed	100	
	Vertebrates		
14	At least one nationally rare/scarce fish species (Schedule 5 of Wildlife & Countryside Act 1981)	100	
15	At least one locally rare fish species or UK BAP Priority Species	100	
16	A community of seven or more freshwater fish species	100	
17	All four species of breeding amphibian (frog, toad, palmate newt, smooth newt)	25 each	
18	An outstanding (<i>e.g.</i> the largest known) population of any amphibian species	100	
19	Any species of reptile	100	
20	Any Schedule 1 bird species breeding or using site as part of its breeding territory	100	
21	At least two breeding Red List Bird species	50 each	
22	At least five non-breeding Red List Bird species	20 each	1
23	At least ten Amber List Bird species	50	1
24	At least 5% of the known Inverclyde Area breeding or non-breeding population of any bird species	100	
25	At least 10% of the known Inverclyde breeding or non-breeding population of any	100	1
-	bird species		
26	A site list of 70 or more bird species	100	
27	An outstanding example (in terms of diversity or density) of any bird community	100	
28	At least one nationally rare/scarce mammal (Schedule 5 of Wildlife & Countryside Act 1981)	100	
	A protected structure of a mammal that is not Schedule 5 e.g. Badger sett	50	
29	An outstanding population of any mammal species	100	

	Habitats		
30	Ancient or Long Established Woodland, as per official inventory, >1 hectare with a bonus 50 if the wood is actually semi-natural	50-100	
31	Wet (Carr) Woodland (>1 hectare)	100	
32	Mature and bushy Hedgerows (>200 metre)	100	
33	Unimproved / Species Rich Grassland (>0.5 hectare)	100	
34	Dwarf Shrub Heath (>0.25 hectare)	100	
35	Fen, Marsh or Swamp (>0.25 hectare)	100	
36	Peat bog (>1ha)	100	
37	Sand-based habitat of any size with a bonus 50 for >1ha	50-100	
38	Open Water of any size with a bonus 50 for >1ha and bonus of 100 for >10ha	50-100	
39	River or Stream (Water Course) wider than 2m and longer than 100m	100	
40	Rock Exposure more than or equal to 500 sq m	100	
41	Saltmarsh/Mudflat of any size with bonus 100 for >1ha	100-200	
	Miscellaneous		
42	Continuity with a Site of Special Scientific Interest (SSSI).	20	
43	Any site in public, NGO or similar ownership which has outstanding potential to achieve, through effective conservation management, LNCS quality.	20	
44	Is used formally for environmental education.	20	
45	Is used by the local community.	20	
46	Within a wildlife corridor and linked to other LNCSs.	20	
	Total		

Appendix 3 Species Plant Lists

Species list for 001 Carsemeadow

Species Name	Common name
Achillea millefolium	Yarrow
Acer pseudoplatanus	Sycamore
Achillea ptarmica	Sneezewort
Aegopodium podagraria	Ground-elder
Aesculus hippocastanum	Horse-chestnut
Agrostis capillaris	Common Bent
Agrostis stolonifera	Creeping Bent
Angelica sylvestris	Wild Angelica
Anthoxanthum odoratum	Sweet Vernal-grass
Anthriscus sylvestris	Cow Parsley
Arrhenatherum elatius	False Oat-Grass
Aster novi-belgii	Confused Michaelmas-daisy
Atriplex prostrata	Spear-leaved Orache
Bellis perennis	Daisy
Betula pendula	Silver Birch
Callitriche stagnalis sens. lat.	Common Water-starwort
Cardamine pratensis	Cuckooflower
Carex rostrata	Bottle Sedge
Carpinus betulus	Hornbeam
Centaurea nigra	Common Knapweed
Cerastium fontanum	Common Mouse-ear
Cerastium glomeratum	Sticky Mouse-ear
Chamerion angustifolium	Rosebay Willowherb
Cirsium arvense	Creeping Thistle
Crataegus monogyna	Hawthorn
Crocosmia x crocosmiiflora	Montbretia (C. aurea x pottsii)
Dactylis glomerata	Cock's-foot
Deschampsia cespitosa	Tufted Hair-grass
Digitalis purpurea	Foxglove
Dryopteris dilatata	Broad Buckler-fern
Dryopteris filix-mas	Male-fern
Elytrigia repens agg.	Couch-grass
	American Willowherb
Epilobium ciliatum Epilobium montanum	Broad-leaved Willowherb
Epilobium montanum	Field Horsetail
Equisetum arvense	
Festuca rubra agg. Filia an dula sular min	Red Fescue
Filipendula ulmaria	Meadowsweet
Fraxinus excelsior	Ash
Galium aparine	Cleavers
Galium palustre	Marsh-bedstraw
Geranium robertianum	Herb-Robert
Geranium x oxonianum	Druce's Crane's-bill
Geum urbanum	Wood Avens
Glyceria fluitans	Floating Sweet-grass
Gnaphalium uliginosum	Marsh Cudweed
Heracleum sphondylium	Hogweed
Holcus lanatus	Yorkshire-fog
Holcus mollis	Creeping Soft-grass
Ilex aquifolium	Holly
Iris pseudacorus	Yellow Iris

Juncus articulatus Juncus bufonius Juncus effusus Lamiastrum galeobdolon subsp. argentatum Lamium maculatum Lathyrus pratensis Lemna minor Lolium perenne Lotus pedunculatus Malus sylvestris Matricaria discoidea Meconopsis cambrica Persicaria maculosa Phleum pratense sens. lat. Pinus sylvestris Plantago lanceolata Plantago major Poa annua Poa trivialis Polypodium vulgare Potentilla anserina Prunella vulgaris Ranunculus acris Ranunculus repens Rhododendron ponticum Rosa caesia subsp. vosagiaca Rubus fruticosus agg. Rubus idaeus Rumex acetosa Rumex crispus Rumex obtusifolius Sagina procumbens Salix caprea Scrophularia nodosa Senecio jacobaea Silene dioica Solanum dulcamara Sonchus arvensis Sonchus asper Sorbus aucuparia Stellaria alsine Stellaria graminea Stellaria media Taraxacum agg. Tilia x europaea Trifolium pratense Trifolium repens Tripleurospermum inodorum Urtica dioica Veronica arvensis Veronica serpyllifolia Vicia cracca

Jointed Rush Toad Rush Soft-rush Garden Yellow-archangel Spotted Dead-nettle Meadow Vetchling **Common Duckweed** Perennial Rye-grass Greater Bird's-foot-trefoil Crab Apple Pineappleweed Welsh Poppy Redshank Timothy Scots Pine **Ribwort Plantain Greater Plantain** Annual Meadow-grass Rough Meadow-grass Polypody Silverweed Selfheal Meadow Buttercup **Creeping Buttercup** Rhododendron **Glaucous Dog-rose** Bramble Raspberry **Common Sorrel Curled Dock** Broad-leaved Dock **Procumbent Pearlwort** Goat Willow **Common Figwort Common Ragwort Red Campion** Bittersweet Perennial Sow-thistle Prickly Sow-thistle Rowan **Bog Stitchwort** Lesser Stitchwort **Common Chickweed** Dandelion Lime **Red Clover** White Clover Scentless Mayweed **Common Nettle** Wall Speedwell **Thyme-leaved Speedwell Tufted Vetch**

Species list for 002 North Denniston

Species Name	Common name
Acer pseudoplatanus	Sycamore
Achillea millefolium	Yarrow
Agrostis capillaris	Common Bent
Agrostis stolonifera	Creeping Bent
Alnus incana	Grey Alder
Alopecurus geniculatus	Marsh Foxtail
Angelica sylvestris	Wild Angelica
Anthriscus sylvestris	Cow Parsley
Arrhenatherum elatius	False Oat-Grass
Athyrium filix-femina	Lady-fern
Betula pendula	Silver Birch
Callitriche stagnalis sens. lat.	Common Water-starwort
Calystegia silvatica	Large Bindweed
Campanula rotundifolia	Harebell
Cardamine pratensis	Cuckooflower
Carex rostrata	Bottle Sedge
Centaurea nigra	Common Knapweed
Cerastium fontanum	Common Mouse-ear
Cerastium glomeratum	Sticky Mouse-ear
Chamerion angustifolium	Rosebay Willowherb
Cirsium arvense	Creeping Thistle
Crataegus monogyna	Hawthorn
Cytisus scoparius	Broom
Deschampsia cespitosa	Tufted Hair-grass
Digitalis purpurea	Foxglove
Eleocharis palustris	Common Spike-rush
Elytrigia repens agg.	Couch-grass
Epilobium ciliatum	American Willowherb
Epilobium montanum	Broad-leaved Willowherb
Epilobium obscurum	Short-fruited Willowherb
Fagus sylvatica	Beech
Festuca rubra agg.	Red Fescue
	Meadowsweet
Filipendula ulmaria	Cleavers
Galium aparine	Marsh-bedstraw
Galium palustre Geranium robertianum	Herb-Robert
Glyceria declinata	Small Sweet-grass
Glyceria fluitans	Floating Sweet-grass
Gnaphalium uliginosum	Marsh Cudweed
Heracleum sphondylium	Hogweed
Holcus lanatus	Yorkshire-fog
Holcus mollis	Creeping Soft-grass
Hypochaeris radicata	Cat's-ear
Iris pseudacorus	Yellow Iris
Juncus articulatus	Jointed Rush
Juncus bufonius	Toad Rush
Juncus effusus	Soft-rush
Lathyrus pratensis	Meadow Vetchling
Lathyrus pratensis	Meadow Vetchling
Lotus pedunculatus	Greater Bird's-foot-trefoil

Mentha aquatica Montia fontana Myosotis scorpioides Nasturtium officinale agg. Oenanthe crocata Persicaria hydropiper Persicaria maculosa Phleum pratense Plantago lanceolata Plantago major Potentilla anserina Potentilla erecta Pteridium aquilinum Quercus robur Ranunculus acris Rosa caesia subsp. vosagiaca Rubus fruticosus agg. Rubus idaeus Rumex acetosa Salix caprea Salix cinerea subsp. oleifolia Senecio jacobaea Silene dioica Solanum dulcamara Sorbus aucuparia Sparganium erectum Stellaria alsine Stellaria graminea Succisa pratensis Taraxacum agg. Trifolium dubium Trifolium pratense Trifolium repens Ulex europaeus Urtica dioica Veronica chamaedrys Vicia cracca

Water Mint Blinks Water Forget-me-not Water-cress Hemlock Water-dropwort Water-pepper Redshank Timothy **Ribwort Plantain Greater Plantain** Silverweed Tormentil Bracken Pedunculate Oak Meadow Buttercup **Glaucous Dog-rose** Bramble Raspberry **Common Sorrel** Goat Willow **Rusty Willow** Common Ragwort **Red Campion** Bittersweet Rowan Branched Bur-reed **Bog Stitchwort** Lesser Stitchwort Devil's-bit Scabious Dandelion Lesser Trefoil **Red Clover** White Clover Gorse **Common Nettle Germander Speedwell Tufted Vetch**

