



# Proposed Housing Development off Selkirk Road, Moffat

## Phase 1 Habitat Survey and Ecological Assessment



A report by  
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## 1. Introduction

This vegetation survey and assessment of ecological impact has been carried out by Rigby Jerram Ecological Consultants. It forms part of the planning application for a proposed housing development off Selkirk Road, Moffat.

## 2. Methodology

### 2.1. Desk study

A desk study was carried out to identify any international, national or local nature conservation designations within or near to the Site and to obtain and evaluate any relevant existing ecological information. The study area for the desk study extended to 2km around the site boundary.

### 2.2. Phase 1 ecological habitats survey

Vegetation within the site was surveyed and mapped in accordance with the JNCC Phase 1 Habitat Survey Classification at a scale of 1:2,500. Vegetation boundaries were checked using Google Earth aerial photos. Written descriptions of the vegetation types is given, including the principal component species of the vegetation, together with an assessment of their abundance using the DAFOR (Dominant Abundant Frequent Occasional Rare) scale.

### 2.3. Assessment

Assessment of ecological value and the significance of impacts follows the guidance given in the Institute of Ecology and Environmental Management (IEEM) "Guidelines for Ecological Impact Assessment in the United Kingdom". The impact assessment for features of European Interest also makes reference to "Managing Natura 2000 Sites", "Assessment of plans and projects significantly affecting Natura 2000 sites", "Habitats Regulations Guidance Notes 1, 3 and 4".

## 3. Baseline Conditions

### 3.1. Desk study

#### *Designated sites*

No designated or non-statutory sites are present within 2km of the site, other than Dyke Farm Nature Reserve and Moffat Community Nature Reserve, both of which lie to the south of Moffat. These two nature reserves are non-statutory in nature and have no legal protection.

#### *Rare and protected species*

Data from the Dumfries and Galloway Environmental Records Centre provide records of the species shown in Table 1 within two kilometres of the proposed course (see also Figures 1 and 2).

Of particular note is the presence of red squirrel in woodland to the north of Moffat and water vole along Frenchland Burn and at Dyke Farm Nature Reserve. Badger are also present, with a large and well known sett present in the top of Auldton Mott on the northern edge of the proposed development. Other badger records occur for setts over 1km from the site to the south, west and north of Moffat. These setts are not mapped here to protect their location.



Bats appear to be frequent, roosting in houses within Moffat.

Red squirrel and water vole are strictly protected under Schedule 5 of the Wildlife and Countryside Act (1981 as amended) and are also listed as Priority Species in the UK and Dumfries and Galloway Biodiversity Action Plans (BAPs) and on the Scottish Biodiversity List. All bat species are European Protected Species (protected under Schedule 2 of The Conservation (Natural Habitats, &c.) Regulations 2010 and are also listed on the Scottish Biodiversity List and Dumfries and Galloway Biodiversity Action Plan, with the exception of common pipistrelle, in the UK BAP. Badgers are protected under the Protection of Badgers Act (1992).

**Table 1 Species Records**

Taxon group	Scientific Name	Common Name	Dates recorded	Number of Records
<b>European Protected Species</b>				
terrestrial mammal	<i>Myotis daubentonii</i>	Daubenton's Bat	2005 – 2009	5
terrestrial mammal	<i>Pipistrellus</i>	Pipistrelle Bat species	1998 – 2007	3
terrestrial mammal	<i>Pipistrellus pipistrellus</i>	Pipistrelle	2006	1
terrestrial mammal	<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	2009 – 2010	3
<b>Protected Species (UK Legislation)</b>				
amphibian	<i>Rana temporaria</i>	Common Frog	2012	1
bird	<i>Alcedo atthis</i>	Kingfisher	2013	1
bird	<i>Turdus pilaris</i>	Fieldfare	2005 – 2006	2
bird	<i>Turdus iliacus</i>	Redwing	2006 – 2013	2
reptile	<i>Zootoca vivipara</i>	Common Lizard	1990	2
terrestrial mammal	<i>Meles meles</i>	Eurasian Badger	1899 – 2009	17
terrestrial mammal	<i>Sciurus vulgaris</i>	Eurasian Red Squirrel	1999 – 2008	13
terrestrial mammal	<i>Arvicola amphibious</i>	European Water Vole	2003 – 2005	2
<b>UK Biodiversity Action Plan Species</b>				
bird	<i>Caprimulgus europaeus</i>	Nightjar	2006	1
bird	<i>Locustella naevia</i>	Grasshopper Warbler	2010	1
bird	<i>Prunella modularis</i>	Dunnock	2005	2
bird	<i>Turdus philomelos</i>	Song Thrush	2005 – 2006	3
bird	<i>Passer domesticus</i>	House Sparrow	2005 – 2013	3
bird	<i>Passer montanus</i>	Tree Sparrow	2006	1
bird	<i>Emberiza schoeniclus</i>	Reed Bunting	2012	1
reptile	<i>Zootoca vivipara</i>	Common Lizard	1990	2
terrestrial mammal	<i>Sciurus vulgaris</i>	Eurasian Red Squirrel	1999 – 2008	13
terrestrial mammal	<i>Arvicola amphibious</i>	European Water Vole	2003 – 2005	2
insect – moth	<i>Hepialus humuli</i>	Ghost Moth	2006	1
insect – moth	<i>Hepialus humuli subsp. humuli</i>	Ghost Moth	2006	1
insect – butterfly	<i>Boloria selene</i>	Small Pearl-bordered Fritillary	2010	1
insect – butterfly	<i>Coenonympha pamphilus</i>	Small Heath	2004 – 2011	2
insect – moth	<i>Orthonama vittata</i>	Oblique Carpet	2005	1
insect – moth	<i>Xanthorhoe decoloraria subsp. decoloraria</i>	Red Carpet	1858	1
insect – moth	<i>Xanthorhoe ferrugata</i>	Dark-barred Twin-spot Carpet	1858 – 2005	2
insect – moth	<i>Ecliptopera silaceata</i>	Small Phoenix	2005 – 2013	4
insect – moth	<i>Perizoma albulata subsp. albulata</i>	Grass Rivulet	1858	1
insect – moth	<i>Diarsia rubi</i>	Small Square-spot	2006	2
insect – moth	<i>Melanchra persicariae</i>	Dot Moth	2009 – 2013	4
insect – moth	<i>Melanchra pisi</i>	Broom Moth	1858	1





