

ECOLOGICAL APPRAISAL

Cadishead Moss

January 2018
revision 1



Provided by:

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1 INTRODUCTION

The Greater Manchester Ecology Unit (GMEU) was commissioned by Salford City Council in July 2017 to carry out ecological and land use assessments of sites proposed for allocation for potential development in the emerging Salford Local Plan.

One of the sites assessed was Cadishead Moss Fig 1.

This is a report of the findings of this assessment.



Figure 1 Cadishead Moss Boundary (as proposed in 2016)

1.1 Project Brief

The work involved:

- An analysis of existing 'desktop' information concerning the site to identify any previously recorded ecological and land use information.
- A field-based ecological survey and land use assessment of the site by an ecologist.
- Appraising the overall biodiversity value of the habitats present utilising the defra biodiversity matrices version 1 and identifying any other potential ecological constraints not covered by the matrices.
- Making recommendations for issues that should be included within specific policies for the site and any additional surveys.

1.1.1 In September 2020, the GMEU was asked by Salford City Council to review the document and make any amendments that may be required. **It should be noted that the site allocation proposed in the Publication Greater Manchester Spatial Framework is considerably smaller**

in both area and number of dwellings proposed than the draft allocation which was reviewed in this report. The current proposed allocation is confined to between 1,100 and 1,400 dwellings on less than 60 hectares on land to the north of Irlam station (as opposed to the 291 ha and 2250 dwellings proposed at the time this report was prepared). It is considered appropriate to publish this report because it remains relevant to GM Allocation 29 Land North of Irlam Station. However, the difference in scale of development must be borne in mind when considering the conclusions of the report. It is also important to remember that the wider policy context has changed since this report was first written at both a national and local level.

1.2 Site Description

The proposed allocation at Cadishead Moss is bounded by the M62 to the north, the Glaze Brook to the west, the Manchester to Liverpool (southern route) railway and Cadishead to the south and Irlam to the east, centred at grid reference SJ7041 9383. The site covers approximately 291 ha of arable farmland, horse grazed pasture and includes New Moss Wood and the Glaze Brook Valley. It forms part of the wider Chat Moss, part of the Mersey Valley National Character area, once one of the largest areas of lowland moss in England, now mostly lost to agriculture and peat extractions.

1.3 Personnel

The desk study was undertaken by David Dutton, with assistance from Steve Atkins. The site visit and assessment was carried out by David Dutton.

David is an ecologist with over 30 years of experience in nature conservation, approximately 20 years in ecological survey and assessment and around 10 years in Countryside Management.

2 LEGISLATION AND POLICY

The following UK legislation was considered to be most relevant to the proposed site allocations:

- The Conservation of Habitats and Species Regulations 2010 (as amended)

These Regulations designate sites considered to have an international importance for nature conservation. If a development is considered to have the potential to have a significant effect on one or more of these international sites then the development must be subject to a formal Assessment under the terms of the Regulations. Such an Assessment is known as a Habitats Regulations Assessment (HRA).

- The Natural Environment and Rural Communities (NERC) Act (2006)

Section 40 placed a duty on Local authorities to have regard to the Conservation of biodiversity in exercising their functions. Guidance on implementing this duty has been provided by defra¹. For forward planning this emphasises the importance of the plan being based on a good evidence base; that the plan seeks biodiversity enhancement; of a local site (SBI) system being in place and; monitoring.

- The Water Environment (Water Framework Directive (England and Wales) Regulations 2003

The EU Water Framework Directive requires environmental objectives be set for all surface and ground waters to enable them to achieve good status or potential for heavily modified water bodies by a defined date. One objective is to prevent further deterioration which can include changes to flow pattern, width and depth of channel, sediment availability/transport and ecology and biology. The mechanism for delivery in the UK is via Regional River Basin Management Plans.

Other legislation taken in to account includes:

- The Wildlife and Countryside Act 1981 (as amended)

¹ Guidance for Local Authorities on Implementing the Biodiversity Duty – Defra 2007

This act has a number of schedules that lists both protected and invasive species that are material considerations in the planning process.

- Protection of Badgers Act 1992

As above but specifically for badgers

The following Policy documents were considered most relevant in 2018. The NPPF has since been reviewed and amended and defra have significantly revised their biodiversity off-set guidance.

- The National Planning Policy Framework (NPPF) 2012

Para 17 sets out 12 core planning principles that should underpin plan-making; three of these principle are key to this report:

- a) Contributing to conserving and enhancing the natural environment and reducing pollution. Allocations of land for development should prefer land of lesser environmental value, where consistent with other policies in this framework;*
- b) Promote mixed use developments, and encourage multiple benefits from the use of land in urban and rural areas, recognising that some open land can perform many functions (such as for wildlife, recreation, food risk mitigation, carbon storage and food production) and;*
- c) Actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling and focus significant development in locations which are or can be made sustainable*

- Draft Greater Manchester Spatial Framework (GMSF) October 2016

- The UK Government's Natural Environment White Paper 2011: The Natural Choice

This introduced the concept of off-setting committing to establish a new voluntary approach to offsetting; testing the approach in a number of pilot areas and; expecting any system to be managed locally.

- Biodiversity Offsetting Pilots – Guidance for offset providers 2012 – defra/Natural England

Defra's response to the commitment to provide guidance in the White Paper

2.1 The Emerging Local Plan Policy Context

2.1.1 The land at Cadishead Moss was put forward under policy WG2 of the draft GMSF as a potential site for the provision of 2,250 houses along with high quality green infrastructure linked to Chat Moss to the North. The policy makes a number of recommendations relating directly or indirectly to biodiversity including:

- Provide a very large amount of green infrastructure throughout the site, including the protection of New Moss Wood and the retention of landscape features such as mature trees and hedgerows, and create attractive access routes through to Chat Moss to the north;
- Naturalize the Glaze Brook, incorporate full mitigation for any flood risk associated with it and retain a strategic recreation route alongside it;
- Incorporate appropriate noise mitigation along the M62 motorway;
- Minimise the loss of the carbon storage function of the peat and avoid any adverse impacts on the hydrology of Chat Moss, whilst ensuring that there is no potential for future problems of land stability or subsidence; and
- Make a significant contribution to the enhancement of Chat Moss, particularly in terms of lowland raised bog restoration and widening public access.

In terms of wider green infrastructure issues the following recommendation is also relevant.

Promote walking and cycling through a range of measures, including: a. Enhancing existing, and provide new, walking and cycling routes through the site, connecting new housing to local facilities, employment opportunities and the wider pedestrian and cycling network; b. Providing significant cycle parking with any new facilities located within the site, and enhanced cycle parking at Irlam Station.

The boundary of Cadishead Moss has been carried forward into the Draft Salford Plan under policy H3/4 Western Cadishead and Irlam.

2.1.2 The Draft Infrastructure Delivery plan includes an Open Space Chapter. This recognises the importance of New Moss Wood as part of the City's strategic Natural Greenspace and in the provision of Local Natural Greenspace as well as being an accessible woodland in excess of 20ha. It also recognises the importance of the Glaze Brook valley as local natural greenspace.

The Delivery plan also recommends a new LEAP and new allotments as part of any development of Cadishead Moss.

3 METHODOLOGY

3.1 Desk Top

3.1.1 GIS, Aerial Photography and Historic Maps

Up to date OS map bases and aerial photographs from 2016 were utilised to plot habitat boundaries and inform the site visit.

Older aerial photographs were utilised to determine previous usage particularly for fields that now appear to be under-utilised.

Historic maps were utilised to identify previous land use, field boundaries and watercourses.

3.1.2 National/International Designated Sites

To assess whether development would have an impact on any nationally or international designated site, Natural England's SSSI Impact Risk Zones (November 2016) were used. SSSI Impact Risk Zones (IRZs) are a GIS tool developed by Natural England to make a rapid initial assessment of the potential risks posed by development proposals to designated nature conservation sites including Sites of Special Scientific Interest (SSSIs), Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar sites. They define zones around each site which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impact (Natural England 2016).

Location details of designated nature conservation sites can be found in Appendix 1

3.1.3 Sites of Biological Importance

Boundaries of Sites of Biological Importance (SBI), local wildlife sites for Greater Manchester, were obtained from Greater Manchester Local Record Centre. The potential impacts of development at each proposed site for allocation were assessed using the following factors:

- Habitats Present
- SBI features of interest
- Distance from the SBI
- Potential pathways between the proposed site allocation and the SBI

Location details of Sites of Biological Importance can be found in Appendix 2.

3.1.4 Protected and Priority Species

Information held on protected and priority species was provided by the Greater Manchester Local Record Centre and Greater Manchester Bird Group

Additional bird data was supplied by a local ornithologist.

The information supplied has been utilised to assess the potential impacts on these species and to determine whether further surveys and or mitigation will be required.

Information can be found in Appendix 2

3.1.5 New Moss Wood Management Plan 2014-2019

The Woodland Trust had a published management plan for New Moss Wood, which was available on-line. This provides information on the Woodland Trust's national policy regarding the management of its woodland assets as well as more detailed objective relevant to New Moss Wood.

The long-term intention is to develop a mixed native broadleaved woodland interspersed with transitional and open ground areas that will form an important landscape feature, provide an informal recreation site and develop and benefits for biodiversity.

Three key features have been identified these are:

- The provision of approximately 3.8km of grass path maintained by cyclic mowing;
- The creation of a new native woodland; and
- Retention of around 45% of the site as open ground, originally because the local community highlighted the value of this habitat for ground nesting birds.

3.1.6 Limitations of Desk-top study

An absence of records of species from a site does not necessarily imply that the species is absent; rather, it may reflect a lack of survey effort for the site concerned. It was also carried out in November 2017 there may therefore be new species records now available. The Cheshire Local Record Centre was also not contacted. They also may have additional species records.

3.2 Site Visit

3.2.1 The area was visited on the 18th August 2017 for approximately 9 hours. During the visit, habitats and dominant species were recorded and target notes made, utilising the JNCC phase 1 habitat survey methodology². The condition of the habitats was also noted, as was land use. Casual records were made of the birds and other species that were seen during the visit. A supplementary visit was made on the 15th November to New Moss Wood and the Glaze Brook Way lasting approximately 1 hour.

3.2.2 As the purpose of the site visit was to inform the developing Salford Local Plan by providing advice on potential ecological constraints, further surveys needs and potential mitigation requirements the level of survey was regarded as sufficient.

3.2.3 The survey is now three years old. Whilst there is unlikely to be any significant changes given the nature of the land management, best practice would be to repeat the walk-over survey of the site.

4 RESULTS

4.1 Desk Top

4.1.1 Statutory nature conservation sites

² JNCC Handbook for Phase 1 Habitat Survey

The nearest statutory site is Holcroft Moss SSSI, part of the Manchester Mosses SAC just over 300m to the west of the proposed allocation. The Manchester Mosses SAC are one of the best examples of degraded lowland raised bog capable of natural regeneration in the UK. Holcroft Moss is believed to be the only section of moss in Cheshire never to have been cut for peat.

Other SSSI's within 5km include:

- Risley Moss (also part of the Manchester Mosses SAC) approximately 1.9km to the west;
- Rixton Clay Pits approximately 2.3km to the SW also an SAC designated for its population of great crested newts;
- Astley and Bedford Mosses Moss (also part of the Manchester Mosses SAC) approximately 2.95km to the north;
- Brookheys Covert approximately 4km to the south designated as a diverse example of oak-hazel-ash woodland with a large number of pools and;
- Woolston Eyes designated for wetland birds approximately 4.3km SW.