Species list for 003 Knapps Loch

Species Name	Common name
Acer pseudoplatanus	Sycamore
Achillea millefolium	Yarrow
Agrostis capillaris	Common Bent
Agrostis stolonifera	Creeping Bent
Alchemilla glabra	Smooth Lady's-mantle
Angelica sylvestris	Wild Angelica
Anthoxanthum odoratum	Sweet Vernal-grass
Arrhenatherum elatius	False Oat-Grass
Athyrium filix-femina	Lady-fern
Bellis perennis	Daisy
Callitriche stagnalis sens. lat.	Common Water-starwort
Caltha palustris	Marsh-marigold
, Campanula rotundifolia	Harebell
Cardamine flexuosa	Wavy Bitter-cress
Cardamine pratensis	Cuckooflower
Carex rostrata	Bottle Sedge
Centaurea nigra	Common Knapweed
Cerastium fontanum	Common Mouse-ear
Cerastium glomeratum	Sticky Mouse-ear
Chamerion angustifolium	Rosebay Willowherb
Cirsium arvense	Creeping Thistle
Cirsium palustre	Marsh Thistle
Comarum palustre	Marsh Cinquefoil
Crataegus monogyna	Hawthorn
Crocosmia x crocosmiiflora	Montbretia (C. aurea x pottsii)
Cynosurus cristatus	Crested Dog's-tail
Cytisus scoparius	Broom
Dactylis glomerata	Cock's-foot
Deschampsia cespitosa	Tufted Hair-grass
	Foxglove
Digitalis purpurea	Broad Buckler-fern
Dryopteris dilatata	Male-fern
Dryopteris filix-mas	
Epilobium ciliatum	American Willowherb
Epilobium obscurum	Short-fruited Willowherb
Euphrasia agg.	Eyebright
Fallopia japonica	Japanese Knotweed
Festuca rubra agg.	Red Fescue
Filipendula ulmaria	Meadowsweet
Fraxinus excelsior	Ash
Galium palustre	Marsh-bedstraw
Galium verum	Lady's Bedstraw
Glyceria declinata	Small Sweet-grass
Glyceria fluitans	Floating Sweet-grass
Gnaphalium uliginosum	Marsh Cudweed
Holcus lanatus	Yorkshire-fog
Holcus mollis	Creeping Soft-grass
	Square-stalked St John's-wort
Hypericum tetrapterum	•
Hypericum tetrapterum Hypochaeris radicata	Cat's-ear
	•

Juncus acutiflorus Juncus articulatus Juncus bufonius Juncus effusus Lathyrus pratensis Lolium perenne Lotus corniculatus Lotus pedunculatus Luzula campestris Matricaria discoidea Mentha aquatica Myosotis laxa Myosotis scorpioides Nasturtium x sterile Oenanthe crocata Persicaria maculosa Pinus sylvestris Plantago lanceolata Plantago major Poa annua Potamogeton polygonifolius Potentilla anserina Prunella vulaaris Prunus avium Prunus spinosa Pteridium aquilinum Ranunculus acris Ranunculus flammula Ranunculus hederaceus Ranunculus repens Rubus fruticosus agg. Rubus idaeus Rumex acetosa Rumex acetosella Rumex crispus Rumex obtusifolius Sagina procumbens Salix cinerea subsp. oleifolia Schedonorus arundinaceus Senecio aquaticus Senecio jacobaea Silene flos-cuculi Sorbus aucuparia Stellaria alsine Stellaria media Taraxacum agg. Trifolium repens Ulex europaeus Urtica dioica Veronica beccabunga Veronica chamaedrys Veronica serpyllifolia

Sharp-flowered Rush Jointed Rush Toad Rush Soft-rush Meadow Vetchling Perennial Rye-grass Common Bird's-foot-trefoil Greater Bird's-foot-trefoil Field Wood-rush Pineappleweed Water Mint Tufted Forget-me-not Water Forget-me-not N. officinale x microphyllum Hemlock Water-dropwort Redshank Scots Pine **Ribwort Plantain Greater Plantain** Annual Meadow-grass **Bog Pondweed** Silverweed Selfheal Wild Cherry Blackthorn Bracken Meadow Buttercup Lesser Spearwort Ivy-leaved Crowfoot **Creeping Buttercup** Bramble Raspberry **Common Sorrel** Sheep's Sorrel **Curled Dock** Broad-leaved Dock **Procumbent Pearlwort Rusty Willow Tall Fescue** Marsh Ragwort **Common Ragwort** Ragged-Robin Rowan **Bog Stitchwort Common Chickweed** Dandelion White Clover Gorse **Common Nettle** Brooklime Germander Speedwell Thyme-leaved Speedwell

Species list for 009 Police Station Field and Milton Wood

Species Name	Common name
Achillea millefolium	Yarrow
Achillea ptarmica	Sneezewort
Aegopodium podagraria	Ground-elder
Agrostis capillaris	Common Bent
Agrostis stolonifera	Creeping Bent
Ajuga reptans	Bugle
Alnus glutinosa	Alder
Angelica sylvestris	Wild Angelica
Anthriscus sylvestris	Cow Parsley
Arrhenatherum elatius	False Oat-Grass
Athyrium filix-femina	Lady-fern
Bellis perennis	Daisy
, Caltha palustris	Marsh-marigold
Cardamine pratensis	Cuckooflower
Carex aquatilis	Water Sedge
Carex paniculata	Greater Tussock-sedge
Carex rostrata	Bottle Sedge
Centaurea montana	Perennial Cornflower
Chrysosplenium oppositifolium	Opposite-leaved Golden-saxifrage
Cirsium arvense	Creeping Thistle
Cirsium palustre	Marsh Thistle
Comarum palustre	Marsh Cinquefoil
Crocosmia paniculata	Aunt-Eliza
Crocosmia x crocosmiiflora	Montbretia (C. aurea x pottsii)
Deschampsia cespitosa	Tufted Hair-grass
Epilobium obscurum	Short-fruited Willowherb
Equisetum fluviatile	Water Horsetail
Filipendula ulmaria	Meadowsweet
Galium palustre	Marsh-bedstraw
Geranium pratense	Meadow Crane's-bill
Glyceria declinata	Small Sweet-grass
•	Yellow Iris
Iris pseudacorus Iuncus acutiflorus	Sharp-flowered Rush
luncus acticulatus	Jointed Rush
	Soft-rush
Iuncus effusus Lemna minor	Common Duckweed
	Greater Bird's-foot-trefoil
Lotus pedunculatus	
Malus sylvestris	Crab Apple
Mentha aquatica	Water Mint
Myosotis scorpioides	Water Forget-me-not
Nasturtium x sterile	N. officinale x microphyllum
Oenanthe crocata	Hemlock Water-dropwort
Persicaria hydropiper	Water-pepper
Phalaris arundinacea Bile a dia a fiisia anna	Reed Canary-grass
Pilosella officinarum	Mouse-ear-hawkweed
Salix cinerea subsp. oleifolia	Rusty Willow
Senecio aquaticus	Marsh Ragwort
Silene flos-cuculi	Ragged-Robin
Stachys palustris	Marsh Woundwort
Stellaria alsine	Bog Stitchwort

Stellaria graminea Symphoricarpos x chenaultii Trifolium repens Urtica dioica Valeriana officinalis

Lesser Stitchwort Pink Snowberry White Clover Common Nettle Common Valerian

Species list for 010 The ARP Field

Species Name	Common name
Acer pseudoplatanus	Sycamore
Achillea millefolium	Yarrow
Achillea ptarmica	Sneezewort
Aegopodium podagraria	Ground-elder
Agrostis capillaris	Common Bent
Agrostis stolonifera	Creeping Bent
Alchemilla glabra	Smooth Lady's-mantle
Alnus glutinosa	Alder
Alopecurus geniculatus	Marsh Foxtail
Angelica sylvestris	Wild Angelica
Anthriscus sylvestris	Cow Parsley
Arrhenatherum elatius	False Oat-Grass
Athyrium filix-femina	Lady-fern
Bellis perennis	Daisy
Campanula rotundifolia	Harebell
Cardamine flexuosa	Wavy Bitter-cress
Cardamine pratensis	Cuckooflower
Carex rostrata	Bottle Sedge
Centaurea nigra	Common Knapweed
Cerastium fontanum	Common Mouse-ear
Cerastium glomeratum	Sticky Mouse-ear
Chamerion angustifolium	Rosebay Willowherb
Chrysosplenium oppositifolium	Opposite-leaved Golden-saxifrage
Cirsium arvense	Creeping Thistle
Cirsium palustre	Marsh Thistle
, Corylus avellana	Hazel
Crataegus monogyna	Hawthorn
Cynosurus cristatus	Crested Dog's-tail
Cytisus scoparius	Broom
Dactylis glomerata	Cock's-foot
Digitalis purpurea	Foxglove
Dryopteris dilatata	Broad Buckler-fern
Dryopteris filix-mas	Male-fern
Eleocharis palustris	Common Spike-rush
Elytrigia repens agg.	Couch-grass
Epilobium ciliatum	American Willowherb
Epilobium obscurum	Short-fruited Willowherb
Epilobium palustre	Marsh Willowherb
Equisetum fluviatile	Water Horsetail
Hypochaeris radicata	Cat's-ear
Ilex aquifolium	Holly
Iris pseudacorus	Yellow Iris
Juncus acutiflorus	Sharp-flowered Rush
Juncus bufonius	Toad Rush
Juncus effusus	Soft-rush
Lapsana communis	Nipplewort
Lathyrus pratensis	Meadow Vetchling
Lemna minor	Common Duckweed
Lolium perenne	Perennial Rye-grass
Lotus corniculatus	Common Bird's-foot-trefoil

Lotus pedunculatus Matricaria discoidea Mentha x verticillata Mercurialis perennis Mimulus agg. Montia fontana Myosotis scorpioides Nasturtium officinale agg. Persicaria maculosa Phalaris arundinacea Phleum pratense Pilosella officinarum Plantago lanceolata Plantago major Poa annua Poa trivialis Polygonum aviculare Polypodium vulgare Potentilla erecta Quercus robur Ranunculus acris Ranunculus flammula Ranunculus repens Rubus fruticosus agg. Rubus idaeus Rumex acetosa Rumex acetosella Rumex obtusifolius Sagina procumbens Salix cinerea subsp. oleifolia Sambucus nigra Scorzoneroides autumnalis Sedum anglicum Senecio jacobaea Silene dioica Sonchus asper Sparganium erectum Spergula arvensis Spiraea x pseudosalicifolia Stachys palustris Stellaria alsine Stellaria media Taraxacum agg. Torilis japonica Trifolium pratense Trifolium repens Tripleurospermum inodorum Ulmus glabra Urtica dioica Valeriana officinalis Veronica chamaedrys Vicia cracca

Greater Bird's-foot-trefoil Pineappleweed Whorled Mint Dog's Mercury Monkeyflower Blinks Water Forget-me-not Water-cress Redshank Reed Canary-grass Timothy Mouse-ear-hawkweed **Ribwort Plantain Greater Plantain** Annual Meadow-grass Rough Meadow-grass Knotgrass Polypody Tormentil Pedunculate Oak Meadow Buttercup Lesser Spearwort Creeping Buttercup Bramble Raspberry Common Sorrel Sheep's Sorrel **Broad-leaved Dock Procumbent Pearlwort Rusty Willow** Elder Autumn Hawkbit **English Stonecrop Common Ragwort Red Campion** Prickly Sow-thistle Branched Bur-reed **Corn Spurrey Confused Bridewort** Marsh Woundwort **Bog Stitchwort** Common Chickweed Dandelion **Upright Hedge-parsley Red Clover** White Clover Scentless Mayweed Wych Elm **Common Nettle Common Valerian** Germander Speedwell **Tufted Vetch**

