




Natural Environment Planning Guidance

sustainable thriving achieving
East Dunbartonshire Council
www.eastdunbarton.gov.uk

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Introduction

This Planning Guidance is intended to support implementation of the East Dunbartonshire Local Development Plan (LDP).The relationship between the LDP, Supplementary Guidance and Planning Guidance is established in Scottish Government Circular 6/2013, and summarised in table 1 below.

Table 1 - The relationship between the LDP, Supplementary Guidance and Planning Guidance

Document	Purpose and Scope
Local Development Plan	Sets out the Council's policies for the development and use of land, including community strategies which identify opportunities for development, for the period up to ten years from adoption.
Supplementary Guidance: – Developer Contributions – Design and Placemaking – Green Infrastructure and Green Network – Frontiers of the Roman Empire (Antonine Wall) World Heritage Site	Supplementary Guidance is statutory as it forms part of the development plan, and has that status for decision making. It is limited to the provision of further information or detail in respect of policies or proposals set out in the LDP. Supplementary Guidance will be adopted with the LDP and lasts for the period of the Plan.
Planning Guidance	Non-statutory planning guidance may be used to provide detail on a range of subject areas. This form of guidance should not be termed Supplementary Guidance and will not form part of the development plan. However, adoption of this guidance by the Council gives it formal status, meaning that it may be a material consideration in decision making. Planning guidance can be updated as required and without the need for scrutiny by Scottish Ministers. Such updates are normally required where a specific issue arises during the period of the Plan.

Policy Context

Scottish Planning Policy introduces a presumption in favour of development that contributes to sustainable development. Its policy on placemaking also encourages development to create high quality places, with distinctive, safe and pleasant, adaptable and resource efficient qualities. Development which protects and conserves the natural environment contributes to sustainable development and high quality places.

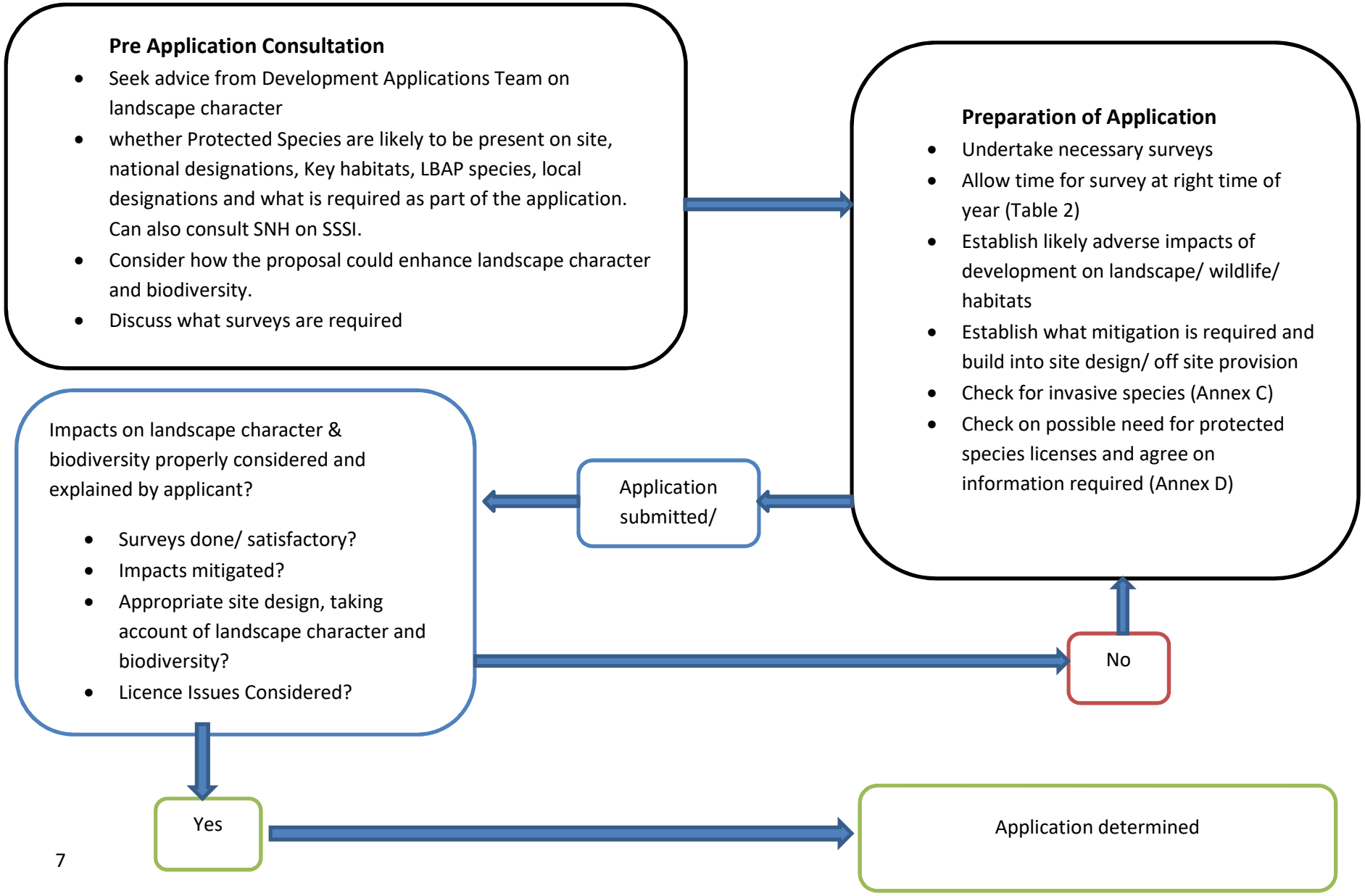
The subject policy on valuing the natural environment highlights that planning authorities have a duty under the Nature Conservation (Scotland) Act 2004 to further the conservation of biodiversity and, in doing so, must have regard to, amongst other things, the Scottish Biodiversity Strategy. This duty requires to be reflected in development management decisions.

LDP Policy 8 Protecting and Enhancing Landscape Character and Nature Conservation will guide development proposals to deliver these outcomes. This Planning Guidance is intended to provide further detailed information to support Policy 8. It should be read in conjunction with other related Guidance including Supplementary Guidance on Design and Placemaking and Supplementary Guidance on Green Infrastructure and the Green Network.

In support of Policy 8 this Planning Guidance provides information on the biodiversity, geodiversity, landscape character and specific soils of interest in East Dunbartonshire. It also sets out procedures on how this will be taken into account when considering development proposals. Applicants are encouraged to refer to this guidance at an early opportunity to consider natural environment requirements, constraints and opportunities for new development. Where relevant, applicants should seek pre-application advice from the Council to identify potential issues and avoid unnecessary delays in the planning process. Figure 1 provides a broad overview of how this Planning Guidance should be used in the development management process. Annexes C (Invasive Non-Native Species) and D (Licensing Requirements) provide some guidance on the legal requirements developers will require to be aware of.

Scottish Natural Heritage (SNH) is a statutory consultee for certain developments that affect wildlife, landscapes and the natural environment. SNH focuses on proposals that require an Environmental Impact Assessment and those that could affect sites with a statutory nature conservation designation. Annex A sets out further information on SNH's role in the planning system.

Figure 1. The Development Management Process and Planning Guidance on Natural Environment



Protecting and Enhancing Landscape Character

Development Management and East Dunbartonshire's Landscape

Under the Countryside (Scotland) Act 1967 the Council, as a planning authority, has a duty to further the conservation of biodiversity, natural beauty and amenity, and this will be reflected in development management decisions. Scottish Planning Policy (paragraph 194) states that as part of valuing the natural environment the planning system should:
"facilitate positive change while maintaining and enhancing distinctive landscape character".

It also states (paragraph 202) that
"The siting and design of development should take account of local landscape character. Development management decisions should take account of potential effects on landscapes and the natural and water environment, including cumulative effects. Developers should seek to minimise adverse impacts through careful planning and design, considering the services that the natural environment is providing and maximising the potential for enhancement."

High quality landscapes are essential to people's health and wellbeing and quality of life. By considering the location, siting and design of new development and proactively planning for change, development has a strong influence on the nature of change and appearance of the landscape. It plays a vital role in sustaining high quality landscapes which contribute to regional and local identity, add to the quality of the lives of residents and providing an attractive setting to help promote visitors and tourism.

LDP, Adopted Plan Policy 8 Protecting and Enhancing Landscape Character and Nature Conservation states that development will conserve and enhance the landscape character of East Dunbartonshire and conserve and enhance the special qualities and overall integrity of Local Landscape Areas (LLA).

Landscape Character

Landscape Character Assessment is a standard methodology for identifying, describing, classifying and mapping what is distinctive about our landscapes. It shows us their variety, and helps us to understand what makes one landscape different from another. It provides baseline information that can be used to guide landscape change - for example by informing decisions on proposed development. There are five landscape character types in East Dunbartonshire and their key characteristics, features and qualities are set out in Table 3. Further information will be found in a reviewed Landscape Character Assessment for Scotland when it is published at the end of 2016, which will supercede the current for the Glasgow and Clyde Valley was produced in 1999. It is being reviewed and updated as part of the Scottish Landscape Character Review which aims to update the studies and create a digital database of Landscape Character Assessment in Scotland. Further information on Landscape Character Assessment and the related document can be found on Scottish Natural Heritage's website.
http://www.snh.gov.uk/protecting-scotlands-nature/looking-after-landscapes/lca/

The LDP Policy 8 aims to facilitate positive change whilst taking account of local landscape character throughout East Dunbartonshire within all landscapes, not just those that are designated for their local landscape value as a LLA. This reflects Scottish Planning Policy and the European Landscape Convention, which recognise the importance of all landscapes and encourages more attention to their care and planning.

Policy 8 states that development will conserve and enhance the landscape character of East Dunbartonshire. The five landscape character types in East Dunbartonshire are set out in table 3 below, which also identifies the key characteristics of each, and shown on Figure 2 and the LDP interactive mapping on the Council's website.

The Landscape Character Assessment's context, description and managing landscape change notes taken together are intended as a tool to help inform proposals for land use change or development and the assessment of individual planning applications.

With regard to 'sensitivities' it is important to note that the lists are not exhaustive and only key issues are highlighted. All landscapes are potentially at risk from inappropriately sited or scaled development and from the direct and indirect effects of cumulative change and these issues should be taken into account when assessing all land use change or development proposals. Although now published some years ago, the Scottish Natural Heritage document Scotland's Future Landscapes still provides a good summary of the underlying problems within the wider Scottish and East Dunbartonshire landscapes. It is useful to bear these in mind as they all have the potential to erode distinctive landscape character:

- Loss of diversity
- Loss of distinctiveness
- Poor standards of design
- Decline of natural features
- Threats to cultural legacy
- Attrition to remote countryside
- Limited landscape management
- Erosion of rural character in lowland areas

Figure 2 - Landscape Character Types in East Dunbartonshire

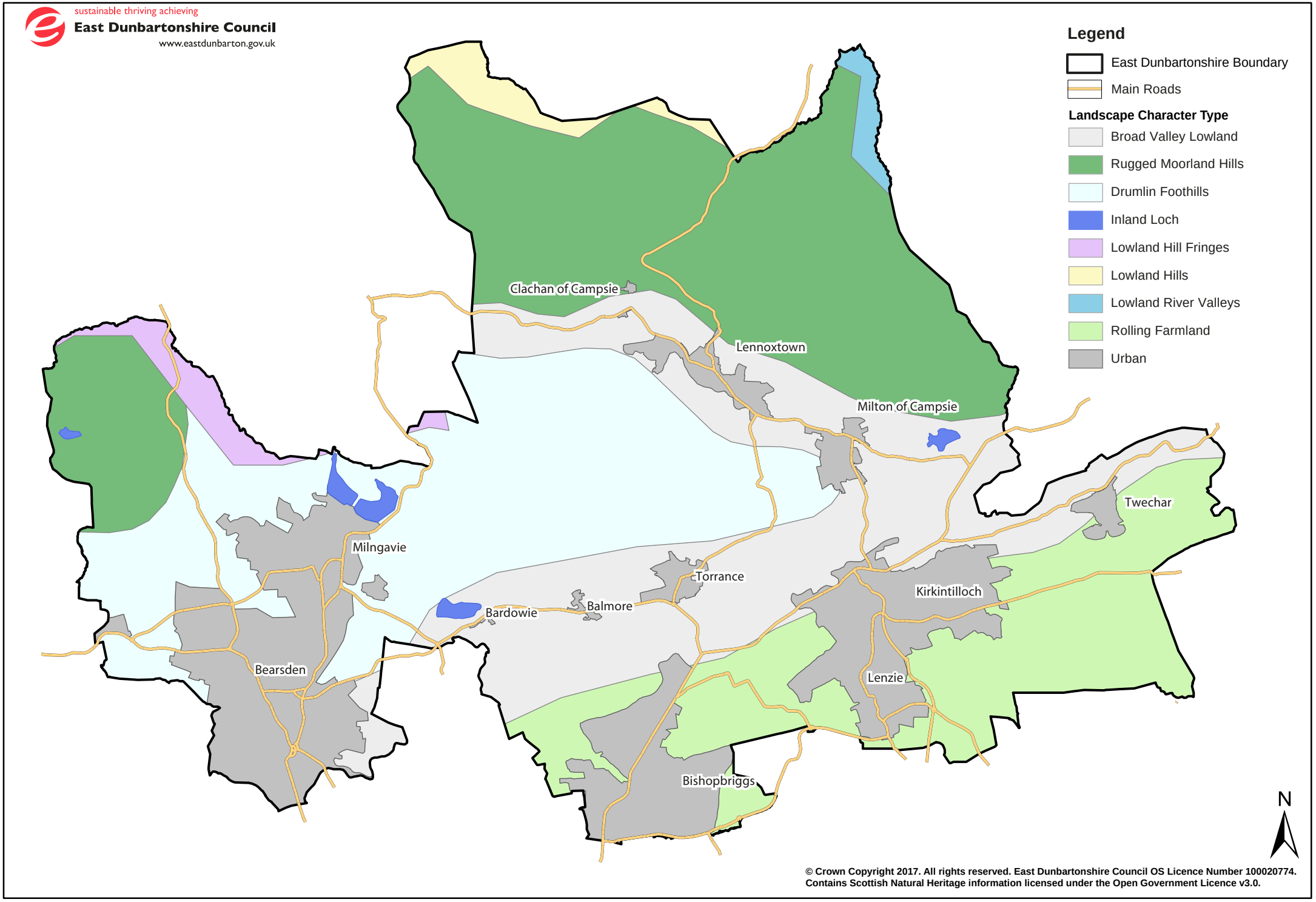


Table 3 Landscape Character Types in East Dunbartonshire

Landscape Character Type & area	Key Characteristics
Rolling Farmlands – Kirkintilloch	• distinctive undulating landform created by fluvio-glacial action • dominance of pastoral farming, varying in productivity according to elevation and exposure • importance of woodland in structuring the landscape and providing shelter for agriculture and rural settlement
Green Corridor - Forth and Clyde Canal, River Kelvin	• strategically important corridors of undeveloped land, following rivers and canals and extending into the urban area. Significant in terms of local landscape, townscape , recreation and nature conservation • landscape features including incised gorges (Kelvin), and remnant industrial and transport features (Forth and Clyde Canal)
Broad Valley Lowland – Kelvin Valley	• wide flat bottomed valley • presence of water bodies, wetlands and rivers • transport routes and settlements along the valley sides • transition from arable to rough grazing from the valley floor to the high valley sides • historic sites and communication routes along the valley sides • presence of farm and policy woodland
Drumlin Foothills	• distinctive undulating landform created by glacial deposition subsequently modified by fluvial erosion • area of transition from lowlands areas to the Rugged Moorland Hills • dominance of pastoral farming in lower parts of the hills, giving way to areas of moorland vegetation in more elevated and exposed areas • combination of semi-natural woodlands along incised burns, farm woodlands, small conifer plantations and, along the northern edge of the hills, more extensive areas of mixed and coniferous woodland
Rugged Moorland Hills – Campsie Fells and Kilpatrick Hills	• distinctive upland character created by the combination of elevation, exposure, rugged landform, moorland vegetation and the predominant lack of modern development • these areas share a sense of apparent naturalness and remoteness which contrasts strongly with the farmed and developed lowland areas • presence of archaeological sites on hilltops and sides

Landscape Tools & Techniques for Development Management

Development has a key role to play in identifying and addressing impacts on landscapes as proposals are progressed. It should demonstrate good practice in fitting new development into the landscape. Scottish Natural Heritage provides specific guidance for different types of development, in particular to help plan and design new house building.
http://www.snh.gov.uk/protecting-scotlands-nature/looking-after-landscapes/landscape-policy-and-guidance/landscape-planning-and-development/

There are practical tools and techniques help a planning application better understand, and manage, the effects of change on the landscape. These also help understand what is special or distinct about a landscape. This can lead to proposals for enhancing and safeguarding landscapes as part of the environmental benefits of a new development.

Landscape, planning and design professionals use standard and well-tested techniques of landscape assessment to identify suitable locations for new development, and ensure that it is designed to fit into the landscape. More details on these are found on Scottish Natural Heritage's website.http://www.snh.gov.uk/protecting-scotlands-nature/looking-after-landscapes/tools-and-techniques/

Techniques include:

- Landscape capacity and sensitivity - Techniques for assessing the sensitivity and capacity of landscapes to change
- Landscape and Visual Impact Assessment - Information about this technique and how it is used
- Environmental assessment - How this process is used to consider the effects of development on landscape
- Master planning - Find out about how this approach can be used to safeguard and enhance landscapes

Specifically wind turbine proposals should consider the Clydeplan Strategic Development Plan (SDP), 2017, Additional Supporting Material, Background Report 10 Landscape Capacity Study for Wind Turbine Development in Glasgow and the Clyde Valley, 2014. This provides more information on sensitivity to and capacity of landscape character types in East Dunbartonshire for that specific type of development. http://www.clydeplan-sdpa.gov.uk/files/GCVLandscapeCapacityStudy2014.pdf
Proposals for woodland expansion and restocking should consider the SDP, Background Report 12 Forestry and Woodland Strategy 2016, also provides more information on sensitivity to and capacity of landscape character types in East Dunbartonshire to woodland change.

Local Landscape Areas (LLA)

In accordance with Scottish Planning Policy (paragraph 197) the purpose of a LLA is to:

a) Safeguard and enhance the character and quality of a landscape which is important or particularly valued locally or regionally; or
b) Promote understanding and awareness of the distinctive character and special qualities of local landscapes; or
c) Safeguard and promote important local settings for outdoor recreation and tourism.

Policy 8 states that development will conserve and enhance the special qualities and overall integrity of a LLA. The following LLA were designated in line with Scottish Planning Policy and are identified in the LDP communities strategies sections or Green Infrastructure and Green Network Supplementary Guidance, 2018. The location of sites designated as LLA are shown in figure 3, and the LDP interactive mapping on the Council's website.

- Kilpatrick Hills LLA (LLA1)
- Campsie Fells LLA (LLA2)
- Glazert Valley LLA (LLA3)
- Bardowie, Baldernock and Torrance LLA, (LLA4) and
- Bar Hill (LLA5)

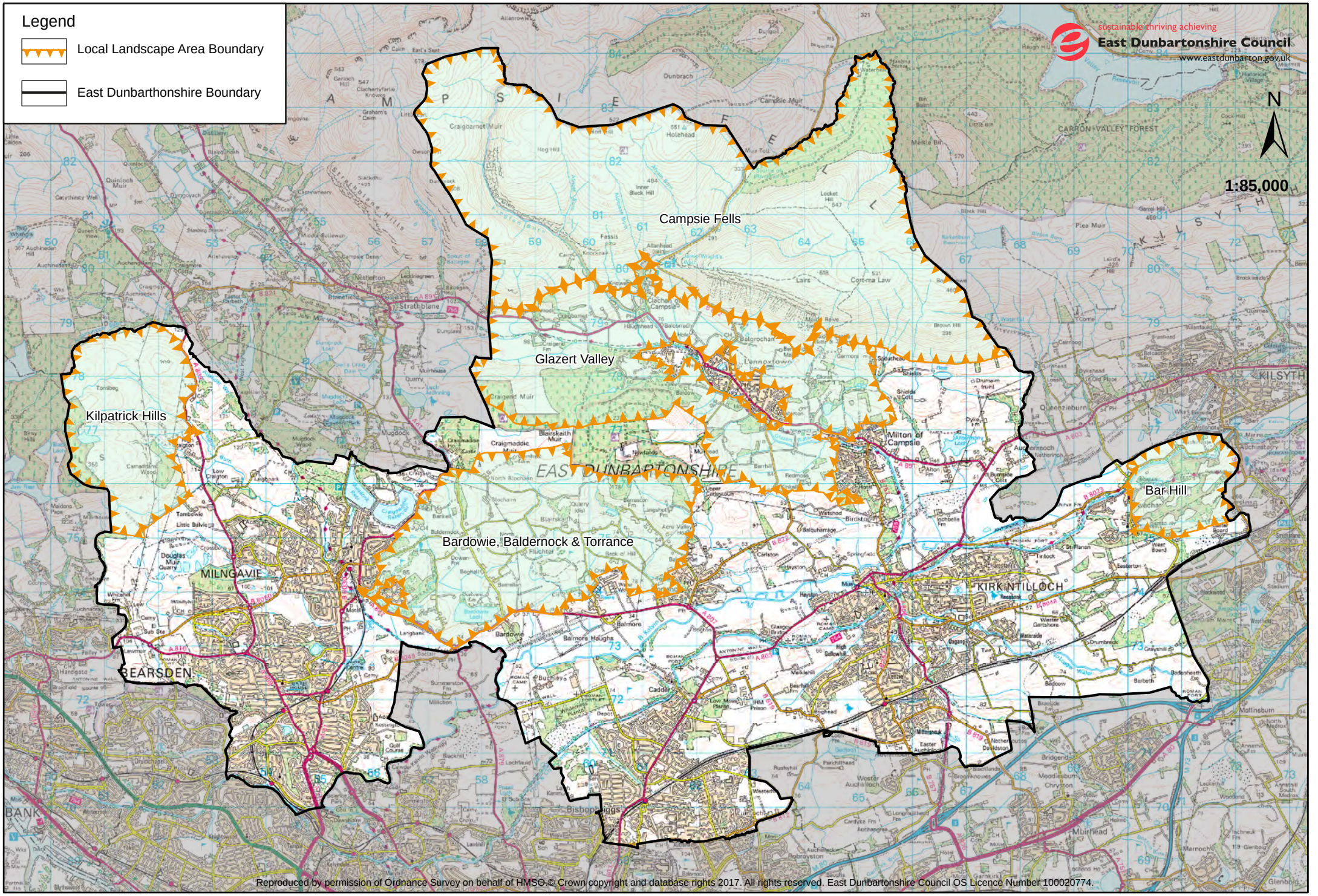
The Kilpatrick Hills and Campsie Fells Statements of Importance, published in 2015, were prepared in consultation with Scottish Natural Heritage (SNH) and the former was also prepared jointly with West Dunbartonshire Council. A review of the statement of importance and boundaries of the remaining LLA and the southern boundary of the Campsie Fells LLA was carried out in 2016. This identified the following changes: revised boundaries for the Glazert Valley, Campsie Fells and Bardowie, Baldernock and Torrance LLAs to refine their core areas. The review found that the Badenheath LLA, identified in the LDP, does not have special qualities which justify its designation and Bar Hill has special qualities which justify its designation as a LLA. It concluded that the landscape of Badenheath LLA is not particularly distinctive and does not exhibit many of the qualities that are considered to merit designation. The primary value of the landscape relates to it being an area of countryside which provides respite from surrounding population centres, although there are few recreational opportunities and a limited number of core paths. Badenheath has therefore not been taken forward as a LLA. The revised LLA boundaries identified in the Green Infrastructure and Green Network Supplementary Guidance 2018 has the status of the development plan for planning applications.

A summary of the special qualities for each LLA is set out below. A full Statement of Importance for each of the LLA is also set out in Annex E, including a landscape overview and description, identification of special qualities, description of boundary and identification of landscape change.

Development and other land-use changes such as forestry proposals will consider potential impacts on the character and integrity of a LLA. The Statement of Importance for each LLA provides background information to help inform a planning application in accordance with LDP Policy 8 and for woodland planting proposals accordance with Policy 5 – Green Infrastructure and Green Network. Particularly high standards of siting, design and planting are required for all forms of development within a LLA, appropriate to local context and special qualities.

Kilpatrick Hills LLA

Figure 3 - Revised Local Landscape Areas in East Dunbartonshire



Kilpatrick Hills LLA Special Landscape Qualities

The special landscape qualities of the Kilpatrick Hills that justify their selection as a LLA is a strong sense of remoteness, wildness and open horizons; distinctive landforms; and a unique diversity of views. These qualities are set out below.

Strong Sense of Remoteness, Wildness and Open Horizons

- The Kilpatrick Hills are almost completely uninhabited. At a broad level the landform is very simple and the open moorland appears vast in extent with open horizons.
- However at a more detailed level there is a diversity of topographical features and upland habitats characterised by mosaics of bog, heath land and grassland, with frequent rocky outcrops, scree and crags. Fragments of broadleaf woodland also occur on the lower ground, and highlight ravines and burn corridors that provide some shelter. The moorland vegetation has muted colours, textures and sinuous patterns.
- It is a simple landscape providing a rolling hill backdrop, undeveloped as a natural setting to adjacent
- urban areas. This contrast and proximity creates an 'accessible solitude' where the remote hills, provide an experience of remoteness, isolation and tranquility in a landscape where wild and natural character dominates.

Distinctive Landforms

- Within the hills, the sweeping open moorland and coniferous plantations are contrasted with the summits, such as Duncolm, Doughnut Hill in West Dunbartonshire and Auchineden Hill in Stirling area which form distinctive local landmarks.
- In places, the summits give way to dramatic ridges of rock and escarpments, particularly in West Dunbartonshire. Dramatic hill edges, long ridges, exposed rock cliffs and the gentle roll of land forming the lower slopes play an important role in the overall landscape composition.
- Elsewhere, deep valleys and gullies have formed at the edge of the Hills where burns run.

A Unique Diversity of Views

- The Kilpatrick Hills boast unique and relatively accessible panoramic views in all directions. These panoramic views form part of a tremendous range of high quality views both to and from the Kilpatrick Hills. These views are very diverse and range from important internal vistas of remote areas with no urbanisation visible, to extensive "borrowed views" of the adjacent nationally important highland landscape. Open horizons and borrowed views lead to the Kilpatrick Hills being experienced as part of a much larger landscape,

increasing the sense of isolation and solitude. Long views across the Glasgow conurbation emphasise the contrast between the remote upland and developed lowlands.

- In well-known views from outwith the Kilpatrick Hills the hills are a key feature seen across adjacent urban and farmed lowlands. The hills' skyline makes an important contribution to the setting of views from the north and east of Glasgow city.

Campsie Fells LLA

Campsie Fells LLA Special Landscape Qualities

The special landscape qualities of the Campsie Fells that justify their selection as a LLA are the distinctive landform of the Campsie Fault, striking views and diversity of landscape experience. These qualities are set out below.

Distinctive Landform of the Campsie Fault

- The long undulating ridgeline of the seemingly towering Earl's Seat, Lairs and Cort Ma Law define and confine Clachan of Campsie, Lennoxtown and Milton of Campsie conveying a strong sense of a physical barrier.
- The skylines and outer faces of the hills help to define the Glazert and Kelvin Valleys and contribute to the setting of East Dunbartonshire towns and villages and the Glasgow Conurbation.
- Precipitous distinctive and dramatic south facing escarpment cliffs and scree at the Crow Road and Meikle Reive, Lennoxtown appear much higher and larger than they really are because of lack of scale indicators. The escarpment appears unassailable.