**Table 1 Species Records**

Taxon group	Scientific Name	Common Name	Dates recorded	Number of Records
insect – moth	<i>Brachylomia viminalis</i>	Minor Shoulder-knot	2013	1
insect – moth	<i>Blepharita adusta</i>	Dark Brocade	1858 – 2013	2
insect – moth	<i>Acronicta rumicis</i>	Knot Grass	2009	2
insect – moth	<i>Amphipoea oculea</i>	Ear Moth	1858	1
insect – moth	<i>Hydraecia micacea</i>	Rosy Rustic	1858 – 2009	3
insect – moth	<i>Arctia caja</i>	Garden Tiger	2009	4
insect – moth	<i>Spilosoma lubricipeda</i>	White Ermine	2006 – 2009	8
insect – moth	<i>Spilosoma luteum</i>	Buff Ermine	2009 – 2013	7
insect – moth	<i>Tyria jacobaeae</i>	Cinnabar	2012 – 2014	3
<b>Dumfries and Galloway Biodiversity Action Plan Species</b>				
lichen	<i>Lobaria amplissima</i>	lichen	1857	1
insect – butterfly	<i>Boloria selene</i>	Small Pearl-bordered Fritillary	2010	1
bird	<i>Chroicocephalus ridibundus</i>	Black-headed Gull	2005	1
bird	<i>Caprimulgus europaeus</i>	Nightjar	2006	1
bird	<i>Apus apus</i>	Swift	2005 – 2006	2
bird	<i>Alcedo atthis</i>	Kingfisher	2013	1
bird	<i>Turdus philomelos</i>	Song Thrush	2005 – 2006	3
bird	<i>Passer domesticus</i>	House Sparrow	2005 – 2013	3
bird	<i>Passer montanus</i>	Tree Sparrow	2006	1
bird	<i>Spinus spinus</i>	Siskin	2005 – 2014	2
bird	<i>Emberiza schoeniclus</i>	Reed Bunting	2012	1
terrestrial mammal	<i>Myotis daubentonii</i>	Daubenton's Bat	2005 – 2009	5
terrestrial mammal	<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	2009 – 2010	3
terrestrial mammal	<i>Sciurus vulgaris</i>	Eurasian Red Squirrel	1999 – 2008	13
terrestrial mammal	<i>Arvicola amphibious</i>	European Water Vole	2003 – 2005	2
<b>Scottish Biodiversity List Species</b>				
flowering plant	<i>Calluna vulgaris</i>	Heather	1998 – 2009	3
flowering plant	<i>Quercus petraea</i>	Sessile Oak	1950	1
flowering plant	<i>Cirsium palustre</i>	Marsh Thistle	2009	1
lichen	<i>Lobaria amplissima</i>	lichen	1857	1
bird	<i>Chroicocephalus ridibundus</i>	Black-headed Gull	2005	1
bird	<i>Caprimulgus europaeus</i>	Nightjar	2006	1
bird	<i>Apus apus</i>	Swift	2005 – 2006	2
bird	<i>Alcedo atthis</i>	Kingfisher	2013	1
bird	<i>Erithacus rubecula</i>	Robin	2005 – 2014	6
bird	<i>Turdus philomelos</i>	Song Thrush	2005 – 2006	3
bird	<i>Turdus iliacus</i>	Redwing	2006 – 2013	2
bird	<i>Passer montanus</i>	Tree Sparrow	2006	1
bird	<i>Spinus spinus</i>	Siskin	2005 – 2014	2
bird	<i>Emberiza schoeniclus</i>	Reed Bunting	2012	1
terrestrial mammal	<i>Meles meles</i>	Eurasian Badger	1899 – 2009	17
terrestrial mammal	<i>Myotis daubentonii</i>	Daubenton's Bat	2005 – 2009	5
terrestrial mammal	<i>Pipistrellus pipistrellus</i>	Pipistrelle	2006	1
terrestrial mammal	<i>Sciurus vulgaris</i>	Eurasian Red Squirrel	1999 – 2008	13
terrestrial mammal	<i>Arvicola amphibious</i>	European Water Vole	2003 – 2005	2