Species list for 011 West Glen Road

Sycamore Yarrow Sneezewort Velvet Bent
Sneezewort
Velvet Bent
Common Bent
Creeping Bent
Wild Angelica
Sweet Vernal-grass
False Oat-Grass
Lady-fern
Daisy
Silver Birch
Downy Birch
Nodding Bur-marigold
Common Water-starwort
Marsh-marigold
Cuckooflower
Green-ribbed Sedge
Oval Sedge
Common Sedge
Carnation Sedge
Pendulous Sedge
Bottle Sedge
Whorled Caraway
Common Knapweed
Common Mouse-ear
Sticky Mouse-ear
Rosebay Willowherb
Creeping Thistle
Marsh Cinquefoil
Hawthorn
Montbretia (C. aurea x pottsii)
Crested Dog's-tail
Broom
Cock's-foot
Heath-grass
Tufted Hair-grass
Wavy Hair-grass
Foxglove
Broad Buckler-fern
Broad-leaved Willowherb
Short-fruited Willowherb
Marsh Willowherb
Field Horsetail
Water Horsetail
Beech
Sheep's-fescue
Red Fescue
Ash
Marsh-bedstraw

Galium saxatile Gaultheria mucronata Geranium x oxonianum Glyceria declinata Glyceria fluitans Gnaphalium uliginosum Hedera helix agg. Holcus lanatus Holcus mollis Ilex aquifolium Iris pseudacorus Juncus acutiflorus Juncus articulatus Juncus bufonius Juncus effusus Juncus squarrosus Lathyrus pratensis Lemna minor Lolium perenne Lotus pedunculatus Lythrum salicaria Mentha aquatica Montia fontana subsp. fontana Myrrhis odorata Nasturtium x sterile Persicaria maculosa Phalaris arundinacea Plantago lanceolata Plantago major Poa annua Poa trivialis Polygonatum x hybridum Potamogeton natans Potamogeton polygonifolius Potentilla erecta Prunella vulgaris Ranunculus acris Ranunculus repens Rhododendron ponticum Rubus fruticosus agg. Rubus idaeus Rumex acetosa Rumex acetosella Rumex crispus Rumex longifolius Rumex obtusifolius Salix cinerea subsp. oleifolia Sambucus nigra Scrophularia nodosa Sedum anglicum Senecio jacobaea Sorbus aucuparia Sparganium erectum

Heath Bedstraw **Prickly Heath** Druce's Crane's-bill Small Sweet-grass Floating Sweet-grass Marsh Cudweed lvy Yorkshire-fog **Creeping Soft-grass** Holly Yellow Iris Sharp-flowered Rush Jointed Rush **Toad Rush** Soft-rush Heath Rush Meadow Vetchling **Common Duckweed** Perennial Rye-grass Greater Bird's-foot-trefoil Purple-loosestrife Water Mint Blinks Sweet Cicely N. officinale x microphyllum Redshank Reed Canary-grass **Ribwort Plantain Greater Plantain** Annual Meadow-grass Rough Meadow-grass Garden Solomon's-seal **Broad-leaved Pondweed Bog Pondweed** Tormentil Selfheal Meadow Buttercup **Creeping Buttercup** Rhododendron Bramble Raspberry Common Sorrel Sheep's Sorrel **Curled Dock** Northern Dock Broad-leaved Dock **Rusty Willow** Elder **Common Figwort English Stonecrop Common Ragwort** Rowan Branched Bur-reed

Spiraea x pseudosalicifolia Stachys palustris Stellaria alsine Succisa pratensis Taraxacum agg. Trifolium pratense Trifolium repens Tussilago farfara Ulex europaeus Urtica dioica Veronica scutellata Veronica serpyllifolia Confused Bridewort Marsh Woundwort Bog Stitchwort Devil's-bit Scabious Dandelion Red Clover White Clover Colt's-foot Gorse Common Nettle Marsh Speedwell Thyme-leaved Speedwell

Species list for 012 Migdale

Species Name	Common name
Acer pseudoplatanus	Sycamore
Achillea millefolium	Yarrow
Aegopodium podagraria	Ground-elder
Aesculus hippocastanum	Horse-chestnut
Agrostis capillaris	Common Bent
Agrostis stolonifera	Creeping Bent
Alchemilla glabra	Smooth Lady's-mantle
Anthoxanthum odoratum	Sweet Vernal-grass
Anthriscus sylvestris	Cow Parsley
Arrhenatherum elatius	False Oat-Grass
Bellis perennis	Daisy
Centaurea nigra	Common Knapweed
Cerastium fontanum	Common Mouse-ear
Chamerion angustifolium	Rosebay Willowherb
Crataegus monogyna	Hawthorn
Cynosurus cristatus	Crested Dog's-tail
Cytisus scoparius	Broom
Dactylis glomerata	Cock's-foot
Digitalis purpurea	Foxglove
Dryopteris dilatata	Broad Buckler-fern
Dryopteris filix-mas	Male-fern
Epilobium montanum	Broad-leaved Willowherb
Fagus sylvatica	Beech
Festuca rubra agg.	Red Fescue
Fraxinus excelsior	Ash
Galium aparine	Cleavers
Galium saxatile	Heath Bedstraw
Heracleum sphondylium	Hogweed
Holcus lanatus	Yorkshire-fog
Holcus mollis	Creeping Soft-grass
Hyacinthoides non-scripta	Bluebell
Hypochaeris radicata	Cat's-ear
Juncus effusus	Soft-rush
Knautia arvensis	Field Scabious
Ligustrum vulgare	Wild Privet
Lotus pedunculatus	Greater Bird's-foot-trefoil
Plantago lanceolata	Ribwort Plantain
Poa pratensis sens. lat.	Smooth Meadow-grass
Polypodium vulgare	Polypody
Potentilla erecta	Tormentil
Prunella vulgaris	Selfheal
Quercus robur	Pedunculate Oak
Ranunculus acris	Meadow Buttercup
Ranunculus repens	Creeping Buttercup
Rhinanthus minor	Yellow-rattle
Rubus fruticosus agg.	Bramble
Rubus jruticosus agg. Rubus idaeus	Raspberry
Rumex acetosa	Common Sorrel
Rumex acetosa Rumex acetosella	Sheep's Sorrel
	Broad-leaved Dock
Rumex obtusifolius	

Sedum anglicum Senecio jacobaea Sorbus aucuparia Stellaria graminea Taraxacum agg. Teucrium scorodonia Tilia x europaea Trifolium repens Ulex europaeus Urtica dioica Veronica chamaedrys English Stonecrop Common Ragwort Rowan Lesser Stitchwort Dandelion Wood Sage Lime White Clover Gorse Common Nettle Germander Speedwell
Species list for 014 West Quarry

Species Name	Common name
Acer pseudoplatanus	Sycamore
Achillea millefolium	Yarrow
Achillea ptarmica	Sneezewort
Agrostis capillaris	Common Bent
Agrostis stolonifera	Creeping Bent
Agrostis vinealis	Brown Bent
Aira praecox	Early Hair-grass
Alchemilla glabra	Smooth Lady's-mantle
Anthoxanthum odoratum	Sweet Vernal-grass
Arrhenatherum elatius	False Oat-Grass
Asplenium ruta-muraria	Wall-rue
Asplenium trichomanes subsp. quadrivalens	Maidenhair Spleenwort
Athyrium filix-femina	Lady-fern
Bellis perennis	Daisy
Betula pendula	Silver Birch
Blechnum spicant	Hard-fern
Campanula rotundifolia	Harebell
Cardamine flexuosa	Wavy Bitter-cress
Cardamine hirsuta	Hairy Bitter-cress
Cardamine pratensis	Cuckooflower
Carex demissa	Common Yellow-sedge
Carex echinata	Star Sedge
Carex leporina	Oval Sedge
Carex nigra	Common Sedge
Carex panicea	Carnation Sedge
Carum verticillatum	Whorled Caraway
Centaurea nigra	Common Knapweed
Cerastium fontanum	Common Mouse-ear
Cerastium glomeratum	Sticky Mouse-ear
Chamerion angustifolium	Rosebay Willowherb
Cirsium arvense	Creeping Thistle
Cirsium palustre	Marsh Thistle
Comarum palustre	Marsh Cinquefoil
Crataegus monogyna	Hawthorn
Cymbalaria muralis	Ivy-leaved Toadflax
Cynosurus cristatus	Crested Dog's-tail
Cytisus scoparius	Broom
Dactylis glomerata	Cock's-foot
Dactylorhiza fuchsii	Common Spotted-orchid
Dactylorhiza purpurella	Northern Marsh-orchid
Deschampsia cespitosa	Tufted Hair-grass
Deschampsia flexuosa	Wavy Hair-grass
Digitalis purpurea	Foxglove
Dryopteris dilatata	Broad Buckler-fern
Dryopteris filix-mas	Male-fern
Epilobium ciliatum	American Willowherb Great Willowherb
Epilobium hirsutum Epilobium montanum	Broad-leaved Willowherb
Epilobium montanum Epilobium obscurum	Short-fruited Willowherb
Epilobium obscurum	
Euphrasia agg.	Eyebright

Fagus sylvatica Festuca ovina agg. Festuca rubra agg. Filipendula ulmaria Fraxinus excelsior Galanthus nivalis Galeopsis bifida Galium aparine Galium palustre Galium saxatile Galium verum Glyceria declinata Gnaphalium uliginosum Hedera helix Holcus lanatus Holcus mollis Hyacinthoides x massartiana Hypochaeris radicata Ilex aquifolium Juncus acutiflorus Juncus articulatus Juncus bufonius Juncus effusus Lathyrus pratensis Linaria vulgaris Lolium perenne Lotus pedunculatus Mentha aquatica Mimulus guttatus Molinia caerulea **Odontites vernus** Phleum pratense Pilosella aurantiaca subsp. carpathicola Plantago lanceolata Platanthera chlorantha Poa annua Poa humilis Polygonum aviculare agg. Polypodium vulgare Potentilla anserina Potentilla erecta Prunella vulgaris Pteridium aquilinum Quercus robur Ranunculus acris Ranunculus flammula Ranunculus hederaceus Ranunculus repens Rosa caesia subsp. vosagiaca Rubus fruticosus agg. Rubus idaeus Rumex acetosa Rumex acetosella

Beech Sheep's-fescue **Red Fescue** Meadowsweet Ash Snowdrop **Bifid Hemp-nettle** Cleavers Marsh-bedstraw Heath Bedstraw Lady's Bedstraw Small Sweet-grass Marsh Cudweed Common Ivy Yorkshire-fog Creeping Soft-grass Hybrid Bluebell Cat's-ear Holly Sharp-flowered Rush Jointed Rush Toad Rush Soft-rush Meadow Vetchling **Common Toadflax** Perennial Rye-grass Greater Bird's-foot-trefoil Water Mint Monkeyflower Purple Moor-grass **Red Bartsia** Timothy Fox-and-cubs **Ribwort Plantain** Greater Butterfly-orchid Annual Meadow-grass Spreading Meadow-grass Knotgrass Polypody Silverweed Tormentil Selfheal Bracken Pedunculate Oak Meadow Buttercup Lesser Spearwort Ivy-leaved Crowfoot Creeping Buttercup **Glaucous Dog-rose** Bramble Raspberry **Common Sorrel** Sheep's Sorrel