Striking Views

- Panoramic outward views from the hill edges and summits: from Earl's Seat looking north west to the Loch Lomond and the Trossachs National Park, from Cort Ma Law and Lairs looking south and south west over the Glazert Valley LLA and south to the Kelvin valley and wider Glasgow area.
- The prevailing weather conditions are cloudy which results in periodically dramatic changes in light across the hills;
- Locally important and dramatic views descending into the Glazert Valley on the Crow Road.
- Views towards the LLA are equally important, from the lowland Glazert and Kelvin valleys, Clachan of Campsie, Lennoxtown and Milton of Campsie, the Frontiers of the Roman Empire (Antonine Wall) World Heritage Site, the Forth & Clyde Canal and John Muir Way.

Diversity of Landscape Experience

- Contrast between open and exposed rugged moorland on range of hills between Cort Ma Law and Earl's Seat with enclosure and introspection within the incised, steep sided valleys, of the Campsie Glen and the hidden Finglen, with their burns and waterfalls.
- Contrast between the large scale, simple open hill land of the Campsie Fells and the adjacent landscapes, outwith the LLA, of the adjacent Glazert Valley LLA and Kelvin valley, of smaller scale, diverse, farmed, wooded and settled hill
- fringes.
- The hills have a sense of remoteness yet are accessible to nearby urban areas and easy to walk or drive into the foothills then climb.

Glazert Valley LLA

Glazert Valley LLA Special Landscape Qualities

The special landscape qualities of Glazert Valley that justify its selection as a LLA are its distinctive broad valley landform, contrasting views in relation to elevation and a diverse range of land uses and recreational opportunities. These qualities are set out below.

Broad Valley Landform

- Distinctive intact broad valley with relatively flat valley floor, flood plain and steep sides.
- The valley floor and sides provide part of a varied landscape setting for Clachan of Campsie, Haughhead, Lennoxtown and Milton of Campsie.

Contrasting Views

- Dramatic elevated views into and across the valley from the southern foothills of the Campsie Fells in the north, and from areas near Lennox Castle in the south.
- Sequential views experienced along the valley floor and towards the paddocks, moorland and woodlands along the valley sides, from the A891 and John Muir Way.
- Enclosed views within the gorge of Campsie Glen, with its mature deciduous woodland and waterfalls.

Land Use and Recreation

- A variety of land use including small farms with their small fields enclosed by hedges, as well as mixed coniferous and deciduous woodlands historically related to designed landscapes, notably Lennox Castle and Campsie Glen.
- The John Muir Way and a network of core paths provide access to the visitor attractions of Clachan of Campsie and the Campsie Glen, and the higher ground in the Campsie Fells, Lennox Forest, and Lennox Castle woodlands.

Bardowie, Baldernock and Torrance LLA

Bardowie, Baldernock and Torrance LLA Special Landscape Qualities

The special landscape qualities of the Bardowie, Baldernock and Torrance area that justify its selection as a LLA are the unique drumlin landform, variety of views, a high standard of land management and recreational opportunities. These qualities are set out below.

Drumlin Landform

- Characteristic undulating drumlin landform.
- Provides part of the wider landscape setting of small farms and designed landscapes for Milngavie and Torrance, and the historic villages of Bardowie and Baldernock.

Variety of Views

- Open long distance vistas of Glasgow to the south from a number of elevated positions within the area, notably Craigmaddie Muir.
- Localised series of views across the drumlin landscape often contained by landform at lower elevations and longer distance views of the backing Campsie Fells.

Land Use and Recreation

- Well managed small farms with varying size and orientation of fields.
- Historical features include the large boulders at the Auld Wives' Lifts, also of archaeological interest, Bardowie Castle, the historic villages of Baldernock and Bardowie, and the Category A listed Factor's House and its grounds at Dougalston.
- Bardowie Loch used for water sports, core paths at Dougalston Golf Course and into the countryside north of Balmore and Torrance.

Bar Hill LLA

Bar Hill LLA Special Landscape Qualities

The special landscape qualities of Bar Hill that justify its selection as a LLA are its distinctive rounded landform, dramatic views and a diverse range of landscape and historical features. These qualities are set out below.

Distinctive Rounded Landform

- Distinctive rounded landform rising above the Kelvin Valley and the urban areas and farmlands to the north.
- Provides part of the wider landscape setting of East Dunbartonshire, particularly the settlement of Twechar, as well as Kilsyth, Queenzieburn and Croy in North Lanarkshire.

Dramatic Views

- Open panoramic outward views from Castle Hill to the north and west out across the Kelvin Valley to the Campsie Fells and Kilpatrick Hills.

- Filtered and framed views from the Roman Fort site, including glimpsed views east from Castle Hill along the ridge to Croy Hill, which also has a Roman Fort.
- Sequential views experienced across the hill through gaps in woodland, across farmland and along the Antonine Wall.
- Sequential views from the curving stretches of the Forth and Clyde Canal up to the woods and open areas along the northern flank of the hill.

Diversity of Landscape and Historical Features

- A unique sense of place is experienced within the Bar Hill Roman Fort site with an attractive composition of archaeological features set in mown grass with specimen trees.
- Beyond Castle Hill to the east, the distinctive undulations of the Antonine Wall lie between broadleaf woodland to the north and coniferous woodland plantation to the south.
- Diverse deciduous and mixed woodland of varying maturity and species.

Trees, Woodlands and Hedgerows

Paragraph 194 of Scottish Planning Policy indicates that the planning system should "protect and enhance ancient semi-natural woodland as an important and irreplaceable resource, together with other native or long-established woods, hedgerows and individual trees with high nature conservation or landscape value".

Scottish Ministers' Policy on Control of Woodland Removal (http://scotland.forestry.gov.uk/supporting/strategy-policy-guidance/woodland-expansion/control-of-woodland-removal) was published in 2009, and signals a strong presumption in favour of protecting Scotland's woodland resources, unless removal will achieve significant and clearly defined additional public benefits. For woodland removal associated with development, it is expected that compensatory planting will normally be undertaken at the developer's expense (see Scottish Planning Policy para 218) – this shall be sensitively designed, located and managed to provide a range of benefits including enhanced biodiversity and air quality and climate change mitigation and adaptation.

The Council expects that:

a) all trees, woodland or hedgerows affected by a development proposal have been (within the recent past), or will be, surveyed for protected species prior to the granting of planning permission, licensing (see Annex D of this Planning Guidance) or advance works;
b) fragmentation or isolation of habitats as a result of new development shall be avoided wherever possible; Trees and woodlands in the East Dunbartonshire Green Network will be protected and enhanced and
c) where individual trees, groups of trees, woodlands or hedgerows would be lost as a result of development, compensatory planting (where appropriate, native species will be preferred) will be provided by the applicant, either as part of the overall scheme or elsewhere in the vicinity (this may require a legal agreement). Compensatory planting (see paragraph 8.14) shall be sensitively designed, located and managed to provide a range of benefits.
d) Tree Surveys (to BS 5837:2012) will be carried out prior to the design stage to ensure that existing woodland/tree cover is taken into account in the design process. All trees over 75mm diameter (100mm in woodland) require to be surveyed (as per paragraph 8.10 of this Planning Guidance).
e) Habitat management plans should normally be produced for woodlands conserved or planted as part of a development.

Ancient, Long Established and Semi-natural Woodland

Ancient, long-established and semi-natural woodland is identified by SNH as an important resource that should be protected and enhanced. The vast majority of East Dunbartonshire's ancient, long established and semi-natural woodland are broad leaved/mixed woodland. They are identified by community area on Figures 4 to 7 and the LDP interactive mapping on the Council's website.

In Scotland Ancient Woodland is defined as land that is currently wooded and has been continually wooded, at least since 1750. The Ancient Woodland Inventory (AWI) is a provisional guide to the location of Ancient and Long-established Woodland in Scotland. Although there is no legislation specifically protecting ancient woodland (it isn't designated as such), SPP identifies it as an important and irreplaceable national

resource that should be protected and enhanced. For further information on interpreting the AWI, please see the following guide - http://www.snh.gov.uk/docs/C283974.pdf

There is a presumption against development which would have an adverse effect, either directly or indirectly (e.g. through drainage), on a site designated as an Ancient, Long Established and Semi-natural Woodland, unless it can be clearly shown that:

a) the social or economic benefits to be gained from the development are of area-wide importance and clearly and significantly outweigh the conservation interest or public access benefit of the site – in such circumstances, suitable mitigation shall be provided in the form of planting, access and/or other compensatory provision;
b) the integrity of the woodland would not be compromised.

The Council expects that a proposal in, or near, an ancient, long established or semi-natural woodland will have been subject to consultation with, and approval from, the Central Scotland Conservator, Forestry Commission Scotland. A Tree Survey will be required, and shall be undertaken to conform to *BS 5837:2012* - Trees in Relation to Construction – see paragraph 9.10 below. Proposals for enhancing the condition of Ancient, Long Established and Semi-natural Woodland, including their resilience to climate change are likely to be viewed favourably by the Council, subject to consideration against other LDP policies and associated Planning Guidance.

Tree Preservation Orders

Tree Preservation Orders (TPO) can be made in the interest of amenity and/or where a tree, group of trees or woodland is of cultural or historical significance. It is an offence for any person, in contravention of a TPO, to remove or damage a tree without the consent of the Council. TPOs in East Dunbartonshire are identified on Figures 4 to 7 and the LDP Interactive Mapping on the Council's website, see link below,
http://www.maps.eastdunbarton.gov.uk/LocalViewext/Sites/LDP2/#

Trees, woodland or hedgerows protected by a TPO must not be removed without the explicit written consent of the Council. The removal of any tree protected by a TPO, or as if covered by a TPO (Council Owned Land), or serious damage to it, should only occur in exceptional circumstances, for example, where the tree, or part of the tree, is a danger to public safety or is diseased.

Trees are often intrinsic to the character of the location. Conservation Area status confers protection on all trees. Any works to trees in Conservation Areas require six weeks written notice to be given to the Council to consider whether the proposals are acceptable or whether trees at risk will require the protection of a Tree Preservation Order

It should be noted that the felling of trees which are not protected by a Tree Preservation Order, are not within a Conservation Area or are not on Council owned land, may, in the absence of a planning permission providing for their removal, require a felling licence. Developers should

consult Forestry Commission Scotland. Where specific tree felling is identified and subsequently approved as part of a detailed planning permission, no felling licence is required.

All development proposals should take into account trees protected by TPO, or as if covered by a TPO, during the design stage. This should include a detailed tree survey (conforming to *BS 5837:2012* - trees in relation to design, demolition and construction - recommendations).

Other Trees, Woodland and Hedgerows

The Town and Country Planning (Scotland) Act 1997, as amended by the Planning etc. (Scotland) Act 2006, states that "it shall be the duty of the planning authority to ensure, wherever it is appropriate, that in granting Planning Permission for any development adequate provision is made, by the imposition of conditions, for the preservation or planting of trees" (section 159). Where development is acceptable in principle, proposals should retain trees, woodland and hedgerows, where they are of landscape, local amenity or biodiversity value – this should be based on a Tree, Woodland and Hedgerow Survey to conform to *BS 5837:2012* - trees in relation to design, demolition and construction - recommendations. Surveys should be carried out by a competent arboriculturalist (or forester, in relation to woodlands).
Issues for the survey to consider should include:
a) the amenity value of trees, woodland and hedgerow for the site and surrounding area, including the Green Network;
b) the ecosystem value of the trees;
c) potential impact on trees on adjacent land;
d) heritage and conservation value of the trees to the area. Veteran trees are a local priority habitat to protect, check the Local Biodiversity Action Plan for further information.

Proposed tree removals or retentions should be submitted on clearly labelled plans for consideration as part of the planning application. There will be a presumption in favour of retaining all healthy and structurally sound trees, woodland and hedgerows on development sites, including those that form a part of a wider green network (see SG6: Green Belt and Green Network). It is preferable to retain hedgerows regardless of condition and enhance them as necessary as they are a priority LBAP habitat. Any removal of trees, woodland and/or hedgerows should be undertaken with recognition of the habit at role they provide for animals and, as such, an appropriate survey should be undertaken to ensure no protected species are disturbed prior to any works commencing. Table 2 provides information on appropriate timings of ecological surveys and Table 4 helps inform when mitigation works might be best undertaken.

In designing new development, account should be taken of how the completed development will function, with a view to reducing impact on the tree, woodland or hedgerow resource in the longer term. For example:
a) the tree species, likely height, and spread of both canopy and root protection area (please refer to BS 5837:2012 for definition), at maturity, of trees to be retained on site (or that may exist on adjacent sites) should be considered when locating buildings, open spaces, riparian corridors and structures; and

b) residential back gardens should not back immediately onto woodland to avoid situations where casual dumping may impact on the woodland resource.

Development proposals shall make provision for the proper management of trees on site during all stages of development, following the guidance set out in
“BS 5837:2012 Trees in Relation to Design, Demolition and Construction - Recommendations”. Sufficient spacing should be left between proposed structures and trees to allow for future growth and adequate protection of trees during the construction phase. There should be no works, including changes to existing ground levels, within the Root Protection Area of any such tree. Damage to roots, compaction of ground and direct damage to the above-ground tree structure all require to be considered. The Guidance Note: Trees & Development provides further detailed guidance.

Mitigation for Tree and Hedgerow Loss

Where it is not possible to retain all trees, woodland and hedgerows on development sites, mitigation will be required. Mitigation should reflect the varied roles of trees, woodland and hedgerow in the area’s environment, including place-setting, biodiversity and green network considerations, carbon storage and water, air quality and noise management. These are important considerations in bringing forward mitigation proposals, and should be addressed as part of a placemaking approach. Mitigation planting within the development site should be prioritised but, where this is not possible, off-site mitigation should be undertaken. The type, nature and location of mitigation proposals should be guided by the existing resource and by LDP policy, such as policy 5 and 8, related supplementary and planning guidance, Green Network Strategy and LBAP.

Figure 4 -Bearsden and Milngavie Native Woodland and Tree Preservation Orders

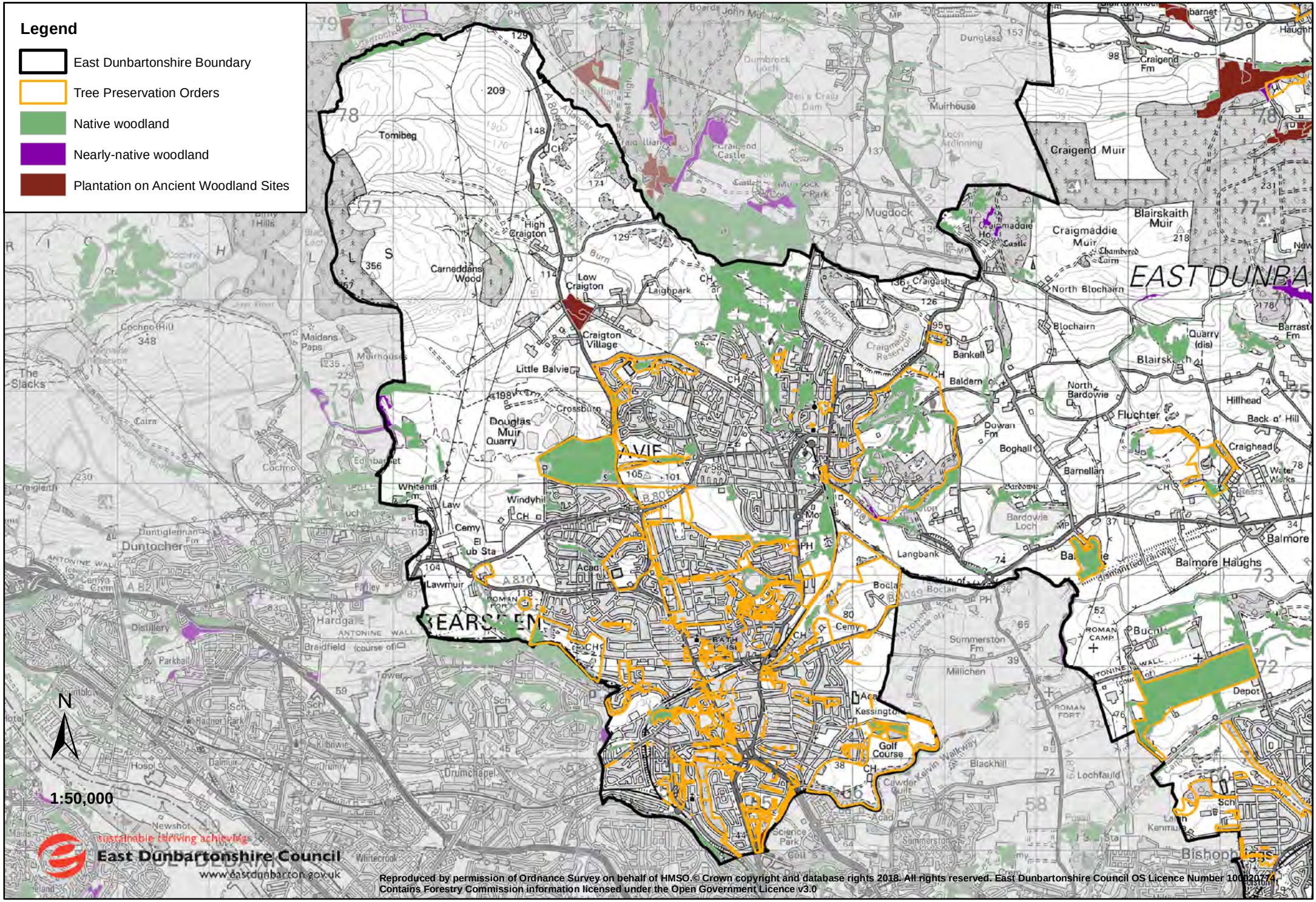


Figure 5 - Bishopbriggs, Torrance, Balmore and Bardowie Native Woodland and Tree Preservation Orders

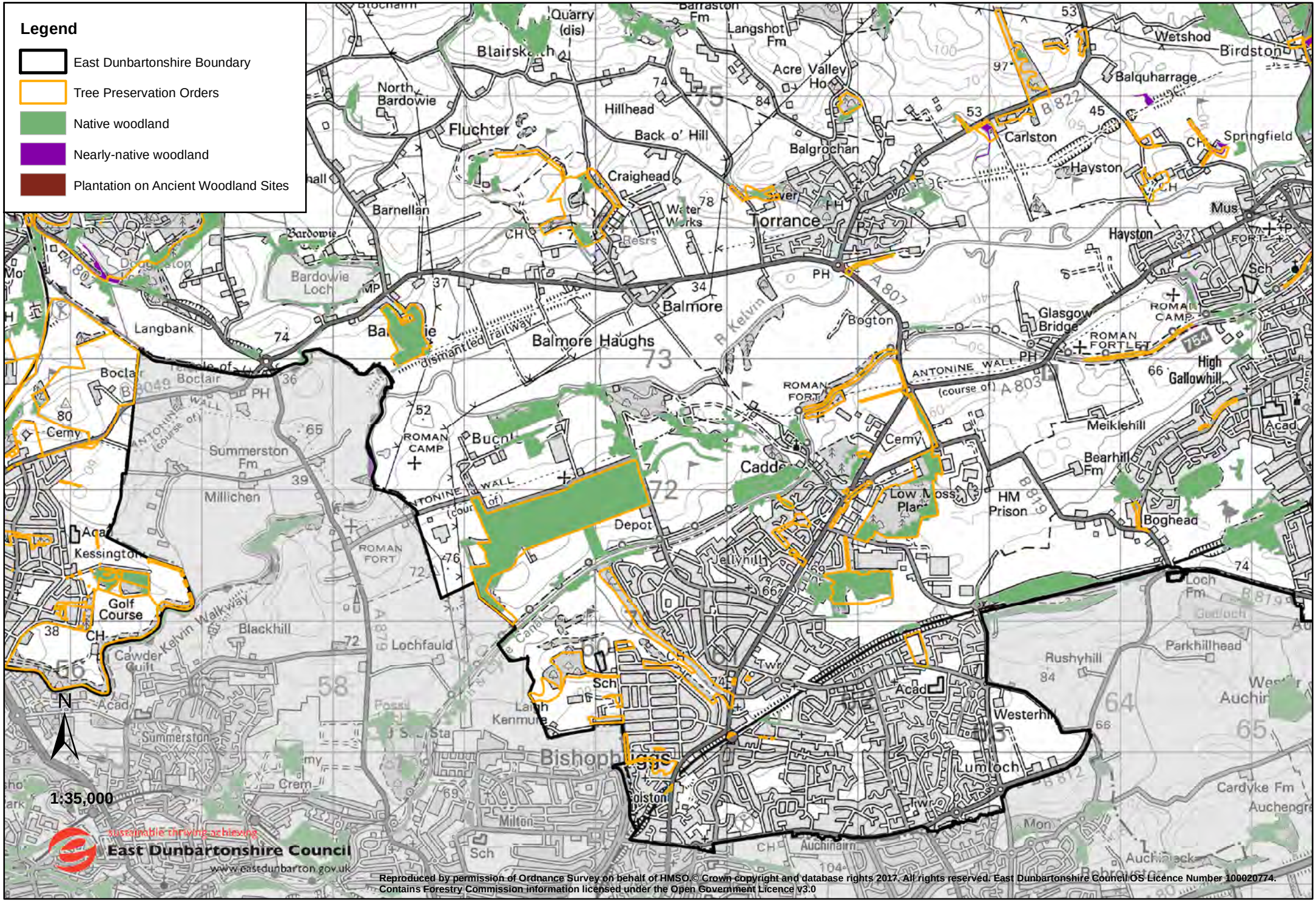


Figure 6 - Kirkintilloch, Lenzie, Waterside and Twechar Native Woodland and Tree Preservation Orders

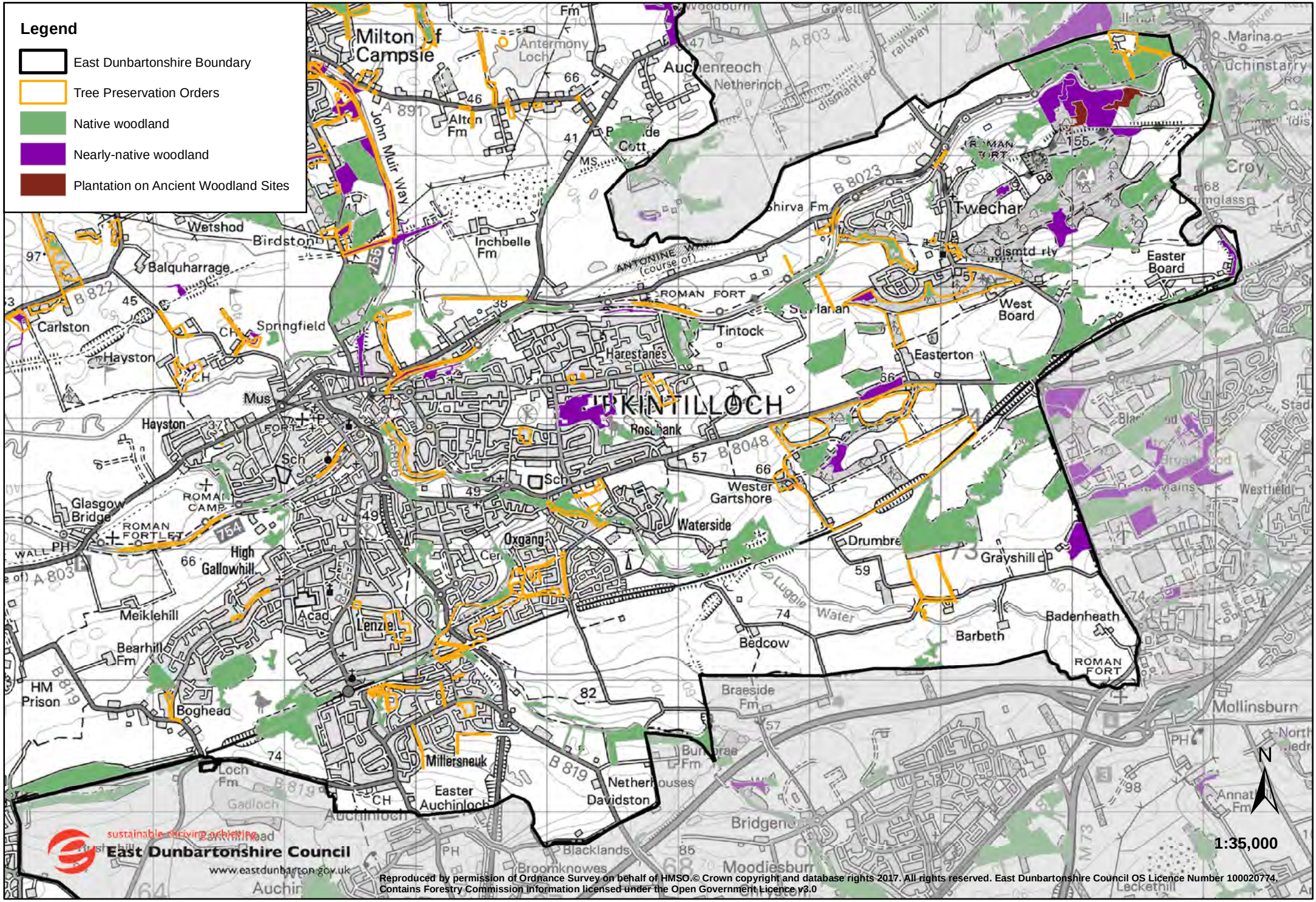
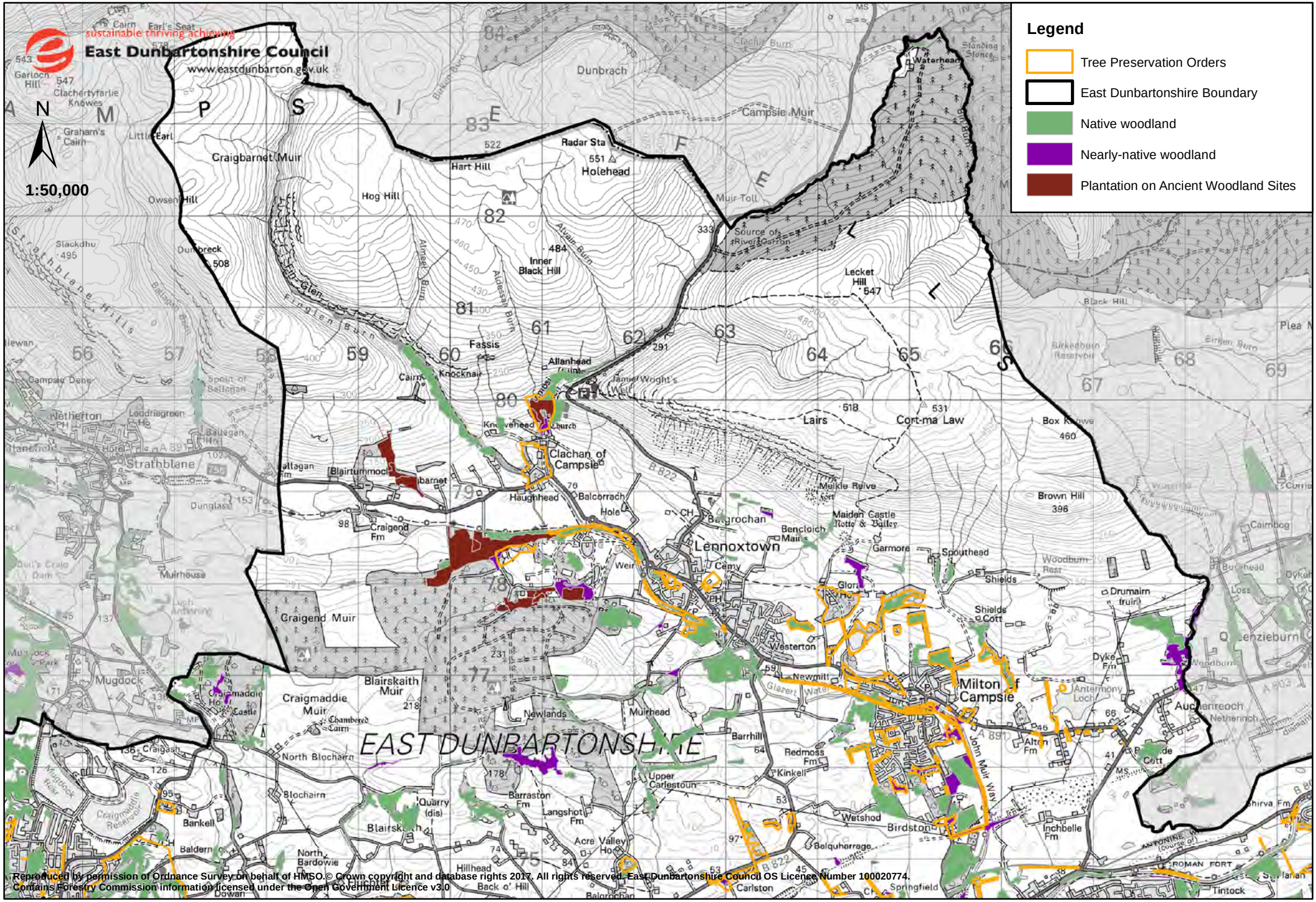


Figure 7 - Lennoxtown, Milton of Campsie , Haughead and Clachan of Campsie Native Woodland and Tree Preservation Orders



Soils

East Dunbartonshire has areas of carbon rich soils, including areas of deep peat on the Campsie Fells and lowland raised bogs, including Lenzie Moss, High Moss and Low Moss. The SNH Carbon and Peatland Map 2016 identifies indicative areas for deep peat. Hutton Institute land use capability for agriculture maps shows that there are areas of good quality soil in East Dunbartonshire, suitable for arable (class 2), and mixed farmland (class 3).