4.1.2 Sites of Biological Importance

Four Sites of Biological Importance (SBI) were identified within 1km of Cadishead Moss.

These were:

- Great Woollen Wood approximately 60m to the north, a grade B site, designated because it is a rare example of mature, potentially ancient woodland within the Chat Moss area;
- Old River Irwell approximately 530m to the east, a grade B site habitats including open water swamp and wet woodland;
- Towns Gate Lake & Marsh approximately 810m to the east, a grade C site designated for its wetland habitats and;
- Woodland north of Moss Farm approximately 840m to the north, a grade C site designated for its birch woodland a rarity in this part of Salford.

4.1.3 Local Wildlife Sites in Warrington

There are no Local Wildlife Sites, Warrington equivalent of SBI's, within 1km of the proposed site allocation. The nearest is Gorse Covert Mounds 1.7km to the west.

4.1.4 Protected Species

The GM Local Record Centre has records for five protected species within the proposed land allocation, water vole, barn owl, peregrine falcon, kingfisher and brown long-eared bat, with an additional five species within 1km common lizard, little ringed plover, common pipistrelle bat, soprano pipistrelle bat and badger.

4.1.5 UK and Greater Manchester Biodiversity Action Plan Species

The GM Local Record Centre has records for eight UK biodiversity priority species from within the proposed land allocation, common toad, lapwing, starling, song thrush, dunnock, tree sparrow, house sparrow and brown hare, with an additional six recorded within 1km, curlew, grey partridge, reed bunting, yellowhammer, linnet and skylark.

The GM Bird recording group has additional records for the above species and records for other UK priority species such as quail, yellow wagtail, corn bunting, bullfinch, lesser redpoll and willow tit. Further information has been supplied by David Steel a local bird recorder, providing breeding evidence for willow tit and yellow wagtail among others.

4.2 Site Visit

4.2.1 Phase 1 habitats recorded during the site visit include:

A1.1 Broadleaved Woodland
A1.2 Broadleaved Plantation
A2.1 Dense Scrub
A2.2 Scattered Scrub
B1.1 Acid Grassland
B2.1 Neutral Grassland
B2.2 Neutral Grassland semi-improved
B4 Improved Grassland
B6 Poor semi-improved grassland
C1.1 Continuous Bracken
C3.1 Tall Ruderal
F1 Swamp
G1 Standing Water (ditch holding water)
G2 Running Water
J1 Arable
J2 Amenity Grassland
J2.1.2 Intact Hedge Species poor
J2.6 Dry Ditch

4.2.2 In terms of biodiversity off-setting version 1, the majority of the proposed allocation would be regarded as low value habitat eg arable farmland and improved grassland, in poor condition with pockets of higher value habitat (broadleaved woodland) in low to moderate condition.

The exceptions are some of the hedgerows and mature trees in the Glaze Brook Valley as well as the Glaze Brook. These are potentially high value features but in poor ecological condition in 2017.

4.2.3 The main land use was arable farming, with crops of wheat and potato and Italian rye grass ley. Other fields were given over to horticulture and turf growing with a significant area of improved and semi-improved grassland grazed by horses, with cattle, sheep and pigs also present.

Fields were generally separated by uncultivated strips or baulks, characterised by rosebay willowherb, stinging nettle, bracken and the invasive Himalayan balsam often associated with a deep drainage ditch. Scrub of bramble and willow was also often present.

Remnant and intact hedges were also present particularly around the Glazebrook Valley and Great Woollen Hall. A remnant orchard lies between the Hall and the Glaze Brook.

4.2.4 Botanical interest was limited. The fields at the north eastern end of the site, were neglected and exhibited a range of neutral grassland, marshy grassland and tall ruderal species; arable weeds were also present with field pansy recorded.

4.2.5 Little effort was put in to recording birds, though a pair of grey partridge was flushed.

5 DISCUSSION

5.1 Statutory nature conservation sites

The close proximity of the western edge of the proposed allocation to Holcroft Moss part of a European protected site, means that development proposals would trigger the need for an Appropriate Assessment under the Habitat Regulations. Potential impacts would include recreational pressure, air pollution and impacts on hydrology. A screening opinion under the EIA Regulations would also be required.

The Glaze Brook however provides a hydrological barrier between the proposed allocation and Holcroft Moss. Holcroft Moss is also immediately adjacent to the M62, which will likely have an overriding influence, in terms of air quality impacts and recreational access to this moss is difficult. It is therefore probable that significant effects will not occur.

5.2 Sites of Biological Importance

Town Gate Lake and Marsh is over 800m from the proposed allocation, separated by urban development, with no obvious hydrological linkages. The risk of negative impacts upon this SBI would appear negligible.

The Old River Irwell is also physically separated from the proposed development. There is however hydrological linkage via Platts Brook which issues within the proposed allocation at the north eastern end passing into a culvert adjacent to School Lane prior to re-emerging south of Liverpool Road. Any development at this end of Cadishead Moss could therefore result in pollutants and sediment reaching the old course of the River Irwell. If development was therefore to occur measures to protect the Platts Brook during and post construction would be required.

The Woodlands north of Moss Farm are sufficiently distant and separated from the proposed allocation by the M62, that direct impacts are unlikely. There is a risk of an increase in recreational pressure but this too is unlikely.

Great Woolden Wood is directly north of the proposed allocation. Whilst separated from the proposed allocation by the M62 there is direct access via a public right of way over the motorway. There is therefore a significant risk of increased recreational pressure, which would justify the need for any development to contribute towards the management and maintenance of this site.

5.3 New Moss Wood

If the proposed allocation was eventually adopted then New Moss Wood should be protected as stated in the draft GMSF policy.

The Woodland Trust advertises the site as a 30.47ha site with planting having occurred primarily in the winter of 1998/1999. It currently consists of semi-mature broadleaved plantation and secondary woodland with significant areas of tall ruderal habitat. Whilst not designated as an SBI, it is an important feature of ecological value and an accessible semi-natural greenspace (Angst) of district wide importance, based on the Natural England hierarchy of Angst, which classes sites in excess of 20ha but under 100ha as being of district importance.

Currently the site appears to have regular low levels of usage, but its location is isolated and appears to be utilised well below its potential. If surrounded by houses however, the opposite may become true and therefore any development should look to enhance the access infrastructure. This is supported by the Woodland Trust's view that the current peaty soils are vulnerable to erosion (horse-riding and cycling is prohibited) and whilst I have not measured the length of ride available it appeared during the site visit that some sections of ride had ceased to be maintained. Developers should also look to expand the size of New Moss Wood.



New Moss Wood

Of the other key objectives, development of a native woodland and maintenance of open areas, the former is maturing and I would expect felling of trees to commence during the next management plan to start diversification of the age structure. I would also recommend the addition of positive management for willow tit.

The management of the open habitat is faring less well. The two main fields are now dominated by coarse and tall ruderal habitat. The regime of cyclic cutting does not appear to have maintained the open areas as suitable habitat for ground nesting birds and therefore requires a review. One possibility would be a management agreement with a local farmer to take hay once the fields were brought back to grass.

Himalayan balsam, mentioned as present in the current management plan is now abundant and dominant along many rides and within the woodland. Management is now required for this species.

5.4 Glaze Brook Valley

As for New Moss Wood, the Glaze Brook Valley should be protected if the proposed allocation is adopted. Whilst not subject to any wildlife designations, the valley provides habitats not found elsewhere on the mosslands, and includes the remnants of woodland and hedgerows on the valley sides that could be enhanced and restored.

The valley is currently grazed by horses (both on the Warrington and Salford sides) which is threatening the long term survival of the remaining woody vegetation. The Brook has also been straightened sometime around the time of the construction of the M62. As there are no properties to protect and the railway viaduct downstream was constructed decades before the Brook was modified, the reintroduction of meanders and connection to the flood plain could potentially occur and benefit both wildlife and reduce flood risk downstream on the Mersey/Manchester Ship Canal.

The long distance path noted in the GMSF policy whilst present and sign posted, did not appear well utilised. It does however have potential to provide linkage for any development at the western end of the proposed allocation as a cycle and pedestrian route through to Cadishead.

5.5 Land off School Lane/Platts Brook

The most northerly fields adjacent to School Lane, differ ecologically from the remainder of Cadishead Moss, as whilst other fields are abandoned, these have developed a more diverse flora. They are also the source of the Platts Brook, which flows to the Old River Irwell SBI and from there in to the Manchester Ship Canal. This area should be a priority for retention and enhancement in terms of biodiversity and flood alleviation. If developed as the watercourse enters a culvert, there would be an increased risk of flooding of housing between School Lane and Locklands Lane.

5.6 Protected and Priority Species

There is a wide range of protected and priority species on the site, the majority of which are adapted to farmland landscapes eg. Brown hare, barn owl, grey partridge, tree sparrow, lapwing, linnet, yellowhammer and skylark, others adapted to the remnant mossland and wetland habitats associated with ditches eg willow tit, water vole and reed bunting and others that are winter visitors

The bird species noted are recorded both historically and currently. Any development would result in negative impacts that should be mitigated and or compensated. To fully understand the level of impact both full breeding bird surveys and winter bird surveys should be carried out along with surveys of potential compensation areas to demonstrate that displacement is possible into the wider landscape. There are no records of barn owl nesting within the site allocation area, but there is a record for a barn owl roosting. Brown hare records are recent, therefore brown hare surveys should also occur and the potential for displacement assessed.

There is a relatively recent record of water vole near New Moss Wood (2009). There is therefore a high risk given the number of ditches across Cadishead Moss of this species being present. Water vole surveys should therefore occur.

The only record for great crested newt is nearly 1km from Cadishead Moss, separated by urban development. There are no significant areas of open water across the moss. The risk of this species present is therefore low. However, any ecological appraisal should still assess the risk for this species being present.

One bat roost is recorded within the proposed allocation, with the Glazebrook Valley and New Moss Wood providing potential high value foraging habitat. Any buildings proposed for demolition should be assessed for bat roosting potential.

5.7 Invasive Species

Himalayan balsam is locally abundant across the site between fields with larger areas found in New Moss Wood and adjacent to Moss Brow Farm. The species is listed under schedule 9 part 2 of the Wildlife and Countryside Act 1981 (as amended). Any development proposals should avoid, control or eradicate this species.



Balsam adjacent to Moss Brow Farm

Japanese knotweed was recorded adjacent to the railway line near the Glaze Brook and there are desk top records for the woodland off the Glazebrook Trail south of Great Woolden Hall. It is likely other patches are present associated with farm buildings, along the Glaze Brook and along the boundary with the railway line all high risk locations for this species.

No other invasive species were recorded.

5.8 Wildlife Links and Corridors

The M62 to the north, the railway line to the south and the Glaze Brook Valley to the west provide wildlife corridors along the boundaries of the site.



Within the site the network of drains provides local wildlife links but are isolated from the wider Chat Moss network by the M62 and the Manchester Ship Canal by Irlam and Cadishead.

The M62 embankment provides linkage through to Barton Moss to the east and Risley Moss to the west, with the railway line also providing connectivity to Risley Moss, whilst connecting the site to the Manchester Ship Canal to the east. The Glaze Brook drains into the Manchester Ship Canal, and is particularly important in providing linkage to the wider Chat Moss to the north.

These corridors should be buffered and enhanced as part of any future development.