Inverclyde LNCS Assessment, Kilmacolm 2017

Rumex crispus Rumex obtusifolius Sagina procumbens Salix cinerea subsp. oleifolia Salix purpurea Sambucus nigra Scorzoneroides autumnalis Scrophularia nodosa Sedum anglicum Senecio aquaticus Senecio jacobaea Sonchus asper Sorbus aucuparia Stachys palustris Stellaria alsine Succisa pratensis Taraxacum agg. Trifolium pratense Trifolium repens Ulex europaeus Urtica dioica Vaccinium myrtillus Veronica beccabunga Veronica chamaedrys Vicia cracca Viola riviniana

Curled Dock **Broad-leaved Dock** Procumbent Pearlwort **Rusty Willow Purple Willow** Elder Autumn Hawkbit **Common Figwort English Stonecrop** Marsh Ragwort Common Ragwort Prickly Sow-thistle Rowan Marsh Woundwort **Bog Stitchwort** Devil's-bit Scabious Dandelion **Red Clover** White Clover Gorse **Common Nettle** Bilberry Brooklime **Germander Speedwell Tufted Vetch** Common Dog-violet

Species list for 015 Planetreeyetts

Species Name	Common name
Acer pseudoplatanus	Sycamore
Achillea millefolium	Yarrow
Agrostis canina	Velvet Bent
Agrostis capillaris	Common Bent
Agrostis stolonifera	Creeping Bent
Alchemilla glabra	Smooth Lady's-mantle
Anthoxanthum odoratum	Sweet Vernal-grass
Athyrium filix-femina	Lady-fern
Campanula rotundifolia	Harebell
Cardamine flexuosa	Wavy Bitter-cress
Cardamine pratensis	Cuckooflower
Carex canescens	White Sedge
Carex demissa	Common Yellow-sedge
Carex echinata	Star Sedge
Carex leporina	Oval Sedge
Carex nigra	Common Sedge
Carex panicea	Carnation Sedge
Carex rostrata	Bottle Sedge
Carum verticillatum	Whorled Caraway
Centaurea montana	Perennial Cornflower
Cirsium palustre	Marsh Thistle
Claytonia sibirica	Pink Purslane
Comarum palustre	Marsh Cinquefoil
Crataegus monogyna	Hawthorn
Cynosurus cristatus	Crested Dog's-tail
Deschampsia cespitosa	Tufted Hair-grass
Epilobium obscurum	Short-fruited Willowherb
Epilobium palustre	Marsh Willowherb
Equisetum fluviatile	Water Horsetail
Eriophorum angustifolium	Common Cottongrass
Faqus sylvatica	Beech
Festuca rubra agg.	Red Fescue
Filipendula ulmaria	Meadowsweet
Fraxinus excelsior	Ash
Galium palustre	Marsh-bedstraw
Geum urbanum	Wood Avens
Glyceria declinata	Small Sweet-grass
Glyceria fluitans	Floating Sweet-grass
Holcus lanatus	Yorkshire-fog
Hydrocotyle vulgaris	Marsh Pennywort
Hypochaeris radicata	Cat's-ear
llex aquifolium	Holly
Juncus acutiflorus	Sharp-flowered Rush
Juncus articulatus	Jointed Rush
Juncus conglomeratus	Compact Rush
Juncus effusus	Soft-rush
Lamiastrum galeobdolon subsp. argentatum	Garden Yellow-archangel
Lapsana communis	Nipplewort
Lolium perenne	Perennial Rye-grass
Lotus pedunculatus	Greater Bird's-foot-trefoil
Lotus peduliculutus	

Mentha aquatica Menyanthes trifoliata Myosotis scorpioides **Odontites vernus** Pedicularis palustris Persicaria maculosa Plantago lanceolata Plantago major Poa pratensis sens. lat. Potamogeton polygonifolius Potentilla anserina Potentilla erecta Prunella vulgaris Ranunculus acris Ranunculus flammula Ranunculus repens Rhinanthus minor Rosa caesia subsp. vosagiaca Rubus fruticosus agg. Rumex acetosa Rumex acetosella Rumex obtusifolius Salix alba Salix cinerea subsp. oleifolia Salix pentandra Salix purpurea Sedum anglicum Senecio jacobaea Silene flos-cuculi Sorbus aucuparia Stellaria alsine Stellaria graminea Succisa pratensis Trifolium repens Urtica dioica Veronica beccabunga Veronica serpyllifolia Viola palustris

Water Mint Bogbean Water Forget-me-not **Red Bartsia** Marsh Lousewort Redshank **Ribwort Plantain Greater Plantain** Smooth Meadow-grass **Bog Pondweed** Silverweed Tormentil Selfheal Meadow Buttercup Lesser Spearwort **Creeping Buttercup** Yellow-rattle **Glaucous Dog-rose** Bramble **Common Sorrel** Sheep's Sorrel Broad-leaved Dock White Willow **Rusty Willow Bay Willow Purple Willow English Stonecrop Common Ragwort** Ragged-Robin Rowan **Bog Stitchwort** Lesser Stitchwort **Devil's-bit Scabious** White Clover Common Nettle Brooklime **Thyme-leaved Speedwell** Marsh Violet

Species list for 016 Stable Wood

Species Name	Common name
Acer platanoides	Norway Maple
Acer pseudoplatanus	Sycamore
Achillea millefolium	Yarrow
Agrostis capillaris	Common Bent
Agrostis stolonifera	Creeping Bent
Ajuga reptans	Bugle
Alchemilla mollis	Garden Lady's-mantle
Anthoxanthum odoratum	Sweet Vernal-grass
Aphanes arvensis agg.	Parsley-piert
Arabidopsis thaliana	Thale Cress
Arrhenatherum elatius	False Oat-Grass
Asplenium trichomanes subsp. quadrivalens	Maidenhair Spleenwort
Athyrium filix-femina	Lady-fern
Bellis perennis	Daisy
Berberis darwinii	Darwin's Barberry
Betula pendula	Silver Birch
Betula pubescens	Downy Birch
Callitriche stagnalis sens. lat.	Common Water-starwort
Caltha palustris	Marsh-marigold
Cardamine hirsuta	Hairy Bitter-cress
Carex rostrata	Bottle Sedge
Centaurea nigra	Common Knapweed
Cerastium fontanum	Common Mouse-ear
Cerastium glomeratum	Sticky Mouse-ear
Chamerion angustifolium	Rosebay Willowherb
Cirsium arvense	Creeping Thistle
Claytonia sibirica	Pink Purslane
Corylus avellana	Hazel
Crassula helmsii	New Zealand Pigmyweed
Crataegus monogyna	Hawthorn
Cynosurus cristatus	Crested Dog's-tail
Dactylis glomerata	Cock's-foot
Deschampsia cespitosa	Tufted Hair-grass
Digitalis purpurea	Foxglove
Dryopteris dilatata	Broad Buckler-fern
Dryopteris filix-mas	Male-fern
Epilobium montanum	Broad-leaved Willowherb
Epilobium obscurum	Short-fruited Willowherb
Fagus sylvatica	Beech
Fallopia japonica	Japanese Knotweed
Festuca rubra agg.	Red Fescue
Fraxinus excelsior	Ash
Galeopsis tetrahit agg.	Common Hemp-nettle
Galium aparine	Cleavers
Geranium robertianum	Herb-Robert
Glechoma hederacea	Ground-ivy
Glyceria fluitans	Floating Sweet-grass
Gnaphalium uliginosum	Marsh Cudweed
Heracleum sphondylium	Hogweed
Holcus lanatus	Yorkshire-fog
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Holcus mollis Hyacinthoides non-scripta Ilex aquifolium Iris pseudacorus Juncus effusus Juncus tenuis Lamiastrum galeobdolon subsp. argentatum Lamium purpureum Lemna minor Lysichiton americanus Montia fontana Myosotis arvensis Myosotis discolor Oxalis acetosella Plantago lanceolata Plantago major Poa annua Polygonatum x hybridum Polygonum aviculare Polypodium vulgare Potentilla anserina Primula vulgaris Prunella vulaaris Pteridium aquilinum Quercus robur Ranunculus acris Ranunculus repens Rhododendron ponticum Rubus fruticosus agg. Rubus idaeus Rumex acetosa Rumex obtusifolius Sagina procumbens Salix caprea Salix cinerea subsp. oleifolia Sambucus nigra Scorzoneroides autumnalis Scrophularia nodosa Senecio jacobaea Senecio vulgaris Sherardia arvensis Sonchus asper Sorbus aucuparia Stachys sylvatica Stellaria media Symphoricarpos albus Symphytum x uplandicum Taraxacum agg. Teucrium scorodonia Trifolium dubium Trifolium repens Ulex europaeus Ulmus glabra

Creeping Soft-grass Bluebell Holly Yellow Iris Soft-rush Slender Rush Garden Yellow-archangel Red Dead-nettle **Common Duckweed** American Skunk-cabbage Blinks Field Forget-me-not Changing Forget-me-not Wood-sorrel **Ribwort Plantain Greater Plantain** Annual Meadow-grass Garden Solomon's-seal Knotgrass Polypody Silverweed Primrose Selfheal Bracken Pedunculate Oak Meadow Buttercup **Creeping Buttercup** Rhododendron Bramble Raspberry **Common Sorrel** Broad-leaved Dock **Procumbent Pearlwort** Goat Willow **Rusty Willow** Elder Autumn Hawkbit **Common Figwort Common Ragwort** Groundsel Field Madder Prickly Sow-thistle Rowan Hedge Woundwort **Common Chickweed** Snowberry **Russian Comfrey** Dandelion Wood Sage Lesser Trefoil White Clover Gorse Wych Elm

Urtica dioica Veronica arvensis Vicia cracca Viola riviniana Common Nettle Wall Speedwell Tufted Vetch Common Dog-violet

Appendix 4. Target Notes

Site 1 Carsemeadow Target notes

1	36521	66604	Small hollow but with a similar appearing improved sward (much Holcus lanatus and Ranunculus repens).
2	36520	66553	Avenue with pines to the west and sycamores to both sides in the east (the latter with a good cover of mosses and some polypody fern). Soprano pipistrelle bats recorded feeding along sycamores.
3	36500	66540	Margins with scrub of crab apple and rhododendron and rough grassland, some herb diversity but also encroaching tall herbs (rosebay willowherb, nettle and cow parsley).
4	36500	66531	Amenity grassland with some limited herbs (rare Centaurea nigra and Lathyrus pratensis) and some moss (Calliergonella cuspidata).
5	36477	66525	Scrub with mature willow over dumped chippings and grass clippings; ridge by the housing with birch, rowan, dense rhododendron, with Holcus spp., Arrhenatherum elatius and Digitalis purpurea. Mole hills here and on western margins of scrub.
6	36436	66537	Rocky ridge (over the fence) with some older birch and ash, with a grassy cover plus Digitalis purpurea, ferns and stands of Michaelmas daisy and rosebay willowherb.
7	36350	66420	Bottom of pasture field poorly draining with Juncus effusus and Deschampsia cespitosa, and swampy to the centre with Glyceria fluitans with Stellaria alsine and some Lemna minor.
8	36294	66458	Old road to southern margin lined by horse chestnut (die-back) and some limes (felled) with a small stretch of hedgerow scrub. The track is poorly draining in places (flooded in east). Extensive rushy pasture to the south. Soprano pipistrelle bats recorded here.
			Target Note from Faunal Surveys
9	36517	66557	One pass recorded of a <i>Myotis</i> bat along field boundary.