The carbon rich soils and good quality soils in East Dunbartonshire are shown on Figure 8. It is also shown on the LDP Interactive Mapping on the Council's website: http://www.maps.eastdunbarton.gov.uk/LocalViewext/Sites/LDP2/#

Peatland management plans

Scotland's National Peatland Plan 2015 highlights the major contribution peatlands make to Scotland. East Dunbartonshire's peatlands occur on the Campsie Fells and there are many bogs and fens, in particular at Lenzie Moss, Low and High Moss, Bishopbriggs a short distance from our towns. These areas contribute much more than dramatic scenery or green oases in our urban area. As stores of carbon they are supremely important in helping to tackle climate change; as homes for nature they are special and unique; and they are important as the raw ingredient of rural farming, and tourism. Healthy peatlands provide many benefits. The Carbon and Peatland Map 2016 providing the most up to date information on the location of carbon-rich soils, deep peat and priority peatland in East Dunbartonshire may be accessed from the SNH website at http://www.snh.gov.uk/planning-and-development/advice-for-planners-and-developers/soils-and-development/cpp/

The map indicates areas where a more detailed site specific peatland survey is likely to be required to support any planning application.

Where preparation of a peatland management plan is necessary, consideration should be given to the likely impacts on peat and carbon-rich soils at all stages of the proposed development. To assist in preparing the management plan, developers are advised to refer to the publication '*Developments on Peatland: Guidance on the Assessment of Peat Volumes, Reuse of Excavated Peat and the Minimisation of Waste'* which may be accessed from the Scottish Government website athttp://www.gov.scot/Resource/0045/00455955.pdf

Measures to restore and protect damaged peatland should be detailed in the management plan. As appropriate, these may include:

- the blocking of drainage channels in order to retain water and create the physical conditions that will encourage the formation of new peat, and
- the storage and re-laying of any peatland vegetation that would be removed to make way for the development.

Further information and guidance on this topic can be found in the Scottish Government's draft Peatland and Energy Policy Statement - http://www.gov.scot/Resource/0050/00502389.pdf

Soil management plans

Most forms of built development require a degree of ground excavation to make way for foundations and, dependent on the size of the development, this can generate large quantities of soil requiring storage prior to its use in the landscaping scheme or, alternatively, being moved offsite to another location. Issues relating to the handling, storage and movement of soil, should be addressed through the preparation of a method statement and, where necessary, a soil management plan. The following are examples of issues which should be addressed:

During wet weather, stockpiles of bare soil are vulnerable to erosion and may pose a risk to nearby watercourses. Conversely in dry, windy conditions blown soil can lead to airborne dust problems.

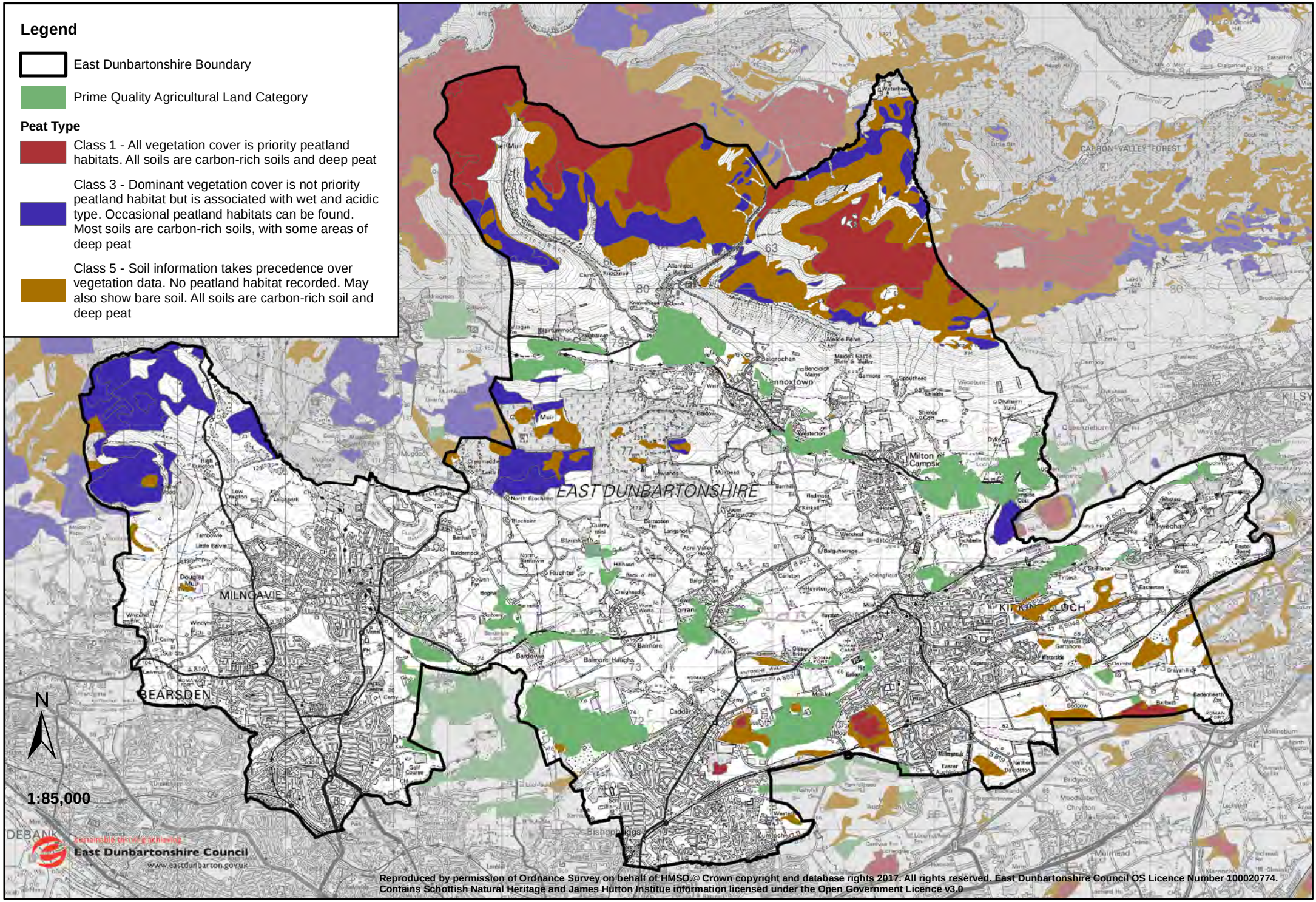
During the construction phase, vehicle traffic can cause compaction, leading to soil sealing which reduces its ability to regulate water storage, a factor which has ongoing potential to cause localised flooding, in particular during high intensity rainfall events.

Where the excavated soil cannot be fully accommodated within the landscaping scheme, options may include the disposal of surplus soil to a landfill site or alternatively its transfer to another location, e.g. for agricultural improvement purposes. However, the movement of soil to inappropriate locations can cause adverse impacts on biodiversity, public amenity and the water environment.

The method statement and/or soil management plan should be prepared and submitted to the Council at an early stage in the planning process.

It is also important to note that the movement of large quantities of soil offsite to a different location is an activity which requires planning approval.

Figure 8 - Protection of Soils in East Dunbartonshire



Site Appraisal and Ecological Surveys

Initial Site Appraisal

LDP Policy 8 states that development will contribute positively to biodiversity conservation. Therefore all development proposals shall be based on an understanding of the characteristics of the site, including any possible wildlife and habitat significance. This should be designed as part of a wider placemaking approach, in line with the LDP's Policy 2 and any key requirements in the Communities Strategies, particularly relating to Policy 6, and prior to site clearance/preparation works beginning. The extent to which appraisal (and any follow up survey work) is required, will depend on the scale, nature and location of the proposal. It may be that an initial site appraisal is sufficient but, depending on the findings, you may need to carry out further surveys for particular species or in relation to a particular habitat. For instance, if there is a watercourse, long grass or mature trees on the site, this could provide habitat for protected species and will need more detailed surveys.

A typical site appraisal should:

a) highlight any designations on or near to the site;
b) identify potential important habitats (e.g. mature trees, woodland, hedgerows, ponds or watercourses);
c) identify if protected species are likely to be in or near the site;
d) give an indication of the ecological data required for progressing a planning application; and
e) recommend if more detailed surveys will be necessary.

It can be important to understand what species occur, or are known to have formerly occurred, within East Dunbartonshire. In addition to species known to exist in the area there are species of note recorded on the periphery which may over time move permanently into East Dunbartonshire. Helpful information including species records and habitat maps may be obtained from a number of sources including Glasgow Museums Biological Records Centre (biological.records@glasgowlife.org.uk), NBN Gateway (https://data.nbn.org.uk) and Atlas of Living Scotland (http://www.als.scot/). It should be noted that the absence of records for a particular location does not necessarily mean that protected species are not present, so species surveys should not be ruled out solely for this reason. (It could just be because that location has not been formally surveyed before). In addition some species have been found in unexpected places, for example remnant freshwater pearl mussel populations above impassable fish obstacles.

A checklist guide of questions to consider and the next steps to take within a site appraisal is provided in Annex B.

Protected Species are protected from adverse impacts under legislation and Policy 8 states that development proposals will only be permitted where it can be justified in accordance with the relevant legislation. Policy 8 also states that local priority species or habitats will be protected

from adverse impacts from development. These local priority species or habitats are identified in the draft Local Biodiversity Action Plan 2016 – 2020. https://www.eastdunbarton.gov.uk/council/consultations/draft-local-biodiversity-action-plan-consultation

If at planning application stage a protected or local priority species or habitat has been identified on, or adjacent to, the development site further information will be required.

At the time of submitting a planning application, applicants need to provide, as appropriate:

a) Information on specific habitats, plants, animals (including how the site is used by them) and geology and the surrounding area, including its sensitivity, significance and value.
b) An assessment of any potential effect of the development on these features.
c) If adverse effects are expected, then details of proposed mitigation measures by the developer to avoid or minimise these effects.
d) Where there is likely unavoidable damage or disturbance, then proposals which would compensate for the loss.
e) A statement of whether there may be licensing requirements and, with reference to the relevant licence tests, a demonstration that a future species licence is likely to be granted (see Annex D of this Planning Guidance).

Site appraisals and surveys shall be undertaken by a suitably qualified and experienced ecologist; more information is provided in the useful contacts section. For the most significant developments, such as a major development, an Ecological Impact Assessment would be required[1]. This can be carried out as part of Environmental Impact Assessment where this is required. The Ecological Impact Assessment shall adopt the methodology of Chartered Institute of Ecological and Environmental Management (CIEEM). Surveys for other natural heritage interests such as geology, geomorphology and soils shall also be undertaken by a suitably qualified and experienced person.

Appropriate Timing of Surveys

The timing of any ecological surveys is important to consider at an early stage as they often need to be carried out at certain times of year. A survey calendar indicating what , in general terms, are likely to be the most appropriate times of year to undertake surveys for various species and habitats in East Dunbartonshire is provided in Table 2. The calendar is intended for use as a general reference guide only. Species surveys are weather dependent so it may be necessary to delay a survey or to carry out more than one survey if the weather is not suitable. All constraints must be clearly reflected in the survey report.

In some circumstances surveys for certain species and habitats may be required over more than one season. If surveys have been carried out a significant amount of time before an application is made, the Council may require updated surveys before the application can be determined

[1] Guidelines for Ecological Impact Assessment have been produced by Chartered Institute Of Ecological And Environmental Management: http://www.cieem.net/data/files/Resource_Library/Technical_Guidance_Series/EcIA_Guidelines/TGSEcIA-EcIA_Guidelines-Terestrial_Freshwater_Coastal.pdf

or the development is started. Some mobile species can expand their range and distribution over time, and pre-construction surveys may need to be undertaken once permission is granted, but prior to development commencing on site.

Timing of Surveys – Points to Remember:

a) Consider what surveys may need to be done as early as possible
b) Discuss surveys with planning authority
c) If you are dealing with a proposal that could affect a Site of Special Scientific Interest (SSSI) then consult with SNH prior to submitting the application to the Council
d) Make sure species surveys are carried out at the optimum time of the year
e) Ensure surveys are carried out in optimal weather conditions where possible
f) Highlight survey limitations if necessary

Key for Ecological Survey Calendar, see Table 2 below

KEY	Recommended period for survey
	Sub-optimal period for survey
	Surveys not possible

Table 2 – Ecological Survey Calendar. ***Note: This calendar should be used as a general reference guide only with advice being sought from a suitable experienced licensed ecologist as site and project specific circumstances may alter seasonal windows***

Target	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Habitat and Vegetation	Phase 1			NVC and Phase 1 Detailed habitat assessment						Phase 1		
Badgers	Limited sett/bait surveys	Bait marking and sett surveys			Limited bait marking and sett surveys			Sett surveys				Limited sett/bait surveys
Bats	Inspection of hibernation roosts (difficult), tree and building roosts			Limited Activity	Summer roost emergence surveys and activity surveys (internal inspection of roof spaces possible through Apr-Oct)				Limited Activity	Inspection of hibernation roosts (difficult), tree and building roosts		
Birds	Winter species		Breeding birds/Migrant species		Breeding birds	Limited Activity		Migrant species		Winter species		
Fish	For river and stream dwelling species, the timing of surveys will depend on the migration pattern of the species concerned. Where surveys require information on breeding, the survey timings will need to coincide with the breeding period. This may be summer or winter months, depending on the species.											
Great Crested Newts	Hibernation			Pond surveys for adults/terrestrial habitat surveys. Egg surveys Apr-mid Jun. Larvae surveys from mid May. eDNA presence/absence surveys can be undertaken between mid-April and late June.				Terrestrial habitat survey		Hibernation		
Otters	Surveys limited by vegetation cover and weather rather than seasons											
Pine Marten	Surveys can be conducted all year round weather permitting. Optimum time is spring and summer. Survey for breeding dens from Mar-May.											
Red Squirrel	Surveys may be conducted all year round weather permitting. Optimum time for broadleaved and larch woodlands best surveyed in winter. Optimum time for other woodland types is spring and summer. Surveys for breeding females from Dec-Sep.											
Reptiles	Hibernation			Optimum survey time in Apr and May		Reduced basking time lowers effectiveness of refugia surveys		Optimum survey time	Limited activity	Hibernation		
Water Vole	Low activity	Initial habitat survey	Habitat and field signs/Activity survey. May be limited by vegetation and weather conditions. Survey May to Sept for upland locations.								Initial habitat survey	Low activity

Sites Designated for their Nature Conservation Importance

The nature conservation sites in East Dunbartonshire include Sites of Special Scientific Interest and Local Nature Reserves which carry statutory protection. It also includes a wide range of Local Nature Conservation Sites (LNCS) in each of the LDP community strategies areas. These are identified in the LDP Communities Strategies sections and proposals maps. Further information on each of these of designated sites is provided in Annex f below and Figures 9 - 12 show their locations for different community areas. These include: Figure 9 - Bearsden and Milngavie; Figure 10 - Bishopbriggs, Torrance, Balmore and Bardowie; Figure 11 - Kirkintilloch, Lenzie, Waterside and Twechar; and Figure 12 - Lennoxtown, Milton of Campsie, Haughhead and Clachan of Campsie.

More detailed information for each of the designated nature conservation sites will be provided in Annex f. The locations, detailed boundaries and reference codes for each of the designated nature conservation sites are also set out on the LDP Interactive Mapping on the Council's website: *http://www.maps.eastdunbarton.gov.uk/LocalViewext/Sites/LDP2/#*

Nationally Important Sites of Special Scientific Interest

The Sites of Special Scientific Interest (SSSIs) in East Dunbartonshire are notified for the special nationally important interest of their habitats, fauna and geology. There are four designated due to their biological interest and two designated due to their geological interest, see Annex f for further details (source: Scottish Natural Heritage). There are also SSSI in other local authority areas, within a two kilometre buffer zone of the Council boundary, which may be affected by development in East Dunbartonshire. There are no internationally designated sites in East Dunbartonshire.

Policy 8 states that development will not have a significant adverse effect on the objectives of designation and overall integrity of SSSI. Development that affects a SSSI will only be permitted where it will not adversely affect the integrity of the area or the qualities for which it has been designated. The applicant shall demonstrate that the objectives of the designation and the overall integrity of the SSSI will not be compromised by the proposed development, directly, indirectly or cumulatively; or any such adverse effects are clearly outweighed by social, environmental or economic benefits of national importance. Where the integrity of the area would be compromised, the applicant must specify how any adverse effects on the SSSI are outweighed by such benefits.

The Council will apply the precautionary principle where the impacts of a proposed development on an SSSI are uncertain but there is evidence to suggest that significant irreversible damage could occur. In such circumstances, development proposals are likely to be refused unless modifications to the proposal eliminate the risk of such damage.

For development applications near SSSIs, and that have the potential to affect the water environment the applicant shall demonstrate how the proposed development will enhance, rather than have a negative impact upon, the:

a) biodiversity of the associated habitats and species;

b) appropriate River Basin Management Plan objectives for water quality and the environment
c) amenity of the people living, working or otherwise spending time in the vicinity of the site; and
d) geological interest of the site.

SNH provide further information on the SSSIs in East Dunbartonshire on its website: http://gateway.snh.gov.uk/sitelink/index.jsp this includes a site map, citation (setting out the reasons for designation), operations requiring consent and Site Management Statement.

Local Nature Reserves (LNR) and Local Nature Conservation Sites (LNCS)

Local sites can be split into two types: statutory and non-statutory designations. In East Dunbartonshire, Local Nature Reserves are statutory designations and enjoy specific legal protection. They are designated by local authorities under Section 21 of the National Parks and Access to the Countryside Act 1949. Local Nature Reserves are areas of important natural heritage, and are managed to give people better opportunities to learn about and enjoy nature close to where they live. The non-statutory designations of LNCSs are identified through the development plan process. LNCSs can be designated for reasons of biodiversity or geodiversity. Both statutory and non-statutory local designations are given protection through the implementation of Policy 8 which states that development will conserve and enhance these local designations. This Planning Guidance will also apply to any new LNCS that is designated during the lifetime of the LDP.

Proposals affecting a LNR or an LNCS will be assessed against Policy 8 and the further guidance set out in this Planning Guidance. Policy 8 states that Supplementary Guidance on Green Infrastructure and Green Network will recognise which elements of the natural environment form part of the green network. It states that Important Wildlife Corridors from East Dunbartonshire Local Plan 2 will be reviewed and replaced as part of the production of the Green Network Strategy and those corridors considered of high ecological value will be surveyed and designated as a LNCS where appropriate. This review has been carried out and additional LNCS have been included in Annex f and Figures 9 to 12. These have been formally designated in the Supplementary Guidance on Green Infrastructure and Green Network 2018, which is statutory guidance that forms part of the Development Plan. Potential impacts of development in East Dunbartonshire on LNR and Sites of Importance for Nature Conservation in the adjacent local authority areas; Glasgow, Stirling, West Dunbartonshire or Stirling; should also be considered under this policy.

There is a presumption against development which would have an adverse effect, directly, indirectly or cumulatively, on a LNR or a LNCS, unless it can be clearly shown that:

a) the objectives and integrity of the area will not be compromised, including, where appropriate, objectives for water quality. For Local Nature Reserves, it will be necessary to demonstrate that the development proposal would accord with the Council's Management Plan; or

b) there are social or economic benefits to be gained from the development that are of area-wide importance and clearly and significantly outweigh the conservation interest of the site – in such circumstances, suitable mitigation shall be provided in the form of compensatory nature conservation and water environment/quality measures.

Subject to assessment against the other policies of the LDP, the Council will support proposals which enhance the nature conservation interest of the locally designated sites. Annex f provides further information on LNCS – Biodiversity, based on survey information on habitats and species from 2009 or 2015 by Land Use Consultants.

LNCS - Geodiversity

Geodiversity is defined as "the variety of rocks, minerals, fossils, landforms, sediments and soils, together with the natural processes which form and alter them". It is important because it is the foundation upon which plants, animals and people live, a source of basic raw materials, and a vital component of our cultural and built heritage. It can also be a unique teaching and scientific resource.

Scottish Planning policy states that
"LNCSs designated for their geodiversity should be selected for their value for scientific study and education, their historical significance and cultural and aesthetic value, and for their potential to promote public awareness and enjoyment". The Council and SNH commissioned British Geological Survey 2010, East Dunbartonshire Geodiversity Audit can be found at: http://nora.nerc.ac.uk/15098/

All sites have been assessed using the British Geological Surveys' 'GDY' data base which scores sites on Geo-scientific Merit plus educational, community and cultural/heritage/economic value. The Audit concludes that thirty four geodiversity sites were considered worthy of protection as LNCS - Geodiversity Sites. These were therefore designated in the LDP under Policy 8. These geodiversity sites are the areas of bedrock exposure or extent of the landform feature and its immediate access. Annex f provides further information on LNCS –Geodiversity, based on the Geodiversity Audit.

Good quality design of development, wherever possible, makes a positive contribution to the protection and enhancement of geodiversity. There is a presumption against development that would have a net adverse impact (taking account of any enhancement proposed) on the geoscientific interest (as defined in the audit) of a LNCS - Geodiversity; unless it can be shown that the social or economic benefits to be gained from the development clearly outweigh the geoscientific interest of the site. Applicants may be required to submit an assessment of the effects of their development on the geodiversity interest.

Access to, and within, the LNCS - Geodiversity should be protected in any new development to provide for viewpoints of the site. Where appropriate, development proposals will be expected to deliver enhanced access to local geodiversity sites and/or interpretation.

Figure 9 - Bearsden and Milngavie Designated Nature Conservation Sites

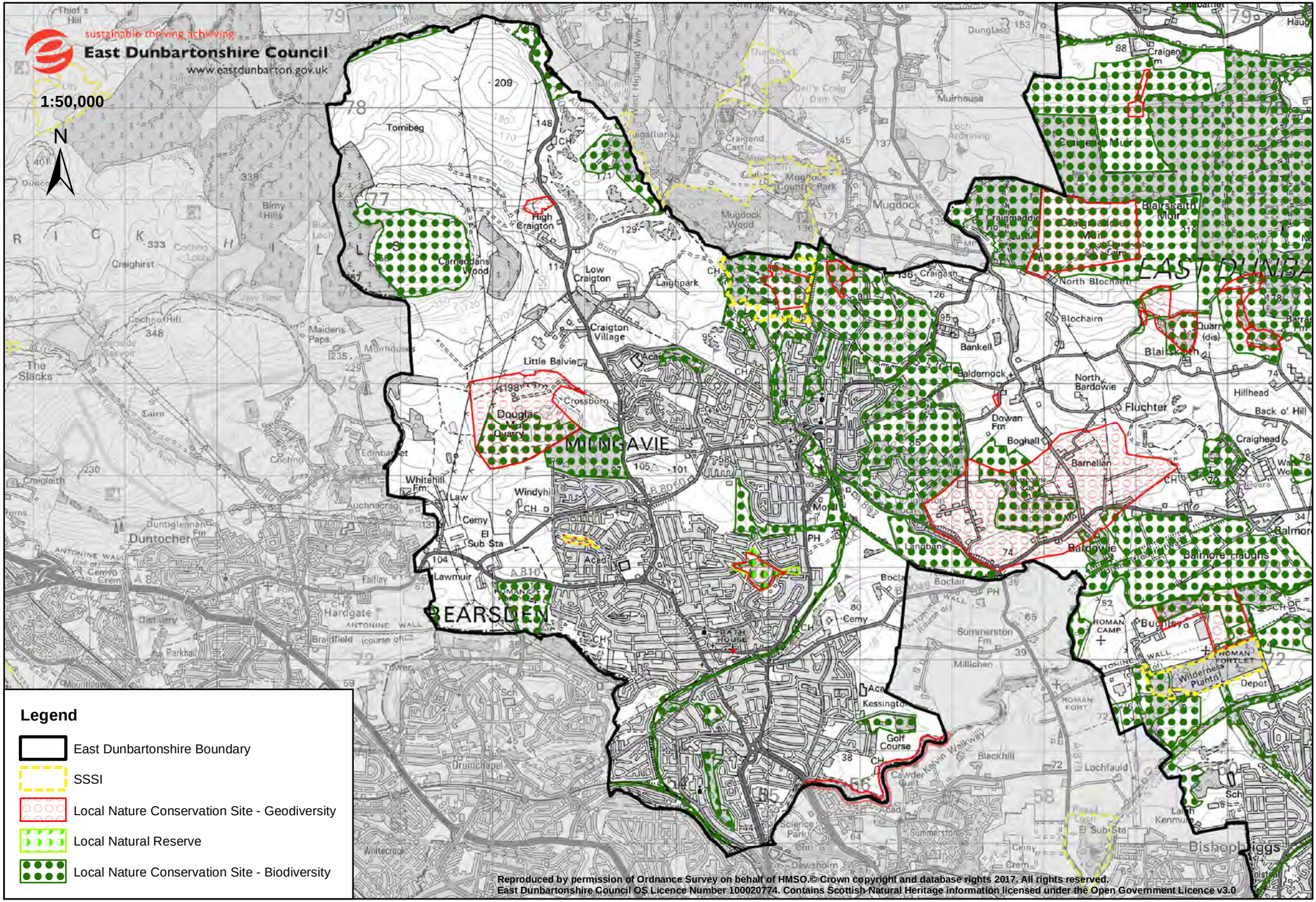


Figure 10 - Bishopbriggs, Torrance, Balmore and Bardowie Designated Nature Conservation Sites