**Table 1 Species Records**

Taxon group	Scientific Name	Common Name	Dates recorded	Number of Records
<b>Notable Species<sup>1</sup></b>				
flowering plant	<i>Vaccinium microcarpum</i>	Small Cranberry	1998	1
moss	<i>Sphagnum subsecundum</i>	Slender Cow-horn Bog-moss	1998	1
insect – butterfly	<i>Boloria selene</i>	Small Pearl-bordered Fritillary	2010	1
insect – butterfly	<i>Coenonympha pamphilus</i>	Small Heath	2004 – 2011	2
bird	<i>Anser brachyrhynchus</i>	Pink-footed Goose	2005	1
bird	<i>Anas crecca</i>	Teal	2005 – 2006	2
bird	<i>Anas platyrhynchos</i>	Mallard	2005 – 2014	9
bird	<i>Aythya fuligula</i>	Tufted Duck	2012 – 2014	2
bird	<i>Tachybaptus ruficollis</i>	Little Grebe	2012 – 2014	3
bird	<i>Haematopus ostralegus</i>	Oystercatcher	2012	1
bird	<i>Chroicocephalus ridibundus</i>	Black-headed Gull	2005	1
bird	<i>Caprimulgus europaeus</i>	Nightjar	2006	1
bird	<i>Apus apus</i>	Swift	2005 – 2006	2
bird	<i>Alcedo atthis</i>	Kingfisher	2013	1
bird	<i>Locustella naevia</i>	Grasshopper Warbler	2010	1
bird	<i>Phylloscopus trochilus</i>	Willow Warbler	2012	1
bird	<i>Riparia riparia</i>	Sand Martin	2006	2
bird	<i>Hirundo rustica</i>	Swallow	1996 – 2014	8
bird	<i>Delichon urbicum</i>	House Martin	2006 – 2014	6
bird	<i>Motacilla cinerea</i>	Grey Wagtail	2005	2
bird	<i>Prunella modularis</i>	Dunnock	2005	2
bird	<i>Turdus pilaris</i>	Fieldfare	2005 – 2006	2
bird	<i>Turdus philomelos</i>	Song Thrush	2005 – 2006	3
bird	<i>Turdus iliacus</i>	Redwing	2006 – 2013	2
bird	<i>Turdus viscivorus</i>	Mistle Thrush	2005	3
bird	<i>Passer domesticus</i>	House Sparrow	2005 – 2013	3
bird	<i>Passer montanus</i>	Tree Sparrow	2006	1
bird	<i>Emberiza schoeniclus</i>	Reed Bunting	2012	1

### 3.2. Site survey

The site was surveyed on 18<sup>th</sup> May 2013. Figure 3 shows the ecological habitats present, whilst site notes are presented in Appendix 1.

The majority of the site consists of fields of improved grassland, the majority of which appears to be grown for silage. Areas of unimproved grassland are present as narrow strips on banks on the edges of some fields (mostly acid grassland with frequent pignut *Conopodium majus* (see target notes **5**, **8**, **12** and **22**) and strips of coarse neutral grassland along the banks of burns running through the fields (see target notes **2**, **3**, **10** and **14**). Whilst coarse grasses tend to dominate these strips, there is some moderate herb-richness, with species such as creeping buttercup *Ranunculus repens*, common sorrel *Rumex acetosa*, greater willow-herb *Epilobium hirsutum*, meadowsweet *Filipendula ulmaria* and nettles *Urtica dioica* occasional to frequent.

<sup>1</sup> Nationally rare and scarce species, Red Data Book species, endemic species, and birds listed on the current review of Birds of Conservation Concern: Population Status of Birds in the UK.

The principal exception to this is the field in the north-east part of the site (target note **15**), which has an unusual sward composition and has been mapped as semi-improved grassland. The sward here is herb-rich, suggesting unimproved grassland, however the most of this herb-richness is brought about by just a single species: yellow rattle *Rhinanthus minor*. Other species which would be characteristic of an unimproved meadow or pasture, such as ribwort plantain *Plantago lanceolata*, oxeye daisy *Leucanthemum vulgare*, common bird's-foot trefoil *Lotus corniculatus*, red clover *Trifolium pratense*, common knapweed *Centaurea nigra* etc. are absent and only common sorrel *Rumex acetosa*, creeping buttercup *Ranunculus repens*, white clover *Trifolium repens*, yarrow *Achillea millefolium*, and broadleaved dock *Rumex obtusifolius* are frequent. This suggests that the abundance of yellow rattle is probably due to its invasion of the sward following a period when there was abundant bare ground as a weed or has been sown into the sward to reduce grass vigour, rather than this being a remnant unimproved meadow.