Site 2 North Denniston Target Notes

1	36131	68451	Inundation hollow with some Juncus effusus but mostly Glyceria declinata, Agrostis stolonifera, Ranunculus repens, Juncus bufonius, Persicaria maculosa, and small patch of Eleocharis palustris.
2	36068	68455	Short section of burn (old bridge) with Filipendula ulmaria, Iris pseudacorus, Oenanthe crocata and Mentha aquatica; Nasturtium x sterilis to bed.
3	36052	68439	Burn bank with relic unimproved grassland (but ungrazed) with Festuca rubra and Succisa pratensis, Potentilla erecta and Achillea millefolium; increasing scrub (gorse, broom, tall herbs and some bracken).
4	36020	68505	Disused railway embankment with mature scrub woodland (willow, grey alder and hawthorn) with stands of tall herbs (Rubus idaeus, Filipendula ulmaria, Chamerion angustifolium and Dryopteris filix-mas – and locally frequent Solanum dulcamara).
5	35977	68650	Mature scrub to railway bank (rowan and ash) with rough grass and nettle to field (fence) edge.
6	35953	68754	Poorly draining fence corner below railway embankment (much Fragaria vesca); Iris pseudacorus frequent with Callitriche stagnalis and Persicaria hydropiper.
7	35984	68903	Large inundation wetland (not possible to access due to high water) with Juncus effusus marsh and to the centre swamp with Carex rostrata, Glyceria fluitans and Sparganium erectum
8	35910	68912	Raised area but with a less improved grass cover (but low herb diversity)
9	35902	68999	Marshy area in hollow (but some past dumping); Juncus effusus with Ranunculus repens, Lotus pedunculatus, Galium palustre, Stellaria alsine and the moss Calliergonella cuspidata and rare Polytrichum commune.
10	35904	69183	Short, occasional mown grass to side of fenced off sports pitch; some Lotus pedunculatus; also sandy area with Hypochoeris radicata and Trifolium pratense.
			Target Notes from Faunal Surveys
11	36070	68476	Roe deer lie-ups in tall grassland.
12	36068	68473	Otter spraint on old stonework and otter slide into watercourse.
13	36011	68532	Molehills in field margin and rabbit tracks leading out from cycle track embankment.
14	35902	69013	Marshy low-lying ground drainage inflow; some open water, likely to be used by amphibians.
15	36019	68482	Several Soprano Pipistrelle bats recorded foraging along cycle track embankment.

Site 3 Knapps Loch Target Notes

1	36350	68732	Slightly marshy grassland (fed from drain above) with some Juncus effusus.
2	36359	68596	Disturbed hollow with dock and thistle
3	36490	68651	Juncus effusus dominated marsh about wall junctions (and spreading into pasture) with limited associates (Cardamine spp., Calliergonella cuspidata)
4	36536	68662	Drain by wall with some herb richness: Glyceria fluitans, Ranunculus flammula, Caltha palustris, Potamogeton polygonifolius and Comarum palustre.
5	36549	68730	Improved pasture with Cynosurus cristatus plus Agrostis capillaris and Festuca rubra plus Ranunculus spp., Trifolium repens, Rumex acetosa, Plantago lanceolata and the moss Rhytidiadelphus squarrosus.
6	36572	68702	Ridge of less unimproved grass plus gorse (and single rowan); herb poor grass but frequent mosses (Hylocomium splendens, Rhytidiadelphus squarrosus, Pseudoscleropodium purum and Hypnum cupressiforme) indicating acid grassland precursor.
7	36600	68661	Similar ridge (also single rowan) but less moss.
8	36628	68644	Small ridge with gorse and Digitalis purpurea.
9	36772	68720	Flush down otherwise impenetrable gorse embankment; Juncus effusus with Cirsium palustre plus docken and thistle; below wet grass with Glyceria fluitans, Veronica beccabunga and Callitriche stagnalis.
10	36793	68693	Juncus effusus dominated marsh with Epilobium spp., Cirsium palustre, Galium palustre, Senecio aquaticus, and occasional Mentha aquatica, Filipendula ulmaria, Myosotis Iaxa, Silene flos-cuculi, Hypericum tetrapterum, Calliergonella cuspidata and Brachythecium rivulare.
11	36870	68686	Fenced off drain with much Filipendula ulmaria, planted with willows.
12	36877	68717	Juncus effusus marsh with to centre near burn a stand of Carex rostrata, plus Cirsium palustre, Epilobium spp and Galium palustre.
13	36884	68739	Inflow flush with Glyceria declinata, Veronica beccabunga and Callitriche stagnalis.
14	36570	68844	Scots pine plantation with some marginal cherry, grazed and poached with a grassy cover (Holcus lanatus, Agrostis capillaris, Dactylis glomerata, Urtica dioica)
15	36543	68848	Similar grassy pine (and cherry) plantation, separated by poached depression.
16	36487	68859	Low, undulating ridges with scattered gorse (some bramble and foxglove) but otherwise a low herb diversity pasture with short grazed Holcus lanatus, Agrostis capillaris, Cynosurus cristatus and Ranunculus spp.
17	36473	68874	Top of drain with small marshy hollow (Juncus effusus, Agrostis stolonifera, Stellaria alsine and Myosotis Iaxa)
18	36480	68899	Steep slope with some relic short-grazed herb diversity, some indicating less acidic conditions: Festuca rubra, Veronica chamaedrys, Prunella vulgaris, Lotus corniculatus, Trifolium repens and Euphrasia sp.
19	36395	68942	Ridge with gorse plus local hawthorn, rowan, sycamore and blackthorn plus bramble, foxglove and rare bracken. Grass less improved but limited herbs noted.
20	36369	68878	Curious poached bare area with a few low herbs (Bellis perennis, Gnaphalium uliginosum, Persicaria maculata, Poa annua, Cerastium glomerata, Sagina procumbens) and the moss Bryum argenteum.

21	36403	68874	Low ridges slightly less improved but short grazed and seemingly herb poor; patchy gorse with bramble and foxglove.
22	36425	68808	Scrub near drain with thick blackthorn plus hawthorn, rowan and gorse; small patch of Ranunculus hederaceus by drain.
23	36327	68768	Improved pasture with Holcus lanatus, Agrostis capillaris, Cynosurus cristatus, Trifolium repens Senecio jacobaea and Ranunculus spp.
24	36793	68649	Fen margin to loch briefly visited, and obviously much more diverse; Menyanthes trifoliata, Carex rostrata, C. panicea, Comarum palustre, Pedicularis palustris, Silene flos-cuculi, Equisetum fluviatile and bryophytes include Calliergon cordifolium, Sphagnum subsecundum, S. teres and Bryum pseudotriquetrum. Loch margin with some Lysimachia thyrsiflora.
			Target Notes from Faunal Surveys
25	36507	68874	Several Soprano Pipistrelle passes recorded along edge of conifer plantation.
26	36291	68801	One Soprano Pipistrelle pass recorded along boundary with main road.
	36291 36297	68801 68973	One Soprano Pipistrelle pass recorded along boundary with main road.Old Badger hole, no longer in use, and rabbit warren.
26			
26 27	36297	68973	Old Badger hole, no longer in use, and rabbit warren.
26 27 28	36297 36296	68973 68850	Old Badger hole, no longer in use, and rabbit warren. Rabbit warren

Site 9 Police Station Field and Milton Wood Target Notes

1	35568	69634	Low ridge dominated by sycamore (mostly immature) and rare rowan, ash and oak; some old stumps. Regeneration by elm, ash and holly; ground cover mostly Dryopteris dilatata with ivy, Geum urbanum, mosses (Kindbergia praelonga and Atrichum undulatum), or bare.
2	35559	69609	Canopy more open, mainly sycamore with rowan, birch and elder over Dryopteris dilatata and bramble plus Lonicera periclymenum, Deschampsia cespitosa, Urtica dioica, Silene dioica and occasional Athyrium filix-femina.
3	35569	69543	Ridge dominated by immature sycamore with some beech, oak, elm, birch and ash; some old stumps. Dryopteris dilatata dominates ground flora with Geum urbanum, Viola riviniana, Polygonatum x hybridum or bare soil.
4	35565	69515	Damper area and local shaded pool with Ranunculus repens, Juncus effusus, Galium palustre, Stellaria alsine and the mosses Calliergonella cuspidata and Sphagnum auriculatum?
5	35536	69478	Path edge with populations of non-native Valeriana pyrenaicum and Tolmeia menziesii
6	35578	69485	Ridge with sycamore and birch over Dryopteris dilatata, Lonicera periclymenum, Deschampsia cespitosa and mosses (Kindbergia praelonga, Thuidium tamariscinum and Polytrichum commune).
7	35597	69476	Marshy depression with Ranunculus repens, Athyrium filix-femina, Chrysosplenium oppositifolium, Galium palustre, Carex rostrata, Myosotis scorpioides, Ribes nigrum and some Mimulus guttatus.
8	35497	69376	Ridge with mature sycamore (some oak, pine, beech and rowan) over Dryopteris dilatata plus Oxalis acetosella, Silene dioica, Viola riviniana, Geum urbanum, ivy and rare Sanicula europaea; bluebell spike but likely Spanish or hybrid.
9	35465	69339	Exotic planting and dumping of garden waste to western edge.
10	35555	69397	Ridge with some open bracken areas otherwise Dryopteris dilatata under sycamore, rowan, pine and beech.
11	35620	69317	Sycamore (plus ash) lined path (west side) with rough grass, nettle, ferns, ivy and bramble; large patch of Lamiastrum argenteum to north.
12	35636	69308	Mature beech to path edge but internal wood strip with mostly younger sycamore, beech, holly and rhododendron; ground cover with Dryopteris dilatata, Lonicera periclymenum, Viola riviniana, Polygonatum x hybridum and some Lamiastrum argenteum.
13	35680	69264	Shaded, muddy pool by fence; some Juncus effusus and Ranunculus repens.
14	35669	69215	Gentle slope with sycamore plus beech and spruce over much bare ground (local Dryopteris dilatata).
15	35657	69125	Leveller ground with much sycamore plus ash, maple and holly and frequent rhododendron; ground flora limited and mossy with some ferns, Claytonia sibirica, Geum urbanum, Viola riviniana and Polygonatum x hybridum
16	35678	69062	Woodland meets riverbank with local scrubby willow carr but mostly large stands of Phalaris arundinacea, with Chrysosplenium oppositifolium, Glechoma hederacea, Filipendula ulmaria, Athyrium filix-femina, Urtica dioica (more so to river edge) and locally much Tolmeia menziesii.