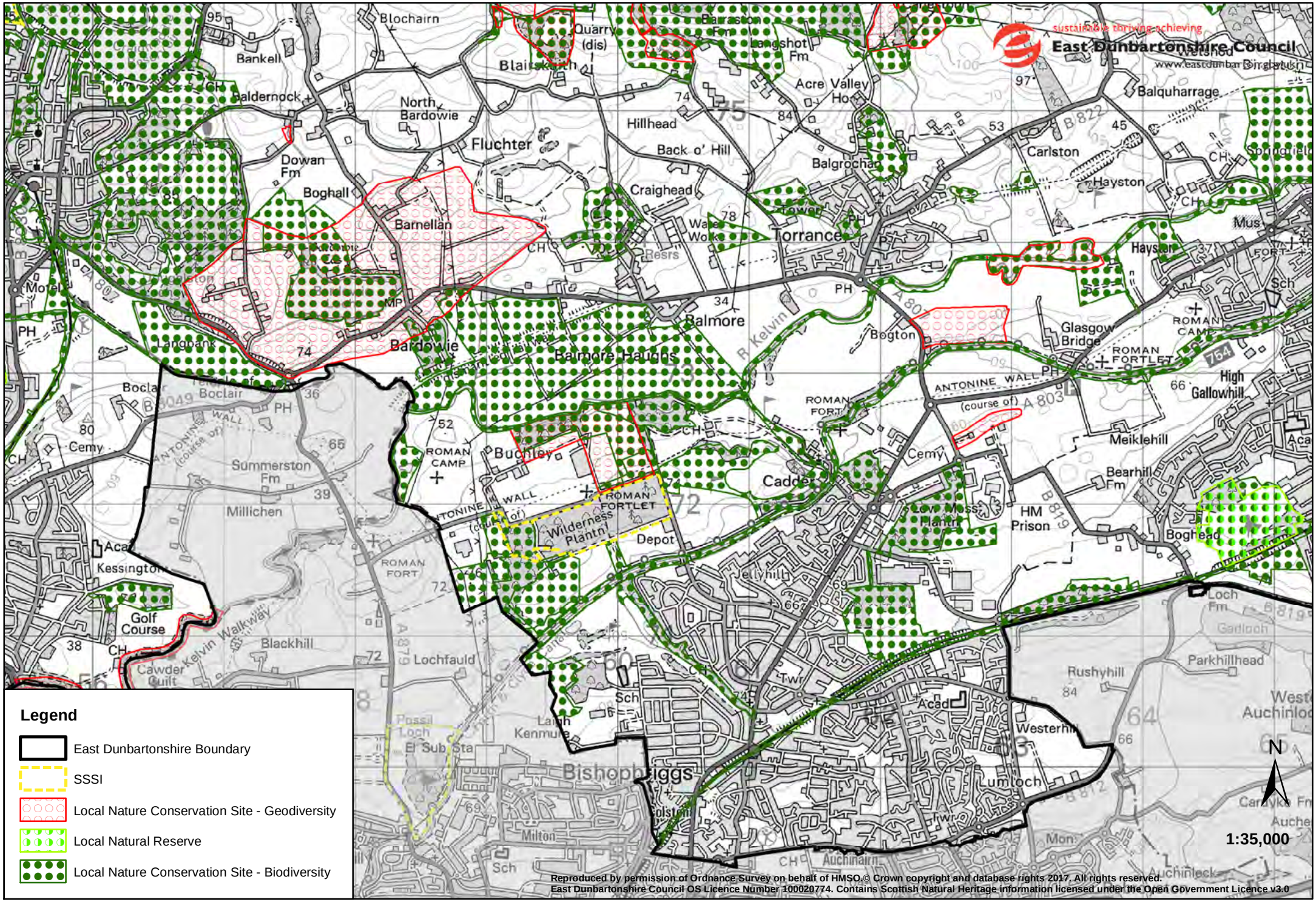


Figure 11 - Kirkintilloch, Lenzie, Waterside and Twechar Designated Nature Conservation Sites

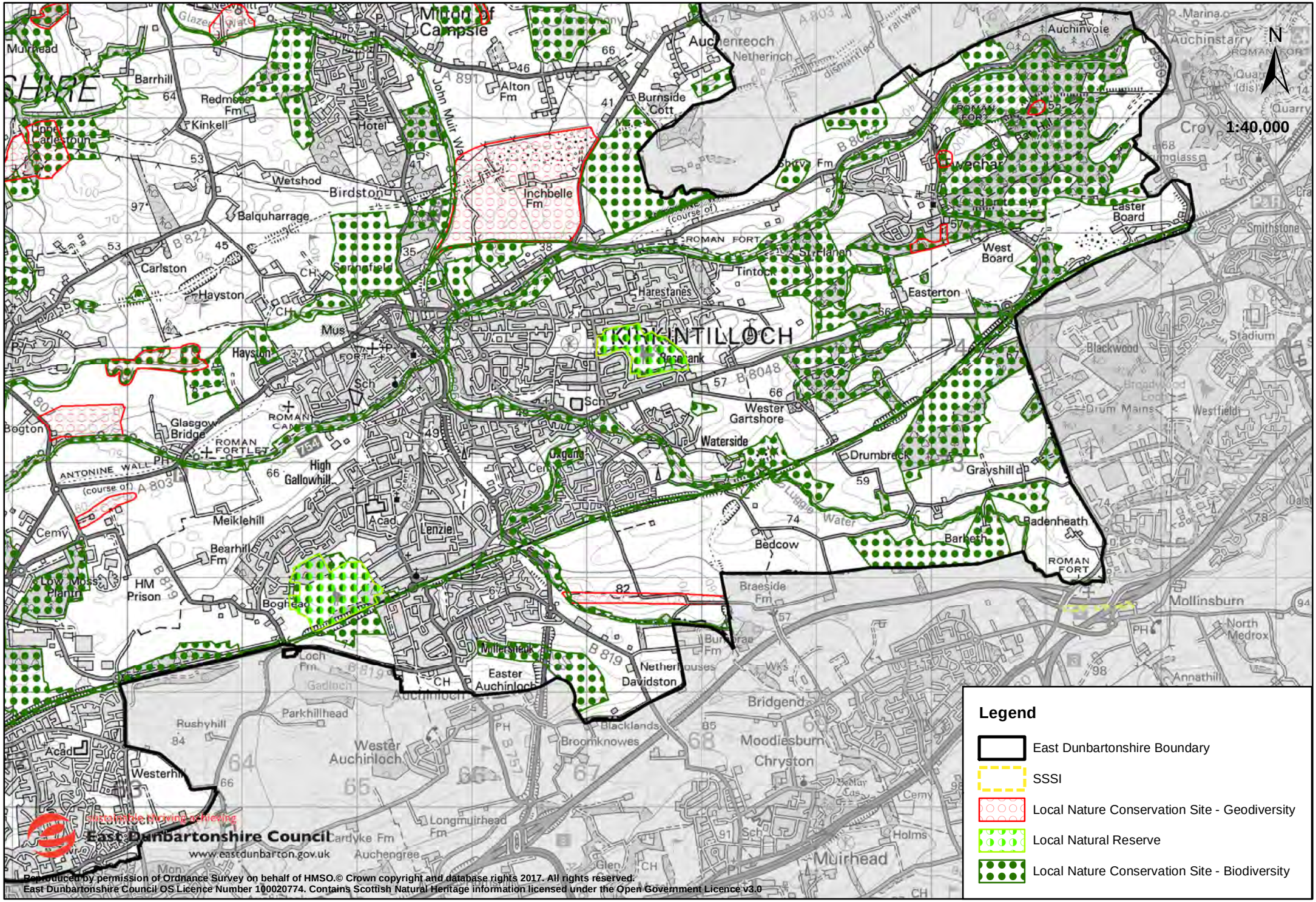
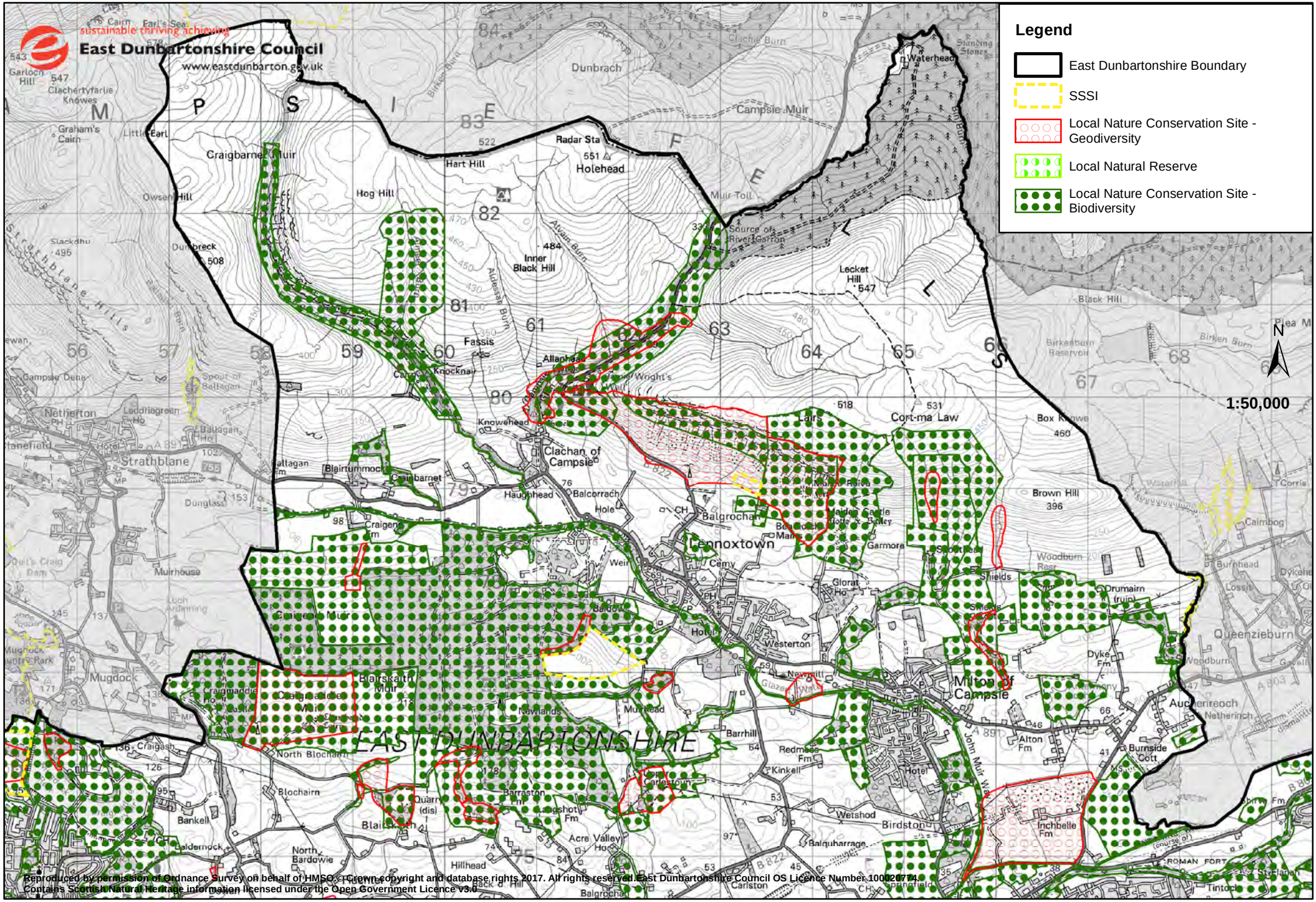


Figure 12 - Lennoxtown, Milton of Campsie, Haughead and Clachan of Campsie Designated Nature Conservation Sites



Protected Species

Most bird species and a wide range of other wild animals and plants have general protection from deliberate damage or harm under the law. In addition to this, some species, such as otter, bats and great crested newt have special protection from disturbance and harm under European legislation, and are known as European Protected Species. A number of species, such as pine marten, water vole, red squirrel, reptiles and badger are protected under domestic legislation. Whilst not currently present in East Dunbartonshire, there are populations of red squirrel within range of the area. It is an offence to damage or destroy a breeding site or resting place of protected animals.

The species referred to in this guidance as species with special protection are as follows:

a) European Protected Species (protected under Schedule 2 (animals) and 4 (plants) of the Habitats Regulations 1994 (as amended);
b) Animals and plants listed on Schedules 1, 5 and 8 (respectively) of the Wildlife and Countryside Act 1981 (as amended);
c) Badgers (protected under the Protection of Badgers Act 1992 (as amended).

There is a presumption against development which would have an adverse effect on a protected species, either directly, indirectly or cumulatively. This may include impact on the habitat of a protected species (e.g. a badger's foraging habitat), including fragmentation or isolation, or other activities that result in disturbance. Examples of development activities that could have an impact on protected species commonly found in East Dunbartonshire are shown in Table 5.

To ensure that offences are not committed under protected species legislation, pre-construction surveys should be undertaken for protected species that have the ability to alter or expand their range and so whose distribution may alter between years (e.g. otter, water vole, badger, pine marten) where the baseline survey work is over 18 months old and the initial survey identified potential supporting habitat.

Where appropriate, mitigation could be used to ensure no adverse effect on protected species. To meet legal requirements, it is important that the mitigation is well designed, properly implemented and monitored to ensure it is effective.

The presence on, or near, a site with protected species is a critical consideration in preparing development proposals and in subsequent decisions on planning applications. Their presence rarely imposes an absolute block on development, however, it is important that the presence of a protected species, and its potential implications, is considered at as early a stage as possible, ideally before land is bought and a planning application made. All required surveys must be carried out prior to any form of site disturbance including ground investigation works and clearance. Mitigation measures will often be necessary and this can affect the design, layout and timing of the works. A licence from SNH will be needed for works which would constitute an offence involving species with special protection (see Figure 13 and Annex D of this Planning Guidance for more details on licensing). Note that a licence may still be needed for works which do not need a planning application.

Further advice on protected species for planners and developers, including species advice notes, can be found on the SNH website - http://www.snh.gov.uk/planning-and-development/advice-for-planners-and-developers/protected-animals/


Table 5. Protected Species and Development Activities

Examples of Development Activities	European Protected Species	UK Protected Species
Developments adjacent to or affecting water bodies and other watercourses	• Otter • Great Crested Newt	• Water Voles • Breeding Birds (such as Kingfisher)
Barn and rural building conversions (especially unoccupied, stone-built buildings)	• Bats*	• Breeding Birds (such as Swallow, House Martin, Starling, House Sparrow and Barn Owl)
- Alterations (or demolitions) to the roof spaces of buildings in particular churches/chapels, institutions, schools - Development affecting caves, mines, tunnels, cellars and exposed rock faces,	• Bats	• Breeding Birds (such as Swift, Swallow, House Martin, Starling, House Sparrow and Barn Owl)

bridges, culverts, chimneys, kilns and ice houses and/or any other structures within 200m of water or woodland		
Developments affecting woodland, hedgerows, lines of trees and scrub	• Otter • Bats Pine Marten	• Badger • Breeding Birds Reptiles
Developments affecting old and veteran trees and trees with a girth over 1.5m or containing obvious holes including any felling or lopping	• Bats	• Breeding Birds (such as Barn Owl)
Developments affecting derelict land, brown-field sites, railways and land adjacent, grassland and allotments	• Bats Great Crested Newt	• Breeding Birds (such as Barn Owl)
Developments affecting quarries, cliff faces and gravel pits	• Bats Great Crested Newt	• Breeding Birds (such as Peregrine Falcons, Sand Martins) Reptiles
Developments (such as Wind Farms) affecting open farmland, moorland and forestry sites in hilly, upland, exposed areas	• Bats • Otters	• Badger • Breeding Birds • Migrating Birds (such as Redwing) Reptiles
Quay Wall renovation	• Otter • Great Crested Newt	• Water Voles • Breeding Birds (such as Sand Martins) Reptiles

** The Bat Conservation Trust provides further information on bats and buildings - http://www.bats.org.uk/pages/bats_and_buildings.html*

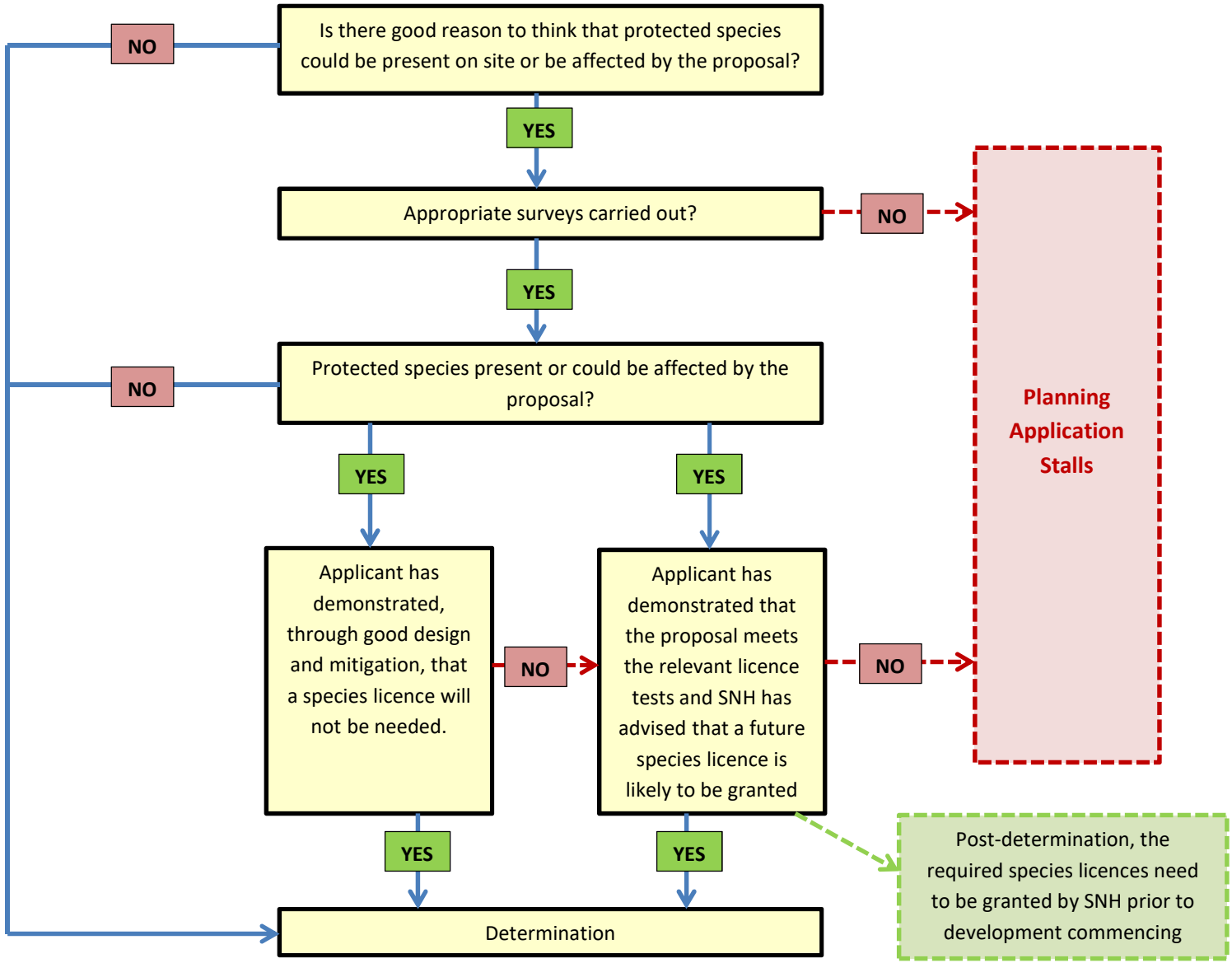
Note: Table 5 is not intended to provide an exhaustive list of development types that may affect protected species. The potential for protected species to be present on site should be considered as part of initial survey work.

It is vital that adequate survey work is carried out at the relevant time in relation to determining the presence or absence of these species (see Section 2 and Annex B for more details on survey work requirements). Applicants will usually need to seek expert ecological advice at an early stage to determine the likely presence of protected species and the likely impact on them of any proposed development. Examples of development activities, together with illustrative protected species that may be affected, is provided in Table 5. If the presence of a protected species is suspected, the applicant shall inform the Council. Where protected species, or their places of foraging/rest/shelter, will be affected by a development proposal, mitigation and management proposals for the species concerned shall be included with any planning application.

Where places regularly used by European Protected Species are on or near to a proposed development site, it must be demonstrated, to satisfaction of the planning authority, that either these will not be affected by the development proposal or, where this is not possible, that the necessary SNH licenses are likely to be granted when applied for. The planning authority must be satisfied, after consultation with SNH, that a future species licence is likely to be granted prior to granting any consent.

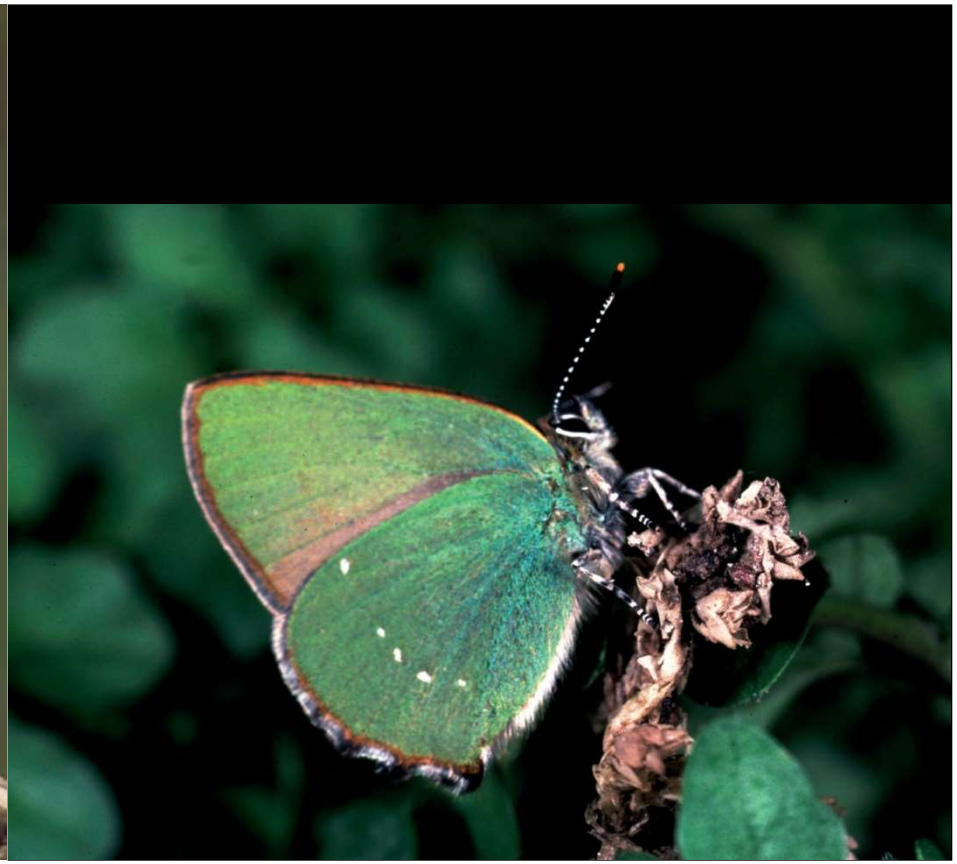
It is important to remember that planning permission does not affect or replace any need to obtain a licence for works that would otherwise constitute an offence under protected species legislation. As a consequence, it may be necessary to obtain a licence before a development can commence even once planning permission has been issued.

Figure 13. Protected Species – Providing the Right Information



Local Biodiversity Action Plan (LBAP)

New development shall be designed, wherever appropriate, to help conserve and enhance populations of LBAP priority species and to protect and enhance priority LBAP habitats, see draft Local Biodiversity Action Plan 2016 – 2020.
and also Section 5: Enhancing Biodiversity. https://www.eastdunbarton.gov.uk/council/consultations/draft-local-biodiversity-action-plan-consultation
There is a presumption against development which would have an adverse effect, either directly or indirectly, on a priority species or habitat, unless that impact can be satisfactorily mitigated.



Enhancing Biodiversity

The LDP promotes a Placemaking approach to new development, intended to deliver benefits for people and nature. Within this context, the LDP takes a broad approach to conserving and enhancing nature which takes into account ecosystems and natural processes, as well as conserving designated or protected sites and species.

Well-designed new development does not result in a net loss of biodiversity or habitat connectivity and enhances biodiversity and/or habitat connectivity. It incorporates existing habitats, enhances and expands them and/or helps create new habitats as well as enhancing the ecosystem services that the development site currently supports, or could support. This can involve protecting and incorporating existing habitat features such as hedges, trees, ponds, streams, wetlands and even derelict areas into plans. These can be expanded and enhanced (such as by provision of bat and bird boxes, bird and bat internal bricks, planting native species, green roofs etc.) as part of the development proposal. A Sustainable Drainage System requires to be provided to support most new developments, and Sustainable Drainage System features shall be designed with a view to helping meet the LDP's requirements for enhancing biodiversity, access to open space and the provision of sustainable travel routes as part of a multifunctional green network. Sustainable Drainage System ponds, planted with native vegetation, can, for example, provide a habitat for a number of species as well as attractive open space. Habitat and species surveys shall be carried out prior to any form of site disturbance including ground investigation works.

Well-designed development is also designed to ensure that ecological links between habitats are not broken, but are provided, or are repaired/enhanced, where possible as part of a green network. Importantly site surveys inform this understanding, including how animals move in and out of the site.

If a plant or animal can move between different habitat patches which are not physically linked, then these patches are functionally connected. Functional connectivity can be difficult to identify. It is necessary to know what sort of landscapes a particular species could be expected to move through, and for what distance, and then apply this information to what is, or could be, on the ground by way of land-use. An informed approach to site survey can help.

Table 6 sets out how biodiversity can be enhanced within certain developments. Provision will be expected to be made for the management and maintenance of features intended to deliver enhanced biodiversity.

The East Dunbartonshire Local Biodiversity Action Plan includes individual Habitat Action Plans (HAPs), detailing:

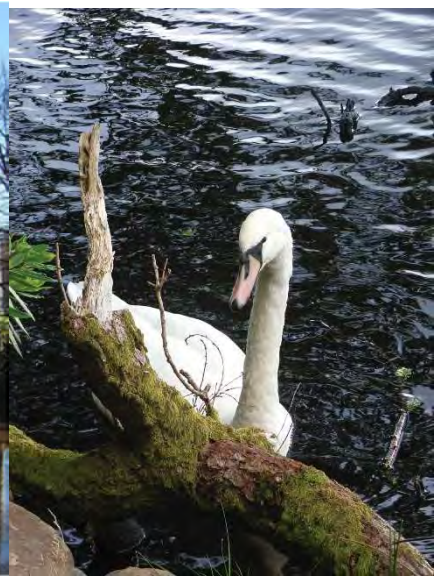
- known habitats or species thought to be threatened locally;
- their distribution (if known);
- a description of the threats they face and causes behind their decline; and,
- a programme of positive management work.

The existing Local Biodiversity Action Plan originally covered the period from 2010-13 but a consultative draft revised version is due to be consulted on in the summer/ autumn of 2016.

Table 6. Examples of Enhancing Biodiversity in Different Development Types/Locations

Development	**Green Infrastructure Opportunities for Enhancing Habitat and Wildlife Interests** *Note – these lists are not exhaustive, applicants should consult the Council Development Applications Team on a case by case basis if there on any other opportunities.*
Householder, Single plot development	• Green roofs • Green/living walls • Rain gardens • Incorporate bat and bird boxes in design including swift bricks to new buildings
Residential /Business/Retail/ Commercial/Mixed Use	• Incorporate and manage existing habitat in open space requirement • Enhance wildlife opportunities in existing open spaces • Design for natural sustainable drainage system and rain gardens • Create a network of easily maintainable, multifunctional open spaces, to include, e.g., wildflower grasslands, ponds, hedgerows • Incorporate bat and bird boxes in design including swift bricks to buildings • Landscape with locally appropriate native species • Green roofs • Green/living walls • Planting of street-trees • Rain gardens
Development within Town/ Village Centre, town centre/ street infrastructure improvements	• Naturalise existing open spaces and deliver new, multi-functional open spaces • Green roofs • Green/living walls • Planting of street-trees • Rain gardens • Incorporate bat and bird boxes in design including swift bricks to new buildings
Open Space and Recreation	• Link to existing green corridors and design for multi functionality • Incorporate green infrastructure into on and off-road access routes • Plant native hedges and trees, fruit trees, create wetlands • Design for longer grass and wildflower grassland

Road schemes	• Mitigation measures to include under passes for otter, badger crossings, etc. • Create new habitats e.g. semi-natural grassland, woodland or ponds • Design for natural sustainable drainage system • Creation of otter holts where appropriate • Conserve, and provide access to, geological exposures • Landscape and screen with locally appropriate native tree and/or hedge species • Design in bat bricks, bird boxes, etc. on bridges
Conversions of buildings	• Install barn owl boxes or provide nest spaces (rural) • Install swift boxes or bricks • Incorporate other bird and bat boxes in the design • Green roofs
Large scale energy (e.g. wind or solar farms)	• Hydrological management for restoring or maintaining bogs (such as drain blocking) • • Incorporate and manage existing habitat, species and geological exposures on unworked land. Where appropriate restore good quality habitat, linking to surrounding green network • Where appropriate create new habitat, linking to surrounding green network



Mitigation and Management

The Mitigation Hierarchy shall apply when considering how to manage the risks of adverse impacts on wildlife and habitats. In line with the Mitigation Hierarchy (Figure 14), the Council expects that development proposals be designed to prevent or avoid impacts. If this is not possible, then development may be acceptable if appropriate measures are put in place to minimise and reduce any unavoidable impact. If adverse impacts cannot be avoided, reduced and/or compensated, to the satisfaction of the planning authority, development proposals shall be refused.