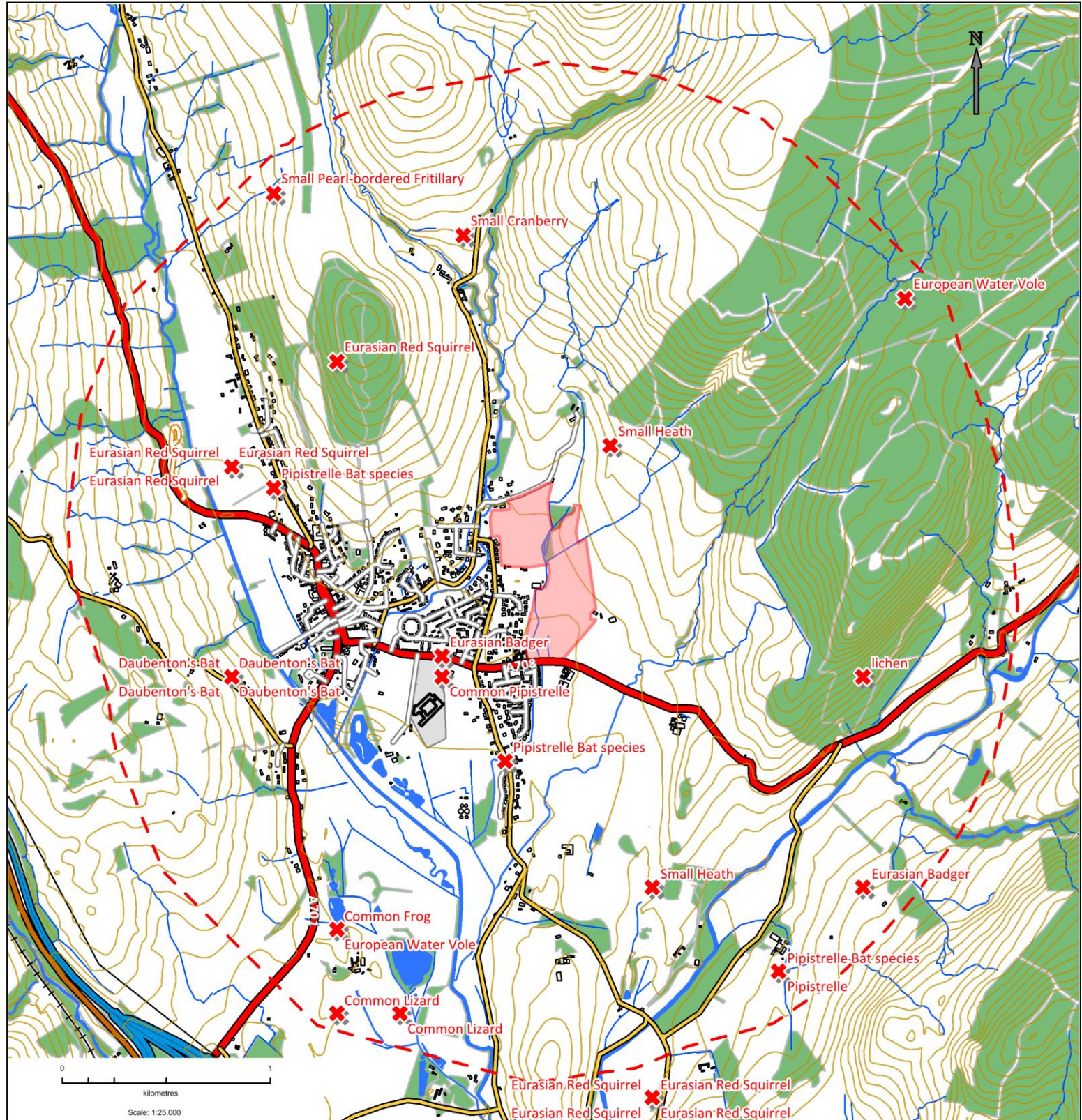
Areas of marshy grassland are present along parts of Crosslaw Burn. These are species-poor with abundant soft and sharp-flowered rushes *Juncus effusus* and *J. acutiflorus*, creeping buttercup *Ranunculus repens*, Yorkshire fog *Holcus lanatus* and creeping bent *Agrostis stolonifera* (target notes **11**, **19** and **20**).

A small relatively young (less than 20 years old) plantation separates the two northernmost fields. This has a central core of spruce and fir forming a dense canopy which is surrounded by a fringe of broadleaved trees (field maple, beech, oak and alder) over a grassy groundlayer of Yorkshire fog *Holcus lanatus* and common bent *Agrostis capillaris* and frequent pignut *Conopodium majus*, common dog-violet *Viola riviniana* and lesser celandine *Ranunculus ficaria*. A small wet hollow supports a stand of grey willow carr. Areas of neutral grassland are present along Crosslaw Burn where it runs along the western edge of the plantation and in the unwooded south-west corner (target notes **13**, **16**, **17** and **18**). A similar area of woodland lies to the north but is outside the proposed development area.

At the northern end of the proposed development is Auldton Mott, the remains of a mott and bailey castle. Mature oak, beech and wild cherry trees ring the bailey and common gorse is abundant on the slopes of the mott. The banks of the bailey, the bailey itself and parts of the mott slopes have abundant to dominant bluebell *Hyacinthoides non-scripta* amongst Yorkshire fog *Holcus lanatus*, sheep's fescue *Festuca ovina* and common bent *Agrostis capillaris*. A large active badger sett is present at the top of the mott (target note **25**).

Although strips of coarse grassland are present along the banks of Crosslaw Burn, the burn itself is too small and shallow to provide adequate habitat for water vole.





**Figure 1: Proposed Housing Development off Selkirk Road, Moffat  
Selected Protected Species Records (excluding birds & moths)**