5.9 Contributing to and Enhancing the Natural Environment

Section 109 NPPF (2012) stated that the planning system should contribute to and enhance the natural and local environment, now superseded by Section 170 NPPF (2019) that states that the planning policies and decisions should contribute to and enhance the natural and local environment. The proposed allocation covers approximately 290ha of which around 196ha would be regarded as low value habitats and around 70ha as moderate value habitat, the remainder consisting of roads, and domestic properties. High value habitats are limited to linear woodland along lanes and between fields, hedgerows and individual trees in the Glaze Brook Valley. The majority of habitats whether of low, moderate or high value would be regarded as being in poor condition.

However even though the site is primarily of low ecological value the potential, the scale of the proposed allocation is significant and would without mitigation and or compensation result in a significant negative impact on the natural environment. This also does not take into account the negative impact on birds and potentially brown hare, water vole and any other protected or priority species that may be present.

As part of the ecological assessment we calculated provisional biodiversity off-set values utilising defra off-set matrices version 1 for each habitat unit. This came up with a biodiversity off-set value for the entire site of 896.4 biodiversity units (BU), the value if all the site was lost. In addition two small areas totalling 0.5ha were not adequately assessed but at most would add another 9 units and from the aerial photographs probably only adding 1 unit. Ie between 897.4 and 905.4 BU's. Any development should recalculate these scores utilising defra metrics version 2.

The area that would be lost based on the GMSF (2016) proposals would not however equate to the entire proposed allocation. 2250 houses if built at 30 houses per hectare the likely minimum density would require only 75ha of land plus additional land for infrastructure such as a new primary school (≈ 2.5 ha), new secondary school (≈ 7 ha), new neighbourhood park and sports facility (≈ 10 ha) and new neighbourhood centre (≈ 0.5 ha) It would be theoretically possible therefore to restrict the development footprint to around 100ha which could if carried out on low value habitats in poor

condition, of which there is nearly 200ha, have an off-set value of around 200 BU's. (Low value habitat in poor condition is worth 2 biodiversity units per hectare).

Mitigation for loss of 200 biodiversity units would therefore be required to ensure no loss of biodiversity as required under NPPF guidance and since the report was produced the government has indicated that it likely to make 10% net gain mandatory ie 220 biodiversity units would be required. This can be achieved through enhancement of retained habitats on-site, creation of new habitats on-site or enhancement or creation of habitats off-site.

To put this in context, if high value habitats in good condition were created on the retained low value habitats in poor condition that were easy to create and matured within 5 years, which is the best case scenario then ≈ 15 ha of land would have been required to be set aside for biodiversity using the version 1 metric.

In reality, much more land would likely be required as the old GMSF policy recommended enhancement of New Moss Wood and the Glaze Brook Valley, not all low value habitats, which the GMEU supports; some of the habitats created would take significantly longer than 5 years to mature; not all the approximately 100 ha lost would be low value habitats in poor condition and; enhancement or creation of habitats in good condition may also be challenging as a result of the abundance of Himalayan balsam in some areas and the high fertility of the open areas increasing the difficulty multipliers.

As noted under section 2 under the policy guidance and above, defra has revised the off-set matrices since the report was produced. Whilst farmland and improved grassland remain low value habitats in poor condition and continue to score 2 BU per hectare, habitats on peat soils are regarded as wetland habitats. Domestic gardens discounted under metric version 1 now have some value. These changes could reduce or increase the area of habitat enhancement and creation required.

Separate but potentially overlapping with off-set mitigation would be mitigation for loss of habitat for farmland birds. Direct harm can be avoided through clearance outside the bird nesting season, but there will be a loss of potential habitat and if the carrying capacity of the land into which they would be displaced is currently at its maximum, a reduction in the population of these species.

There is insufficient information to determine what the carrying capacity currently is for adjacent farmland. Surveys of areas within or beyond the site allocation would be required and an assessment made for their potential mitigation and or compensation.

Similarly, if the presence of brown hare or water vole is confirmed, evidence that displacement and or mitigation is possible will be required.

5.10 Wider Ecosystem Services

5.10.1 Food Production

Currently the main ecosystem service provided by Cadishead Moss is food production. Whilst it is not achieving its full potential, with fields being utilised for silage, horticulture, turf growing, horse grazing and in some cases apparently abandoned, it is grade 1 agricultural land, ie farmland of national importance and part of the most important block of agricultural land in Greater Manchester. If built on it will be permanently lost with significant mitigation unlikely.



Wheat Field

Allotments are proposed in the strategic infrastructure document. No number is given but should be proportional to local standards per 1000 of population.

5.10.2 Recreation

New Moss Wood is the only public open space within the proposed allocation. This is a strategic semi-natural greenspace and accessible woodland. Currently access is maintained but appears to have only low usage and is isolated from Cadishead and Irlam by the railway with only a limited number of houses in easy walking distance. An additional 2250 houses nearby would however add significant recreational pressure to the site, which currently has no surfaced paths. Development should therefore be expected to contribute to enhancement of the recreational facilities.

A strategic footpath runs the length of the Glaze Brook Valley. Whilst waymarked, the path is currently not surfaced. There may be justification dependent on the location of any housing for upgrading this route through surfacing and/or as a cycle route.

The GMSF proposes a local neighbourhood park, including sports pitches and the strategic infrastructure document whilst not mentioning the above recommends a LEAP. In terms of local standards this would be justified as the only neighbourhood park near the proposed allocation is in Cadishead with only the SW corner of the proposed allocation within Salford CC distance threshold. Nearly the entire site is within the distance threshold for the nearest District Park in Irlam. There may therefore be an argument for a financial contribution towards the upkeep of this Park, that would result from the increase in local population that it serves.

5.10.3 Flood Alleviation

In terms of flood alleviation, the site will probably score well for on-site storage, through natural holding capacity because of the peaty nature of the soil and limited gradients to drain water off the site. The current storage capacity and potential if restored to mossland would be lost if developed and would require mitigation preferably through natural flood management techniques to ensure no net risk of flooding downstream.

The site is likely to score poorly on 'roughness' a measure of the lands capacity to physically delay run-off as this is maximised where there is permanent vegetation.

Development at the northern end adjacent to Platts Brook would run the risk of increasing peak flows in to the culvert between School Lane and Locklands Lane. Any development will need to incorporate sustainable urban drainage systems to ensure this does not occur and it should be a requirement to survey the existing culvert to ensure it is not a risk of collapse.

5.10.4 Carbon Storage

In terms of carbon storage, the site will be providing short term storage within the agricultural crops as well as more long term storage in the developing woodland at New Moss Wood. There is again the potential carbon storage capacity of the restoring the mossland. Development is likely to have a negative impact without compensation.

The GMSF policy recommends minimisation of loss in carbon storage capacity but no mechanism or guidance provided.

5.10.5 Air Quality

In terms of air quality the site currently provides limited benefits but also is sparsely populated and therefore unlikely to be generating negative impacts resulting from vehicle movements. The proximity of the M62 will mean air quality on the proposed site allocation is probably primarily influenced by factors outside the site's, Salford CC and the regions control. Development of the site will have negative impacts through an increase in traffic. Whether this is significant compared to the impact of the motorway needs to be answered. The draft GMSF proposal includes the objective of enhancing pedestrian and cycling facilities. The GMEU supports this proposal.

5.10.6 Noise Abatement

Currently the majority of Cadishead Moss suffers from noise pollution above the UN guidance of 55 db³, with land within 100m with levels up to 70db. Any development should therefore include some form of noise attenuation along the motorway boundary. Forestry commission guidance recommends 30m of tree planting for a long term reduction of upto 10db which would remove a significant area of Cadishead Moss from the over 55 category as well as providing biodiversity and air pollution benefits.

5.10.7 Landscape

The landscape is generally open and flat, allowing long views, with large fields, that generally lack traditional field boundaries such as hedgerows. Shelterbelts of birch, oak and willow providing occasional breaks to the openness.

The Glaze Brook Valley provides a higher value landscape particularly where Great Woolden Hall is in view and remnant woodland is present. This landscape should be protected and enhanced.

³ <https://data.gov.uk/data/map-preview?url=http%3A%2F%2Fenvironment.data.gov.uk%2Fds%2Fwms%3FSERVICE%3DWMS%26INTERFACE%3DENVIRO%3DENVIRONMENT--2791ebe0-8ebb-4d9f-98d6-bce907becf33%26request%3DGetCapabilities&n=55.8&w=-5.7&e=1.8&s=50.0>



Glaze Brook Valley

New Moss Wood breaks the existing landscape providing a backdrop at the western end, though is not itself of high landscape interest.

There are a number of mature trees associated with field boundaries particularly between Woolden Road and New Moss Wood and within the Glaze Brook Valley.

5.11 Western Cadishead and Irlam GMSF Allocation

5.11.1 As noted under section 2.1, a number of recommendations were included within draft GMSF policy WG2, relating to biodiversity and wider ecosystem services.

- We agree that should the proposed allocation be carried forward, that a significant area (beyond that required in terms of the NPPF) of high quality green infrastructure should be provided. We also agree that New Moss Wood and the Glaze Brook Valley are the key existing GI assets within the proposed allocation and should be protected and enhanced for biodiversity, recreation and in the case of the Glaze Brook as flood alleviation.

We also agree that given the scale of the site, existing mature trees and hedgerows and we would also include ditches should be retained and incorporated into any development.

- We also support the provision of noise mitigation measures along the M62 boundary, which should include a wide belt of native broadleaved trees appropriate to the landscape eg downy birch, oak and willow, which in addition to providing noise alleviation, will also buffer and strengthen the existing wildlife corridor.
- We also support the objective of minimising the loss of potential carbon storage but note that there appears to be no way of measuring this.
- We also support the objective that any development should contribute to the enhancement to the wider Chat Moss. Again there does not appear to be a mechanism for achieving this.

5.11.2 Other significant ecological issues were not covered by the previous policy. These include:

- The value of Cadishead Moss for UK biodiversity priority species primarily farmland birds.
- The scale of the potential loss of low value ecological habitats;
- The proximity to the M62 and Manchester to Liverpool railway (southern route) functioning wildlife corridors.
- The risk of indirect impacts through increased recreational pressure on Great Woolden

Wood SBI.

- One of the sources of Platts Brook arising in the north of the proposed allocation with risks of indirect impacts on properties downstream through flooding and the Old River Irwell SBI.

5.12 Infrastructure Delivery Plan

The Infrastructure delivery plan also recommends the protection and enhancement of New Moss Wood and the Glaze Brook Valley and in addition recommends the provision of allotments within any development on Cadishead Moss. We support this proposal as it will provide partial mitigation for loss of grade 1 agricultural land.

6.0 RECOMMENDATIONS

- Any development would require an Appropriate Assessment as defined under the Habitat Regulations due to the close proximity of the site to the Manchester Mosses SAC in particular Holcroft Moss and a screening opinion under the EIA Regs because of the proximity to the SAC and the scale of the development.
- Any residential development west of or linked to Moss Road should contribute towards the protection from increased recreational pressure and enhancement of the biodiversity of Great Woollen Wood SBI.
- In line with the proposals in the withdrawn draft GMSF, New Moss Wood should be protected and enhanced. This should be in consultation with the Woodland Trust and be incorporated within the next 5 year management plan for the site. Key issues will include, protection and enhancement of the existing footpath infrastructure; control of Himalayan balsam; restoration of open areas to grassland suitable for ground nesting birds; thinning and naturalisation of the secondary and plantation woodland and the potential of extending the woodland on to adjacent agricultural land. Management for willow tits should also be introduced.
- In line with the proposals in the withdrawn draft GMSF, the Glaze Brook Valley should be protected and enhanced as strategically important blue/green infrastructure. The Glaze Brook Way should be enhanced; existing woodland, scrub and hedgerows should be protected and enhanced through exclusion of grazing and re-naturalisation of the course of the Glaze Brook investigated. Views towards Great Woollen Hall should be protected.