On sites where wildlife features are retained, or new habitats and features are created, appropriate on-going management shall be put in place to ensure long-term effectiveness. In such cases, a mitigation plan shall be produced and submitted as part of the planning application. The Mitigation Plan:

a) shall detail the mitigation proposed;
b) shall identify specific actions required for good management, including details of the phasing of the works;
c) shall make provision for monitoring the mitigation measures over an appropriate period of time to assess the success of the measures;
d) may be the subject of a planning agreement or condition relating to any planning permission;

Where places used by protected species will be affected by a development, detailed mitigation proposals are likely to be required in order to secure the necessary licences to allow the development to proceed (see Annex D). Depending on what type of mitigation is proposed, it may be that there are certain times of the year when mitigation activities are inappropriate – the ecological mitigation calendar (Table 4) provides some general guidance.

Figure 14. The Mitigation Hierarchy

Table 4. Ecological Mitigation Calendar

Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Badgers	Construction of artificial setts only (no disturbance to existing setts)							Exclusion for setts and destruction				Artificial sett
Bats	Maternity roost works until mid-May					No maternity roost works			Maternity roost works from mid-Sept			
	Hibernation period			Hibernation roost works from mid-March							Hibernation period	
Birds	Clearance works		Nesting season – avoid ALL clearance works without a breeding bird survey					Clearance works				
Great Crested Newt	Pond management only		Both terrestrial and aquatic trapping possible				Terrestrial trapping only				Pond management only	
Otters	No seasonal constraints, however restrictions are likely during breeding season											
Water Vole	Avoid works in habitat		Trapping and exclusion		Avoid works (breeding season)				Trapping and exclusion		Avoid works in habitat	
Fish	Mitigation for the protection of water courses is required at all times of the year. Mitigation for particular species will need to be timed so as to avoid their breeding season - this varies between species											
Pine Marten	Work in areas of pine marten habitat and dens		Avoid all work in pine marten habitat								Work in areas of pine marten habitat and dens	

Recommended period for mitigation

Sub-optimal period for mitigation

Mitigation not possible

Note: This mitigation calendar should be used as a reference guide only with advice being sought from an experienced/ qualified ecologist as site and project specific circumstances may alter seasonal windows. Source: SNH.

Useful Contacts

East Dunbartonshire Council, Development Applications Team – for advice on local biodiversity or landscape interest

https://www.eastdunbarton.gov.uk/residents/planning-and-building-standards

Tel: 0300 1234510
E-mail planning@eastdunbarton.gov.uk

Forestry Commission Scotland, Central Scotland Conservancy
http://scotland.forestry.gov.uk

SNH – for advice on Protected Species or SSSI
http://www.snh.gov.uk/

Scottish Environmental Protection Agency (SEPA) – For Advice on Water Environment
www.sepa.org.uk

Scottish Environment and Rural Services (SEARS) - for advice on invasive non-native species
http://www.sears.scotland.gov.uk/

Specialist Professional Organisations:
Register of practices with landscape architects,
http://www.landscapeinstitute.org/

Register of practices with ecologists – Chartered Institute of Ecology and Environmental Management
http://www.cieem.net/

Register of tree (arboricultural) consultants and contractors: Arboricultural Association
http://www.trees.org.uk/

Institute of Chartered Foresters (Includes Arboricultural Work)
http://www.charteredforesters.org/

Glasgow Museums Biological Records Centre, which holds records for East Dunbartonshire, for survey information on the species which exist, or have been known to exist, in and around a site.
biological.records@glasgowlife.org.uk

Glossary

Ancient, Long-established and/or Semi-natural Woodland	Trees and woodlands identified, by SNH, on the Ancient Woodland Inventory, and of value for their biodiversity and cultural value by virtue of their antiquity.
Ancient Woodland	Sites that have been continuously wooded since before 1750AD. Some of these may be primary, i.e. remnants of prehistoric woodlands, or secondary - on ground cleared sometime prior to 1750.
Ancient Woodland Inventory	A provisional guide to the location of Ancient Woodland produced by SNH. It contains three main categories of woodland – see individual definitions for Ancient Woodland, Long-established Woodland and semi-natural Woodland
Biodiversity	The variability in living organisms and the ecological complexes of which they are part. This includes diversity within species, between species and of ecosystems (UN Convention on Biological Diversity, 1992).
eDNA Presence/ Absence Survey	Environmental DNA (a test of water collected from a pond to see if it includes GCN DNA and therefore indicates species presence.
Geodiversity	Describes the variety of rocks, minerals and fossils, landforms and landscapes, active geological processes and soils and subsoils (Quaternary deposits) of an area. It links people, places, rocks, soils, landforms, landscape and ecosystems, and the past through the present to the future.
Green Network Strategy	East Dunbartonshire Green Network Strategy 2016, which identifies existing corridors, stepping stones and hubs as well as opportunities to enhance these.
Hedgerow	Any boundary line of trees or shrubs over 20m long and less than 5m wide between major woody stems at the base. Gaps should be taken into account (see: https://www.gov.uk/government/publications/hedgerow-survey-handbook).
Local Biodiversity Action Plan	East Dunbartonshire Local Biodiversity Action Plan 2016, which identifies priority habitats and species.
Local Nature Conservation Site (LNCS)	Local designations in LDP.
Long-Established Woodland	Plantations or semi-natural woodland that came into existence between 1750 and 1860.
Prime Agricultural land	Agricultural land identified as being Class 1, 2 or 3.1 in the land capability classification for agriculture developed by Macaulay Land Use Research Institute (now the James Hutton Institute).
Refugia Survey	It's a standard survey method for reptiles. Put out artificial refuge for reptiles usually squares of corrugated iron. The reptiles will use them for basking away from predators and the refugia can then be checked for species presence.
Semi-Natural Woodland	Predominantly trees and shrubs that are native to the site and are not obviously planted. It includes woodlands mapped after 1860 but with an earlier provenance.

Site of Special Scientific Interest (SSSI)	An area of national importance which is designated for the special interest of its flora, fauna, geology or geomorphological features.
Woodland	Land of 0.25 has or more (and with a minimum width of 15 metres) under a stand of trees with, or the potential to achieve, tree canopy cover of 20% or more.

Annexes

Annex A: Development and the Role of Scottish Natural Heritage (SNH)

SNH welcome consultations (including pre-application consultations) in relation to certain development proposals (see http://www.snh.gov.uk/planning-and-development/approach/). SNH's service statement sets out the service Planning Authorities and other consenting authorities can expect from SNH in relation to planning and development proposals. SNH have produced a checklist that sets out when planning authorities should consult them – the considerations currently relevant to East Dunbartonshire are replicated below for information, but the checklist can be updated on occasion and reference should be made to the SNH website to confirm the most up-to-date position. **Boxes with an asterisk (*) denote statutory consultations.**

Nature	**Check Box**
*Development affecting European sites: Special Protection Areas, Special Areas of Conservation and candidate sites (Guidance on Natura Sites and Habitats Regulations)	
*Development affecting Sites of Special Scientific Interest (SSSIs)	
*Cases that involve the winning and working of peat for commercial purposes	
Development affecting protected species where the mitigation measures proposed by the applicant are not sufficient to avoid an offence under the relevant legislation. Note: Do not consult SNH prior to surveys being carried out or (where relevant) mitigation plans being submitted unless a licence is required for your survey (Guidance on Protected Species and Planning)	
Development affecting Geological Conservation Review sites (GCR sites)	
Development that could adversely affect priority peatland and carbon rich soil (category 1 and 2 in Scotland's Carbon and Peatland Map (2015))	
Environmental Impact Assessment	
*Scoping requests and environmental statements received in connection with a development proposal that requires an environmental impact assessment Note: In practice we are also consulted on the associated development proposal	
Other	
*Marine licence applications	
*Licences for exploration of, production from and decommissioning of oil and gas fields within the 12 nautical mile territorial sea limit	
*Hazardous substances consents and cases that could have significant repercussions on major accident hazards	

Annex B: Initial Site Appraisal Checklist

This checklist can help when undertaking a site appraisal. It will help give an indication of the ecological data that will be required for a development site, as well as highlighting the important designations, habitats and species to be considered during the design and planning process. In some cases further survey requirements may be identified following consultations with Council staff and/or SNH.

1. Consideration	Tick if it Applies	If Yes then:	Done
Does the site include all or part of a statutorily designated site e.g. SSSI, Local Nature Reserve?		Consult SNH and Council for more information	
Is there a nearby statutorily designated site e.g. Special Protect Area, Special Areas of Conservation, Sites of Special Scientific Interest, Local Nature Reserve that may be impacted by the development?		Consult SNH and Council for more information	
Does the site include all, or part of, or impact on, a nearby non-statutory designated site, e.g. a Local Site of Importance for Nature Conservation ?		Consult Council to determine under what circumstances, if any, development might be acceptable and the ecological data required.	
Does all or part of the site form a wildlife corridor or 'stepping stone' linking two or more other areas of ecological value?		Assess ecological impact of development on the site and adjacent areas of habitat, and identify possible mitigation.	
If No Then:			
Has a Phase 1 Habitat Survey been undertaken in order to help define the key habitats on site?		Consider undertaking a Phase 1 Habitat Survey at the earliest opportunity.	

2. Does the site include any of the following habitats (Based on Phase 1 Habitat Survey):	Tick if it Applies	*Note - this table is not exhaustive, applicants should consult the Council Development Applications Team on a case by case basis if there on any other habitats or species of local interest to consider.*		Tick when Done
Mature trees (individual or small stands)?		Survey For	• Bats • LBAP Species • Breeding birds • Lichens, mosses and liverworts	

		Check For:	• Tree Preservation Orders • Conservation Area Designation	
		Undertake:	• Tree Survey (species, location, ground spread, age, height)	
Woodland?		Survey For	• Bats • Breeding Birds • Pine Marten • Badgers • LBAP Species • Otters • Lichens, mosses and liverworts	
		Undertake:	• Phase 2 Habitat Survey • Tree Survey	
Hedges?		Survey For	• Determine if the hedge is of particular ecological value e.g. Species rich • Breeding Birds • LBAP Species	
		Undertake:	• Tree Survey	
Rivers, streams or wet ditches?		Survey For	• Otters • Water Voles • Salmon • Kingfisher • Breeding Birds • LBAP Species	
		Undertake:	• Ecological Impact Assessment • Phase 2 Habitat Survey	
Ponds, pools or lochs?		Survey For	• Great Crested Newts • Water Voles • Breeding Birds • LBAP Species	
		Undertake:	• Phase 2 Habitat Survey	
Wetland or bog?		Survey For	• Water Voles • Otters • Breeding Birds • LBAP Species	

		Undertake:	• Phase 2 Habitat Survey on vegetated areas	
Long/rough grassland		Survey For	• Water Voles • Breeding Birds • Foraging Areas For Badgers • LBAP Species	
		Undertake:	• Phase 2 Habitat Survey • Ecological Impact Assessment	
Bings/spoil tips/rock faces?		Survey For	• Young's Helleborine (on wooded bings) • LBAP Species	
		Undertake:	• Phase 2 Habitat Survey on vegetated areas	
Brownfield?		Survey For	• Invertebrates • water voles Great Crested Newt • LBAP Species	
Heath (Heather)?		Survey For	• LBAP Species	
		Undertake:	• Phase 2 Habitat Survey	
Buildings/Barns/bridges/quay walls?		Survey For	• Bats • Barn Owls • Nesting Birds • LBAP Species	
Scrub?		Survey For	• Breeding Birds • LBAP Species	
		Undertake:	• Phase 2 Habitat Survey	

Annex C: Invasive Non-Native Species

There are many species of non-native plants that have been introduced to Scotland over time which we enjoy in our gardens and countryside. Studies for the flora of East Dunbartonshire show that many of the species recorded as growing 'wild' in the area, more than half were non-native. However, a few non-native species are very invasive in the natural environment and cause serious problems. They can out-compete native species and result in serious damage to the environment, the economy and human health.
For further advice on invasive non native species contact Scottish Environment and Rural Services (SEARS), see website below. Scottish Ministers, SNH, Scottish Environment Protection Agency and the Forestry Commission (Scotland) all have responsibilities relating to non-native species in Scotland, with SNH having a coordinating role, SEPA has specific responsibility for freshwater (still and flowing water) habitat and Forestry Commission Scotland has specific responsibility for woodland habitat.

In East Dunbartonshire, the most common of these Invasive Non-Native Species are:

a) Japanese knotweed (Fallopia japonica)
b) Giant hogweed (Heracleum mantegazzianum)
c) Himalayan balsam (Impatiens glandulifera)
d) Skunk cabbage
e) New Zealand Pygmyweed, found in waterbodies

Invasive non-native animals may also be of concern, particularly aquatic species in watercourses, see SNH website for a list of animals outwith their native range.

The legislation covering non-native species differs across the UK. In Scotland it was updated and amended in 2011 by the Wildlife and Natural Environment (Scotland) Act 2011. It is an offence to release, or allow to escape from captivity, any animal to a place outwith its native range. It is also a potential offence, subject to the provisions in the legislation, for any person to plant, or otherwise cause to grow, any plant in the wild at a place out with its native range. It may be in developers interest to be able to show that they took reasonable steps and showed due diligence to avoid committing an offence (see http://www.snh.gov.uk/protecting-scotlands-nature/nonnative-species/native-range/).

A common way in which invasive non-native species may be introduced to a development site is through soil contaminated with seed or root material. If a development is responsible for the introduction of an invasive non-native species, either to the site or to other areas, then the developer will have to remove the species and dispose of material appropriately.

Japanese knotweed, Giant Hogweed and Himalayan Balsam are regarded as controlled waste. Developers shall seek advice on their disposal by referring to the Scottish Environment Protection Agency website. SEPA has also produced advice on how to treat these invasive plants. The Scottish Government has produced a Non-Native Species Code of Practice that will help those developing land that contains these plants to understand their legal responsibilities.

For more information see:
SNH, http://www.snh.gov.uk/protecting-scotlands-nature/protected-species/non-native-species/
SEPA, http://www.sepa.org.uk and www.netregs.gov.uk
The Scottish Government www.scotland.gov.uk/publications/2012/08/7367

Documentation should be provided as part of the planning application for invasive species includes survey information, eradication programme, method statement and appropriate zoning demarcation plans.

Annex D: Licensing Requirements

If it is discovered that there are potential impacts on protected species that cannot be avoided through mitigation then a licence may be required before works can proceed. This is in order to prevent a possible offence being committed. Licences will only be granted if strict tests are met. SNH is responsible for the administration of most protected species licences in Scotland (except most marine species where Marine Scotland is the licensing authority). For some species, in specific circumstances, licences can be issued which allow:
a) disturbance for the purpose of development; or
b) disturbance for the purpose of survey and research.

After obtaining planning permission, the developer may need to apply for various types of licence regarding protected species before work can start on site. It is important to remember that planning permission does not affect or replace any need to obtain licences or permits required by other environmental protection legislation. A licence may be required for works that do not require planning permission, for instance, internal works to a building or those carried out under permitted development.

Species Licensing – Points to Remember:
a) Identify any needs for licensing as soon as possible – ensure you allow enough time in the project programme for the issuing of licences
b) Check out the SNH web site for all the information needed at: www.snh.gov.uk/protecting-scotlands-nature/species-licensing
c) Make sure the relevant licensing tests can be met for any protected species present

European Protected Species and Licensing Requirements
D.3 There are three strict legal tests which must all be passed before a licence can be granted. In summary they are:
a) Test 1: that there is a licensable purpose. SNH provides more detailed guidance on Test 1 at: http://www.snh.gov.uk/docs/B896394.pdf;
b) Test 2: that there is no satisfactory alternative; SNH provides more detailed guidance on Test 2 at: http://www.snh.gov.uk/docs/B896418.pdf; and
c) Test 3: that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range (the qualified ecologist should be able to provide advice on this or alternatively seek advice from SNH).

SNH provides more detailed guidance on licencing and species licencing tests – see http://www.snh.gov.uk/docs/B896429.pdf and http://www.snh.gov.uk/protecting-scotlandsnature/species-licensing/.*Water Voles*
D.5 It is possible to licence activities that could affect water voles for social, economic or environmental reasons. This could cover a range of activities including development. However, it is important to note that licences may only be issued for this purpose provided that:
a) the activity authorised by the licence will contribute to significant social, economic or environmental benefit; and
b) there is no other satisfactory solution.

Badgers
D.6 If you are planning any development works that could result in disturbance to badgers in their setts, or damage or obstruction to setts then you are likely to require a licence. Licences can be issued (for activities that would otherwise constitute and offence) under the Protection of Badgers Act 1992 (as amended) for the purpose of development. It is important to note that licences can only permit someone to 'interfere with a badger sett' for the purpose of development. It is not possible to licence removal, translocation or killing of badgers for the purpose of development.
D.7 SNH provides more detailed guidance on badgers, development and licensing: http://www.snh.gov.uk/protecting-scotlands-nature/species-licensing/mammal-licensing/badgers-and-licensing/dev/

Birds
D.8 It is not possible to licence actions that would otherwise be an offence in relation to wild birds, for the purpose of development. Particularly where development is carried out during the breeding season, there could be a risk of damage to, or destruction of, nests or eggs, or disturbance to nesting birds. Because there is no development licensing purpose for wild birds, this means that any development that could result in these actions should not proceed until it is appropriate to do so. Developers should seek professional advice at an early stage in the process.

D.9 SNH provides more detailed guidance on birds and development at: http://www.snh.gov.uk/protecting-scotlandsnature/species-licensing/birdlicensing/development-houses/

Annex E: Statements of Importance for the Local Landscape Areas (LLA)

Contents

1.0 Kilpatrick Hills LLA Statement of Importance

Photograph 1 - The Kilpatrick Hills above Tambowie, East Dunbartonshire

1.1 Landscape Overview

The Kilpatrick Hills form a distinctive rugged upland landscape, inextricably linked with their surroundings: 'borrowed' views, unique and relatively accessible panoramas and a plethora of high quality vistas, both to and from the Kilpatrick Hills, make the area key to defining the identity of nearby settlements and in providing a setting for nationally important landscapes.

The Kilpatrick Hills rise relatively steeply from the River Clyde shores and the Leven Valley to around 400m at their highest point at Duncolm (Photograph 2, left). The landform comprises a series of rounded, locally craggy summits set within an undulating plateau, crossed by a series of burns. Land cover is characterised by open moorland including heather and rough grasslands, with extensive areas of blanket bog. Several of the area's burns have been dammed to create reservoirs and lochs which sit among the summits and several coniferous plantations. Semi-natural and native woodland cover is largely limited to the narrow burn corridors and glens and the edges of the Kilpatrick Hills, notably the designed landscapes of Overtoun, Cochno and Edinbarnet. This woodland forms a key component of the relatively short transition from the urban area and agricultural land to the rugged moorland hills.

This abrupt transition from surrounding areas, the seemingly remote and relatively wild characteristics of the hills, and the ease of access from west Central Belt towns and cities, makes the Hills a popular recreational area, including for hill walking, mountain biking, fishing and wild camping. The

ecological value of the Kilpatricks, both in their internal habitat network and as an upland outcrop within the settled lowlands, greatly enhances their landscape qualities and recreational value.

1.2 Landscape Description

Regional Landscape Context
Although the Kilpatrick Hills are relatively low lying they are part of a wider landscape character area. To the east the hills tumble dramatically into the Blane Valley, which separates the Kilpatrick Hills from the Campsie Fells and Kilsyth Hills.

The Glasgow & Clyde Valley Landscape Character Assessment (LUC, 1999) notes that the Kilpatricks are part of a broken line of rugged upland which encloses Glasgow and the Clyde Valley to the north. The uplands are marked by steep south facing slopes which are visible from much of the conurbation. This 'Rugged Moorland Hills' landscape type crosses west to east from the Kilpatrick Hills, through the Campsie Fells/Kilsyth Hills. The Landscape Character Assessment notes the following key characteristics, features and qualities:

distinctive upland character created by the combination of elevation, exposure rugged landform, moorland vegetation and the predominant lack of modern development;
a shared sense of apparent naturalness and remoteness which contrasts strongly with the farmed and developed lowland areas;
presence of archaeological sites on hill tops and sides.

The Kilpatrick Hills descend to the north east to the Cameron Muir and Stockie Muir which are assigned by the Stirling LDP Supplementary Guidance 'Landscape Character Assessment' to Landscape Character Area L22. This is described as a transitional moorland hill fringe landscape. Auchineden Hill and the Whangie, which together form one of the best known viewpoints and places of interest within the Kilpatrick Hills, fall within this area. Setting aside the local authority boundary, however, the area forms part of the landscape character unit of the Kilpatrick Hills, sharing many of its key landscape qualities. Stirling Council recognized this by designating it as a LLA in 2014.

The relationship between the Kilpatrick Hills and the area around south Loch Lomond is an important element in the Hills' regional landscape context. The Kilpatrick Hills form a key element in the setting and overall landscape composition in views to/from the south-east part of the Loch Lomond and the Trossachs National Park and the Loch Lomond National Scenic Area (NSA).

Local Landscape Character

The local landscape identity of the Kilpatrick Hills is focused around prominent hills, escarpments, plateau moorland and the abrupt transition from surrounding urban areas and farmed lower slopes. There is a high perceived quality of wildness and sense of apparent naturalness and remoteness, particularly in the central areas of the Kilpatrick Hills, derived in part from the limited visual influence of modern development, in contrast to nearby urban areas (Photographs 3 & 4).

The skylines and edges of the Kilpatrick Hills play an important role in views from the Vale of Leven, Dumbarton, Clydebank and Milngavie. They form a natural setting and backdrop for large areas in the Glasgow conurbation, which visually contrasts with the urban development. With such an extensive visual envelope, and large viewing populations, the hill slopes and skylines have a high level of visual and landscape sensitivity.

Although the Kilpatrick Hills are lower than the mountains beyond the highland boundary fault to the north, their dramatic form and largely open character make them a defining feature in the overall landscape composition.

1.3 Special Landscape Qualities

The special landscape qualities of the Kilpatrick Hills that justify their selection as a LLA are as follows: a strong sense of remoteness, wildness and open horizons; distinctive landforms and a unique diversity of views. These qualities are set out below.

Strong Sense of Remoteness, Wildness and Open Horizons

Although the area is partly traversed by tracks and electricity lines and bounded by roads, the Kilpatrick Hills are almost completely uninhabited, see Photograph 3. At a broad level the landform is very simple and the open moorland appears vast in extent with open horizons, see Photograph 4. However at a more detailed level there is a diversity of topographical features and upland habitats characterised by mosaics of bog, heath land and grassland, with frequent rocky outcrops, scree and crags. Fragments of broadleaf woodland also occur on the lower ground, and highlight ravines and burn corridors that provide some shelter. Coniferous plantations occur frequently and appear highly incongruous in this landscape as stark, angular, dark blocks which contrast with the muted colours, textures and sinuous patterns of the moorland vegetation.

Pockets of enclosed grazing, stone walls, post and wire fencing and telegraph poles mark the transition from the central area of more remote hills and moorland to the lower slopes and road and urban corridor to the west and south. Infrequently scattered across the landscape are the remains of archaeological or historic features such as cairns and these add to the sense of a remote historic unchanged landscape.

It is a simple landscape providing a rolling hill backdrop, undeveloped as a natural setting to adjacent urban areas. This contrast and proximity creates an 'accessible solitude' which is enjoyed particularly in the central areas. Here the remote hills, reservoirs and lochs provide an experience of remoteness, isolation and tranquility in a landscape where wild and natural character dominates.

Photograph 3 – View eastwards from the core path above Kilpatrick Braes

Photograph 4 – Part of the Kilpatrick Hills central area

Distinctive Landforms

Within the Kilpatrick Hills, the sweeping open moorland and coniferous plantations are contrasted with the summits such as Duncolm, Doughnut Hill and Auchineden Hill which form distinctive local landmarks, see Photograph 5. In places, the summits give way to dramatic ridges of rock and escarpments. In the south, distinctive horizontally banded lava flows, eroded into stepped cliffs, top the hill faces shelving gently downwards towards the well-defined transitional area of moorland and fields. Dramatic hill edges, long ridges, exposed rock cliffs and the gentle roll of land forming the lower slopes play an important role in the overall landscape composition. The Kilpatrick Braes, and the Lang Craigs which dominate the skyline above Dumbarton, are the most prominent examples of this feature of the Kilpatrick Hills (Photograph 6).

Elsewhere, deep valleys and gullies such as Auchenreoch Glen and Glenarbuck have formed at the edge of the Kilpatrick Hills where the many burns run through towards the River Clyde.

Many of these features are locally or regionally important for their geology. Together they tell a story of how the Hills formed which enhances the experience of visitors (see also section 4.5).

Photograph 5– The Duncolms are some of the striking landforms

Photograph 6– The Lang Craigs from Overtoun Estate

A unique diversity of views

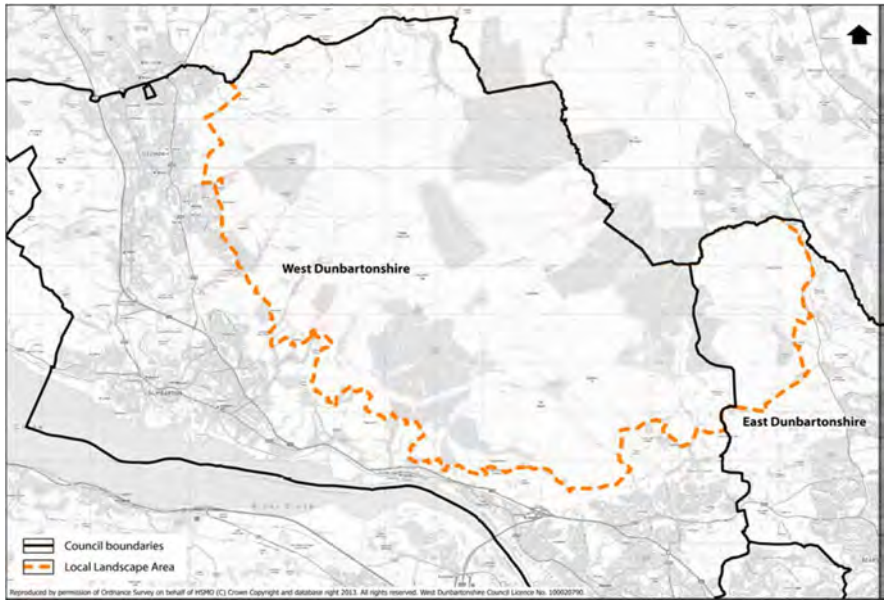
The Kilpatrick Hills boast unique and relatively accessible panoramic views in all directions, so that the landscape experience from these small hills is one of being part of and "viewing the whole of Scotland". For example, there is a sequence of vast panoramic views over the Clyde estuary on the short walk from Old Kilpatrick up over the Kilpatrick Braes, see Photograph 7. When at Duncolm, within the core of the Kilpatrick Hills, it is possible to see east beyond Arthur's Seat in Edinburgh (approximately 80km or 50 miles) and south to the Carsphairn hills (approx. 50 miles) and the Merrick (approx. 57 miles), in Galloway. From the same vantage point, in views to the north, Ben Lui is framed between Ben Lomond and Ben Vorlich, and Loch Lomond and its Highland setting are clearly visible (Photograph 8).