✕ Species record

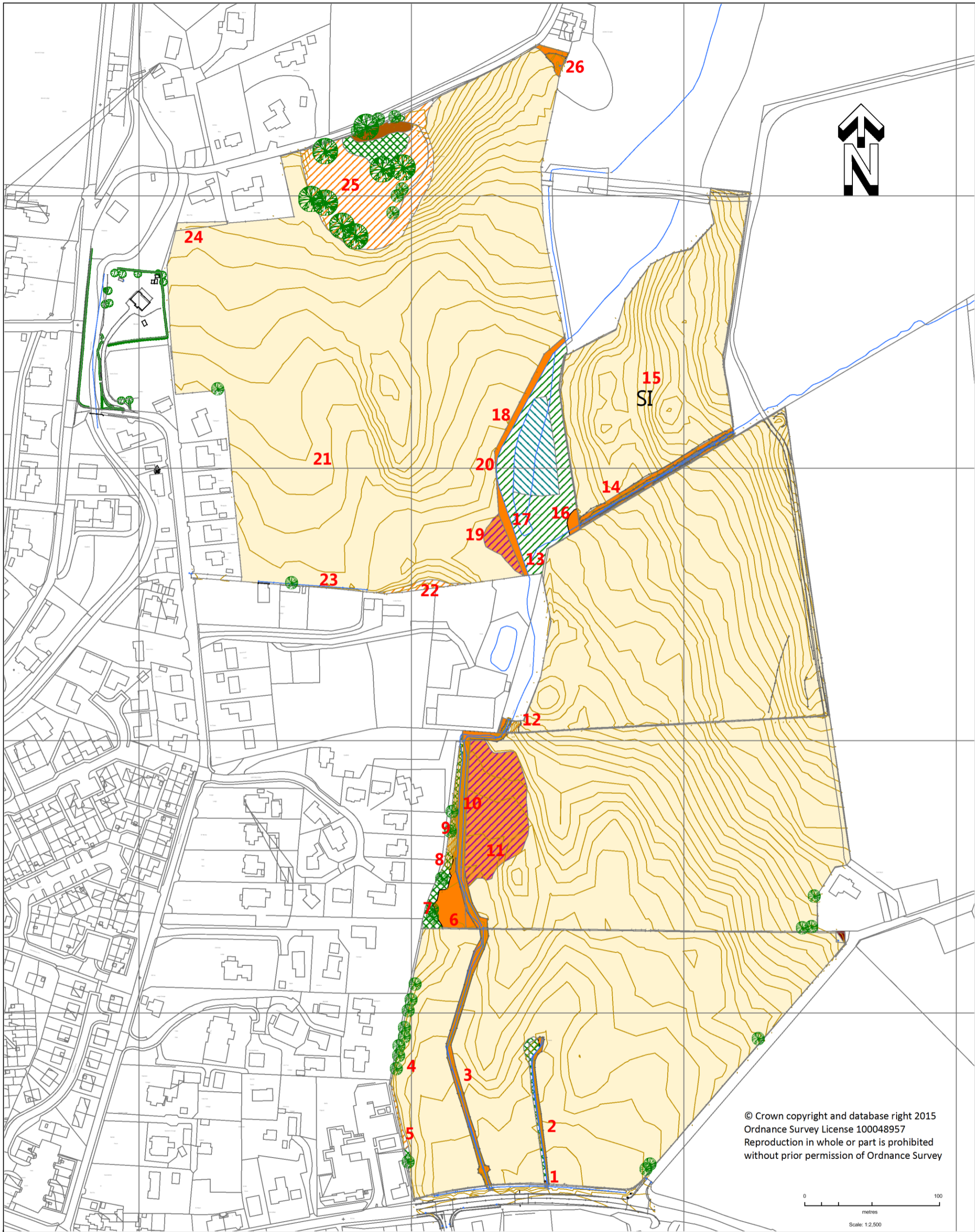
■ Site boundary











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**Figure 3: Proposed Housing Development off Selkirk Road, Moffat  
 Phase 1 Habitats**

<b>SI</b> Semi-improved grassland	Conifer plantation	Neutral grassland	Scrub
Acid grassland	Improved grassland	Bracken	<b>3</b> Target note
Broadleaved plantation	Marshy grassland	Ruderal tall herbs	

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## 4. Assessment of Ecological Importance

The improved grassland of the main fields is of local ecological significance as feeding habitat for badger, whilst the semi-improved field with abundant yellow rattle is of local ecological importance due to its herb-richness, though it lacks the species-richness of a true hay meadow and as badger feeding habitat. The small areas of acid grassland and neutral grassland along field edges and burns are of local ecological interest as small localised areas of unimproved herb-rich grassland but are not large enough to be considered to be of significance beyond the local area. Stands of marshy grassland are species-poor and again are of no more than local ecological importance. The plantation is again of local ecological interest, but is too immature as woodland to be considered as a significant feature.