Great Woollen Hall Farm

- The fields adjacent to the source of Platts Brook should be protected and enhanced for

biodiversity and recreation. If developed the culvert from School Lane to Locklands Lane should be investigated and refurbished as necessary.

- Existing moderate and high value landscape and ecological features should be retained and enhanced within any future development. Any enhancement should be in keeping with the Chat Moss landscape utilising species typical of the locality such as downy birch, goat and grey willow and oak.
- Land should be identified, within a draft masterplan with evidence of landowner control and willingness to engage, either on or off-site for ecological mitigation prior to any development proposals. It is difficult to be prescriptive on the area required as this will be dependent on:

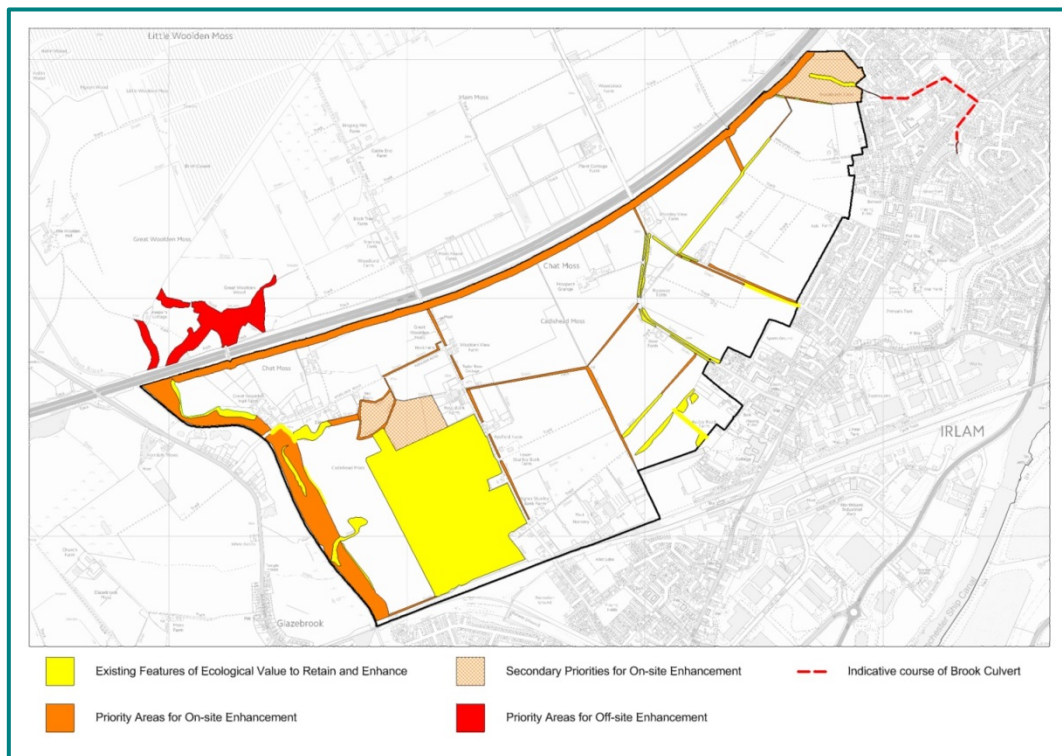
the area of land required;
the number of houses that are agreed;
the housing density and;
the existing ecological value of the receptor site for ecological mitigation.

The mechanism for funding should be agreed prior to any application so that subsequent phasing is aware of these obligations.

- Off-site compensation should be carried out in combination with other potential development proposals around the periphery of Chat Moss such as Barton Moss, and Boothstown.

A traditional mixed farmland habitat managed for farmland birds, brown hare, water voles and arable weed in mind by an organisation such as Lancashire Wildlife Trust.

- New allotments should be provided adequate to serve approximately 5000 new residents based on Salfords local standard this equates to 2.5ha.
- A mechanism for contributing towards the enhancement of the Biodiversity heartland should be devised as a separate SPD. This could be along the lines of the funding provided for the Dorset Heathlands⁴



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⁴ <http://www.poole.gov.uk/planning-and-buildings/planning/planning-policy/spds/dorset-heathlands-planning-framework/>

- A 30m buffer of broadleaved woodland, utilising appropriate native species should be planted adjacent to the M62 to strengthen the wildlife corridor; provide noise attenuation and potentially filtering air pollution.
- Wider ecological surveys (farmland birds, brown hare, water vole in the ditches and arable weeds) and studies of Chat Mosses current and potential carrying capacity for farmland biodiversity are required in order to determine the potential for displacement of existing species from the proposed allocation area and the relative value of the site against the rest of Chat Moss.
- Bat surveys should occur for any building proposed for demolition and mature trees proposed for removal.
- An invasive species management plan for the entire site should be produced at the outset and not left to individual phases of development.
- The 2017 walk over survey should be repeated and the biodiversity baseline scores recalculated utilising the version 2 metric.

7.0 Conclusions

The proximity of Holcroft Moss part of the Manchester Mosses SAC will require an appropriate assessment of any development on Cadishead Moss

The proposed allocation will result in a significant negative biodiversity impact unless mitigation and or compensation is provided. This is primarily due to the scale of the development.

The other significant impact is the loss of breeding habitat for a number of UK biodiversity priority species primarily farmland birds.

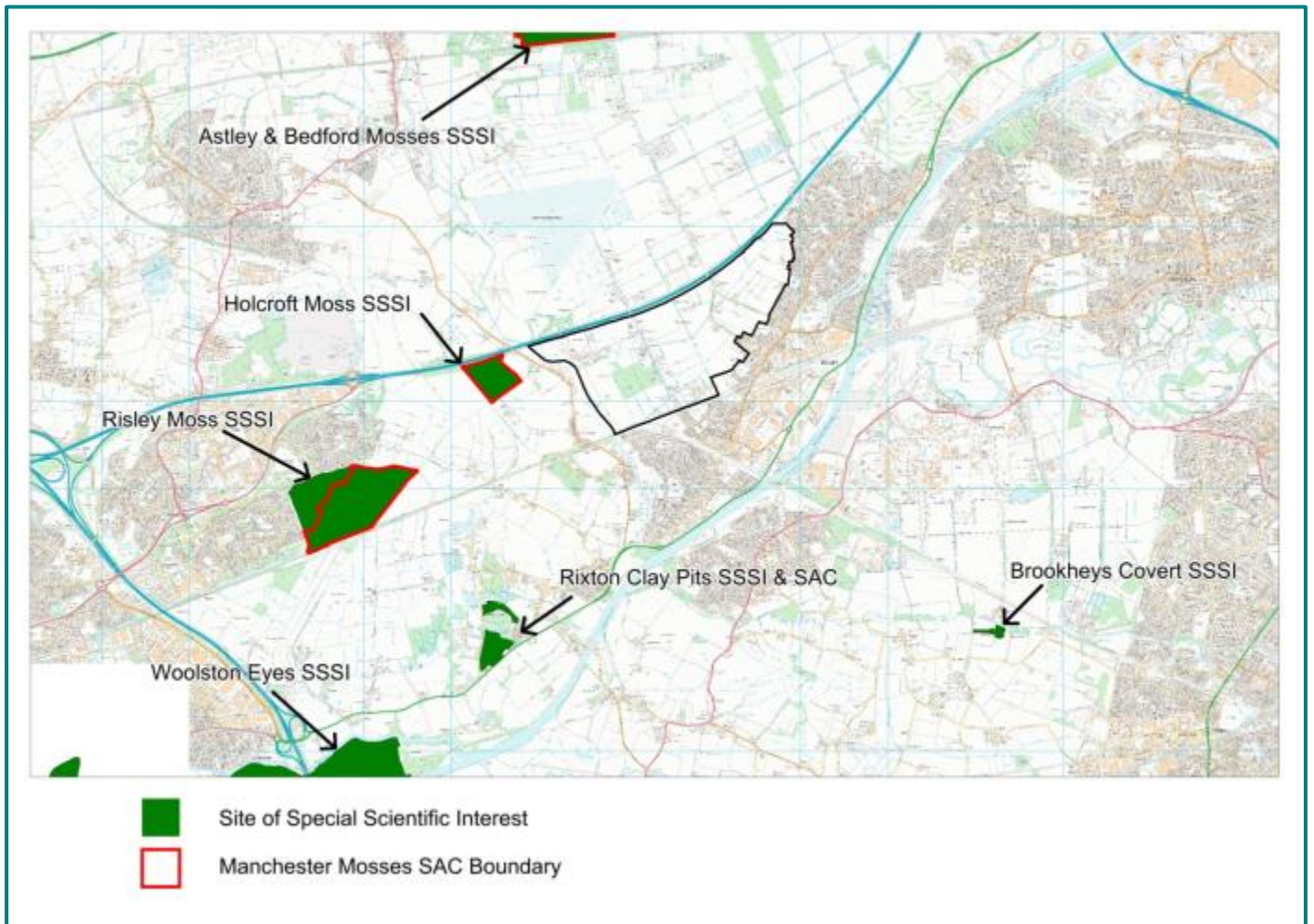
Further information is required on how adequate land will be provided to ensure no nett loss and further surveys required to better understand the current and potential carrying capacity of Chat Moss to enable mitigation for farmland birds.

Further ecological surveys will also be required to determine whether water vole and brow hare are still present.

The Glaze Brook Valley and New Moss Wood are existing strategically important elements of Salford City Council's green infrastructure. Both are currently below optimal condition. Any development should seek to extend and enhance these assets in consultation with the Woodland Trust and private landowners.