These panoramic views form part of a tremendous range of high quality views both to and from the Kilpatrick Hills. Well over 20 key, panoramic or iconic high quality viewpoints can be identified. These views are very diverse and range from important internal vistas of remote areas with no urbanisation visible, to extensive "borrowed views" of the adjacent nationally important highland landscape. Open horizons and borrowed views lead to the Kilpatrick Hills being experienced as part of a much larger landscape, increasing the sense of isolation and solitude.

Long views across the Glasgow conurbation emphasise the contrast between the remote upland and developed lowlands. In well-known views from outwith the Kilpatrick Hills, from locations such as Carman Reservoir and Dumbarton Castle, the Hills are a key feature seen across adjacent urban and farmed lowlands. The Hills' skyline makes an important contribution to the setting of views from the north and east of Glasgow city and the Inner Clyde estuary.

Photograph 7 – The Clyde basin from the Kilpatrick Braes

Photograph 8 – View from Middle Duncolm toward the Loch Lomond and the Trossachs National Park



LLA boundary in East and West Dunbartonshire

Photograph 9 – Auchenreoch Glen

1.4 LLA Boundary

An important element of the fieldwork undertaken was to determine the boundary of the LLA, taking account of the Regional Scenic Area boundary as defined in the adopted east and West Dunbartonshire Local Plans and features in the landscape, with the aim of creating a robust boundary which is clearly identifiable.

Lower hill slopes and fringes contribute to the setting and approach to the Kilpatrick Hills' distinctive ridges and crags, acting as an important landscape and visual buffer. These transitional landscapes are generally more diverse in appearance than the open hills. The historic influence of old estate and policy landscapes, such as Overtoun, Cochno and Edinbarnet, is still evident in many of these areas. The historic character, policy woodland, remnant field tree lines and avenues, and vistas associated with remains of former farmed estate landscapes make an important contribution to landscape diversity and setting on the boundary of the Kilpatrick Hills. These areas also provide a unique ease of access to an experience of remoteness and the diverse experience of sharply contrasting landscape. In a short walking time, visitors will pass from urban and suburban town, through farmland or parkland, to wild expansive upland landscape, but be still in close proximity to or have a view of contrasting urban lowlands.

The boundary of the LLA in West Dunbartonshire seeks to recognise the importance of these transitional landscapes to the overall character of the Kilpatrick Hills, acknowledging that landscape changes in these areas can have significant effects on the landscape quality of the Kilpatrick Hills, particularly in terms of how it is experienced by local people. The historic RSA boundary has therefore been moved further down the hill slope in a number of locations to create the LLA boundary. The boundary of the section of the Kilpatrick Hills within the Stirling Council area was created in 2014 as a new LLA in its revised Supplementary Guidance on Protecting Special Landscapes.

The East Dunbartonshire review of the outer green belt boundary in 2013 defined the edge of the green belt along the Kilpatrick Hills by considering landscape character. By defining the boundary of the rough moorland hills in this location it also provided a revised boundary for the LLA. A description and justification for the LLA boundary in East Dunbartonshire is summarised in the full Statement of Importance.

Recommendations for Boundary Change in East Dunbartonshire

A LLA boundary (also the redefined outer green belt boundary) is set out in the LDP. This illustrates small areas of fields omitted from the Rugged Moorland Hills character area and one minor inclusion. The review has generally produced a westerly shift in the landscape character area boundary, reflecting increasing conformity to the character area description. This increase in conformity is typified by changes in elevation, vegetation cover, topography, land use and degree to which the area is settled.

In reflecting landscape character change, the study has wherever possible identified obvious and reasonably permanent boundary features to enable and support clear 'on-the-ground' delineation of the boundary, which is an important consideration for the LLA. Inevitably, with the landscape character refinement leading green belt re-alignment, semi-permanent features, such as dry stone walls and farm tracks have been used to delineate the

boundary changes where more permanent structures, such as the main A809 road and historic drovers' road at Tambowie, do not closely reflect landscape character transition. In particular, boundary delineation identified within the study area at Todhill Wood and Quarries, uses a remnant drystone wall within an area of maturing scrub vegetation as the boundary. This is occasionally difficult to identify on the ground, but alternative landscape features which reflect the primary function of character area delineation amendment are not evident.

1.5 Landscape Change

A key principle in the policy approach to landscape is that landscapes are constantly changing and evolving in response to our needs. Positive change should be facilitated whilst maintaining and enhancing distinctive character. Human activity has already had notable effects on parts of the Kilpatrick Hills' landscape, including: management for grazing; the creation of water-supply reservoirs for nearby urban areas; planting and management of commercial forestry and associated infrastructure such as access tracks; and erection of masts and pylons. All of these cumulatively have detracted from some of the special landscape qualities in some locations, particularly the characteristics of remoteness and perceived wildness/naturalness. They do not, however, presently dominate or significantly impact on the overall character of the landscape in the central parts of the Kilpatrick Hills.

Landscape planning and management should aim to conserve the character and special qualities of these Rugged Moorland Hills. Developments and land use changes which undermine the sense of perceived wildness/naturalness and remoteness should be resisted.

1.6 Summary of Designations and Interests

In addition to their importance in landscape terms, the Kilpatrick Hills are unsurprisingly home to a number of other natural heritage and recreation interests. This range of habitats, geodiversity sites and formalised access routes enhances landscape experience and the number of people who can enjoy it.

The Kilpatrick Hills feature a network of nationally and locally important nature conservation sites, of both biological and geological interest. Five Sites of Special Scientific Interest (SSSI) (Photograph 9), are found within the Kilpatrick Hills and much of the rest of the area has been designated as LNCSs. These provide the SSSIs with a robust framework of buffers and habitat connectivity which contribute to safeguarding their viability and recognise the wildlife value of the Kilpatrick Hill's open mosaic of habitats.

The hills are connected to the wider green network by a number of core paths and burn corridors – key features which link both the habitat network and enables residents and visitors to West Dunbartonshire to enjoy the Kilpatrick Hills. This range of habitats and geodiversity sites and formalised access routes enhances landscape experience and the number of people who can enjoy it.

Already noted above are the historic gardens and designed landscapes that form part of transitional landscapes at the edge of the Kilpatrick Hills. Grand houses constructed by wealthy industrialists at Overtoun, Auchentorlie, Cochno and Edinbarnet, mainly in the eighteenth and nineteenth centuries, historically had large gardens, parkland and woodland associated with them, designed and managed to add to the setting and enjoyment of the main

house. Overtoun Estate is the best example of an estate as it would have originally looked when the house was built and is recorded on the Inventory of Gardens and Designed Landscape.

Further back in human history, prehistoric cup and ring marked stones and cairns have been found within the Kilpatrick Hills, including at Auchentorlie, Auchnacraig and Gallangad Muir and burn, where they are designated as scheduled monuments.

2.0 Campsie Fells LLA Statement of Importance

Lairs Hill & Escarpment from the Road to Torrance

Campsie Fells from Forth & Clyde Canal & Strathkelvin, Twechar

2.1 Landscape Overview

The Campsie Fells are the highest part of the range of hills that form the northern edge of the Clyde Basin. They are an important feature in the setting of Glasgow and the towns and villages of East Dunbartonshire. The special qualities of the hills include the distinctive escarpment and cliffs of the Campsie Fault, striking views from the range of hills out over surrounding valleys and urban areas and diversity of landscape experience with the rugged moorland hills and intimate river valleys. The southern part of the Campsie Fells is within East Dunbartonshire. The name Campsie means "crooked fairy hill", from the Scottish Gaelic and "Fell" originates from the Old Norse word fjal, meaning hill. The northern part of the Campsie Fells are designated by Stirling Council in the Southern Hills LLA and this designation will complement this for the section of the Campsie Fells in East Dunbartonshire, following the former Campsie Fells Regional Scenic Area landscape designation.

2.2 Landscape Description

Landscape Context

Together the Campsie Fells, and Kilpatrick and Kilsyth Hills form a broken line of rugged moorland hills which encloses Glasgow and the Clyde Valley to the north. These hills are marked by steep south facing slopes which are visible from much of the conurbation.

From Earl's Seat in the Campsie Fells there are panoramic views north west to the Loch Lomond and the Trossachs National Park. From Lecket Hill/ Cort Ma Law in the Campsie Fells there are views north east over Meikle Bin and the Carron Valley and reservoir, and Stirling Council Southern Hills LLA, from Cort Ma Law and Lairs and there are dramatic views south and south west over the Glazert Valley LLA and south over the Kelvin Valley. The headwaters of the River Carron rise in the Campsie Fells, just north east of the boundary of East Dunbartonshire.

Although the Campsie Fells are lower than the mountains beyond the highland boundary fault to the north, they are the highest in the region and their dramatic form and largely open character make them a defining feature in the overall landscape composition.

The southern edge of the Campsie Fells, and the Kilsyth Hills in North Lanarkshire, is defined by the Campsie fault, creating the distinctive escarpment slopes along the Glazert and Kelvin Valleys. The skylines and edges of these are a key feature in the setting of the East Dunbartonshire towns and villages, Frontiers of the Roman Empire (Antonine Wall) World Heritage Site and Forth and Clyde Canal. With such an extensive visual envelope, and large viewing populations, the hill slopes and skylines have a high level of landscape and visual sensitivity.

Landform

The landform is underlain by basalts which are more resistant than surrounding rocks and have withstood glacial and fluvial erosion to stand as rugged uplands around the north western part of the Clyde Basin . Erosion along the line of a geological fault known as the Campsie Fault has left tiers of rock representing some 30 lava flows which date from the Carboniferous period. This forms a dramatic escarpment and cliffs on the south flanks of Cort ma Law north of Lennoxtown and Milton of Campsie. There are drumlins in the upper valley of the Campsie Glen and along the slacker slopes south of the escarpment. The prominent continuous range of the Camspie Fells runs from Earls Seat (578 metres) in the west to HoleHead (551 metres), Lecket Hill (547 metres) and Cort ma Law (531 metres) in the east. The southern escarpment along the Campsie Fault is scored by the gullies of burns and of the workings of small scale historic mining industry.

The section of the Campsie Fells in East Dunbartonshire includes the watershed of the Glazert Water and its tributaries. The hills are intersected by the river valleys of two burns the Kirk Burn / Nineteentimes Burn through Campsie Glen and Finglen Burn. These burns and their tributaries form gullies down the steep flanks of the hills with several waterfalls, including the Almeel Burn, the Black and White Spouts on the Finglen Burn, the Aldessan Burn and Campsie Glen and at Spouthead. The Finglen is an incised river valley south east of Earl's Seat that is largely hidden from view from the east by Inner Black Hill, and its mouth is approached from the path along the Finglen Burn north west of Knowhead, Clachan of Campsie.

Earls Seat and Fin Glen, from Cort Ma Law

The Escarpment at Garmore

Landcover

The landcover of the hills has varied texture; moorland interspersed with gullies and grey rocky outcrops. The colours of the hills are muted greens, yellows and browns changing through the seasons: brightening green in the spring and bronzing in autumn. Their tops are rugged moorland with considerable areas of eroded peat bog. These plateaux are intersected by marshes and streams. Landcover on these hills is dominated by moorland plant communities including rough grasslands. There are fields, enclosed within walls and hedges, on the slacker southern slopes of the hills. Some of these have been abandoned are becoming invaded by bracken or rushes, while their boundaries decline. The hills include areas of nature conservation interest, including those associated with small stream, bums and wetlands. There is riparian woodland planting on the flanks of the Kirk Burn/ Campsie Glen and Finglen. Extensive new deciduous woodland has taken place north of Knowehead and in the upper glen of the Kirk Burn, however with the exception of a number two small coniferous blocks, the south facing escarpment is largely unwooded.

Aesthetic Qualities and Perceptions

The Campsie Fells are largely uninhabited although they are readily accessible on foot from towns and villages to the south. The only road to pass through the Campsie Fells is the Crow Road and there are few man-made features in this peaceful landscape of open rugged moorland intersected by the steep-flanked enclosed Finglen and Campsie Glen. The tops of the Campsie Fells are open and exposed to changing light and shade, from the prevailing

cloudy weather conditions. The landscape is interspersed with small burns and small cascades of waterfalls and gurgling burns, on the Kirk Burn, Nineteentimes Burn and Finglen Burn and their tributaries.

The hills provide long views across the farmed and settled Glazert Valley LLA and the wider Glasgow conurbation, emphasising the contrast between the upland moors and the developed lowlands. A key accessible viewpoint is the Crow Road Car Park.

The Campsie Fells have escarpments, plateau moorland and the abrupt transition from surrounding urban areas and farmed lower slopes. There is also a high sense of apparent naturalness and remoteness, particularly in the central/core areas of the hills, derived in part from the limited visual influence of modern development, in contrast to nearby urban areas.

Clachan of Campsite and upper Glazert valley from Lairs Hill

Holehead from Lairs Hill

Landscape Character

The Land Use Consultants, 1999, Glasgow & Clyde Valley Landscape Character Assessment notes the following key characteristics, features and qualities for the Rugged Moorland Hills Landscape Character Type, which incorporates the Campsie Fells:

- distinctive upland character created by the combination of elevation, exposure rugged landform, moorland vegetation and the predominant lack of modern development;
- a shared sense of apparent naturalness and remoteness which contrasts strongly with the farmed and developed lowland areas;
- presence of archaeological sites on hill tops and sides. The key characteristics, features and qualities of the rugged moorland hills landscape character type are:

The northern part of the Campsie Fells are in the Stirling Council area and are assigned by its LDP Supplementary Guidance on Landscape Character Assessment to Landscape Character Area L27 - a lowland hills landscape. The East Dunbartonshire section of the Campsie Fells can be considered to form part of same the landscape character unit, sharing many of the key landscape qualities.

2.3 Special landscape qualities of the Campsie Fells

The special landscape qualities of the Campsie Fells that justify their selection as a LLA are the distinctive landform of the Campsie Fault, striking views and diversity of landscape experience. These qualities are set out below.

Distinctive landform of the Campsie Fault

The long undulating ridgeline of the seemingly towering Earl's Seat, Lairs and Cort Ma Law define and confine Clachan of Campsie, Lennoxtown and Milton of Campsie conveying a strong sense of a physical barrier.
The skylines and outer faces of the hills help to define the Glazert and Kelvin Valleys and contribute to the setting of East Dunbartonshire towns and villages and the Glasgow Conurbation.
Precipitous distinctive and dramatic south facing escarpment cliffs and scree at the Crow Road and Meikle Reive, Lennoxtown appear much higher and larger than they really are because of lack of scale indicators. The escarpment appears unassailable.

Striking views

Panoramic outward views from the hill edges and summits: from Earl's Seat looking north west to the Loch Lomond and the Trossachs National Park, from Cort Ma Law and Lairs looking south and south west over the Glazert Valley LLA and south to the Kelvin valley and wider Glasgow area.
The prevailing weather conditions are cloudy which results in periodically dramatic changes in light across the hills;
Locally important and dramatic views descending into the Glazert Valley on the Crow Road.
Views towards the LLA are equally important, from the lowland Glazert and Kelvin valleys, Clachan of Campsie, Lennoxtown and Milton of Campsie, the Frontiers of the Roman Empire (Antonine Wall) World Heritage Site, the Forth & Clyde Canal and John Muir Way.

Diversity of landscape experience

Contrast between open and exposed rugged moorland on range of hills between Cort Ma Law and Earl's Seat with enclosure and introspection within the incised, steep sided valleys, of the Campsie Glen and the hidden Finglen, with their burns and waterfalls.

Contrast between the large scale, simple open hill land of the Campsie Fells and the adjacent landscapes, outwith the LLA, of the adjacent Glazert Valley LLA and Kelvin valley, of smaller scale, diverse, farmed, wooded and settled hill fringes.
The hills have a sense of remoteness yet are accessible to nearby urban areas and easy to walk or drive into the foothills then climb.

Campsie Fault from the Mouth of the Fin Glen

Escarpment and Cliffs of Campsie Fault at the Crow Road

Fin Glen

Waterfall on Almeel Burn, Fin Glen

Loch Lomond and the Trossachs National Park from Earl's Seat

2.4 LLA Boundary

The northern, western and eastern boundaries of the Campsie Fells (east Dunbartonshire LLA) follow the local authority boundary, and although not clearly defined on the ground are clearly defensible. However the southern boundary is not robust and in places does not fully encompass the Campsie Fells. The southern boundary has been reviewed as part of the preparation for the LDP and now:

More clearly follow the southern extent of the Campsie Fells and its landscape
Have a clearer alignment to the Campsie Fells (Stirling) boundary to the west
Meet the Kilsyth Hills, adjoining to the east, in agreement with the findings of the North Lanarkshire LLA Review.

2.5 Landscape Change

A key principle in the policy approach to landscape is that landscapes are constantly changing and evolving in response to our needs. Positive change should be facilitated whilst maintaining and enhancing distinctive character. Human activity has already had notable effects on parts of the landscape of the Campsie Fells. This includes: management and improvement of grassland for grazing; the construction of the Crow Road; the creation of water-supply reservoirs nearby; planting and management of commercial forestry and associated infrastructure such as access tracks; and erection of the Holehead Weather Radar Station and pylons in adjacent areas. These cumulatively have detracted from some of the special landscape qualities in some locations, particularly the characteristics of striking views and diversity of landscape experience. They do not, presently dominate or significantly impact on the overall character of the landscape in the Campsie Fells.

Landscape planning and management should aim to conserve the character and special qualities of these Rugged Moorland Hills. Developments and land use changes which undermine the special qualities of the Campsie Fells, of the distinctive landform of the Campsie Fault, striking views and diversity of landscape experience, should be resisted.

Young Woodland Planting, west of Clachan of Campsie

Campsie Glen

Wild Pansy; Species of Interest in the Campsie Fells

2.6 Summary of Designations and Interests

The Campsie Fells (East Dunbartonshire) have a wide range of natural and cultural heritage and recreational interests which are important and valued locally and regionally and provide a setting for outdoor recreation and tourism. These interests are summarised below.

Natural Heritage

The British Geological Survey, 2011, East Dunbartonshire Geodiversity Audit noted that the diverse and attractive landscape and rich biodiversity of the East Dunbartonshire area is a product of the underlying geology and geological processes that have acted upon it. The Campsie Fells are made up of volcanic rocks belonging to the Clyde Plateau Volcanic Formation. These igneous rocks are as a rule hard wearing and resistant to erosion, so that when our present-day landscape was being sculpted during the last ice-age they resisted erosion resulting in high ground. The audit identified four local geodiversity sites in the Campsie Fells (East Dunbartonshire), located along the southern escarpment that include a variety of geological and geomorphological features. They are Burnhead Burn, Campsie Glen, Crow Road and Spouthead Burn and are designated as LNCS, see Appendix 1 for further information on their geodiversity value.

The Campsie Fells (East Dunbartonshire) includes a Site of Special Scientific Interest of national importance at Sculliongour Limestone Quarry, of importance due to its lowland calcareous grassland, see Appendix 1 for details. There are LNCS of ecological interest at Campsie Glen, Fin Glen, Meikle Reive, Spouthead, Woodburn Reservoir and Craigbarnet which include watercourse, woodland, cliff/scree, wet heath/acid grassland and standing water habitat interest. The RPS 2009, Review of LNCS surveyed these sites, with the exception of Craigbarnet, and included a conditions assessment for each site, see Appendix 1 for details. The Dunbartonshire Local Biodiversity Action Plan also contains habitat action plans for blanket bog peatland, rivers burns and marginal habitats and woodland, all of which are present in the Campsie Fells. The semi natural ancient woodland includes Fin Glen (16 hectares), Campsie Glen (8.2ha), and Woodburn (7.8ha).

Cultural Heritage

Peter McGowan Associates, 2006, Survey of Historic Gardens ad Designed Landscapes in East Dunbartonshire provides an overall assessment of the significance of sites at Campsie Glen & Craigbarnet, which lie in and adjacent to the Campsie Fells, see Appendix 1 for details. The Campsie Glen is a romantic natural glen enhanced for its picturesque or sublime qualities and a long established visitor destination of regional importance. Craigbarnet has high local value as a designed landscape that continues to feature prominently in the local landscape.

There are two Scheduled Monuments in the Campsie Fells (East Dunbartonshire) Maiden Castle Motte & Bailey, Meikle Reive Fort, further details can be found on Historic Scotland website. The Clachan of Campsie Conservation Area lies to the south of the Campsie Fells and includes St Machan's Church ruin & Churchyard. Another local feature of interest is Jamie Wright's Well on the Crow Road.

Clachan of Campsie

Pyramidal Orchid, Species of Interest in the Campsie Fells

Recreational Interests

The Campsie Fells are an accessible landscape for outdoor recreation for residents of East Dunbartonshire and the wider Glasgow area and tourism. The Campsie Glen and its waterfalls in particular has been a visitor attraction for over a century. The Crow Road provides access to the hills and Carron/ Endrick Valleys to the north for touring vehicles, cyclists and walkers, with a good viewpoint at a car park north east of Campsie Glen. The hills are readily accessible on foot from Clachan of Campsie, Lennoxtown and Milton of Campsie and a network of core paths runs nearby, including:

- The John Muir Way, opened in 2014, a nationally important long distance path which follows a disused railway line and the Forth and Clyde canal, from Twechar to Kirkintilloch. This route runs through the rural, farming landscapes of the Glazert Water and River Kelvin valleys with views onto the dramatic south face escarpments and cliffs of the Campsie Fells.
- The Campsie Glen and Fin Glen.
- A circular footpath to Lairs hill, Cort Ma Law and Lecket Hill, used by hillwalkers of all ages. After a steep climb this route follows the edge of an escarpment of the Campsie Fells with great views to complete a horsehoe taking in the summit of Cort-ma Law. From these summits and the further higher core of the Campsie Fells an accessible feeling of remoteness can be experienced.
- A publicised route combines Dumgoyne in Stirling Council area with a moorland ramble to Earl's Seat, which borders East Dunbartonshire, with extensive views north.

3.0 Glazert Valley LLA Statement of Importance

3.1 Landscape Overview

The productive Glazert Valley contrasts with the dramatic volcanic range of the Campsie Fells to the north. The candidate LLA extends from the Stirling Council Boundary in the west to the western settlement edge of Milton of Campsie in the east, and includes the southern slopes of the Campsie Fells in the north as well as Craigend Muir and Lennox Forest in the south. The valley is part of the wider landscape setting of Lennoxtown, Milton of Campsie, Clachan of Campsie and Haughhead.

The special qualities of the valley include:

- its distinctive intact broad valley form;
- varied land use;
- varying views, from internal views following the meander of the Glazert Water to dramatic views of the surrounding hills; and
- valued outdoor recreation resources.

Glazert Valley, looking east from John Muir Way near Craigend Farm (259031,678780)

3.2 Landscape Description

Landscape Context

Approximately 7.5 km long and up to 3 km wide the Glazert Valley lies in contrast to the volcanic Campsie Fells to the north and elevated Craigend Muir and Lennox Forest in the south. The valley is widest in the east narrowing to the west, with a distinctive flat valley floor and steep valley sides. Settlement in the valley has developed in relation to historic water-dependant bleach works and mills. A number of settlements are situated along the valley floor, including Clachan of Campsie, Haughhead, and the larger villages of Lennoxtown and Milton of Campsie. Both the Glazert Valley and the Campsie Fells are important to the wider landscape setting of these settlements. Outside of the main settlements there are scattered farmsteads and occasional lodge houses, cottages and more modern dwellings.

Landform

The landform of the Glazert Valley is underlain with gravel, formed thousands of years ago by rivers produced from melting glaciers. Landform is steeper in the north where the farmed valley slopes meet the foothills of the Campsie Fells. Landform to the south rises more gradually to a high point of 231 m above sea level within Lennox Wood. The main watercourses within the valley include the narrow Glazert Water and its tributaries the Pow Burn in the west, and Finglen Burn and Kirk Burn flowing down from the Campsie Fells.

Landcover

This is a productive valley with a mixed landcover of agricultural land at lower elevation and areas of extensive woodland and rough grazing leading to open moorland at higher elevation, such as on Craigend Muir in the south west. Pastoral farmland is situated along the valley floor, with occasional areas of arable land and rough grazing on the valley sides. Field size varies but is generally rectilinear and bound by a mix of gappy hedgerows, hedgerow trees, stone walls or post and wire fencing. Areas of rough grazing at higher elevation to the north are regularly bound with dry stone walls giving a distinctive character to the transition between farmed slopes and foothills, particularly in the west.

The valley has a strong structure of broadleaf woodland and coniferous forestry. Wooded areas include the extensive plantation at Lennox Forest, and riparian woodland hugging the Glazert Water and Heron Burn. Much of the woodland within the Glazert Valley is associated with historic estates.

Aesthetic Qualities and Perceptions

The Glazert Valley is an attractive, farmed and settled landscape contrasting with the steep slopes of the Campsie Fells. The primary land uses of farmland and woodland provide a varied texture and pattern. Colours of the Glazert Valley include greens, yellows and browns with areas of broadleaf woodland providing a range of seasonal colours.

The Glazert Valley is readily accessible with the A891 road running through its centre, and by a number of walking and cycle routes, including core paths. Views out vary from contained views along the valley floor to more open views from higher ground across the valley and towards the surrounding hills. Notable vistas seen from lower elevation include sequential views along the John Muir Way with the Campsie Fells dominating views to the north. From the elevated Lennox Castle there are views east along the Campsie Fells and north into Campsie Glen. The Kilsyth Hills are also visible to the north-east from the area west of Milton of Campsie. The ruins of the category A listed Lennox Castle and High Kirk of Campsie, Lennoxtown, are landmarks in the valley.

The valley is overlooked by the Campsie Fells and visible from its summits and south facing slopes including the popular scenic route of the Crow Road. The Glazert Valley is part of the wider landscape setting of a number of settlements. It is visible from transport routes such as the A891 which connects Strathblane (Stirlingshire) in the west with Milton of Campsie in the east.

The Glazert Valley in autumn, looking west from the Crow Road viewpoint above Campsie Glen (261283,680068)

Farmland and mature trees seen from Campsie Road (263436,676273)

Landscape Character

The Glazert Valley contains three Landscape Character Types (LCTs) as defined in the Glasgow and the Clyde Valley Landscape Assessment (LUC, 1999). These are the Rugged Moorland Hills LCT, Broad Valley Lowland LCT and Drumlin Foothills LCT. The key characteristics, features and qualities of these LCTs are noted below:

Rugged Moorland Hills

- distinctive upland character created by the combination of elevation, exposure, rugged landform, moorland vegetation and the predominant lack of modern development;
- these areas share a sense of apparent naturalness and remoteness which contrasts strongly with the farmed and developed lowland areas; and

- presence of archaeological sites on hilltops and sides.

Broad Valley Lowland

- wide, flat-bottomed valley;
- presence of waterbodies, wetlands and rivers;
- transport routes and settlements along the valley sides;
- transition from arable to rough grazing from the valley floor to the high valley sides;
- historic sites and communication routes along the valley sides; and
- presence of farm and policy woodland.

Drumlin Foothills

- distinctive undulating landform created by glacial deposition subsequently modified by fluvial erosion;
- area of transition from lowland areas to the Rugged Moorland Hills;
- dominance of pastoral farming in lower parts of the hills, giving way to areas of moorland vegetation in more elevated and exposed areas; and
- combination of semi-natural woodlands along incised burns, farm woodlands, small conifer plantations and, along the northern edge of the hills, more extensive areas of mixed and coniferous woodland.

1.1 The Glazert Valley mainly falls within the Broad Valley Lowlands LCT with fringes of the Rugged Moorland Hills LCT in the north and Drumlin Foothills LCT in the south.