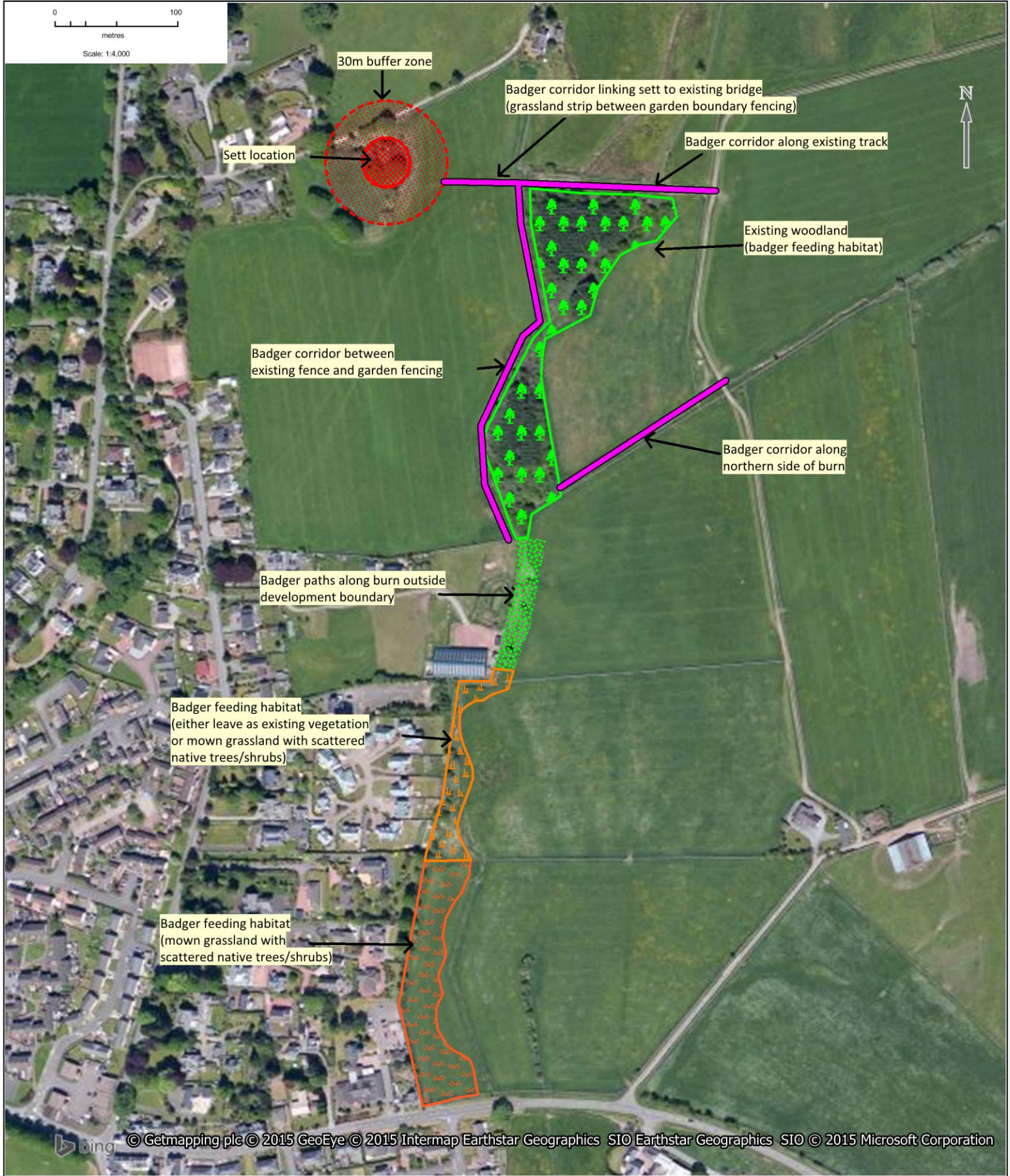
The grassland on Auldton Mott is of ecological importance at the community/parish scale as it is the main area of semi-natural vegetation in the local area. The mature trees are all of high suitability as bat roosts. The badger sett is of ecological importance at the community/parish scale and is the main sett in this part of Moffat and District.

## 5. Assessment of Development Proposal Predicted Impacts

The proposals will result in the loss of the majority of the improved and semi-improved grassland on the site. Whilst this is of limited botanical interest it is of importance as feeding habitat for the badgers from Auldton Mott. Whilst the mott badgers will also feed in other fields on the east side of Moffat, it is likely that the fields within the development constitute a significant proportion of their feeding area given the proximity to the sett. During the site survey there was ample evidence of badgers feeding in areas of grassland with pignut on the edges of the fields, but it is also likely that they use the main parts of the fields too. Evidence of badger foraging was also seen in the young plantations to the south-east of the mott. The impact upon the badgers using the mott sett from the proposed development is predicted to be adverse and long-term at the community/parish scale due to the loss of feeding habitat. The sett itself will not be impacted by the proposed development as its position on a scheduled ancient monument means that any construction will be restricted to well beyond the 30m excavation buffer required for a badger sett.

Bats are recorded as roosting in houses in Moffat and are likely to feed around the trees on the Mott and along the edges of the young plantations, the line of trees and shrubs on the western edge of the site. None of these trees will be affected by the proposals, so there should be no adverse impact on foraging bats, indeed there may be an increase in foraging habitat in the medium term due to the creation of gardens with their associated trees and shrubs. Pipistrelle bats are known to forage around street lights so should not be adversely affected by additional street lights due to the development. Daubenton's bats, which avoid street lights, are only recorded from the west side of Moffat and are likely to concentrate feeding along the River Annan and are not likely to be affected by additional street lighting at the proposed development.





**Figure 4: Proposed Housing Development off Selkirk Road, Moffat  
Indicative badger mitigation proposals**



## 6. Mitigation

To mitigate the impact upon badger it is proposed to have corridors through the proposed housing development which will provide routes for badgers through the development to feeding areas to the east of the development and to areas to the west of Crosslaw Burn which will be retained as badger feeding habitat (Figure 4).

## 7. Residual Impact and Conclusions

The impact upon bats is likely to be positive at the local scale in the medium and long term due to the creation of gardens which will provide additional foraging habitat for bats.

The impact upon badger is likely to be adverse at the local scale for the long term once the mitigation proposals are taken in to account. Whilst the mitigation measures will allow badgers access to feeding areas beyond the proposed development they do not alleviate the loss of a large area of grassland which currently provides foraging habitat.