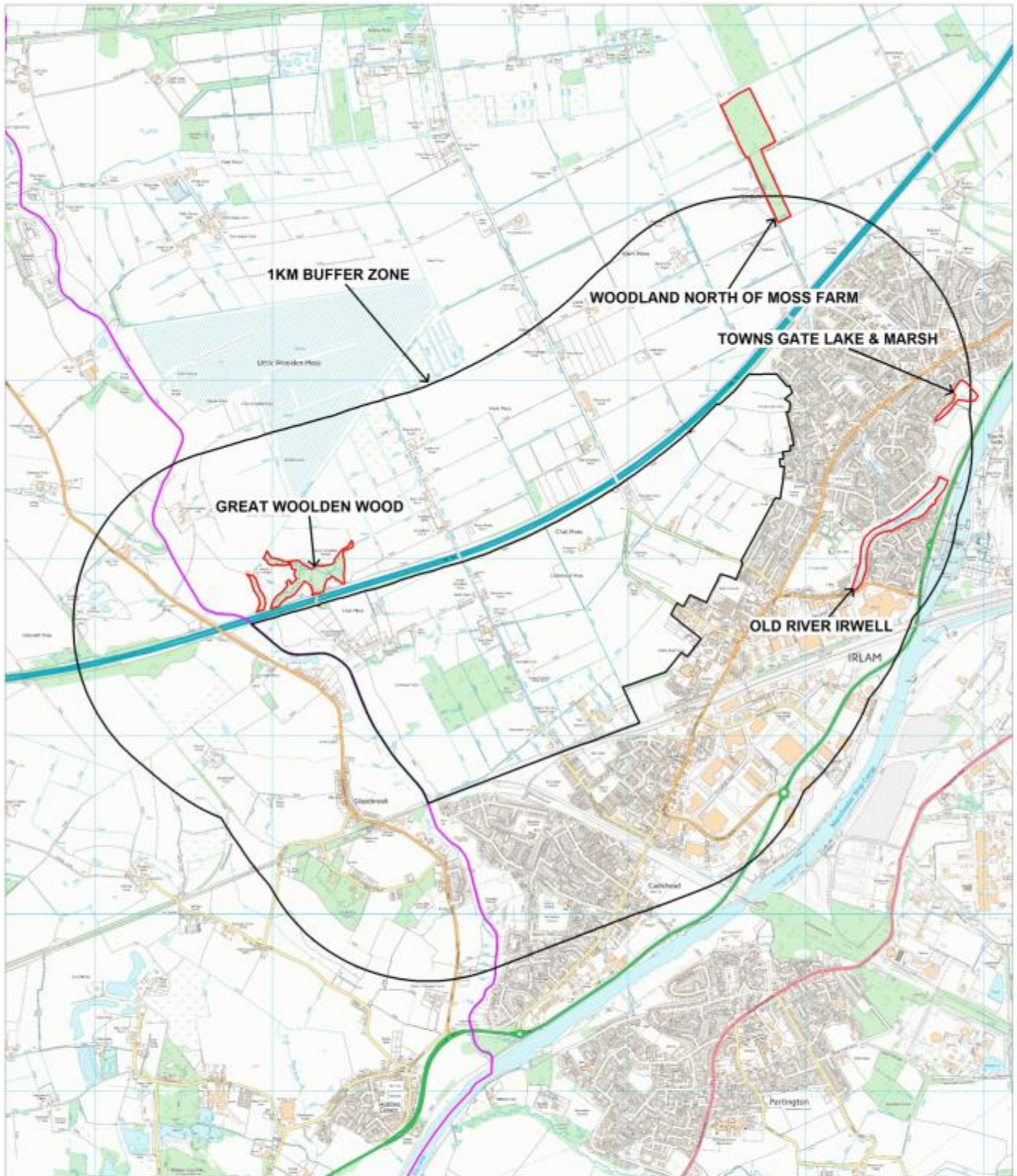
The survey is now three years old and the biodiversity off-set metric guidance has been revised. Updates are therefore required. The data search from Greater Manchester is also now three years old and should be updated and records from the Cheshire Local Record centre also obtained.

Appendix 1 – Location of Statutory Protected Sites



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Appendix 2 – Information supplied by Local Record Centre



KEY

SITE OF BIOLOGICAL IMPORTANCE



SBI BOUNDARY

GREATER MANCHESTER ECOLOGY UNIT
ECOLOGICAL SEARCH - SJ7041 9383
CADISHEAD MOSS - MAP 1

SCALE 1:20,000

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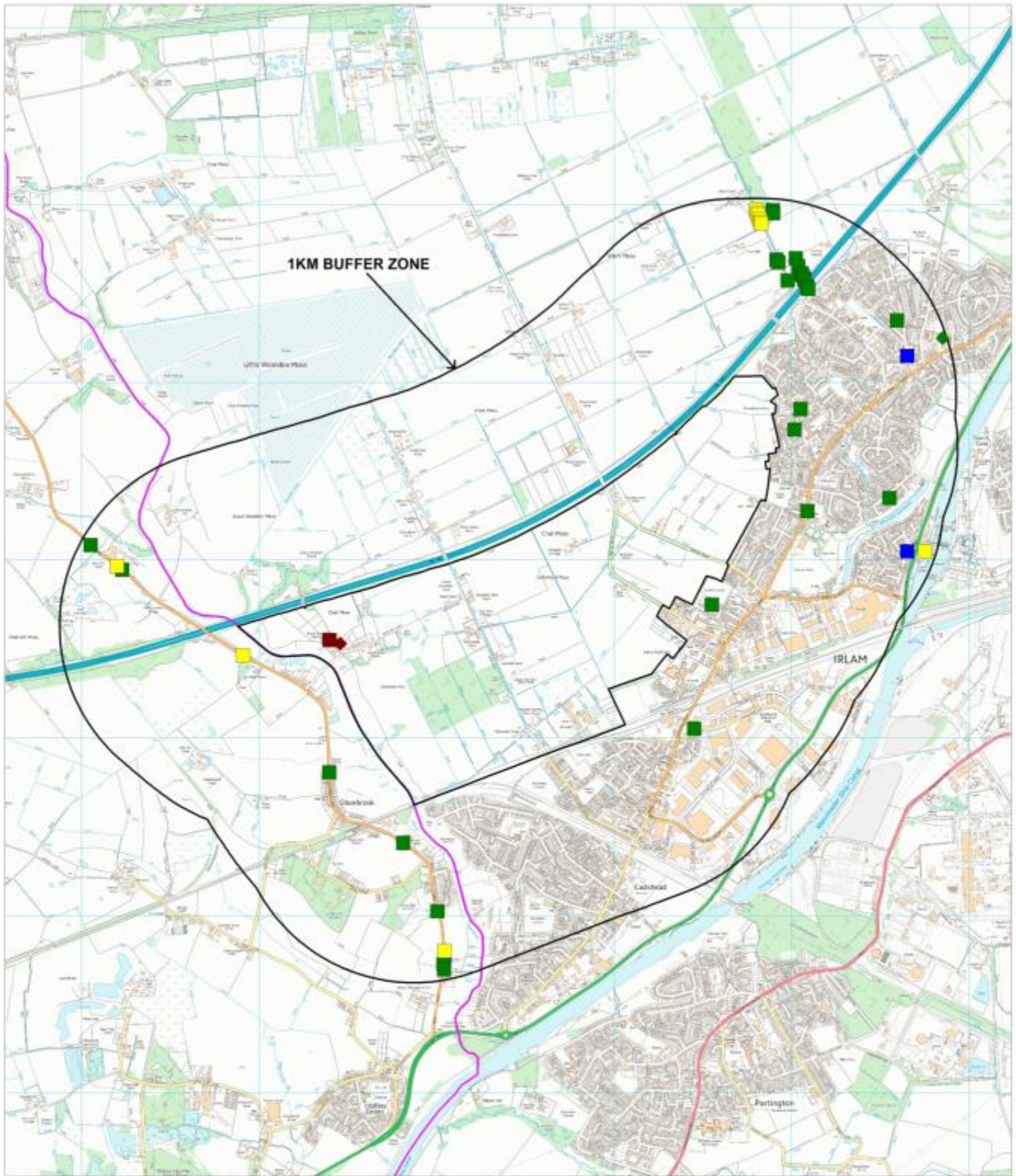
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KEY

BAT ROOSTS

- ◆ BROWN LONG-EARED BAT
- ◆ COMMON PIPISTRELLE

BATS OTHER SIGNS

- BROWN LONG-EARED BAT
- COMMON PIPISTRELLE
- PIPISTRELLE SP
- SOPRANO PIPISTRELLE

**GREATER MANCHESTER ECOLOGY UNIT
ECOLOGICAL SEARCH - SJ7041 9383
CADISHEAD MOSS - MAP 3**

SCALE 1:20,000

BAT DATA COURTESY OF SOUTH LANCS BAT GROUP

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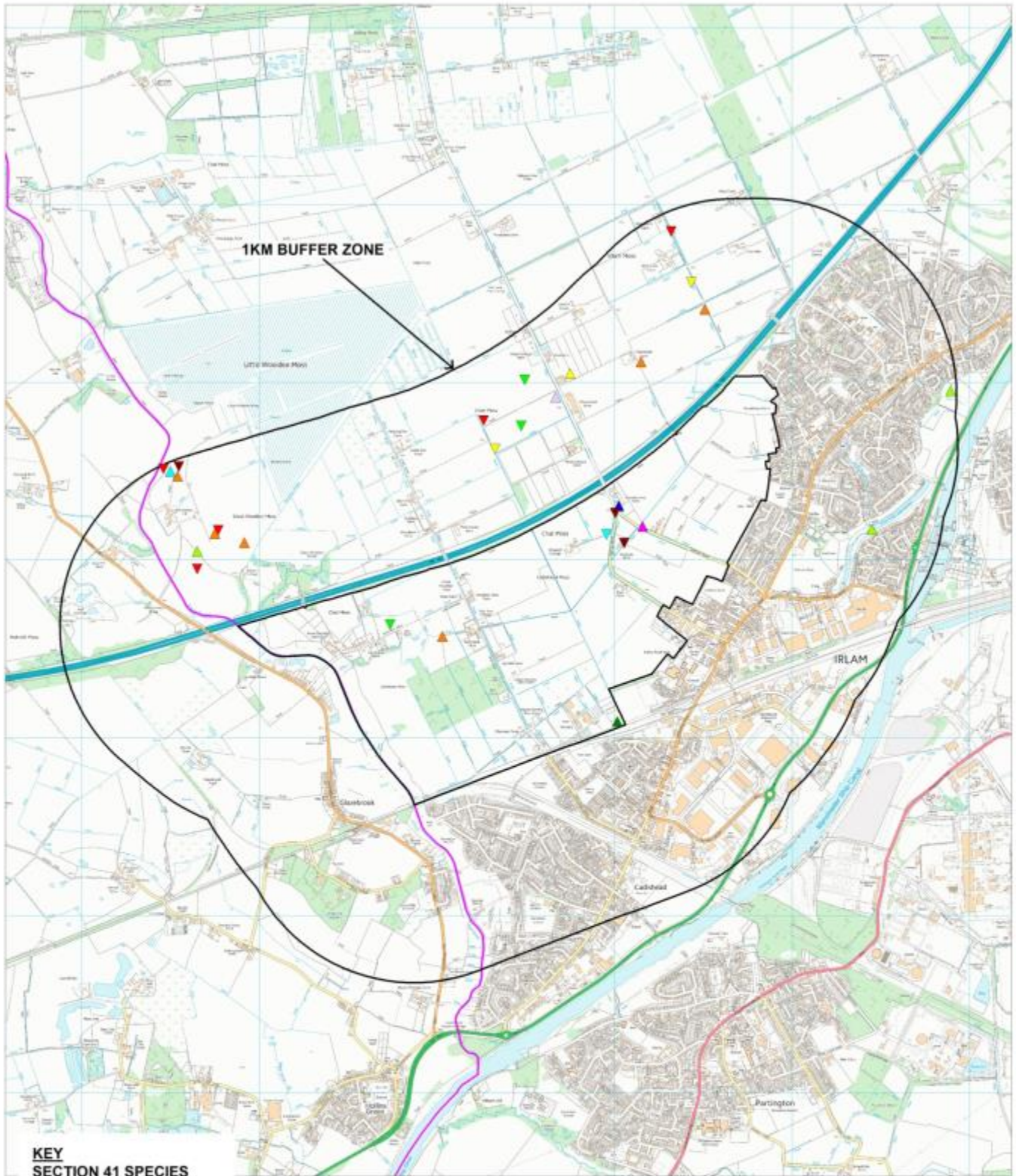
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KEY
SECTION 41 SPECIES

- ▲ COMMON TOAD
- ▲ CURLEW
- ▲ DUNNOCK
- ▲ GREY PARTRIDGE
- ▲ HOUSE SPARROW
- ▲ LAPWING
- ▲ LINNET
- ▲ REED BUNTING
- ▲ SKYLARK
- ▼ SONG THRUSH
- ▼ STARLING
- ▼ TREE SPARROW
- ▼ YELLOWHAMMER