3.3 Special Landscape Qualities of Glazert Valley

The special landscape qualities of Glazert Valley that justify its selection as a LLA are its distinctive broad valley landform, contrasting views in relation to elevation and a diverse range of land uses and recreational opportunities. These qualities are set out below.

Broad Valley Landform

- Distinctive intact broad valley with relatively flat valley floor, flood plain and steep sides.
- The valley floor and sides provide part of a varied landscape setting for Clachan of Campsie, Haughhead, Lennoxtown and Milton of Campsie.

Contrasting Views

- Dramatic elevated views into and across the valley from the southern foothills of the Campsie Fells in the north, and from areas near Lennox Castle in the south.

- Sequential views experienced along the valley floor and towards the paddocks, moorland and woodlands along the valley sides, from the A891 and John Muir Way.
- Enclosed views within the gorge of Campsie Glen, with its mature deciduous woodland and waterfalls.

Land use and Recreation

- A variety of land use including small farms with their small fields enclosed by hedges, as well as mixed coniferous and deciduous woodlands historically related to designed landscapes, notably Lennox Castle and Campsie Glen.
- The John Muir Way and a network of core paths provide access to the visitor attractions of Clachan of Campsie and the Campsie Glen, and the higher ground in the Campsie Fells, Lennox Forest, and Lennox Castle woodlands.

3.4 LLA Boundary

The western boundary of the Glazert Valley is formed by the local authority boundary. The northern boundary follows the southern boundary of the Campsie Fells LLA, and is based mainly on land cover, with farmland and broadleaved woodland being part of the Glazert Valley, and coniferous plantation and moorland being part of the Campsie Fells LLA. The eastern boundary follows the Spouthead Burn which flows south into Cowies Glen, before following the western settlement boundary of Milton of Campsie. The southern boundary includes the high ground that frames the valley, including the ridge of high drumlins at Redmoss near Milton of Campsie, and the summit of Mounthuillie further west. The large village of Lennoxtown, including the committed development sites on the former Lennox Castle estate, have been excluded from the LLA. The designation washes over smaller settlements of Clachan of Campsie and Haughhead.

These boundaries have been selected to define the enclosed valley of the Glazert Water that exhibits the special qualities noted above.

3.5 Landscape Change

- Expansion of woodland planting on valley floor and sides, for example around Clachan of Campsie and Lennoxtown.
- Flooding along the Glazert Water and its tributaries, and flood management measures that may include wetland restoration or woodland planting.
- Ongoing management of Lennox Forest, a productive forest with cycles of felling and restocking.
- The effects of climate change may bring about pressures on woodland and other native vegetation, and plant diseases may affect characteristic species such as Ash.
- Continued house building on the adjacent development site, allocated for housing, at the former Lennox Castle Hospital which is visible from the Crow Road and elsewhere in the valley.

3.6 Summary of designations and interests

The Glazert Valley has a wide range of natural, cultural heritage and recreational interests which are valued locally and regionally and provide a setting for outdoor recreation and tourism. These interests are summarised below.

Natural Heritage

The East Dunbartonshire Geodiversity Audit (British Geological Survey, 2011) noted that the Glazert Valley has been physical shaped by glacial and subsequent river processes over the last two million years. The audit identified five local geodiversity sites within the Glazert Valley. From east to west these include Gallow Hill, part of the Crow Road, Baldow, Campsie Glen and Pattie's Bught.

Within the Glazert Valley are a number of LNCSs including Spouthead, Ashenwell Dams, Meikle Reive, Alloch Dam & Mount Dam, Red Moss Grasslands, Balgrochan Marsh, Glazert Wood, part of Campsie Glen, part of Finniescroft, Lennox Forest, and Craigmaddie Muir/Craigend Muir.

Areas of woodland including parts of Lennox Forest are also identified on the Ancient Woodland Inventory (AWI).

Cultural Heritage

The Survey of Historic Gardens and Designed Landscapes in East Dunbartonshire (Peter McGowan Associates, 2006), provides an overall assessment of the significance of sites within the Glazert Valley. The LLA includes all or part of seven designated Gardens and Designed Landscapes as listed below:

- Craigbarnet;
- Lennox Castle, which includes the category A listed Lennox Castle, currently roofless and fenced off;
- Ballencleroch;
- Campsie Glen;
- Whitefield Dam;
- Glorat House; and
- Baldoran & Mount Dam.

Scheduled Monuments include the Maiden Castle motte & bailey and Meikle Reive fort located in the north-west of the valley. Clachan of Campsie is a Conservation Area. The High Kirk of Campsie, Lennoxtown is a category A listed building and local landmark, currently roofless.

Recreational Interests

The Glazert Valley is an important outdoor recreational resource and wider tourist attraction. Clachan of Campsie is a well visited village and there are a number of cycle and walking routes in the vicinity. These include:

- The John Muir Way (Route Section 3 Strathblane to Kilsyth), which runs along the valley floor and at points runs adjacent to the Glazert Water;

- A network of core paths provides connectivity in the eastern part of the area with access to the Campsie Fells, Campsie Glen and Lennox Wood; and
- Sustrans National Cycle Route 755, an 8 mile route known locally as the 'Strathkelvin Railway Path' that runs from Kirkintilloch to Strathblane.

The Glazert Water from near Glen Road (261546,678688)

The Glazert Water and John Muir Way from near Craigend Farm (259031,678780)

4.0 Bardowie, Baldernock and Torrance LLA Statement of Importance

4.1 Landscape Overview

The characteristic drumlin landscape of Bardowie, Baldernock and Torrance extends from Craigmaddie Muir in the north to the Kelvin Valley in the south and from Milngavie in the west to Torrance in the east. The area around Dougalston is part of the setting of Milngavie.

The special qualities of the area include:

- its distinctive topography of hummocks and hollows;
- high standards of land management;
- strong historical character; and
- long distance rural and urban views typical of the area.

Parts of the Dougalston - Torrance area are recognised through designation as local Gardens and Designed Landscapes, Scheduled Monuments, locally designated Conservation Areas and other natural heritage designations.

Undulating drumlin farmland seen from Craigmaddie Road (258329,673862)

Elevated views towards Greater Glasgow from minor road at Craigmaddie Muir (258994,675839)

4.2 Landscape Description

Landscape Context

The area is approximately 5 km long and up to 3.3 km wide. The rural setting of the area is distinctive from other parts of East Dunbartonshire due to its strongly rolling relief. A network of minor roads (often single track) connects historic settlements within a well-managed farmed landscape overlooked by open moorland to the north. The landscape forms part of the wider setting of Milngavie and Torrance and other urban areas are visible from it at a greater distance, including Bearsden, Bishopbriggs, Kirkintilloch/Lenzie and the greater Glasgow area. The landscape is also of importance to the setting of the smaller historic settlements of Baldernock and Bardowie. Outside of these settlements are a number of well-spaced hamlets and detached residence and farmsteads.

Landform

The landform of the Bardowie, Baldernock and Torrance area is underlain in part by Lawmuir Formation, Limestone, Carboniferous Sills and Limestone Coal formation, in contrast with the Kelvin Valley to the south which is mostly underlain by relatively soft sedimentary rock. The landscape of pronounced drumlins was formed over millions of years through glaciation and deglaciation processes. The landform rises from south to north with a high point of 218 m above sea level at Blairskaith Muir. There are a number of waterbodies and watercourses within the area including Bardowie Loch (popular for water sports) and Dougalston Loch, both in the western part of the area. A number of watercourses flow down towards the Allander Water in the south-west and the Kelvin Valley in the south-east, notably the Craigmaddie Burn.

Landcover

The area has generally high standards of land management with a mixed land use of productive agriculture, woodland and areas of open moorland at higher elevation. Farmed areas include arable and pastoral fields with some equestrian enclosures. Field pattern is mostly rectilinear but of varying size and orientation. Field boundaries are well defined by hedgerow, stone walls and post and wire fencing. Fields are interspersed with numerous woodlands and trees, from distinctive individual specimens, to plantations, strips, shelter belts and tree lined field boundaries. Wooded areas are mostly comprised of broadleaf tree species with a number of plantations associated with historic estates.

Aesthetic Qualities and Perceptions

The Bardowie, Baldernock and Torrance area has an attractive rural setting with undulating farmland interspersed with woodland and backed by Craigmaddie Muir. The colours of the area include greens, yellows and browns with more muted colours on the moorland at Craigmaddie Muir. Brighter colours are found in spring and summer provided by wildflowers dotted along connecting roads and paths. Pockets of broadleaf woodland provide autumn colour.

The drumlin landscape creates a series of ever changing views often contained by landform at lower elevations. When visible the backdrop of the Campsie Fells is within views to the north. Conversely elevated positions near Craigmaddie Muir provide long distance views south across Glasgow. These locations provide a dynamic contrast between the immediate rural setting and distant urban form. Vertical lattice towers supporting overhead lines are a regular detracting feature crossing the landscape to the south.

The area is visible from parts of the A807 which forms the southern boundary of the area. There are views into the area from the elevated Craigmaddie Reservoir to the west. The landscape is also visible from parts of the Glasgow conurbation.

Landscape Character

The Bardowie, Baldernock and Torrance area contains two Landscape Character Types (LCTs) as defined in Glasgow and the Clyde Valley Landscape Assessment (LUC, 1999). These are the Drumlin Foothills LCT and the Broad Valley Lowland LCT. The key characteristics, features and qualities for these LCTs are noted as:

Drumlin Foothills

- distinctive undulating landform created by glacial deposition subsequently modified by fluvial erosion;
- area of transition from lowlands areas to the Rugged Moorland Hills;
- dominance of pastoral farming in lower parts of the hills, giving way to areas of moorland vegetation in more elevated and exposed areas; and
- combination of semi-natural woodlands along incised burns, farm woodlands, small conifer plantations and, along the northern edge of the hills, more extensive areas of mixed and coniferous woodland.

Broad Valley Lowland

- wide flat bottomed valley;
- presence of waterbodies, wetlands and rivers;
- transport routes and settlements along the valley sides;
- transition from arable to rough grazing from the valley floor to the high valley sides;
- historic sites and communication routes along the valley sides; and
- presence of farm and policy woodland.

Bardowie, Baldernoc and Torrance mainly falls within the Drumlin Foothills LCT. Part of the south of the area lies within the Broad Valley Lowland LCT.

Baldernock Parish Church and churchyard (257711,675048)

3.3 Special Landscape Qualities of Bardowie, Baldernock and Torrance

The special landscape qualities of the Bardowie, Baldernock and Torrance area that justify its selection as a LLA are the unique drumlin landform, variety of views, a high standard of land management and recreational opportunities. These qualities are set out below.

Drumlin Landform

- Characteristic undulating drumlin landform.
- Provides part of the wider landscape setting of small farms and designed landscapes for Milngavie and Torrance, and the historic villages of Bardowie and Baldernock.

Variety of Views

- Open long distance vistas of Glasgow to the south from a number of elevated positions within the area, notably Craigmaddie Muir.
- Localised series of views across the drumlin landscape often contained by landform at lower elevations and longer distance views of the backing Campsie Fells.

Landuse and Recreation

- Well managed small farms with varying size and orientation of fields.
- Historical features include the large boulders at the Auld Wives' Lifts, also of archaeological interest, Bardowie Castle, the historic villages of Baldernock and Bardowie, and the category A listed Factor's House and its grounds at Dougalston.
- Bardowie Loch used for watersports, core paths at Dougalston Golf Course and into the countryside north of Balmore and Torrance.

3.4 LLA Boundary

The western boundary follows the eastern edge of the settlement of Milngavie and the A81 as it runs below Craigmaddie Reservoir. The northern boundary follows minor roads, forestry edges and the ridge of high ground at Craigmaddie Muir and Blairskaith Muir. The eastern boundary follows a minor road between Glenwhapple and the north and western edge of Torrance. The southern boundary skirts Bargeny Hill and follows the northern edge of Balmore before joining the A807 which it follows until reaching the A81 at Milngavie.

3.5 Landscape Change

- Changing agricultural practices, which may affect hedgerows and field patterns in the area.
- The conversion of redundant traditional agricultural buildings into dwellings.
- The effects of climate change may bring about pressures on woodland and other native vegetation, and plant diseases may affect characteristic species such as Ash.
- Pressures for land use change may include forestry expansion and other uses such as extension of golf courses or utilities infrastructure.

3.6 Summary of designations and interests

The Bardowie, Baldernock and Torrance area has a wide range of natural, cultural heritage and recreational interests which are valued locally and regionally and provide a setting for outdoor recreation. These interests are summarised below.

Natural Heritage

The East Dunbartonshire Geodiversity Audit (British Geological Survey, 2011) noted that the area has been physical shaped by a process of glaciation and deglaciation over the last two million years. The audit identified five local geodiversity sites which lie either wholly or partially

within the Bardowie, Baldernoc kand Torrance area. From east to west these include Craigend Glen, Barraston Quarry, Blairskaith Quarry, Bardowie Loch and the Auld Wives' Lifts.

Also within the area are a number of LNCSs including Barraston Quarry Grasslands, Glen Orchard/Blairnile Wood, Blairskaith Quarry, Craigmaddie Muir/Craigend Bardowie Loch and Wetland and Dougalston Estate and Loch. There are also LNCS at Tower Burn and Bargeny Hill, identified in this Planning Guidance

Areas of woodland, including parts of Dougalston Estate, Glenorchard House and an area to the north-east of Bankwell Farm, are also identified on the Ancient Woodland Inventory (AWI).

Cultural Heritage

The Survey of Historic Gardens and Designed Landscapes in East Dunbartonshire (Peter McGowan Associates, 2006), provides an overall assessment of the significance of sites within the Bardowie, Baldernock and Torrance area. There are three within this LLA:

- Dougalston, including the category A listed Factor's House;
- Bardowie Castle, including the category A listed castle; and
- Glenorchard House

There are two Conservation Areas at Baldernock and Bardowie. There are also two Scheduled Monuments in the area: a dun at Kettlehill; and a cairn at High Blochairn. The undesignated Auld Wives' Lifts are made up of three large boulders each with unique carvings of archaeological interest. Speculation as to the formation and carvings on the rocks continues today.

Recreational Interests

The Bardowie, Baldernock and Torrance area is of recreational importance to neighbouring urban areas including Milngavie and Kirkintilloch. The main recreational interests within the area include:

- The Auld Wives' Lifts form an accessible feature on Craigmaddie Muir;
- Bardowie Loch in the west of the area is a centre for watersports;
- A network of core paths provides connectivity around Dougalston and with the wider area in the west and a number of routes in the east; and
- A number of golf courses within the area include Dougalston and Balmore.

Mature trees around Bardowie Loch from Craigmaddie Road (258329 673862)

Bardowie Loch from Craigmaddie Road / A807 (258394,673514)

5.0 Bar Hill LLA Statement of Importance

5.1 Landscape Overview

Prominent Bar Hill lies approximately 6 km north-east of Kirkintilloch and 500 m east of Twechar. The town of Kilsyth lies approximately 2.5 km to the north-west and the village of Croy lies directly east of the hill within North Lanarkshire. Bar Hill is an important feature in the wider landscape setting of these towns and villages. The Forth and Clyde canal runs to the north.

The special qualities of the area include:

- its distinctive rounded hill;
- strategic views out over the surrounding landscape;
- provision of setting to urban areas;
- significant historical monuments; and
- a diversity of woodland including specimen trees, shelter belts and larger woodlands.

Rounded Bar Hill Seen from the B8023 / Forth and Clyde Canal (269221,675650)

Views from Bar Hill looking north-west towards the Campsie Fells (270711,675990)

5.2 Landscape Description

Landscape Context

Bar Hill provides part of the wider landscape setting of settlements within the eastern part of East Dunbartonshire including Twechar, and settlements within North Lanarkshire particularly Cumbernauld, Croy, Kilsyth and Queenzieburn. The highest point of Castle Hill (155 m above sea level) provides wide and open views north and west along the Kelvin Valley to the Campsie Fells and Kilsyth Hills beyond. Views south and east are contained by landform and woodland. From Bar Hill Roman Fort, views are filtered by the open sycamore tree canopy which provides a distinctive setting with prospect and refuge. Elsewhere views out of the landscape are framed by woodland. The Forth and Clyde Canal runs to the north of Bar Hill, alongside the flat flood plain associated with the River Kelvin.

Landform

The landform of Bar Hill is underlain by hard rock with layers of limestone, coal seams and sandstone. Remnants of mining on Bar Hill include a number of disused quarries, now overgrown, including Twechar Quarry in the west and disused Castle Hill Quarry at the summit. Bar Hill has a distinctive rounded shape rising above the Kelvin Valley. Water features include the River Kelvin and Forth and Clyde Canal to the north and the smaller Broad Burn to the south.

Landcover

The landcover of the hill comprises large irregular shaped woodland punctuated by pockets of open farmland. The colours of the hill include greens, yellows and browns: in spring and summer wild flowers brighten the muted colours; and in autumn broadleaved woodland provides seasonal colour. Woodland on the northern slopes contains a variety of species of different maturity and density. Strone Plantation to the north-east comprises mostly mature broadleaf species with occasional groups of conifers. Tree planting within the Roman Fort area comprises a well-spaced canopy of sycamore trees, underlain by mown grassland and archaeological remains. South of the Roman Fort tree species are again broadleaf but less mature. Barhill Wood extends from Castle Hill across the southern slopes of the hill, a large component of the woodland is Forestry Commission plantation. Parts of the woodland to the south-east have recently been felled and restocked. Pockets of arable farmland divide the woodland and comprise small to medium sized fields with an irregular to rectilinear field pattern bounded by degraded hedgerows, post and wire fencing and woodland.

Aesthetic Qualities and Perceptions

Bar Hill is easily accessible with excellent views out from the hill. Castle Hill offers wide and open views north and west over the surrounding valley and hills beyond. The Roman Fort offers views framed and filtered by tree planting. Other glimpsed views are found through gaps in woodland and along the Antonine Wall. East of Castle Hill there are glimpsed views along the ridge to Croy Hill, across which the Antonine Wall continues.

Bar Hill is important in views in from the surrounding settlements of Twechar within East Dunbartonshire and Croy, Cumbernauld, Kilsyth and Queenzieburn in North Lanarkshire.

Landscape Character

Within the boundary of Bar Hill LLA there are two Landscape Character Types (LCTs), defined in the Glasgow and the Clyde Valley Landscape Assessment (LUC, 1999). These are the Broad Valley Lowland LCT and the Rolling Farmland LCT. The key characteristics, features and qualities for these LCTs are noted below:

Broad Valley Lowland

- wide flat bottomed valley;
- presence of waterbodies, wetlands and rivers;
- transport routes and settlements along the valley sides;
- transition from arable to rough grazing from the valley floor to the high valley sides;
- historic sites and communication routes along the valley sides; and
- presence of farm and policy woodland.

Rolling Farmland

- distinctive undulating landform created by fluvio-glacial action;
- dominance of pastoral farming, varying in productivity according to elevation and exposure; and
- importance of woodland in structuring the landscape and providing shelter for agriculture and rural settlement.

Barhill mainly falls within the Rolling Farmland LCT with lower ground to the north within the Broad Valley Lowland LCT.

5.3 Special Landscape Qualities of Bar Hill

The special landscape qualities of Bar Hill that justify its selection as a LLA are its distinctive rounded landform, dramatic views and a diverse range of landscape and historical features. These qualities are set out below.

Distinctive Rounded Landform

- Distinctive rounded landform rising above the Kelvin Valley and the urban areas and farmlands to the north.
- Provides part of the wider landscape setting of East Dunbartonshire, particularly the settlement of Twechar, as well as Kilsyth, Queenzieburn and Croy in North Lanarkshire.

Dramatic Views

- Open panoramic outward views from Castle Hill to the north and west out across the Kelvin Valley to the Campsie Fells and Kilpatrick Hills.
- Filtered and framed views from the Roman Fort site.

- Sequential views experienced across the hill through gaps in woodland, across farmland and along the Antonine Wall, including glimpsed views east from Castle Hill along the ridge to Croy Hill.
- Sequential views from the curving stretches of the Forth and Clyde Canal up to the woods and open areas along the northern flank of the hill.

Diversity of Landscape and Historical Features

- A unique sense of place is experienced within the Bar Hill Roman Fort site with an attractive composition of archaeological features set in mown grass with specimen trees.
- Beyond Castle Hill to the east, the distinctive undulations of the Antonine Wall lie between broadleaf woodland to the north and coniferous woodland plantation to the south.
- Diverse deciduous and mixed woodland of varying maturity and species.

Remains of the fort at Bar Hill (270711,675990)

Bar Hill from Queenzieburn, North Lanarkshire (269681,677524)

5.4 LLA Boundary

The northern and eastern boundaries are formed by the North Lanarkshire local authority boundary. The southern boundary follows a road, field boundaries and the edge of an industrial site. The western boundary is formed by Twechar Main Street.

These boundaries have been selected to define the prominent, isolated Bar Hill, enclosing the area that exhibits the special qualities noted above.

5.5 Landscape Change

- Most of the woodland on the hill is own by Forestry Commission Scotland, and is managed as a recreational resource. The long term management of other woodlands may be less secure.
- The Frontiers of the Roman Empire (Antonine Wall) World Heritage Site and the associated archaeology are an important resource as well as an attraction to the area.
- The effects of climate change may bring about pressures on woodland and other native vegetation, and plant diseases may affect characteristic species such as Ash.
- Several brownfield allocated housing development sites, industrial areas and former quarries are located around the fringes of the area, and their reuse or restoration may alter the outlook from the hill.

5.6 Summary of Designations and Interests

Bar Hill has a wide range of natural and cultural heritage and recreational interests which are valued locally and regionally and provide a setting for outdoor recreation and tourism. These interests are summarised below.

Natural Heritage

The East Dunbartonshire Geodiversity Audit (British Geological Survey, 2011) noted the rocky hill has been physical shaped by the work of ice sheets and cycles of glaciation and deglaciation over the last two million years. The audit identified two local geodiversity sites on Bar Hill: Castle Hill Quarry (a disused quartz-dolerite quarry); and Twechar Quarry (a disused quartz-microgabbro quarry).

The woodland cover on Bar Hill is designated locally as Barhill LNCS. Large parts of the woodland including parts of Barhill Wood are also identified on the Ancient Woodland Inventory (AWI).

Cultural Heritage

The Antonine Wall is a World Heritage Site and is designated as part of the trans-national Frontiers of the Roman Empire. The World Heritage Site has a buffer zone which encapsulates the immediate setting of the Antonine Wall and important views.

There are three Scheduled Monuments within the area, covering the Antonine Wall and associated features. Bar Hill is also listed in the Survey of Historic Gardens and Designed Landscapes in East Dunbartonshire (Peter McGowan Associates, 2006), which provides an overall assessment of the significance of the designed landscape.

Recreational Interests

Bar Hill is an important outdoor recreational resource and wider tourist attraction. The Antonine Wall and Roman Fort is a recognised visitor attraction. The B8023 and Forth and Clyde Canal provide access to the area. Recreational routes include:

- The John Muir Way (Route Section 3 Strathblane to Kilsyth), which here splits in two with a walking path over the Antonine Wall and a lower path for cyclists (running parallel to the Forth and Clyde Canal) to avoid the protected Bar Hill archaeological site;

- Core paths follow those noted above as part of the John Muir Way with a third core path leading from Twechar in the east into Barhill Wood; and
- Sustrans National Cycle Route 754, which starts on Route 7 and uses the towpath of the Forth and Clyde Canal from Bowling, through north Glasgow, to the Falkirk Wheel; and then the Union Canal towpath (joining Route 75) into the heart of Edinburgh.

Well at Bar Hill Roman Fort (270745,675947)

Annex F: Further Information on Sites of Special Scientific Interest (SSSI) and Local Nature Conservation Sites (LNCS)

Table A – SSSI in and Adjacent to East Dunbartonshire and their Notified Natural Features

Site Code	**Name**	**Council Area**	**Notified Natural Features**	**Area (hectares)**
1127	Manse Burn, Bearsden	East Dunbartonshire	Geological: Palaeontology: Permian/Carboniferous Fish/Amphibia	1.75
281	Cadder Wilderness, Bishopbriggs	East Dunbartonshire	Biological: Woodlands: Lowland mixed broadleaved woodland Biological: Invertebrates: Invertebrate assemblage	40.01
1449	Southbraes, Lennoxtown	East Dunbartonshire	Biological: Fens: Fen meadow Biological: Lowland grasslands: Lowland acid grassland	32.65
403	Corrie Burn, Queenzieburn	East Dunbartonshire and North Lanarkshire	Geological: Stratigraphy: Lower Carboniferous [Dinantian - Namurian (part)]	11.5
1414	Sculliongour Limestone Quarry, Lennoxtown	East Dunbartonshire	Biological: Lowland grassland: Lowland calcareous grassland	3.9
1210	Mugdock Woods /Drumclog, Milngavie	East Dunbartonshire and Stirling	Biological: Woodlands : Upland oak woodland Woodlands : Wet woodland Lowland heathland : Lowland dry heath Lowland heathland : Lowland wet heath Freshwater habitats : Mesotrophic loch Invertebrates : Beetle assemblage	168.92
122	Balglass Corries	Stirling	Geological: Igneous Petrology, Carboniferous – Permian Igneous Biological : Upland habitats, Blanket bog, Upland assemblage	268.7 hectares
125	Ballagan Glen	Stirling	Geological: Stratigraphy, Lower Carboniferous [Dinantian – Namurian (part)] Biological: Woodland: Upland mixed ash woodland	6.81 hectares
313	Carbeth Loch	Stirling	Biological: Freshwater habitats: Mesotrophic loch: Fens: Open water transition fen	9.94 hectares
426	Craigallian Marshes	Stirling	Biological: Fens: Flood-plain fen	8.17 hectares
552	Dumbrock Loch Meadows	Stirling	Biological: Lowland grassland: Lowland neutral grassland	27.58 hectares
1310	Possil Marsh	Glasgow	Biological: Freshwater habitats: Mesotrophic loch	31.31 hectares
1177	Mollinsburn Road Cutting	North Lanarkshire	Geological: Igneous petrology: Carboniferous-Permian Igneous	1.53 hectares

Table B - LNCS With Biodiversity Interest

Name of Site	Location	LNCS Reference Number, *(B= Biodiversity).*	Grassland (G)	Heathland and Peatland (H&P)	Watercourse (Wa)	Standing Water and Wetland (SW&We)	Woodland including scrub, hedgerow and/or Trees (W)	Core Path On Site (CP)	Notable Species Recorded. These include Protected Species and LBAP Priority Species and/or Species of Conservation Concern. *Note – any records of badgers are excluded for their protection.*
Allander Water	Milngavie	B21	Y		Y		Y	Y	Soprano Pipistrelle, Otter, Atlantic Salmon, Brook Lamprey
Alloch Dam & Mount Dam	Milton of Campsie	B75	Y			Y	Y	Y	Tawny Owl, Kingfisher
Almeel Burn	Clachan of Campsie, Lennoxtown	B64	Y	Y	Y	Y	Y		Otter, Skylark
Antermony Loch	Milton of Campsie	B53	Y		Y	Y	Y	Y	Otter, Barn Owl, Snipe, Reed Bunting, Sand Martin
Ashenwell Dams	Milton of Campsie	B76	Y			Y	Y	Y	Broadleaved Helleborine, Common Toad, Kingfisher

Name of Site	Location	LNCS Reference Number	G	H&P	Wa	SW &We	W	CP	Notable Species Recorded.
Auldmurroch Burn and Woods	Milngavie	B1	Y		Y	Y	Y	Y	Otter, Roe Deer
Balgrochan Marsh (Geelong Gardens Wetlands)	Lennoxtown	B72	Y		Y	Y	Y	Y	Jack Snipe, Snipe, Barn owl
Balmore Haughs	Balmore	B31	Y		Y	Y	Y	Y	Greylag Goose, Whooper Swan, Tree Sparrow, Skylark, Yellowhammer, Fieldfare, Brown Hare, Yellow Hammer, Pink Foot Goose, White-Fronted Goose
Barbeth Moss	Cumbernauld	B53	Y		Y	Y	Y		Bog-Rosemary, Round-Leaved Sundew, Brown Hare, Common Snipe
Bardowie Loch and Wetland	Bardowie	B13	Y		Y	Y	Y		Daubenton's Bat, Greylag Goose
Bardowie Woodland	Bardowie	B14					Y	Y	Bluebell, Pipistrelle Bat
Bar Hill	Twechar	B53	Y		Y	Y	Y	Y	Pine Marten, Devil's-Bit Scabious. Green Woodpecker, Green Hairstreak Butterfly
Bargeny Hill	Torrance	B93	Y			Y	Y		Roe Deer, Greater Butterfly Orchid, Yellow Rattle, Yellowhammer, Reed Bunting, Barn Owl, 6 Spot Burnet Moth, Small Pearl Bordered Fritillary, Common Blue Butterfly
Barloch Moor	Milngavie	B95	Y		Y	Y	Y	Y	Roe Deer, Long-Tailed Tit, Sparrowhawk, Dipper
Barraston Grasslands	Torrance	B28	Y		Y	Y	Y	Y	Currently no survey information on notable species.