17	35619	69081	Rhododendron dense near bridge.
18	35713	69121	Lower-lying pasture locally wet and poached with Juncus effusus, Holcus lanatus, Agrostis stolonifera and Ranunculus repens; to east becoming more marshy with increased Juncus plus Cardamine pratensis, Epilobium obscurum, Lotus pedunculatus and Calliergonella cuspidata.
19	35769	69088	Dilapidated iron fence marks of old works area, but with similar appearing improved pasture.
20	35752	69155	Flush (drain?) down gentle slope (poached rush and thistle); some local (but limited) diversity to pasture (Centaurea nigra, Plantago lanceolata, Rumex acetosa, Lotus pedunculatus).
21	35737	69230	Level or depressed area with poached wet pasture (much Juncus effusus); locally more definitively marshy with Cardamine pratensis, Myosotis scorpioides, Stellaria alsine, Juncus articulatus, Lotus pedunculatus, Achillea ptarmica and Glyceria spp. (latter nearer disused railway fence).
22	35734	69362	Rock exposures with some Sedum anglicum, Rumex acetosella and mosses (Polytrichum juniperinum, Racomitrium heterostichum, Hypnum lacunosum) and lichens. Disturbed with stock feeding and nettle patches.
23	35686	69434	Edge of pasture with grazed woodland (sycamore, beech and ash) inside fence with a rock ridge (Sedum anglicum, Galium saxatile, mosses etc), and some bracken stands.
24	35670	69477	Grazed birch wood on ridge with grazed acidic grass cover with occasional fern and bramble; damper to centre plateau
25	35715	69483	Rocky ridge with some Sedum anglicum exposure plus mosses and lichens; grassland with Potentilla erecta, Succisa pratensis and Hypochoeris radicata.
26	35710	69514	Rock edge with Sedum anglicum plus moss and lichens; local Vaccinium myrtillus and Campanula rotundifolia.
27	35688	69561	Ridge with some residual herb diversity: Trifolium pratense, Centaurea nigra, Plantago lanceolata, Lotus corniculatus, Alchemilla glabra, Potentilla erecta, Prunella vulgaris and some Carex panicea.
28	35648	69629	Old wall lined by various old trees (and scrub); strip of shaded but similar improved pasture adjacent to wood.
29	35617	69597	Woodland on ridge above path with much sycamore plus holly, rhododendron, elm and rare oak; Dryopteris dilatata abundant with Silene dioica, Deschampsia cespitosa, Geum urbanum, rare Sanicula europaea, Lamiastrum argenteum, honeysuckle and ivy.
30	35628	69511	Shaded depression below path, poorly draining and swampy (some grey willow) with Ranunculus repens, Urtica dioica, Athyrium filix-femina, Glyceria fluitans and some Calliergonella cuspidata and Sphagnum squarrosum.
31	35596	69143	Raised pasture slightly improved but still herb poor (mainly Ranunculus spp., Trifolium repens with the moss Rhytidiadelphus squarrosus).
32	35554	69146	Enriched pasture with Lolium perenne and Cynosurus cristatus (plus Holcus, Agrostis) with Ranunculus spp., Trifolium repens, the moss Calliergonella cuspidata and frequent dock and some rush.
33	35520	69142	Poached soft-rush dominated depression with Deschampsia cespitosa, Epilobium obscurum, Ranunculus repens, Stellaria alsine, Senecio aquaticus and Calliergonella cuspidata.

34	35521	69112	Rocky ridge surrounded by gorse fringe (with birch and broom); Sedum anglicum with mosses (Hypnum lacunosum, Polytrichum piliferum, P. juniperinum, Racomitrium heterostichum) and Cladonia lichens.
35	35571	69088	Diverse marsh near river, grazed and poached in places; Juncus effusus with much (short) Filipendula ulmaria plus Valeriana officinalis, Angelica sylvestris, Senecio aquaticus, Galium palustre, Myosotis scorpioides, Caltha palustris, Athyrium filix- femina, Iris pseudacorus, Stachys palustre, Chrysosplenium oppositifolium and Calliergonella cuspidata
36	35393	69123	Grassy 'island' between marshy areas with local herb diversity: Pilosella officinarum, Hypochoeris radicata, Lathyrus pratensis and Festuca rubra (some waxcap fungi)
37	35379	69117	Diverse marsh with Juncus effusus (and J. acutiflorus) plus Iris pseudacorus, Filipendula ulmaria, Galium palustre, Silene flos-cuculi, Mentha aquatica, Comarum palustre, Carex rostrata and some Calliergon cordifolium
38	35344	69094	Ridge of less improved grass (some Centaurea nigra, Veronica chamaedrys and Rhytidiadelphus squarrosus).
39	35193	69111	Rush pasture wetter and more distinctly marshy with Filipendula ulmaria, Iris pseudacorus, Angelica sylvestris, Senecio aquaticus and Myosotis scorpioides.
40	35097	69123	Poached, poorly draining rush pasture extending narrowly from fence and broadening near river; Juncus effusus with Holcus lanatus, Ranunculus repens, Epilobium obscurum, Glyceria fluitans, Deschampsia cespitosa etc.
41	35089	69202	Wetland locally more fen like with Carex rostrata, Comarum palustre, Juncus acutiflorus, Filipendula ulmaria and of note two large tussocks of Carex paniculata; large grey willow to edge.
42	35069	69229	Mixed area of intermediate Filipendula – Phalaris marsh with some Carex aquatilis and Oenanthe crocata.
43	35066	69242	Filipendula ulmaria in broad marshy channel, here with Oenanthe crocata and Carex aquatilis plus some Nasturtium x sterilis.
44	35040	69260	Phalaris arundinacea swamp extends to the riverbank (some Filipendula ulmaria and Valeriana officinalis); local willow scrub.
45	35033	69299	Abrupt drop to marsh dominated by Filipendula ulmaria; associates include Iris pseudacorus, Valeriana officinalis, Stachys palustre, Juncus acutiflorus with Phalaris arundinacea and Urtica dioica nearer to riverbanks.
			Target Notes from Faunal Surveys
46	35001	69308	Several Soprano Pipistrelle and Daubenton's bat recorded over the surface of the river and above the riparian vegetation.
47	34968	69319	Small building with bat roost potential. No suitable cracks or fissures under bridge for potential roosts. One old otter spraint under bridge. Dogs being walked at river.
48	35081	69252	Badger path.
49	35395	69092	Old tree stump with bat roost potential.
50	35559	69024	Single old otter spraint.

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51	35603	69104	Rabbits present.
52	35534	69631	Ivy-covered trees with bat roost potential.
53	35698	69590	Evidence of foraging by Badger.
54	35744	69051	Badger path and presence of Field Vole.

Site 10 ARP Field Target Notes

1	34947	69310	Marshy hollow with small section of outflow drain (iron stained). Juncus effusus with central area of Glyceria fluitans; species include Lotus pedunculatus, Epilobium spp., Stachys palustris, Galium palustre and Mimulus guttatus; channel with much Nasturtium x sterilis.
2	34921	69346	Low rocky ridge with some exposure (Sedum anglicum with mosses – Pogonatum urnigerum, Bryum alpinum and Racomitrium spp.); some short herb diversity: Lotus corniculatus, Pilosella officinarum, Campanula rotundifolia, Achillea millefolium and frequent Hypochoeris radicata.
3	34895	69376	Burnside with patchy alder woodland (plus hazel and rowan) and locally grey willow; associates include Mercurialis perennis, Filipendula ulmaria, grasses and ferns
4	34850	69396	Uniform improved pasture on undulating ground with Holcus lanatus, Agrostis capillaris, Cynosurus cristatus and Ranunculus spp; other species seem scarce.
5	34850	69362	Very small ridge with Achillea millefolium and Campanula rotundifolia
6	34824	69427	Outflow channel with increased Glyceria fluitans, Agrostis stolonifera, Ranunculus repens.
7	34710	69455	Extensive Juncus effusus marsh with Rumex acetosa, Cardamine pratensis, Galium palustre, Calliergonella cuspidata and where wetter Calliergon cordifolium
8	34696	69469	Swampy central channel (very hard to access) with Sparganium erectum, Glyceria fluitans, Ranunculus flammula, Juncus articulatus and Eleocharis palustris.
9	34743	69488	Swampy channel continues with Eleocharis palustris and Sparganium erectum but here much Carex rostrata.
10	34765	69500	Northern edge of marsh drier and disturbed with stands of nettle, thistle and ragwort.
11	34795	69523	Open ground to river north of fence with much Filipendula ulmaria and Arrhenatherum elatius plus Urtica dioica, Rumex obtusifolius, Iris pseudacorus, Stachys palustris and occasional Mercurialis perennis.
12	34640	69624	Burn side with increasing alder plus ash and willow, but some open areas; and large patch of bridewort.
13	34662	69573	Juncus effusus marsh with occasional Filipendula ulmaria, Stachys palustris, Athyrium filix-femina, Cirsium palustre and rare Chrysosplenium oppositifolium.
14	34620	69508	Low ridge by wall with limited herb interest (some neutral pasture indicators): Hypochoeris radicata, Achillea millefolium, Centaurea nigra, Plantago lanceolata, Potentilla erecta, Campanula rotundifolia, Lotus corniculatus and Trifolium pratense
15	34622	69446	Old wall with a few herbs (Achillea millefolium and Veronica chamaedrys) and some large stones with lichens and mosses (some Hedwigia stellata).
16	34770	69348	Depression with Juncus effusus plus to centre Glyceria fluitans and some Lemna minor.
17	34789	69331	Small mound with short pasture: Lotus corniculatus, Achillea millefolium, Rumex acetosa, Campanula rotundifolia and Veronica chamaedrys.
18	34783	69293	Old wall and stone piles with some scrub (elder and hawthorn) and tall herbs (thistle, nettle, dock etc.). Dung pile nearby and inundation flushed grassland.

19	34562	69113	Ridge with some grass relics and some rock (rare Sedum anglicum), but also stone dumping.
20	34666	69049	Wet Juncus effusus marsh by gappy hedge, with some Juncus acutiflorus, Agrostis stolonifera and rare Equisetum fluviatile and some Filipendula ulmaria by drain.
			Target Notes from Faunal Surveys
21	34971	69358	Otter spraints on fallen willow on northern bank.
22			See Confidential Annex
23	34896	69386	Several Soprano Pipistrelle bats passes recorded along the riparian vegetation.
24	34935	69376	Otter lie-up under washed-out roots of Hazel bush and spraint at large bramble patch.
25	34852	69410	Badger diggings.
26	34635	69620	Badger diggings.
27	34619	69621	Badger diggings.

Site 11 West Glen Target Notes

1	36434	70320	Open, grazed pine plantation by wall; grassy with Ranunculus repens, Digitalis purpurea, dock and nettle,
2	36447	70267	Damp field edge (Juncus effusus, Holcus lanatus, Ranunculus repens)
3	36441	70259	Mixed, scrubby plantation (spruce, birch and sycamore plus holly, willow and rhododendron); mixed ground cover but indicating damp (frequent Ranunculus repens, Deschampsia cespitosa and Equisetum arvense) with much moss (Kindbergia praelonga, Thuidium tamariscinum and Plagiomnium undulatum) and several exotics (e.g. Hydrangea, montbretia and Hostas).
4	36426	70269	Marshy to north with Equisetum fluviatile, much Nasturtium x sterilis (in water course) and Carex pendula; several fallen trees and cut brash.
5	36478	70230	Marshy conditions (more birch and willow) with Juncus effusus plus some Comarum palustre, Epilobium palustre, Mentha aquatica, Angelica sylvestris, Carex pendula and some Iris pseudacorus; some juniper but presumable planted.
6	36497	70231	Rocky ridge with some birch, rowan and gorse plus a poached and disturbed (and wet) acid grassland cover. Gorse, previously extensive to both sides, has been recently cleared (and piled up) – coded as 'ephemeral' but developing acid grassland.
7	36503	70236	Enriched, poached and poorly draining acidic grassland with some mire elements: Carex nigra, C. panicea, Succisa pratensis and Carum verticillatum.
8	36527	70247	Marshy strip dominated by Juncus effusus with Cirsium palustre, Galium palustre, and Epilobium palustre; centre more mire-like with Carex rostrata, Calliergon cordifolium, Veronica scutellata, Caltha palustris and Potamogeton polygonifolius.
9	36557	70259	Rocky ridge (gorse cleared) with frequent Sedum anglicum with mosses and lichens (some Peltigera sp.).
10	36552	70201	Cleared gorse with Holcus spp., Digitalis purpurea, Rumex acetosella, mosses and young gorse seedlings.