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CADISHEAD MOSS - MAP 4

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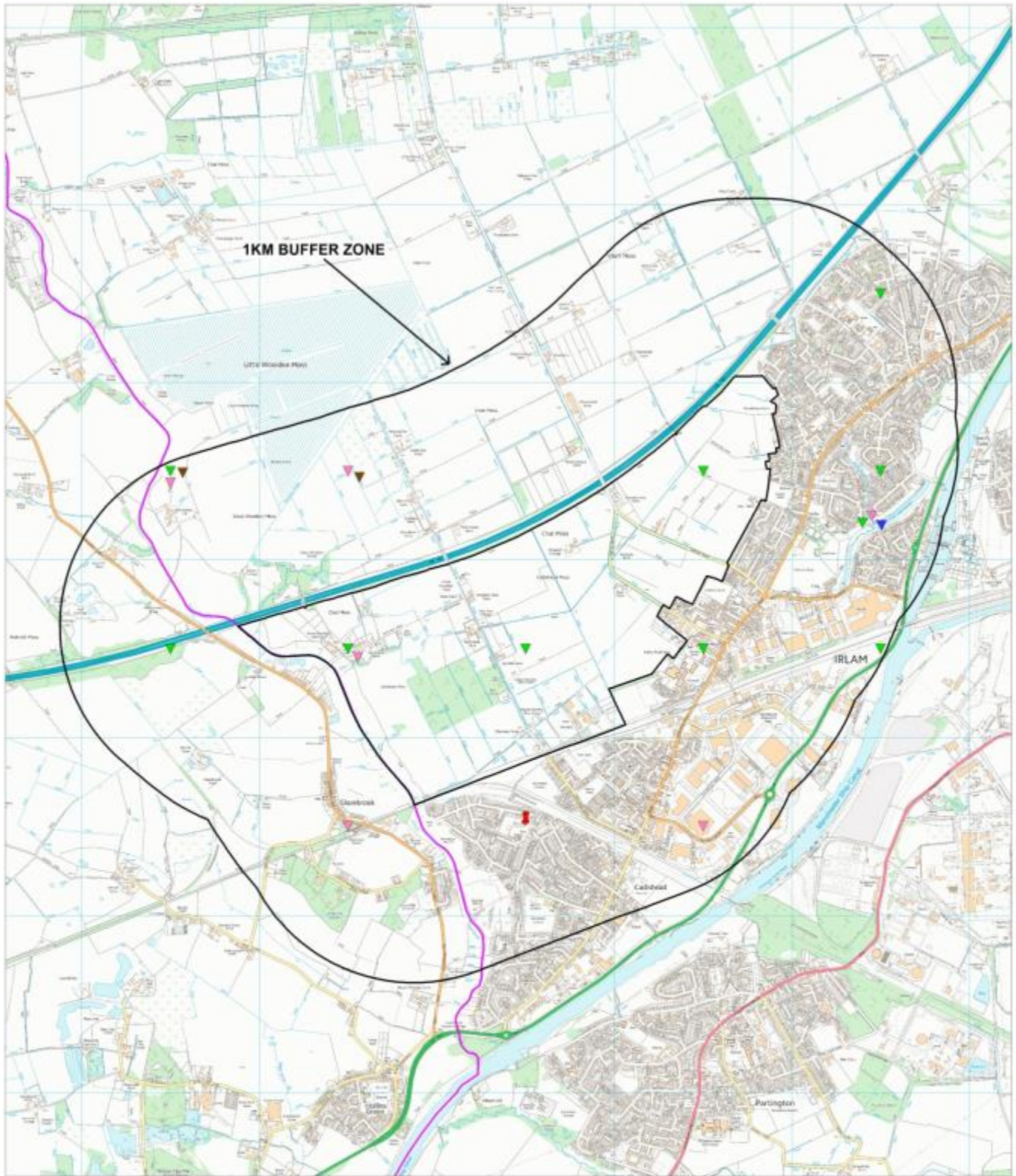
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KEY

INVASIVE SPECIES

- ▼ CANADIAN WATERWEED
- ▼ HIMALAYAN BALSAM
- ▼ JAPANESE KNOTWEED
- ▼ RHODODENDRON
- ▼ WALL COTONEASTER

**GREATER MANCHESTER ECOLOGY UNIT
ECOLOGICAL SEARCH - SJ7041 9383
CADISHEAD MOSS - MAP 5**

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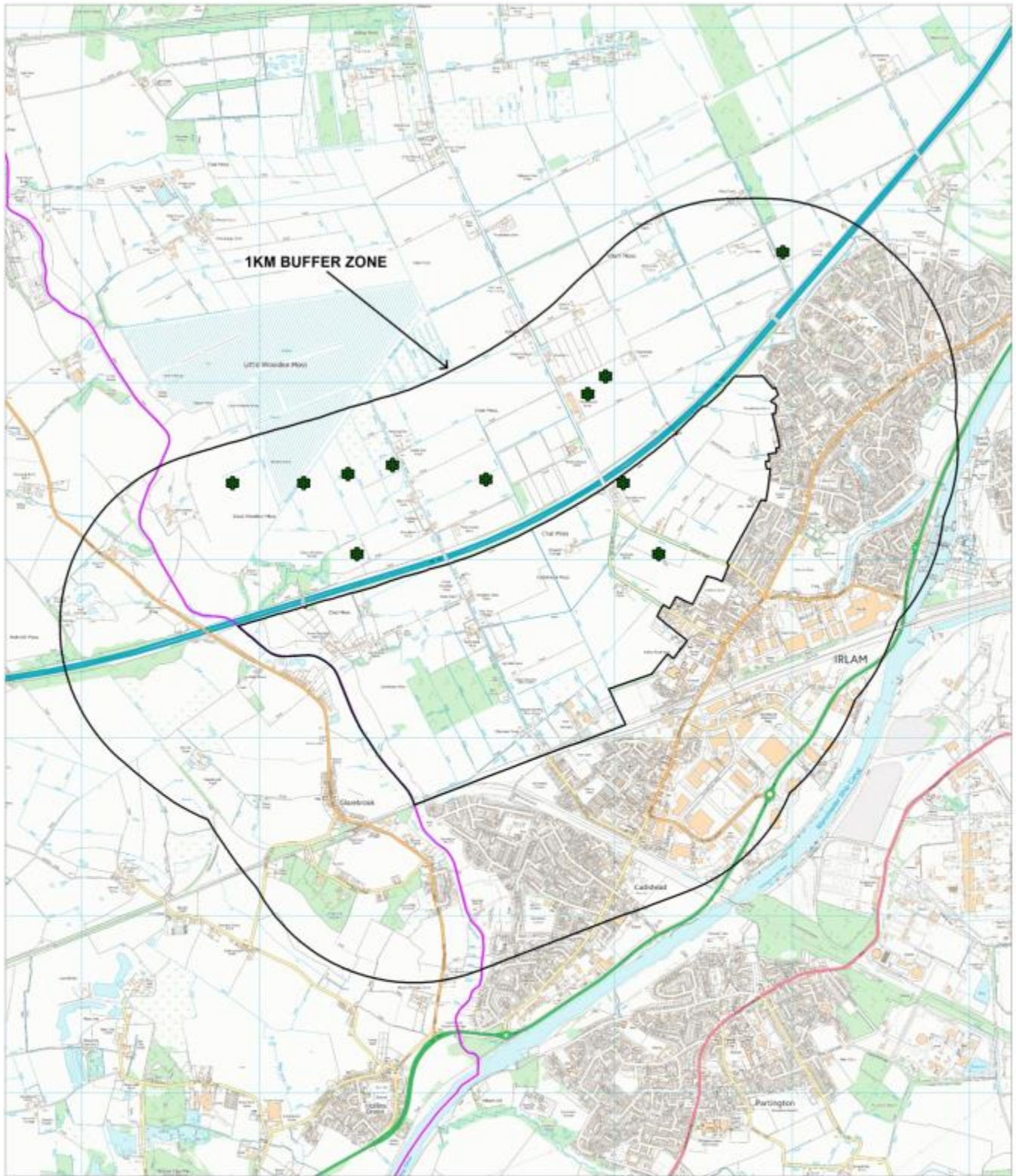
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KEY