Name of Site	Location	LNCS Reference Number	G	H&P	Wa	SW &We	W	CP	Notable Species Recorded.
Barraston Quarry Grasslands	Torrance	B26	Y		Y	Y	Y	Y	Adders-Tongue Fern, Devil's-Bit Scabious, Greater Butterfly Orchid, Brown Hare, Grasshopper Warbler, Reed Bunting, Yellowhammer, Common Toad, Great Crested Newt, Smooth Newt, Palmate Newt, Cinnabar Moth, Odonata sp.
Birdston Meadows	Milton of Campsie	B84	Y			Y	Y		Currently no survey information on notable species.
Bishopbriggs to Croy Mainline Railway Corridor	East Dunbartonshire	B41	Y				Y		Roe Deer, Teal
Blairskaith Quarry	Baldernock	B24	Y		Y		Y	Y	Great Crested Newt, Lesser Pond-Sedge, Common Toad, Palmate Newt, Common Newt, Green Woodpecker, Common Blue Butterfly
Bothlin Burn	Lenzie	B88	Y		Y		Y	Y	Otter, Water Vole, Kingfisher, Sand Martin, Swallow, Orange-Tip Butterfly
Bridgend Marshes	Kirkintilloch	B48	Y		Y	Y	Y		Curlew, Lapwing
Broomhill Ox-Bow Lake & Broomhill Hospital Marsh	Kirkintilloch	B46	Y		Y	Y	Y	Y	Roe deer, Common Hawker, Cinnabar moth,
Buchley Farm	Bishopbriggs	B15	Y			Y	Y		Greylag goose, Snipe, Shoveler
Buchley Sand Pit	Bishopbriggs	B32	Y			Y	Y		Currently no survey information on notable species.
Cadder	Bishopbriggs	B38	Y			Y	Y	Y	Swift, Bombus spp.

Name of Site	Location	LNCS Reference Number	G	H&P	Wa	SW &We	W	CP	Notable Species Recorded.
Cadder Yard	Bishopbriggs	B42	Y	Y		Y	Y	Y	Common Lizard, Small Copper Butterfly, Small Heath Butterfly
Cairnhill Woods	Bearsden	B100					Y	Y	Broadleaved Helleborine
Campsie Glen	Clachan of Campsie, Lennoxtown	B70	Y	Y	Y		Y	Y	Pipistrelle Bat, Bluebell, Dipper, Wood Anemone, primrose
Campsie Glen Golf Course	Lennoxtown	B71	Y				Y		Roe deer, Great Crested Newt
Carbeth Wood	Milngavie	B2	Y		Y	Y	Y		Yellow Rattle, Odonata spp.
Carlston Farm Wetlands	Torrance	B97	Y			Y			Branched Bur-reed
Castle Hill Grasslands	Bearsden	B9	Y			Y	Y	Y	Currently no survey information on notable species.
Cawder Golf Course Woods	Bishopbriggs	B37	Y		Y	Y	Y	Y	Roe Deer
Craigbarnett	Clachan of Campsie, Lennoxtown	B65			Y		Y		Roe deer, Grey Heron
Craigdhu Wedge	Milngavie	B17	Y		Y		Y	Y	Water Vole, Greater Butterfly Orchid, Wood Anemone, Yellow Rattle
Craigmaddie and Mugdock Reservoirs (and Tannoch Loch)	Milngavie	B11	Y		Y	Y	Y	Y	Otter, Great-Crested Grebe, Kingfisher, Greylag Goose, Tree Sparrow, Goosander, 6 Spot Burnet Moth, Pignut, Goldeneye, Greater Butterfly Orchid, Greater Spotted Woodpecker, Tawny Owl, Bullfinch, Roe Deer.

Name of Site	Location	LNCS Reference Number	G	H&P	Wa	SW &We	W	CP	Notable Species Recorded.
Craigmaddie Muir/Craigend Muir/Blairskaith Muir	Baldernock	B23, B66	Y	Y	Y	Y	Y	Y	Meadow Pipit, Skylark, Adder, Common Lizard, Heath Spotted Orchid, Round-Leaved Sundew, Lungwort, Bog Asphodel, Sphagnum spp
Craigmaddie Plantation	Baldernock	B22				Y	Y		Pine Marten, Black Grouse, Green Woodpecker
Craigmore Mire	Milngavie	B3		Y		Y	Y		Meadow Pipit, Skylark, Adder, Common Lizard
Craigton Woods	Milngavie	B5					Y	Y	Pipistrelle Bat, Broad-Leaved Helleborine
Dougalston Estate and Loch	Milngavie	B12	Y		Y	Y	Y	Y	Daubenton's Bat, Common Frog, Common toad
Douglas Muir	Milngavie	B6		Y	Y	Y	Y		Peregrine Falcon
East Balgrochan Farm	Torrance	B98	Y			Y	Y		Odonata sp.
Easterton Woods, including Moss Plantation	Twechar	B61	Y	Y	Y	Y	Y	Y	C – could we separate the woods and moss (2015 survey)?
Easterton Moss Plantation	Twechar	B60	Y	Y		Y	Y		NA
Fin Glen	Clachan of Campsie, Lennoxtown	B65	Y		Y	Y	Y		Yellow Rattle
Finniescroft	Lennoxtown	B27	Y		Y	Y	Y	Y	Otter, Hen Harrier, Merlin
Forth and Clyde Canal	East Dunbartonshire	B43	Y		Y	Y	Y	Y	Otter, Water Vole, Kingfisher, Reed Bunting, Goosander

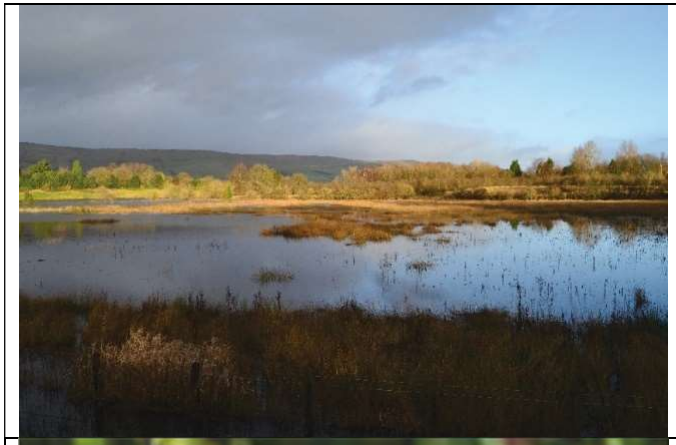
Name of Site	Location	LNCS Reference Number	G	H&P	Wa	SW &We	W	CP	Notable Species Recorded.
Gartshore Moss and Grayshill Woods	Cumbernauld	B55, B56, B57		Y	Y	Y	Y		Adders-Tongue Fern, Snipe, Skylark, Grasshopper Warbler, Lapwing
Gartshore Woods, Kennel Plantation, Heronryhill	Twechar	B54	Y		Y	Y	Y	Y	Cranberry, Skylark
Glasgow to Milngavie Railway Corridor	East Dunbartonshire	B96	Y				Y		Willow Warbler, Whitethroat, Sedge Warbler, Lesser Redpoll
Glazert Water	Lennoxtown, Milton of Campsie	B85	Y		Y	Y	Y	Y	Otter, Brown Trout, Atlantic Salmon
Glazert Wood	Lennoxtown	B69	Y		Y	Y	Y	Y	
Glen Orchard/Blairnile Wood	Balmore	B25	Y		Y	Y	Y	Y	Green Woodpecker, Barn Owl, Greater Butterfly Orchid, Yellow Rattle, Common Blue Butterfly, Greater Spotted Woodpecker
Harestanes	Kirkintilloch	B47	Y			Y	Y		Greater Butterfly Orchid, Otter, Barn Owl, Fieldfare, Redwing
Hayston Oxbows	Kirkintilloch	B44	Y		Y	Y	Y	Y	Common Toad, Common Frog, Otter, Teal, Mallard, Great Heron, Reed Bunting
High Moss Plantation	Bishopbriggs	B40		Y	Y	Y	Y		Common Frog, Green Hairstreak Butterfly, Common Snipe, Lapwing, Woodcock, Round-Leaved Sundew, Sphagnum spp.
Hutcheson Hill	Bearsden	B8	Y		Y	Y	Y		Meadow Pipit, Reed Bunting
Kierhill	Queenzieburn	B80	Y		Y	Y	Y		Tawny Owl
Kilmardinny Loch Local	Bearsden	B18			Y	Y	Y	Y	Otter, Greater Spotted Woodpecker, Broad-Leaved Helleborine, Tufted Duck,

Nature Reserve (LNR1)									
Name of Site	**Location**	**LNCS Reference Number**	**G**	**H&P**	**Wa**	**SW &We**	**W**	**CP**	**Notable Species Recorded.**
Langbank	Milngavie	B16	Y				Y		Otter, Greylag Goose, Chiffchaff, Blackcap
Lennox Forest	Lennoxtown	B67	Y			Y	Y	Y	Brown Hare, Skylark, Yellowhammer, Small Pearl-Bordered Fritillary Butterfly, Crossbill, Great Crested Newt
Lenzie	Lenzie	B90	Y				Y		Pine marten, Great Crested Newt, Palmate Newt, Black Grouse, Grasshopper Warbler, Green Hairstreak Butterfly, Small Pearl-Bordered Fritillary, Common Blue Butterfly
Lenzie Moss LNR2		B65	Y	Y	Y	Y	Y	Y	Green Hairstreak Butterfly, Round-leaved Sundew, Meadow Pipit, Sphagnum spp, Barn Owl, Snipe, Bog Rosemary
Low Moss Plantation	Bishopbriggs	B39				Y	Y		Round Leaved Sundew, Skylark, Meadow Pipit, Cranberry, Green Hairstreak Butterfly
Luggie Water	Kirkintilloch	B88	Y		Y		Y	Y	Otter, Kingfisher, Reed Bunting, Sedge Warbler, Yellowhammer
Mains Plantation	Bearsden	B7	Y		Y	Y	Y	Y	Roe Deer, Skylark, Meadow Pipit, Bluebell
Manderston	Torrance	B91	Y			Y	Y		Pipistrelle Bat
Meikle Reive	Lennoxtown	B73		Y		Y			Peregrine Water Vole, Barn Owl, Reed Bunting, Common Frog
Merklands LNR3	B62		Y			Y	Y	Y	Otter, Water Vole, Common Lizard, Jack Snipe, Short-Eared Owl, Skylark, Reed Bunting, Odonata spp.

Name of Site	Location	LNCS Reference Number	G	H&P	Wa	SW &We	W	CP	Notable Species Recorded.
Millersneuk Wetland, Lenzie	Lenzie	B64	Y			Y	Y		Devil's-Bit Scabious, Common Lizard, Geostiba Armata, Snipe, Barn Owl, Water Vole
Mugdock Woods and Drumclog	Milngavie	B10	Y	Y	Y	Y	Y	Y	Bluebell, Broad-Leaved Helleborine
Oxgang (Woodilee Hospital Woods)	Lenzie	B63	Y		Y	Y	Y	Y	Greater Butterfly Orchid, Roe Deer, Barn Owl, Fieldfare, Redwing, Grasshopper Warbler, Six-spot Burnet Moth
Pow Burn	Clachan of Campsie	B101	Y		Y		Y	Y	Broadleaved helleborine
Redmoss Grasslands (North)	Milton of Campsie	B86	Y		Y	Y	Y	Y	Roe Deer,Greater Butterfly Orchid, Ragged Robin, Barn Owl
Redmoss Grasslands (South)	Milton of Campsie	B94	Y			Y	Y		Yellow rattle, Lesser Butterfly Orchid
River Kelvin	East Dunbartonshire	B30	Y		Y	Y	Y	Y	Otter, Kingfisher, Atlantic Salmon, Sea Trout, Mallard
Rookery Plantation/Old Ammunition Dump	Bishopbriggs	B34,B35,B36	Y		Y	Y	Y	Y	Adders-Tongue Fern, Lesser Butterfly Orchid, Greater Butterfly Orchid.
South Brae Marsh	Lennoxtown	B68	Y				Y		Curlew, Golden Ringed Dragonfly, Greater and Lesser Butterfly Orchids

Name of Site	Location	LNCS Reference Number	G	H&P	Wa	SW &We	W	CP	Notable Species Recorded.
South east part of Hilton Park golf course	Milngavie	B4	Y			Y	Y		Peregrine, Tawny Owl, Barn Owl, Linnet, Bullfinch
Spouthead	Milton of Campsie	B77	Y	Y	Y	Y	Y	Y	NA
Springfield Marsh	Kirkintilloch	B45	Y		Y	Y	Y		Currently no survey information on notable species.
St. Germains Loch	Bearsden	B19	Y			Y	Y	Y	Common Shrew
Templehill Wood	Bearsden	B20	Y			Y	Y		Snipe, Jack Snipe, Common Frog
Tower Farm/ Tower Burn	Torrance	B89	Y		Y	Y	Y	Y	Otter, Daubenton's Bat, Barn Owl, Lesser Butterfly Orchid
West Balgrochan Grassland	Torrance	B102	Y				Y		Lesser Butterfly Orchid, Brown Hare, Snipe, Ragged Robin, Greater Trefoil
West Balgrochan (Torrance) Marsh	Torrance	B29	Y		Y	Y	Y		Barn Owl, Bat, Snipe, Reed Bunting, Jack Snipe, Whitethroat, Stonechat, Common Frog, Marsh Violet.
Twechar Marshes	Twechar	B50, B51	Y		Y	Y	Y		Roe Deer, Snipe, Lapwing, Teal, Mallard, Brown Hare
Waterside Bing	Waterside	B59			Y		Y		Common Toad
Waterside Flood Pool and Barbeth Pool	Cumbernauld	B92	Y		Y		Y		Skylark, Barn Owl, Snipe
Waterside Moss	Kirkintilloch	B99	Y	Y					Marsh Violet, *Sphagnum spp.*

Wilderness Woods (west & east)	Bishopbriggs	B33	Y			Y	Y	Y	Roe Deer, Brown Hare, Brown Trout, Common Toad
Woodburn Reservoir & Glen	Milton of Campsie	B78	Y		Y	Y	Y	Y	Tawny Owl, Kingfisher



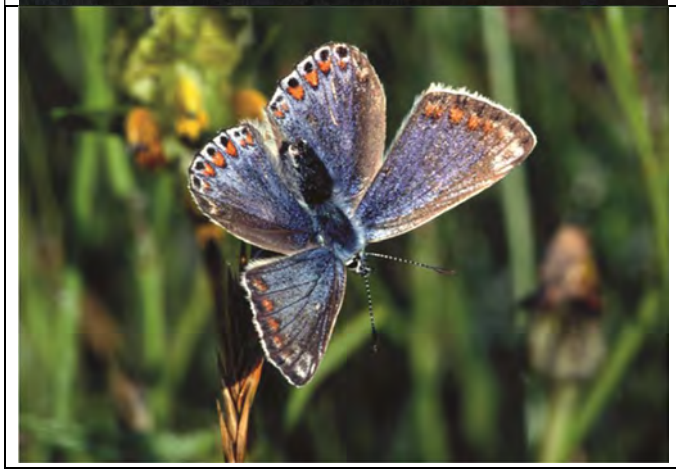


Table C - LNCS With Geological Interest

Name of Site	Location	LNCS Reference Number, *(G = Geodiversity)*	Geodiversity Value *Notes on Geodiversity Value are taken from the BGS Geodiversity Audit.*
Auld Wives' Lifts , Craigmaddie Muir	Baldernock	G14	An excellent site displaying a variety of sedimentary and glacial features. However, the main value of this site probably lies with its associations with local industry (millstone quarrying), archaeology (chambered tombs) and folklore (Auld Wives Lifts).
Baldernock Mill	Baldernock	G28	The main value of this site is the presence of a transgressing sill, a feature rarely so well exposed. The mill adjacent to the site is a good historical/cultural link.
Baldow Glen	Lennoxtown	G34	Access is a limiting factor (from informal bike trail) but ok for looking at lithologies described under education
Bardowie Loch	Bardowie	G6	Although neither lochs nor drumlins are rare features in the area, Bardowie Loch is a very good example of a flooded inter-drumlin hollow. However the main value of the site lies below the water, where the likely presence a continuous sequence of sediment on the loch floor could provide an important insight into how the local environment has changed from the last glaciation to the present day .Its geodiversity value is enhanced as it is a good example of a flooded inter-drumlin hollow and its potential for future research
Barraston Quarry, Barraston Farm	Torrance	G12	There are few places in East Dunbartonshire where such a large volume of mudstone has been removed/ processed as seen at this site. Although the remaining quarry faces are much degraded and access is poor to this site, valuable information about our industrial past can be gained from this locality. However, the main value of this site is how a disused quarry left to nature can over time create a valuable habitat for wildlife.
Bishopbriggs No2 Gravel Pit	Torrance	G33	Former sand and gravel quarry where woolly rhinoceros bone was found. All faces now degraded and overgrown. No exposures remain. Locality mainly of historical importance because of bone find, but current site geodiversity value lessened by the lack of visible quarry faces and overgrown nature of the site.

Name of Site	Location	LNCS Reference Number	Geodiversity Value
Blairskaith Quarry, Blairskaith	Baldernock	G13	The main value of this site is the diverse range of sedimentary rock types, fossils and structures which can be observed here. Visitors of any age and geological expertise will find something of interest here, the exposures are safe, specimens are numerous and varied, and the site has good access. An excellent site.
Board Craig Quarry	Twechar	G3	Geologically this site displays a good section through the middle part of a thick quartzmicrogabbro intrusion, combined with being used as a local resource and the great view to the Campsie Fells.
Burniebrae Burn , Shields Farm	Milton of Campsie	G21	The main value of this site is the high quality and number of sections exposed up the burn, through a variety of sedimentary and igneous rocks, and the well-exposed nature of the Campsie Fault. In particular, the exposures of the Limestone Coal Formation are important in the East Dunbartonshire context.
Campsie Glen	Clachan of Campsie, Lennoxtown	G19	Excellent site, the main value of which lies in the wide variety of geological features displayed up the Glen. Access to the site and lower parts of the glen is very good and already popular with visitors and geologists. There are ample opportunities to enhance existing information with some geology.
Castle Hill Quarry	Twechar	G2	The main value of this site is the historical associations. The quartz-microgabbro sill has formed high ground which has been used by the Romans to build a major defensive wall, 63km long, across Scotland. There are also great views from the top along the Kelvin valley and towards the Kilsyth Hills where the relationship between the landscape and the underlying geology can be explored.
Cowies Glen	Milton of Campsie	G20	The main value of this site is the variety of sedimentary rocks and structures visible up the glen. The exposures of Upper Limestone Formation are particularly useful in representing this part of the Carboniferous succession. Some of these geological features are of a high quality or rarely exposed in East Dunbartonshire. However the site's value for geoconservation is currently lessened by unfriendly access

Name of Site	Location	LNCS Reference Number	Geodiversity Value
Craigangawn Quarry	Milngavie	G26	This site displays excellent sections through a number of igneous intrusions, revealing not only their composition, but also their structure and geometry. Most importantly it exposes sections in one of the few volcanic vents in East Dunbartonshire. The quality of these exposures would be difficult to match regionally.
Craigen Glen , Balgrochan	Torrance	G30	This site displays a number of sedimentary features and industrial remains and is one of only a few localities where the marine band (Craigenglen Beds) is exposed. Historically the site was first visited by Glasgow Geological Society in 1858 and was famous then for its fossils of marine shells.
Crow Road	Lennoxtown	G18	An excellent site displaying a variety of geological and geomorphological features. The main value of this site is the rare outcrops of essexite, and how, due to their distinctive appearance, they have been used to determine ice-flow patterns of a much younger geological event.
Douglas Muir Quarry	Milngavie	G23	This site provides the best exposures and is the type locality for the Douglas Muir Conglomerate Member. The current operators (Tarmac Ltd) are additionally willing to discuss leaving key areas of some quarry faces accessible following extraction for the purpose of geoconservation, so future visitors may access and learn from the site. One such face would be the one facing south–west above the silt lagoon in the eastern part of the quarry. This face displays excellent channel features. This site's geodiversity value would be enhanced if the current or any other operator leaves conservation sections after cessation of working.
East Mugdock Quarry, by Mugdock Reservoir	Milngavie	G27	The main value of this site is the number of different features it exposes. Not only of the rocks and their structures but tool-marks of this quality are rare in East Dunbartonshire, and the sandstone was likely used for constructing local buildings connected with the reservoir.
Finniescroft Wood	Lennoxtown	G16	The main value of this site is the presence of the Hurlet Limestone, this unit was extensively worked across the Central Scotland and surviving exposures are rare.
Gallow Hill	Milton of Campsie	G15	The site displays 'hummocky' ground, composed of sand and gravel deposits, and formed in an ice-contact environment during the last glaciation. The site is further enhanced by the modern river features produced by the Glazert Water adjacent to Gallow Hill.

Name of Site	Location	LNCS Reference Number,	Geodiversity Value
Glenwynd	Torrance	G35	Good for links between the bedrock geology and the former exploitation of their minerals. At least one shaft and one adit location can be seen with little risk, if sensible.
Inchbelle Quarry	Kirkintilloch	G29	The sand and gravel deposits exposed in this site are an important part of East Dunbartonshire's glacial history. Many similar quarries existed in the past but almost all are now degraded and overgrown.
Kilmardinny Loch	Bearsden	G8	Although neither lochs nor drumlins are rare features in the area, Kilmardinny Loch is a good example of a flooded inter-drumlin hollow. However, the main value of the site is that the fact that it is located within the urban environment and could be used as an example of the glacial features and deposits created in the area during the last glaciation and developed to inform residents about their local geological history. Its geodiversity value is enhanced on account of its accessible location.
Linn of Baldernock, Blairskaith	Baldernock	G25	An excellent site, displaying a variety of geodiversity features, including a good geological section through an igneous intrusion, a variety of sedimentary rocks, an excellent (and accessible) example of stoop and rooms workings, and on top of that some superb speleothem 'formations' within the old workings which must be some of the best in Scotland.
Manse Burn	Bearsden	G10	The significance of this site has already been recognised in designating it a SSSI. The site is of major international importance for its Carboniferous age fossils. Fossil fish of this age (approximately 330 Ma) are rare throughout the world, the Bearsden sharks have exceptional preservation and eleven new bony fish species have been found here. The quality and variety of the Carboniferous assemblage found at this site is unrivalled worldwide. However the site's value for geoconservation is currently lessened by dumping, litter, erosion, over-collecting and natural overgrowth
Meltwater Channel, Cadder	Bishopbriggs	G5	Meltwater channels record the retreat of the last glaciers following a period of glaciation. They illustrate the youngest event in the geological history of the area. Although there are many examples across Scotland, this type of landform is relatively rare in East Dunbartonshire and this site displays one of the best examples. Its geodiversity value is enhanced on account of its relative rarity in East Dunbartonshire.

Name of Site	Location	LNCS Reference	Geodiversity Value
Pattie's Bught, Craigend Muir	Lennoxtown	G17	This site displays some excellent specimens of plant material. However, the main value of the site is the fact that it retains many features of quarrying which are normally lost; you can see evidence for the way quarrymen extracted the stone, worked the stone, transported the stone and then you can look at the railway bridges along the Blane Valley Railway Line to see the final product and application of the stone.
River Kelvin Meanders	Bearsden	G7	This site displays characteristic erosional and depositional river features found in the lower course of a mature river. Although common across Central Scotland, examples of good sized meanders are relatively rare in East Dunbartonshire. The main value of the site is to use these fluvial deposits and landforms which are actively forming today and representative of river landforms forming across Scotland to help us understand the structures and sediments observed in fossil river deposits from the Carboniferous which underlie extensive areas of the Midland Valley. As Charles Lyell summarised in the 1830's "The present is the key to the past". In the absence of locally active glaciers or volcanoes, rivers are a good example to illustrate the important geological principle of uniformitarianism, explaining that the same natural processes that operate now, have always operated in the past, and at the same rates. Its geodiversity value is enhanced on account of its relative rarity in East Dunbartonshire.
Roman Baths	Bearsden	G24	This site clearly displays Bearsden's long-standing link between geology and the built environment. Romans appeared to have used the local sandstone for construction of the baths. The site additionally displays how the nature of the stone has determined how and where it is used; thicker-bedded stone, which produced blocks which were used for the construction of walls, whereas thinner-bedded stone was carefully extracted in sheets and used as slabs on the floor. Chisel marks still visible on original stones. Its geodiversity value is enhanced on account of its link with archaeology (Scheduled Ancient Monument) and accessible location.
Spouthead Burn, Spouthead Farm	Milton of Campsie	G22	The main value of this site is the presence of the felsite intrusion and the cementstone beds belonging to the Ballagan Formation.

Name of Site	Location	LNCS Reference	Geodiversity Value
Lenzie - Torphichen Dyke	Lenzie	G4	Of the several east-west trending dykes which traverse across East Dunbartonshire this site best reveals the composition and the influence of such igneous intrusions on the present day landscape.
Torrance Meanders	Torrance	G36	Most comparable rivers in the Central Belt have been straightened or artificially confined. Although many do have similar remnant meanders, this is certainly the best example in East Dunbartonshire. (Broomhill 'Oxbow' in Kirkintilloch is more degraded, and bisected by the upraised Council office site; a remnant meander at Cadder is also degraded and incorporated into a golf course development.) Whereas the River Kelvin Meanders (Bearsden) site demonstrates active processes, this Torrance Meanders site is quite distinct as it is an inactive relict of a lost river regime. The geodiversity value of this site is enhanced by its rarity and particular potential for helping local people understand changing land-use on the floodplain.
Twechar Quarry	Twechar	G1	Although there are numerous disused quarries in East Dunbartonshire within the Midland Valley quartz-dolerite sills and dykes, Twechar quarry is one of the few to expose the top or base of an intrusion. The nature of the contact between the igneous intrusion and the baked sedimentary rocks it intruded can be examined in the quarry and typical field characteristics observed.
West Mugdock Quarry, Mugdock Country Park	Milngavie	G11	This site is a typical example of the small sandstone quarries which are scattered across East Dunbartonshire, and most likely used for material to build the dry-stone walls which criss-cross the countryside. However, the main value of the site is its location within Mugdock Country Park and the opportunity this opens up for informing large number of visitors about their local geology in general; how it influences the shape of our landscape, creates wildlife habitats, and contains raw materials which attracted people to settle in the area and industries to develop nearby.
Wilderness Plantation	Bishopbriggs	G31	This site is the type locality for the Wilderness Till Formation, a glacial deposit which stretches across much of Central Scotland. Glaciotectonic structures at and around the contact between the till and the underlying sand and gravel worthy of re-excavation and academic research. As a site with a dated woolly rhinoceros bone it is also important in the understanding of Quaternary ice age events in central Scotland.

Natural Environment

Planning Guidance 2018

sustainable thriving achieving
East Dunbartonshire Council
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