11	36502	70195	Small marshy flush with Juncus effusus and some Sphagnum (S. inundatum?); rocky ridge to side with Succisa pratensis, Juncus squarrosus and Danthonia decumbens.
12	36545	70151	Small hollow with poached Juncus effusus marsh (Ranunculus repens, Cardamine pratensis, Stellaria alsine, Rumex acetosa, Epilobium palustre, Cirsium palustre and some dock and nettle. Wet grassland extends parallel the fence
13	36533	70131	Old plantation with beech, birch, spruce, larch and pine; locally heavily shaded plus some rhododendron and a dense bridewort patch.
14	36614	70138	Short rock face with Sedum anglicum and mosses (Racomitrium spp., Polytrichum piliferum, Andreaea rupestris, Dicranum scoparium and Hypnum cupressiforme).
15	36621	70141	Cleared gorse ridge with patchy Deschampsia flexuosa, Rumex acetosella, Digitalis purpurea, Carex binervis and Dryopteris dilatata.
16	36627	70166	Small area of poached marshy grass, Juncus effusus plus Agrostis canina and some Carum verticillatum.
17	36663	70193	Level area of poached marshy pasture with frequent Juncus effusus plus Holcus lanatus, Agrostis stolonifera and Ranunculus repens.
18	36616	70246	Swampy fringe to pool dominated by Glyceria fluitans with some Lemna minor; fringes with Agrostis stolonifera, Glyceria declinata, Ranunculus repens, Juncus articulatus. Small population of Bidens cernua (rayed form).
19	36606	70242	Open water (impossible to access due to high water) but well colonised by Potamogeton sp. (P. natans presumably); margins or islets of Glyceria fluitans (rare Sparganium erectum).
20	36635	70289	Northern pool margin with more Juncus effusus (but also much Glyceria fluitans swamp); associates include Agrostis stolonifera, Ranunculus repens, Juncus articulatus, Callitriche stagnalis and some Bidens cernua.
21	36585	70346	Improved but poorly draining pasture with Holcus lanatus and Cynosurus cristatus, but frequent herbs (reflecting enrichment but poor drainage), Ranunculus spp., Carex leporina, Juncus articulatus, Juncus effusus (increasing), Trifolium repens, Prunella vulgaris, Bellis perennis and the moss Calliergonella cuspidata.
22	36561	70390	Grazed pine plantation to roadside wall.
			Target Notes from Faunal Surveys
23	36434	70332	Both Common and Soprano Pipistrelle and Brown Long-eared bats recorded along boundary.
24	36448	70251	Tawny Owl singing during bat survey.
25	36484	70244	Vole runs and larger mammal paths.
26	36608	70150	Rabbit warren.
27	36612	70168	Remains of Toad, possible Otter prey.
28	36679	70276	Molehills.

Site 12 Migdale Faunal Target Notes

17	35935	70898	Rabbit warren under beech tree.
16	35865	70908	Large ash tree, ivy-covered, with potential for bat roosts.
15	35943	70963	Network of mammal paths.
14			See Confidential Annex
13	35856	70983	Several Soprano Pipistrelle bats recorded along the edge of underscrub and trees.
			Target Notes from Faunal Surveys
12	35823	70969	Narrow strip (c. 2 to 3m) of rank grass and tall herbs (dock, rosebay willowherb, raspberry and bramble); hedgerow with some diversity (beech to northern edge).
11	35827	71009	Narrow fringe of uncut pasture, becoming rank to rear.
10	35830	71065	Old wall meets roadside hedge and scrub (plus mature lime and ash).
9	35860	70999	Old wall becoming lost in rough grass (coarse but enriched to east side, but shorter and more acidic to west); plantation oak and sycamore and local Scots Pine.
8	35872	70972	Rock outcrop with mature ash, sycamore and oak and below some Digitalis purpurea, Teucrium scorodonia, Veronica chamaedrys and Hyacinthoides non- scripta; Sedum to rock with various mosses (Racomitrium heterostichum, Hypnum cupressiforme etc.).
7	35861	70957	Lower slopes of embankment clothed in gorse with bramble
6	35904	70949	Northern edge of the uncut strip with a population of the locally very rare Knautia arvensis.
5	35910	70910	Short but steep bank with uncut grass (and telegraph pole); rank above (much Dactylis glomerata) but below some diversity (some Hypochoeris radicata and Rhinanthus minor)
4	35921	70960	Northern edge with old broken down wall and narrow bank of short grass (rare Galium saxatile) but increasingly coarse; some scrub (birch, rowan, gorse and broom) and herbs include Digitalis purpurea, Teucrium scorodonia and Dryopteris spp ferns.
3	35913	70908	Pasture on slope semi-improved with some persisting herb diversity: Plantago lanceolata, Ranunculus acris, Rumex acetosa, Achillea millefolium, Trifolium repens, and occasional Hypochoeris radicata and Rhinanthus minor.
2	35901	70901	Broad field margins (c. 5m) with coarse grass to east, bramble to west. Marginal policy tree avenue (sycamore, lime and horse chestnut; beech and ash further east).
1	35835	70868	Corner with narrow strip of relatively unimproved grassland: Festuca rubra, Agrostis capillaris, Anthoxanthum odoratum with Plantago lanceolata, Ranunculus acris, Achillea millefolium, Hypochoeris radicata and Rhinanthus minor. To hedgerows coarser grass and dumping of lawn cuttings.

Site 14 Planetreeyetts Target Notes

1	35430	70843	Spring Wood: open canopy of sycamore, pine, larch, spruce, birch and oak over a grazed, semi-improved grassland cover, locally poached; few woodland elements noted (rare Oxalis acetosella).
2	35441	70901	Small valley in woodland with poached wet grassland (Agrostis stolonifera, Ranunculus repens).
3	35494	70908	Field margin with Juncus effusus marsh feeding fen; associates include Cirsium palustre, Lotus pedunculatus, Galium palustre, Epilobium obscurum and Rumex acetosa
4	35522	70922	Grazed fen margin with increased Juncus and species such as Ranunculus repens, Achillea ptarmica, Lotus pedunculatus, Holcus lanatus, Cardamine pratensis etc.
5	35539	70929	Species rich fen with much Carex rostrata plus Comarum palustre; other species include Silene flos-cuculi, Carex nigra, Agrostis canina, Equisetum fluviatile, Ranunculus flammula, Epilobium palustre, Hydrocotyle vulgare, Caltha palustris, Juncus articulatus, J. bulbosus with a bryophyte layer (inundated) including Calliergonella cuspidata, Calliergon cordifolium, Bryum pseudotriquetrum, Plagiomnium ellipticum and some Marchantia polymorpha and Climacium dendroides.
6	35583	70928	Locally increased cover of Juncus articulatus strip (to central fence) but otherwise similar associates; some Mimulus guttatus.
7	35600	70936	Species rich fen continues east of old fence with similar flora; additional species include Eriophorum angustifolium, Carex echinata, Viola palustris, the moss Aulacomnium palustre, and some Carum verticillatum to margin.
8	35576	70971	Some Carex diandra here.
9	35576	70980	More Carex diandra with Carex curta and Menyanthes trifoliata.
10	35569	71002	To north edge Juncus articulatus (very tall but appears pure) cover increases; with fen elements including Carex spp. (some C. diandra) and Hydrocotyle vulgare.
11	35591	71030	Narrow fringe of increased Juncus effusus (broader to SE corner).
12	35696	70974	Improved pasture (horse grazed, very short) with Agrostis capillaris, Festuca rubra, Holcus lanatus, Lolium perenne, Cynosurus cristatus, with much Ranunculus spp., and Trifolium repens plus local Poa pratensis, Prunella vulgaris, Achillea millefolium and Odontites vernus.
13	35724	70947	Dung patches with coarser Holcus lanatus and Ranunculus repens (low diversity)
14	35715	70914	Shallow valley with short grazed and often heavily poached poorly draining wet grassland; Holcus lanatus with Ranunculus repens, plus Agrostis stolonifera, Prunella vulgaris, Alopecurus geniculatus, Cardamine pratensis, Veronica serpyllifolia, Carex leporina, and below Glyceria declinata, Stellaria alsine and Galium palustre.
15	35755	70873	Roundel with sycamore and pine (plus hawthorn, holly and rowan) over grass with Claytonia sibirica, nettle, ragwort and foxglove.
16	35824	70824	Improved pasture of Agrostis capillaris, Holcus lanatus, Festuca rubra and Cynosurus cristatus, with much Ranunculus spp., Trifolium repens plus Prunella vulgaris, Cerastium fontanum, Achillea millefolium, Plantago lanceolata, Senecio

			jacobaea, Rumex obtusifolius and Odontites vernus
17	35811	70772	Old wall with some foxglove and bramble plus Achillea millefolium, Rumex acetosella, Dryopteris filix-mas and the moss Polytrichum commune.
18	35832	70775	Rocky ridge with slightly increased herbs (Festuca rubra, Achillea millefolium, and moss Rhytidiadelphus squarrosus).
19	35807	70760	Rocky exposure with Sedum anglicum and moss but otherwise improved pasture.
20	35593	70912	Grassy ridge with Holcus lanatus, Agrostis capillaris, Deschampsia cespitosa, Rumex acetosa and Ranunculus repens but also frequent Potentilla erecta, Succisa pratensis and the mosses Rhytidiadelphus squarrosus and Pseudoscleropodium purum, and even some Rhinanthus minor.
21	35606	70869	Grassland here with Potentilla erecta, Succisa pratensis, Hypochoeris radicata and Carex panicea.
22	35629	70876	Low ridge with birch (some pendulous) over a short, grazed grassy cover; old stone wall with mature beech plus pine and lime.
23	35657	70848	Southern part of ridge with beech, pine, ash and birch over a grazed grassy ground.
24	35718	70784	Slope with Juncus acutiflorus marsh plus Lotus pedunculatus, Galium palustre, Cirsium palustre, Cardamine pratensis but increasing diverse and fen-like below.
25	35691	70790	Marshy area but shorter grazed with less Juncus influence and frequent Carex panicea, C. echinata, C. demissa, Succisa pratensis and some Carum verticillatum.
26	25714	70774	Marshy slope becoming more fen mire below and very diverse with Silene flos- cuculi, Carex rostrata, Epilobium palustre, Comarum palustre, Eriophorum angustifolium, Hydrocotyle vulgare, Potamogeton polygonifolius and Agrostis canina.
27	35706	70757	Fen becoming very wet (some swampy with Glyceria fluitans to hedge); species include Carex echinata, Pedicularis palustris, Carex curta, Potamogeton polygonifolius and the mosses Sphagnum palustre and Philonotis fontana.
28	35704	70752	Local fen carr with tall white willow and scrubby purple, grey and bay willows; ground cover as for the adjacent species rich fen with Mentha aquatica, Filipendula ulmaria, Glyceria fluitans and Ranunculus repens. Dumping of cuttings and brash from farmyard damaging (and threatening) the vegetation).
29	35616	70632	Steep bank above old wall with oak, ash and sycamore; some acid grassland elements to the rocky ridge with Hypochoeris radicata, Succisa pratensis, Viola riviniana, Rumex acetosella, Festuca ovina, Sedum anglicum and good cover of moss and lichens.
30	35639	70627	Ridge top with Juncus flushing and acid grassland; species include Potentilla erecta, Succisa pratensis and Carex leporina.
			Target Notes from Faunal Surveys
31	35670	70849	Mature ash and beech with potential bat roost features.
32	35698	70756	Field vole signs.
33	35728	70694	Potential for roosting or nesting barn owl.
34	35831	70806	Brown Long-eared bat recorded during bat survey.