★ Brown Hare

**GREATER MANCHESTER ECOLOGY UNIT
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CADISHEAD MOSS - MAP 6**

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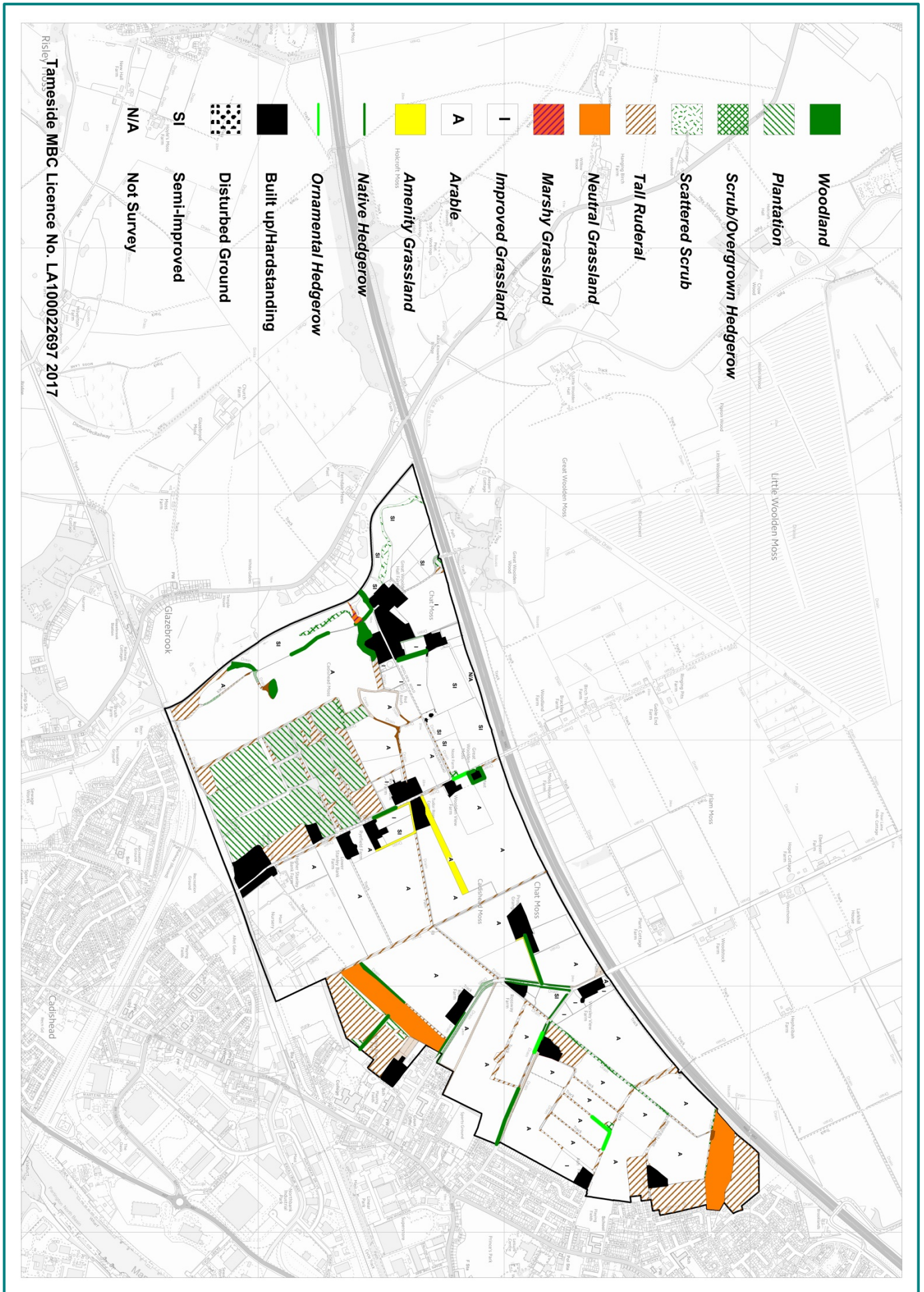
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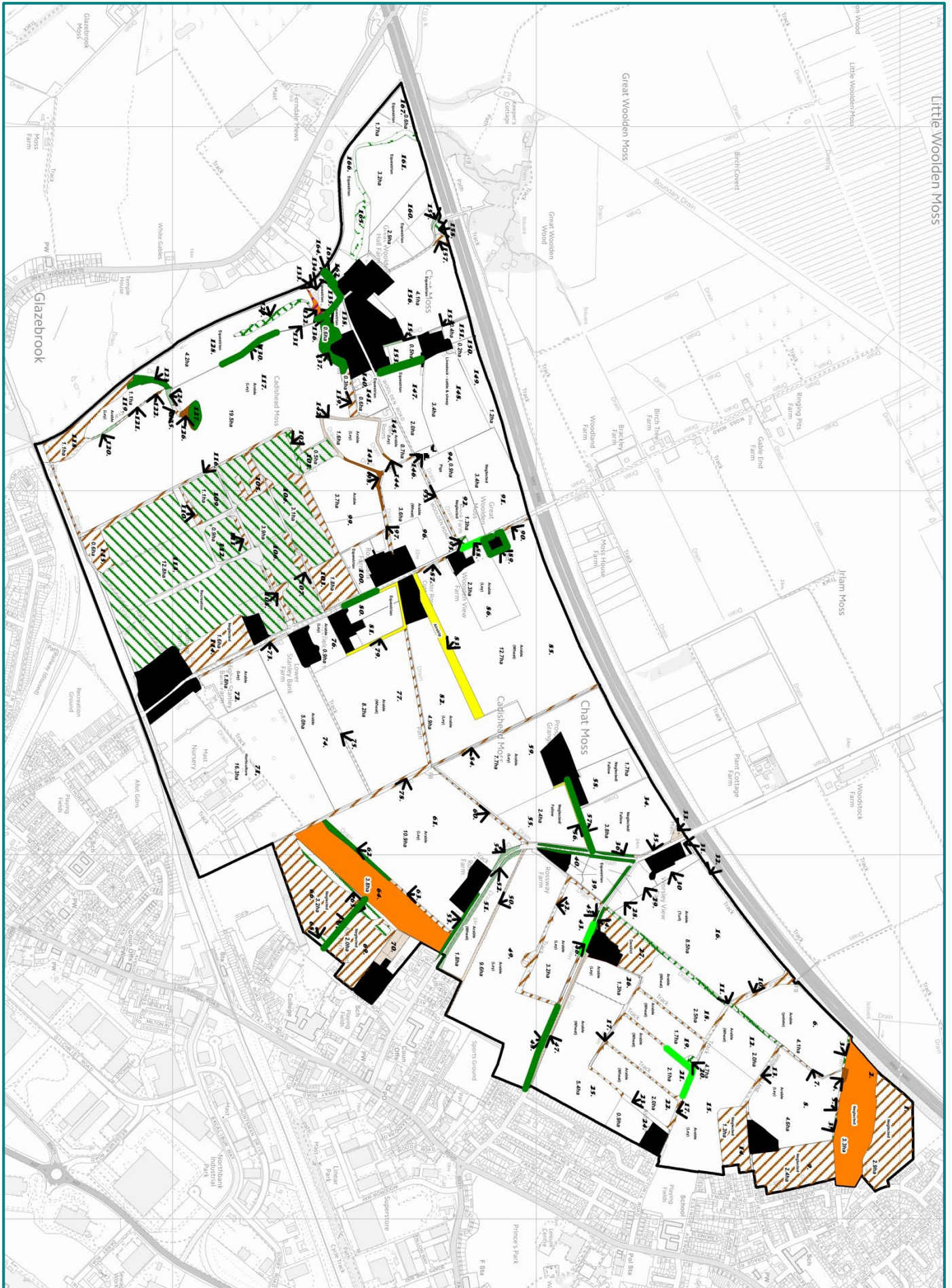
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Appendix 3 – Phase 1 Habitat Survey



Appendix 4 – Land Use and Field numbering system



Appendix 5

Field No.	Ward	Grid Reference	Phase 1 Habitat	Area (ha)	Off-set Calculations			Landuse
					Distinctive	Condition	Bio Units	
1	Irlam	SJ7176 9496	Tall Ruderal	2.9	4	2	23.2	Neglected
2	Irlam	SJ7171 9488	Neutral Grassland	3.3	4	2	26.4	Neglected
3	Irlam	SJ7154 9485	Scrub	0.1	4	1	0.4	Agricultural Field Boundary
4	Irlam	SJ7161 9485	Bracken	0.05	4	1	0.2	Agricultural Field Boundary
5	Irlam	SJ7169 9483	Tall Ruderal	0.04	4	1	0.16	Agricultural Field Boundary
6	Irlam	SJ7148 9470	Arable	4.1	2	1	8.2	Arable (potatoes)
7	Irlam	SJ7159 9476	Tall Ruderal	0.1	4	1	0.4	Agricultural Field Boundary
8	Irlam	SJ7167 0471	Arable	4.6	2	1	9.2	Arable (Ley)
9	Irlam	SJ7186 9471	Tall Ruderal	2.4	4	1	9.6	Neglected
10	Irlam	SJ7136 9463	Tall Ruderal	0.4	4	1	1.6	Agricultural Field Boundary
11	Irlam/Cadishead	SJ7133 9443	Scrub	0.6	4	2	4.8	Agricultural Field Boundary
12	Irlam	SJ7152 9457	Arable	2	2	1	4	Arable (wheat)
13	Irlam	SJ7161 9462	Tall Ruderal	0.2	4	1	0.8	Agricultural Field Boundary
14	Irlam	SJ7178 9455	Tall Ruderal	1.3	4	1	5.2	Neglected
15	Irlam	SJ7170 9447	Arable	4.7	2	1	9.4	Arable (Ley)
16	Cadishead	SJ7121 9445	Arable	8.5	2	1	17	Arable (Turf)
17	Cadishead	SJ7141 9434	Tall Ruderal	1.1	4	1	4	Agricultural Field Boundary
16	Cadishead	SJ7139 9440	Arable	2.5	2	1	5	Arable (wheat)
19	Cadishead	SJ7147 9435	Arable	1.7	2	1	3.4	Arable (wheat)
20	Cadishead	SJ7157 9443	Scrub	0.1	4	2	0.8	Derelict (site of Ash Farm)
21	Cadishead	SJ7155 9431	Arable	2.1	2	1	4.2	Arable (wheat)
22	Cadishead	SJ7163 9427	Arable	2	2	1	4	Arable (wheat)
23	Cadishead	SJ7171 9439	Line of Trees	0.2	2	1	0.4	Shelterbelt
24	Cadishead	SJ7173 9425	Improved Grassland	0.9	2	1	1.8	Equestrian
25	Cadishead	SJ7155 9411	Arable	5.4	2	1	10.8	Arable (wheat)
26	Cadishead	SJ7135 9420	Arable	1.3	2	1	2.6	Arable (Ley)
27	Cadishead	SJ7124 9425	Tall Ruderal	1.3	4	1	5.2	Derelict
28	Cadishead	SJ7111 9423	Improved Grassland	0.4	2	1	0.8	Equestrian
29	Cadishead	SJ7106 9429	Improved Grassland	0.5	2	1	1	Equestrian
30	Cadishead	SJ7104 9439	Improved Grassland	0.4	2	1	0.8	Equestrian
31	Cadishead	SJ7098 9414	Amenity Grassland	0.1	2	1	0.2	
32	Cadishead	SJ7114 9455	SI (poor)	0.4	2	1	0.8	Access Track
33	Cadishead	SJ7094 9439	Tall Ruderal	0.1	4	1	0.4	Derelict
34	Cadishead	SJ7089 9425	Arable	3.8	2	1	7.6	Arable (fallow)
35	Cadishead	SJ7099 9431	Tall Ruderal	0.04	4	1	0.16	Agricultural Field Boundary
36	Cadishead	SJ7100 9422	Broadleaved Woodland	0.1	6	1	0.4	Agricultural Field Boundary
37	Cadishead	SJ7100 9414	Broadleaved Woodland	0.2	6	1	0.8	Agricultural Field Boundary
38	Cadishead	SJ7108 9422	Broadleaved Woodland	0.1	6	1	0.6	Agricultural Field Boundary
39	Cadishead	SJ7107 9419	SI Neutral Grassland	1	4	1	4	Equestrian
40	Cadishead	SJ7102 9412	SI Neutral Grassland	0.2	4	1	0.8	Equestrian
41	Cadishead	SJ7105 9410	SI Neutral Grassland	0.1	4	1	0.4	Equestrian
42	Cadishead	SJ7112 9406	Tall Ruderal	0.8	4	1	3.2	Agricultural Field Boundary
43	Cadishead	SJ7124 9407	Arable	3.2	2	1	6.4	Arable (Ley)
44	Cadishead	SJ7118 9417	Broadleaved Woodland	0.1	6	1	0.6	Agricultural Field Boundary
45	Cadishead	SJ7117 9416	Broadleaved Woodland	0.02	6	1	0.12	Agricultural Field Boundary
46	Cadishead	SJ7123 9413	Ornamental Hedge (84m)		2	1	N/A	Agricultural Field Boundary