## 8. Photographs



Photo 1 Looking north along Crosslaw Burn from Selkirk Road



Photo 2 Looking north across eastern fields from Selkirk Road



**Photo 3 Looking across marshy grassland of Target Note 11**



**Photo 4 Looking south across the southern two fields**



**Photo 5 Burn in Target Note 14**





**Photo 6 Broadleaved plantation (Target Note 13)**



**Photo 7 Abundant yellow rattle in north-eastern field (Target Note 15)**



**Photo 8 Looking north towards Auldton Mott across northern most field**



**Photo 9 Spoil from badger sett entrance on Auldton Mott**



**Photo 10 Looking south across northern field towards young plantation**



**Photo 11 Looking north-east across northern field towards young plantation**



## 9. Appendix 1: Site Notes

1. Corner of field with abundant *Urtica dioica*, *Galium aparine* and *Rumex obtusifolius*.
2. Stream through middle of field with a line of hawthorn bushes and occasional elder and rowan along the western bank. The stream banks has a strip of coarse grassland dominated by *Arrhenatherum elatius*, *Dactylis glomerata*, *Holcus lanatus* and *Festuca rubra* with frequent *Urtica dioica* and *Galium aparine*. The stream channel has locally abundant *Phalaris arundinacea* along the southern section and locally abundant *Ranunculus repens*, plus occasional *Hyacinthoides non-scripta* and *Cirsium arvense*. The upper northern section has locally abundant *Phalaris* and stands of *Veronica beccabunga*, frequent *Agrostis stolonifera* and abundant *Ranunculus repens*.
3. Strips of coarse grassland along the banks of Crosslaw Burn where it flows through a field. The grassland has abundant *Arrhenatherum elatius*, *Dactylis glomerata*, *Holcus lanatus* and *Festuca rubra* with frequent *Urtica dioica*, *Rumex obtusifolius*, *R. acetosa*, *Epilobium hirsutum*, *Taraxacum officinalis*, *Anthriscus sylvatica*, *Galium palustre*, *Cardamine pratensis*, *Ranunculus ficaria*, *Filipendula ulmaria*, *Stachys sylvatica*, *Oenanthe crocata*, *Centaurea nigra* and *Lathyrus pratensis* form a herb-rich and moderately species-rich sward.
4. Scattered to locally dense shrubs and trees along boundary wall. Mostly hawthorn, elder and rowan over stands of *Urtica dioica* and *Galium aparine* with occasional *Aegopodium podagraria*, *Rumex obtusifolius* and *Lamiastrum galeobdolon*. There are frequent piles of lawn cuttings from the adjacent gardens.
5. Narrow strip of semi-improved acid grassland on a bank below the boundary wall. The sward has abundant *Festuca ovina*, *Agrostis capillaris* and *Conopodium majus*, plus frequent *Veronica chamaedrys*, *Rumex acetosa*, *Ranunculus ficaria*, *Cardamine pratensis* and *Taraxacum officinalis*. Much foraging for *Conopodium* by badgers.
6. Ungrazed or mown corner of field to west of Crosslaw Burn. The coarse tussocky grassland is damp with locally frequent *Juncus effusus* tussocks, but mostly is composed of *Arrhenatherum elatius*, *Dactylis glomerata* and *Holcus lanatus*, plus frequent *Filipendula ulmaria*, *Rumex obtusifolius* and *Urtica dioica*. Broom is present along the burn and there are small patches of *Rubus fruticosus*. Towards the western edge *Cirsium arvense* and *Phalaris arundinacea* are abundant plus frequent *Galium aparine*.
7. Low bank below the wall with abundant *Rubus fruticosus* and scattered ash, hawthorn and elder.
8. Small patches of acid grassland on bank with abundant *Agrostis capillaris*, *Festuca ovina*, *Anthoxanthum odoratum* and *Holcus lanatus* with occasional to frequent *Potentilla erecta*, *Conopodium majus*, *Lathyrus pratensis*, *Plantago lanceolata*, *Veronica chamaedrys*, *Ranunculus ficaria* and *Alchemilla glabra*. Hawthorn and young ash occasional.
9. *Rubus fruticosus* locally dominant on the bank with scattered ash, holly, hawthorn and elder and patches of acid grassland as **8**.



10. The channel of Crosslaw Burn has stands of *Phalaris arundinacea*, *Agrostis stolonifera* and *Glyceria fluitans* along its edges. The steep banks have coarse grassland with abundant *Arrhenatherum elatius*, *Dactylis glomerata*, *Holcus lanatus*, *Alopecurus pratensis* and *Festuca rubra*, plus frequent to occasional *Juncus effusus*, *Ranunculus repens*, *Filipendula ulmaria*, *Cardamine pratensis*, *Galium aparine*, *Rumex acetosa* and *Lotus pedunculatus*.
11. Damp rushy grassland within main field with abundant *Juncus effusus* tussocks amongst *Holcus lanatus* and *Ranunculus repens* and locally abundant *Agrostis stolonifera*, together with occasional to frequent *Deschampsia cespitosa*, *Dactylis glomerata* and *Phalaris arundinacea*. Species-poor.
12. Steep eastern bank of Crosslaw Burn with semi-improved herb-rich acid grassland with abundant *Agrostis capillaris*, *Festuca ovina*, *Alopecurus pratensis*, *Dactylis glomerata* and *Ranunculus repens*, plus frequent *Conopodium majus*, *Lotus corniculatus*, *Rumex acetosa*, *R. obtusifolius*, *Deschampsia cespitosa*, *Vicia cracca* and locally frequent *Juncus effusus*. Broom bushes are present at the foot of the bank. On the western bank there is coarse grassland with *Deschampsia cespitosa*, *Dactylis glomerata*, *Alopecurus pratensis*, *Holcus lanatus*, *Rubus fruticosus*, *Juncus effusus*, *Urtica dioica* and *Ranunculus repens*.
13. Outer fringe of a semi-mature plantation with field maple over a grassy groundflora of *Holcus lanatus*, *Agrostis capillaris* and abundant *Conopodium majus* and *Galium aparine*, plus frequent *Viola riviniana*, *Veronica chamaedrys*, *Digitalis purpurea*, *Ranunculus repens*, *R. ficaria* and locally frequent *Urtica dioica*. Beech, oak, ash and wild cherry are present on the edges. Alder is frequent at the northern end with *Caltha palustris*, *Filipendula ulmaria* and *Ranunculus repens* present along the burn. The centre of the plantation has a dense canopy of spruce and fir with no groundflora.
14. Burn running along northern side of wall. Coarse grassland is present along the banks with abundant *Holcus lanatus*, *Festuca rubra* and *Agrostis capillaris* and frequent to locally abundant *Ranunculus repens*, locally frequent *Urtica dioica* and frequent *Rumex acetosa* and occasional *Rumex obtusifolius*, *Phalaris arundinacea*, *Veronica chamaedrys*, *Galium aparine*, *Rhinanthus minor*, *Centaurea nigra* and *Ranunculus ficaria*. *Agrostis stolonifera* is locally abundant along the lower banks along with *Juncus effusus*. *Oenanthe crocata* is rare.
15. Herb-rich semi-improved meadow with abundant *Rhinanthus minor*, *Rumex acetosa* and *Ranunculus ficaria* amongst frequent to abundant *Holcus lanatus*, *Festuca rubra* and *Agrostis capillaris*. *Anthoxanthum odoratum*, *Rumex obtusifolius* and *Cerastium fontanum* are frequent, whilst *Bellis perennis* and *Veronica arvensis* are occasional and *Achillea millefolium* and *Trifolium repens* locally frequent.
16. Unwooded corner with neutral grassland of abundant *Festuca rubra*, *Holcus lanatus*, *Dactylis glomerata* and frequent *Ranunculus ficaria*, *Stellaria graminea*, *Vicia sepium*, *Veronica chamaedrys*, *Galium aparine* and *Oenanthe crocata*.
17. Wet hollow within plantation with a canopy of grey willow over abundant *Agrostis stolonifera*, *Ranunculus repens*, *Glyceria fluitans*, plus occasional *Phalaris arundinacea*,