Site 15 West Quarry Target Notes

1	35308	70575	Short, rough grass (much Festuca rubra) with limited herbs, mostly Rumex acetosa but some Succisa pratensis below.
2	35290	70587	Marshy area with Juncus acutiflorus but also increasing bramble and thistle (more so to margins); associates include Deschampsia cespitosa, Rumex acetosa, Lotus pedunculatus, Cirsium palustre and Epilobium spp.
3	35272	70573	Recently cleared area by gate with various ephemerals;
4	35270	70551	Disturbed edge with quarry spoil and removed bracken and gorse.
5	35300	70528	Juncus acutiflorus mire to either side of the grassy ridge slope; associates include Deschampsia cespitosa, Rumex acetosa, Lotus pedunculatus, Senecio aquaticus, Cirsium palustre and Achillea ptarmica; of note is small tuft of Molinia caerulea with Succisa pratensis and Potentilla erecta.
6	35316	70543	Flushed slope with Angelica sylvestris, Lotus pedunculatus, Stachys palustre and Comarum palustre.
7	35324	70538	Free draining grass (with much Festuca rubra, plus Anthoxanthum odoratum and Agrostis capillaris) with limited herbs but some Potentilla erecta, Succisa pratensis and rare Galium saxatile.
8	35327	70510	Marshy grassland with local Juncus acutiflorus but much Deschampsia cespitosa on slopes.
9	35340	70486	Small acid grassland relic ridge (some Festuca ovina, Potentilla erecta, Galium saxatile and Succisa pratensis); increasing rank grass and thistle with nettle and raspberry to houses.
10	35387	70537	Low ridge with less improved pasture, herbs include Ranunculus spp., Plantago lanceolata, Achillea millefolium and Lathyrus pratensis
11	35394	70513	Flushed and thick Holcus lanatus dominated pasture with Ranunculus spp., Lotus pedunculatus, Plantago lanceolata and Alchemilla glabra
12	35451	70430	Boundary stone wall with Asplenium trichomanes and A. ruta-muraria, and some Cymbalaria muralis; margin with rank grass, tall herbs and scrub developing.
13	35418	70451	Slope with freer draining grass: increased Festuca rubra, Agrostis capillaris, plus herbs such as Ranunculus spp., Plantago lanceolata, Achillea millefolium, and local Centaurea nigra, Trifolium pratense, Veronica chamaedrys and Dactylorhiza fuchsii. Further north Holcus lanatus increases with some Lolium perenne.
14	35422	70503	Ridge with slightly increased diversity; of note for spike of Platanthera chlorantha.
15	35444	70565	Poorly draining depression with rushes (some Juncus articulatus) plus Lotus pedunculatus, Agrostis stolonifera, Ranunculus repens, Potentilla anserina, Carex leporina, Scorzoneroides autumnalis and Mimulus guttatus; of note as local short sedges (Carex demissa, C. panicea, C. nigra) with Euphrasia sp. and Dactylorhiza fuchsii spikes.
16	35425	70573	Juncus effusus mire to bottom of improved ley pasture with central Juncus acutiflorus flush; associates include Rumex acetosa, Epilobium obscurum, Epilobium hirsutum, Deschampsia cespitosa an Urtica dioica.
17	35444	70596	Tall hedge with hawthorn, elder and bramble bearing much fruit.
18	35464	70590	Swamp grass strip (some sulphurous) below improved ley field: much Agrostis

			stolonifera with Glyceria declinata mats.
19	35485	70525	Low ridge with mature lime plus sycamore and pine; some acidic grass but limited herbs (some Veronica chamaedrys); frequent thistle in improved pasture to north slope.
20	35507	70486	Old wall with some lichen and moss cover, plus ferns and Digitalis purpurea; some pasture herbs also present (much Centaurea nigra and Achillea millefolium).
21	35483	70457	Old spike of Platanthera chlorantha; pasture with Agrostis capillaris and Festuca rubra plus Ranunculus spp., Plantago lanceolata, Hypochoeris radicata, Lathyrus pratensis and Alchemilla glabra.
22	35521	70436	Pasture with a general improved sward (much Holcus lanatus and Agrostis capillaris, with Festuca rubra, and common herbs being Ranunculus spp., and Plantago lanceolata; some flush elements (Lotus pedunculatus and Alchemilla glabra) and very local Centaurea nigra or Lathyrus pratensis.
23	35520	70503	Coarse Holcus lanatus – Ranunculus spp grassland with some Plantago lanceolata; the old wall stonework with Galium saxatile, Hypochoeris radicata and Campanula rotundifolia.
24	35554	70452	Mostly low diversity grassland but with local strips of increased herbs, including some Hypochoeris radicata and Rhinanthus minor.
25	35575	70464	Ridge of increased diversity; Festuca rubra, Anthoxanthum odoratum, Agrostis capillaris (but also Cynosurus cristatus), with Ranunculus spp., Plantago lanceolata, Lotus pedunculatus, Alchemilla glabra, Potentilla anserina, and some local Succisa pratensis, Dactylorhiza fuchsii and Platanthera chlorantha.
26	35559	70495	Low ridge with mature lime over acid grass (increasing Dactylis glomerata) but limited herbs (some Hypochoeris radicata). Slope below (north) with much Holcus lanatus, Ranunculus spp. and Cynosurus cristatus
27	35512	70587	Low ridge with Festuca rubra and occasional Centaurea nigra and Trifolium pratense; old wall to north with some Galium saxatile, Blechnum spicant and Vaccinium myrtillus.
28	35524	70570	Marshy corner with Juncus effusus (plus Holcus lanatus, Agrostis stolonifera) with Ranunculus repens, Lotus pedunculatus, Potentilla anserina, Juncus articulatus, Cardamine pratense and some Carum verticillatum
29	35561	70618	Flushed grassy slope with Holcus lanatus, Festuca rubra Anthoxanthum odoratum, Agrostis capillaris and Cynosurus cristatus plus Ranunculus acris, Prunella vulgaris, Scorzoneroides autumnalis, Lotus pedunculatus, Juncus spp., Carex leporina and frequent Carum verticillatum.
30	35567	70601	Lower down slope increasing Juncus spp., and sedges (Carex panicea, C. echinata, C. demissa, C. leporina) with much Carum verticillatum.
31	35575	70573	Flushing and inundation about informal path with short open vegetation with Glyceria declinata, Veronica beccabunga, Ranunculus hederaceus, Juncus bufonius, Mimulus guttatus with mosses Pohlia wahlenbergii and Calliergonella cuspidata.
32	35570	70593	Flushed grassland more distinctly marshy with flush from above, increased Juncus spp., Galium palustre, Lotus pedunculatus, Ranunculus flammula, Carex spp.
33	35603	70644	Slope with increasingly improved grassland to the east above with limited herbs

			(and frequent dock).
34	35670	70742	Eastern edge of improved pasture with grazed marshy conditions (Juncus spp., Lotus pedunculatus, Ranunculus repens, Galium palustre, Carex nigra and Carex leporina; grading westward to a more improved and poached sward
35	35674	70754	Ungrazed coarse marshy grassland with Juncus spp., Deschampsia cespitosa, Cirsium palustre, Lotus pedunculatus, Senecio aquaticus, Mentha aquatica, Comarum palustre and some Succisa pratensis.
36	35636	70779	Upper slope flush with increased Filipendula ulmaria but similar associates to Juncus below; some Molinia caerulea occurs below the gorse and bramble scrub fringe
37	35601	70822	Very small, relic area of Molinia caerulea mire (with Potentilla erecta, Succisa pratensis) above gorse (and bramble scrub).
			Target Notes from Faunal Surveys
38	35290	70572	Abundant vole runs and larger mammal path leading into gorse scrub.
39	35306	70587	Abundant vole runs.
40	35597	70808	Network of Badger paths around fringes of gorse scrub.
41	35653	70746	Abundant vole runs.

Site 16 Stable Wood Target Notes

1	34768	70792	Amenity grass strip separating scrubby embankment (gorse, beech, sycamore, birch – some recently cut) from a stony disturbed roadside embankment, with annuals, mosses and lichens.
2	34818	70749	Stony bank with small population of Sherardia arvensis; some Aphanes arvensis agg.
3	34924	70715	Roadside wood on steep slope or outcrop with sycamore and beech over bracken, Oxalis acetosella, Teucrium scorodonia, Viola riviniana and Polypodium vulgare.
4	34952	70718	Slope up to driveway with immature canopy of sycamore, birch and beech (some rhododendron and snowberry) over Dryopteris dilatata, Oxalis acetosella, Viola riviniana, Dryopteris filix-mas, rare Hyacinthoides non-scripta, bramble, grasses and moss (Kindbergia praelonga).
5	34933	70732	Mature beech and sycamore but locally very dense rhododendron (extending to gardens above)
6	34871	70747	Small ponds near wall (lined) with Iris pseudacorus Caltha palustris, Glyceria fluitans, Callitriche stagnalis, Lysichiton americanus and the highly invasive Crassula helmsii.
7	34837	70769	Slopes below house with mostly ornamental planting (and much rhododendron)
8	34790	70828	Entrance track with mature sycamore and beech to sides.

9	34762	70869	Woodland with beech, sycamore and birch with regenerating beech and elder, over Dryopteris dilatata, Deschampsia cespitosa, moss and a couple of bramble glades.
10	34777	70923	North of fence open grazed woodland with occasional older birch or beech over a grass dominated pasture cover with local bramble or nettle (and dock),
11	34804	70957	Large bramble patch with goat willow above; mature beech line below.
12	34811	70919	Old pile of stones with mature sycamore and nettle
13	34830	70921	Former walled garden (not accessed) but dense nettle with rosebay willowherb and scrub developing.
14	34883	70951	Slope with abundant rosebay willowherb plus thistle, male fern and bramble.
15	34813	70868	Grassy track route (much knapweed) but mostly rank grass with thistle and scrub developing.
16	34999	70784	Sycamore-dominated (crudely pollarded) with Dryopteris dilatata but much bare of vegetation (local play areas).
17	35021	70808	Auchenbothie Wood southern slope with sycamore, birch and beech (plus pine, oak and holly – and below much rhododendron); ground cover with much Dryopteris dilatata plus Oxalis acetosella, Hyacinthoides non-scripta and bramble.
			Target Notes from Faunal Surveys
18	34798	70826	Tawny Owl singing during bat survey.
19	34804	70893	Soprano Pipistrelle and Brown Long-eared bats recorded throughout area of grassland and surrounding scrub with scattered trees.
20			See Confidential Annex