47	Cadishead	SJ7145 9406	Tall Ruderal	0.4	4	1	1.6	Agricultural Field Boundary
48	Cadishead	SJ7155 9400	Hedge (241m)		6	2		Agricultural Field Boundary
49	Cadishead	SJ71319392	Arable	9.6	2	1	19.2	Arable (Ley)
50	Cadishead	SJ7121 9386	Tall Ruderal	0.4	4	1	1.6	Agricultural Field Boundary
51	Cadishead	SJ7116 9385	Arable	1.8	2	1	3.6	Arable (wheat)
52	Cadishead	SJ7113 9384	Dense Scrub	0.4	4	2	3.2	Agricultural Field Boundary
53	Cadishead	SJ7120 9378	Broadleaved Woodland	0.2	6	1	1.2	Agricultural Field Boundary
54	Cadishead	SJ7099 9391	Dense Scrub	0.1	4	1	0.4	Agricultural Field Boundary
55	Cadishead	SJ7089 9402	Arable	2.4	2	1	4.8	Arable (fallow)
56	Cadishead	SJ7085 9410	Amenity Grassland	0.1	2	1	0.2	Edge of Driveway
57	Cadishead	SJ7089 9412	Hedge (208m)		6	1		Agricultural Field Boundary
58	Cadishead	SJ7079 9421	SI (poor)	1.7	2	1	3.4	Neglected
59	Cadishead	SJ7072 9399	Arable	7.7	2	1	15.4	Arable (Ley)
60	Cadishead	SJ7087 9385	Tall Ruderal	0.2	4	1	0.8	Agricultural Field Boundary
61	Cadishead	SJ7099 9369	Arable	10.9	2	1	21.8	Arable (Ley)
62	Cadishead	SJ7099 9351	Broadleaved Woodland	0.3	6	1	1.8	Agricultural Field Boundary
63	Cadishead	SJ7114 9368	Tall Ruderal	0.2	4	1	0.8	Agricultural Field Boundary
64	Cadishead	SJ7109 9355	Neutral Grassland (poor)	3.8	4	2	30.4	Neglected/Fallow
65	Cadishead	SJ7104 9343	Broadleaved Plantation	0.7	6	1	4.2	Agricultural Field Boundary
66	Cadishead	SJ7109 9340	Tall Ruderal	3.2	4	1	12.8	Neglected
67	Cadishead	SJ7119 9347	Hedge (176m)		6	2		Overgrown
68	Cadishead	SJ7123 9340	Broadleaved Plantation	0.1	6	1	0.6	Neglected
69	Cadishead	SJ7125 9352	Tall Ruderal	2	4	1	8	Neglected
70	Cadishead	SJ7125 9360	Tall Ruderal	0.4	4	1	1.6	Derelict/Neglected
71	Cadishead	SJ7080 9319	Arable	16.3	2	1	32.6	Arable (horticulture)
72	Cadishead	SJ7052 9318	Arable	1.8	2	1	3.6	Arable (Ley)
73	Cadishead	SJ7045 9319	Tall Ruderal	0.2	4	1	0.8	Agricultural Field Boundary
74	Cadishead	SJ7064 9339	Arable	5	2	1	10	Arable
75	Cadishead	SJ7066 9346	Bare Earth	0.3	2	1	0.6	Track
76	Cadishead	SJ7042 9343	Arable	0.9	2	1	1.8	Arable (Ley)
77	Cadishead	SJ7061 9354	Arable	8.2	2	1	16.4	Arable (wheat)
78	Cadishead	SJ7086 9349	Tall Ruderal	0.8	4	1	3.2	Agricultural Field Boundary
79	Cadishead	SJ7028 9356	Amenity Grassland	0.3	2	1	0.6	Curtilage
80	Cadishead	SJ7031 9355	Improved Grassland	0.7	2	1	1.4	Equestrian
81	Cadishead	SJ7037 9356	SI (poor)	0.9	2	1	1.8	Equestrian
82	Cadishead	SJ7064 9381	Arable	4.9	2	1	9.8	Arable (Ley)
83	Cadishead	SJ7043 9376	Amenity Grassland	1	2	1	2	Airstrip
84	Cadishead	SJ7064 9394	Tall Ruderal	0.4	4	1	1.6	Agricultural Field Boundary
85	Cadishead	SJ7013 9392	Arable	12.7	2	1	25.4	Arable (wheat)
86	Cadishead	SJ7026 9387	Arable	2.3	2	1	4.6	Arable (Ley)
87	Cadishead	SJ7020 9371	Tall Ruderal	0.1	4	1	0.4	Agricultural Field Boundary
88	Cadishead	SJ7016 9380	Hedge (63m)		2	1		Agricultural Field Boundary
89	Cadishead	SJ7016 9390	Hedge (177m)		4	1		Agricultural Field Boundary
90	Cadishead	SJ7009 9394	Tall Ruderal	0.1	4	1	0.4	Agricultural Field Boundary
91	Cadishead	SJ6997 9387	SI Neutral Grassland	3.4	2	1	13.6	Neglected Pasture
92	Cadishead	SJ7004 9377	SI Neutral Grassland	1.3	2	1	2.6	Neglected Pasture
93	Cadishead	SJ7014 9380	Dense Scrub	0.1	4	1	0.4	Derelict
94	Cadishead	SJ6994 9374	SI Neutral Grassland	0.9	2	1	1.8	Pigs
95	Cadishead	SJ7003 9373	Tall Ruderal	0.1	4	1	0.4	Agricultural Field Boundary

96	Cadishead	SJ7006 9368	Arable	3.6	2	1	7.2	Arable (wheat)
97	Cadishead	SJ7012 9356	Tall Ruderal	0.3	4	1	1.2	Agricultural Field Boundary
98	Cadishead	SJ6993 9352	Continuous Bracken	0.2	4	1	0.8	Agricultural Field Boundary
99	Cadishead	SJ7004 9347	Arable	3.7	2	1	7.4	Arable
100	Cadishead	SJ7014 9357	Improved Grassland	1	2	1	2	Equestrian
101	Cadishead	SJ6991 9340	Broadleaved Plantation	0.5	6	1	3	Recreation
102	Cadishead	SJ6987 9333	Dense Scrub	0.2	4	1	0.8	Recreation
103	Cadishead	SJ7009 9341	Tall Ruderal	1.8	4	1	7.2	Recreation
104	Cadishead	SJ7003 9333	Broadleaved Plantation	3.1	6	1	18.6	Recreation
105	Cadishead	SJ6993 9322	Tall Ruderal	0.5	4	1	2	Recreation
106	Cadishead	SJ7013 9327	Broadleaved Plantation	3.9	6	1	23.4	Recreation
107	Cadishead	SJ7022 9336	Tall Ruderal	0.3	4	1	1.2	Recreation
108	Cadishead	SJ7029 9330	Tall Ruderal	0.3	4	1	1.2	Recreation
109	Cadishead	SJ7001 9309	Broadleaved Plantation	1.1	6	1	6.6	Recreation
110	Cadishead	SJ7004 9305	Tall Ruderal	0.1	4	1	0.4	Recreation
111	Cadishead	SJ7012 9319	Tall Ruderal	0.1	4	1	0.4	Recreation
112	Cadishead	SJ7013 9315	Broadleaved Plantation	0.9	6	1	5.4	Recreation
113	Cadishead	SJ7017 9305	Broadleaved Plantation	12.8	6	1	76.8	Recreation
114	Cadishead	SJ7042 9312	Tall Ruderal	1.6	4	1	6.4	Recreation
115	Cadishead	SJ7017 9279	Tall Ruderal	0.6	4	1	2.4	Recreation
116	Cadishead	SJ6997 9305	Tall Ruderal	0.8	4	1	3.2	Agricultural Field Boundary
117	Cadishead	SJ6983 9308	Arable	19.5	2	1	39	Arable (Ley)
118	Cadishead	SJ6980 9277	Tall Ruderal	1.1	4	1	4.4	Neglected
119	Cadishead	SJ6978 9287	Arable	1.1	2	1	2.2	Arable (Ley)
120	Cadishead	SJ6979 9288	Dense Scrub	0.05	4	2	0.4	Agricultural Field Boundary
121	Cadishead	SJ6978 9290	Tall Ruderal	0.1	4	1	0.4	Agricultural Field Boundary
122	Cadishead	SJ6974 9296	Continuous Bracken	0.01	4	1	123	Agricultural Field Boundary
123	Cadishead	SJ6970 9294	Broadleaved Woodland	0.2	6	2	2.4	Neglected
124	Cadishead	SJ6974 9299	Dense Scrub	0.1	4	2	0.8	Neglected
125	Cadishead	SJ6978 9301	Tall Ruderal	0.03	4	1	0.12	Agricultural Field Boundary
126	Cadishead	SJ6980 9304	Continuous Bracken	0.1	4	1	0.4	Agricultural Field Boundary
127	Cadishead	SJ6979 9306	Broadleaved Woodland	0.2	6	1	0.8	Neglected
128	Cadishead	SJ6958 9315	SI (poor)	4.2	2	1	8.4	Equestrian
129	Cadishead	SJ6952 9327	Dense Scrub	0.3	4	2	1.2	Equestrian
130	Cadishead	SJ6959 9324	Hedge (174m)		6	2		Agricultural Field Boundary
131	Cadishead	SJ6955 3935	Acid Grassland	0.03	6	2	0.2	Equestrian
132	Cadishead	SJ6948 9340	Marshy Grassland/Flush	0.1	6	2	1.2	Equestrian
133	Cadishead	SJ6943 9339	SI (poor)	0.1	2	1	0.2	Equestrian
134	Cadishead	SJ6944 9341	SI Neutral Grassland	0.1	4	1	0.4	Equestrian
135	Cadishead	SJ6946 9343	Improved Grassland	0.3	2	1	0.6	Equestrian
136	Cadishead	SJ6951 9343	Improved Grassland	0.1	2	1	0.2	Access Track
137	Cadishead	SJ6956 9344	Broadleaved Woodland	0.6	6	1	3.6	Derelict
138	Cadishead	SJ6952 9346	Improved Grassland	0.3	2	1	0.6	Equestrian
139	Cadishead	SJ6973 9349	Tall Ruderal	0.3	4	1	1.2	Derelict
140	Cadishead	SJ6970 9353	Improved Grassland	0.2	2	1	0.4	Equestrian
141	Cadishead	SJ6975 9355	Improved Grassland	0.6	2	1	1.2	Equestrian
142	Cadishead	SJ6976 9351	Tall Ruderal	0.3	4	1	1.2	Agricultural Field Boundary
143	Cadishead	SJ6987 9351	Arable	1.6	2	1	3.2	Arable (Ley)
144	Cadishead	SJ6991 9360	Continuous Bracken	0.02	4	1	0.08	Agricultural Field Boundary

145	Cadishead	SJ6986 9361	Arable	0.7	2	1	1.4	Arable (Ley)
146	Cadishead	SJ6990 9379	Disturbed Ground	0.2	2	1	0.4	Derelict
147	Cadishead	SJ6977 9364	Improved Grassland	2	2	1	4	Equestrian
148	Cadishead	SJ6976 9378	SI Neutral Grassland	3.4	4	1	13.6	Neglected
149	Cadishead	SJ6978 9387	SI Neutral Grassland	1.2	4	1	4.8	Neglected
150	Cadishead	SJ6960 9379	Unknown	0.2	2	1	0.4	Disturbed
151	Cadishead	SJ6956 9378	Unknown	0.4				
152	Cadishead	SJ6954 9376	Unknown	0.1				
153	Cadishead	SJ6962 9364	Improved Grassland	0.5	2	1	1	Equestrian
154	Cadishead	SJ6959 9363	Dense Scrub	0.1	4	1	0.4	Agricultural Field Boundary
155	Cadishead	SJ6966 9361	Hedge (254m)		6	1		Agricultural Field Boundary
156	Cadishead	SJ6945 9367	Improved Grassland	4.1	2	1	8.2	Equestrian
157	Cadishead	SJ6931 9374	Tall Ruderal	0.1	4	1	0.4	Derelict
158	Cadishead	SJ6928 9374	Broadleaved Plantation	0.1	4	1	0.4	Lanscaping
159	Cadishead	SJ6926 9372	Dense Scrub	0.02	4	2	0.16	Neglected
160	Cadishead	SJ6926 9364	SI (poor)	2.9	2	1	5.8	Equestrian
161	Cadishead	SJ6920 9360	SI (poor)	3.2	2	1	6.4	Equestrian
162	Cadishead	SJ6938 9346	SI (poor)	0.4	2	1	0.8	Equestrian
163	Cadishead	SJ6942 9343	Hedge (45m)		6	2		Agricultural Field Boundary
164	Cadishead	SJ6950 9344	Hedge (136m)		6	2		Agricultural Field Boundary
165	Cadishead	SJ6904 9358	Scattered scrub	0.8	4	1	3.2	Equestrian
166	Cadishead	SJ6901 9355	SI (poor)	1.7	2	1	3.4	Equestrian
167	Cadishead	SJ6895 9362	SI (poor)	0.6	2	1	1.2	Equestrian