*Juncus acutiflorus*, *Galium palustre*, *Caltha palustre*, *Ranunculus ficaria*, *Mentha aquatic*, *Filipendula ulmaria* and *Cirsium palustre*.

18. Banks of burn where it runs along the edge of the woodland with coarse locally damp grassland with abundant *Dactylis glomerata*, *Holcus lanatus*, *Festuca rubra*, *Juncus acutiflorus* and occasional *Phalaris arundinacea*. *Ranunculus repens* is abundant and *Galium aparine* locally abundant, plus frequent *Rumex acetosa*, *Lathyrus pratensis*, *Urtica dioica*, *Stachys sylvatica*, *Mentha aquatic*, *Anthriscus sylvestris* and *Rumex obtusifolius*.
19. Slightly damp grassland with frequent *Juncus acutiflorus*, *Ranunculus repens*, *Carex hirta*, *Holcus lanatus*, *Cardamine pratensis*, *Rhinanthus minor*, *Trifolium pratense* and *Agrostis capillaris*, with frequent *Cirsium arvense*, *Dactylis glomerata* and *Festuca rubra*. *Deschampsia cespitosa* and *Phalaris arundinacea* are abundant in the hollow. Herb-poor.
20. Small area of marshy grassland with abundant *Juncus acutiflorus* and *Ranunculus repens*, plus occasional *Lathyrus pratensis* and frequent *Holcus lanatus*, *Deschampsia cespitosa* and *Agrostis stolonifera*.
21. *Rhinanthus minor* frequent within sward of what otherwise appears to be a field of herb and species-poor improved grassland grown for silage.
22. Bank on the edge of the field supporting herb-rich acid grassland with abundant *Agrostis capillaris*, *Festuca ovina*, *Anthoxanthum odoratum*, *Conopodium majus* and *Ranunculus repens*, plus frequent *Veronica chamaedrys*, *Cerastium fontanum*, *Rumex obtusifolius*, *Epilobium montanum* and *Stellaria graminea*.
23. Dry ditch along field boundary dominated by species-poor coarse grassland with abundant *Dactylis glomerata*, *Festuca rubra* and *Holcus lanatus*, plus frequent *Urtica dioica*, *Ranunculus repens*, *Rumex obtusifolius* and *Galium aparine*.
24. Pile of lopped tree branches in corner of field over tall ruderal herbs including *Urtica dioica*, *Rumex obtusifolius* and *Galium aparine*, plus *Rubus idaeus* bushes.
25. Auldton Mott. Mature beech, oak and wild cherry trees are present on the bank of the bailey over a grassy sward of *Holcus lanatus* and *Agrostis capillaris* with frequent *Hyacinthoides non-scripta*, *Conopodium majus* and *Rumex acetosa* and occasional *Rumex obtusifolius* and *Stellaria holostea*. The flat area of the bailey itself is unimproved grassland largely dominated by *Holcus lanatus* with frequent *Festuca ovina* and *Agrostis capillaris* and abundant *Hyacinthoides non-scripta* and frequent *Rumex acetosa* and *Stellaria holostea*, plus occasional *Scrophularia nodosa*, *Urtica dioica*, *Galium aparine*, *Veronica chamaedrys*, *Dactylis glomerata* and *Rubus fruticosus*. The steep sides of the mott have abundant common gorse and scattered broom below mature oak and rowan trees. *Hyacinthoides non-scripta* is dominant over large areas below this with frequent *Pteridium aquilinum* and *Dryopteris affinis* and grassier ground similar to that present on the bailey. A large active badger sett is present at the top of the mott.



26. Corner of species-poor coarse grassland with abundant *Dactylis glomera*, *Festuca rubra* and *Aegopodium podagraria*, plus frequent *Urtica dioica*, *Galium aparine*, *Cirsium arvense* and a small stand of an *Iris* species (possibly an garden escape).