



Agenda Item 8

**Falkirk Local Development Plan –
Supplementary Guidance SG08 –
Local Nature Conservation and
Geodiversity Sites**

Falkirk Council

Title: Falkirk Local Development Plan – Supplementary Guidance
SG08 – Local Nature Conservation and Geodiversity Sites

Meeting: Executive

Date: 29 November 2016

Submitted By: Director of Development Services

1. Purpose of Report

- 1.1 The purpose of this report is to seek approval for Supplementary Guidance note 'SG08 Local Nature Conservation and Geodiversity Sites'.

2. Recommendation

- 2.1 The Executive is invited to finalise 'SG08 Local Nature Conservation and Geodiversity Sites', including modifications in response to consultation as detailed in Appendix 2, and agree its submission to Scottish Ministers for final approval.**

3. Background

- 3.1 The Planning etc. (Scotland) Act 2006 gives planning authorities the power to adopt statutory Supplementary Guidance (SG) which becomes part of the Development Plan. Previously, 'supplementary planning guidance' produced by Falkirk Council has been non-statutory and not part of the Development Plan, acting as a material consideration in the determination of planning applications. Under the new legislation statutory SG has enhanced status and hence more weight in the decision-making process. It is therefore important that the Executive reviews the content of SG08.
- 3.2 On 25 February 2014 the Executive authorised officers to prepare and undertake consultation on the seventeen SG notes referred to in Falkirk's Local Development Plan (LDP). It was agreed that the outcome of these consultations and the proposed content of the finalised SGs would be reported back to the Executive on an on-going basis.
- 3.3 Fifteen SGs have already gone through their statutory consultation process, with the results of consultation and recommendations reported to the Executive. Fourteen of these SGs have now been approved by Scottish Ministers, adopted by the Council and form part of the Development Plan. The fifteenth has been sent to Scottish Ministers and awaits approval.
- 3.4 The latest SG to be prepared is SG08 on Local Nature Conservation and Geodiversity Sites. The consultation draft is attached as Appendix 1. This has now gone through its statutory consultation process and is being brought back to the Executive for consideration.
- 3.5 Once SG08 is finalised it will be submitted to the Scottish Ministers for approval. At the same time the Council must also send Scottish Ministers a

statement setting out the publicity measures they have undertaken, the comments received and an explanation of how these comments have been taken into account. After 28 days have elapsed the authority may adopt the Supplementary Guidance unless Scottish Ministers have directed otherwise. At that point the supplementary guidance forms part of the Development Plan and assumes the same status as the LDP for decision making.

4. Considerations

- 4.1 SG08 provides guidance on the definition and conservation value of the Council's suite of locally designated Wildlife Sites, Sites of Importance for Nature Conservation and Geodiversity Sites. It clearly describes the assessment and designation process that these sites undergo.
- 4.2 The SG sets out the policies and guidance which underpin the locally designated sites system and afford protection to locally designated sites.
- 4.2 The SG includes statements for each of the Council's 62 existing Wildlife Sites and 24 existing Sites of Importance for Nature Conservation. These statements provide details of site location and size; highlight the key features of importance at each site; provide a brief site description and summary of the site's nature conservation interest; and indicate conservation and enhancement opportunities for each site.
- 4.3 The SG also includes brief statements for 9 'Potential Wildlife Sites', 2 'Potential Sites of Importance for Nature Conservation' and 3 'Potential Geodiversity Sites'. The formal designation of these new sites will be undertaken as part of the LDP2 process.

5. Consultation

- 5.1 Over 64 key agencies, organisations and individuals were notified by letter or email of the commencement of the consultation process and the availability of Consultative Draft SG08 on the Council website. Copies of SG08 were also deposited at Council Offices (Abbotsford House & the Municipal Buildings), all Council Libraries and One Stop Shops.
- 5.2 Consultation took place over a 6 week period between 26 August 2016 and 7 October 2016. Responses were received from 18 organisations or individuals consisting of:
 - Central Scotland Green Network Trust (CSGNT)
 - Falkirk Community Trust
 - Forestry Commission
 - Scottish Water
 - Historic Environment Scotland
 - Scottish Natural Heritage
 - British Geological Survey
 - North Lanarkshire Council
 - I & H Brown
 - Persimmon Homes
 - Mike Browne (Geologist)
 - 6 private landowners
 - 1 member of the public

- 5.3 A summary of the consultation responses and the proposed changes to Draft SG08 are included in Appendix 2.
- 5.4 The majority of consultees who responded welcomed the SG, with a few offering suggestions for improvements. Most private landowners who responded required additional information relating to the site within their landholding but had no further comment to make about the SG.
- 5.5 Two changes are proposed. These are:
- 1) Correction to text on page 9, section 3.2 to read “geological and geomorphological” rather than “ecological”; and
 - 2) Addition of a paragraph on page 2 to highlight the multiple benefits that many locally designated sites can provide, including carbon storage, natural flood management and opportunities for outdoor activity.

6. Implications

Financial

- 6.1 None

Resources

- 6.2 None

Legal

- 6.3 The requirements and procedures for the preparation of SG are set out in Section 22 of the Town & Country Planning (Scotland) Act 1997, as inserted by the Planning, etc (Scotland) Act 2006, and in the Town & Country Planning (Development Planning) (Scotland) Regulations 2008.

Risk

- 6.4 None

Equalities

- 6.5 None

Sustainability/Environmental Impact

- 6.6 The document has been screened for the requirement for Strategic Environmental Assessment. A screening was undertaken and submitted to the consultation authorities under the Environmental Assessment (Scotland) Act 2005. The consultation authorities concluded that SEA was not required.
- 6.7 SG08 will have a positive environmental impact, protecting and encouraging the enhancement of many of the areas locally important ecological and geological sites.

7. Conclusions

- 7.1 Following due consideration, SG08 will provide a helpful addition to the Council's suite of supplementary guidance. Guidance on the definition, assessment and conservation value of the Council's locally designated sites and the individual site statements will help landowners, developers and others to protect and enhance these ecologically and geologically important local areas.

Director of Development Services

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Date: 17 November 2016

Appendices

Appendix 1 - Consultative Draft SG08 Local Nature Conservation and Geodiversity Sites
Appendix 2 - Summary of consultation responses and proposed changes to Draft SG08

List of Background Papers:

The following papers were relied on in the preparation of this report in terms of the Local Government (Scotland) Act 1973:

Consultation responses to Draft SG08 Local Nature Conservation and Geodiversity Sites.

Local Nature Conservation and Geodiversity Sites

Appendix 1

Supplementary Guidance SG08 Consultative Draft



Falkirk Council
Development Services

Supplementary Guidance

A suite of supplementary guidance (SGs) is currently being produced by the Council. Most of these SGs are updated versions of previous Supplementary Planning Guidance (SPG) whilst others cover new topic areas (*denotes new SGs). There are 17 SGs in the series, all of which seek to provide more detailed guidance on how particular local development plan policies should be applied in practice.

These SGs form a statutory supplement to the Local Development Plan, and are intended to expand upon planning policies and proposals contained in the proposed plan.

A full list of the supplementary guidance available in this series is found below.

- SG01 Development in the Countryside ***
- SG02 Neighbourhood Design**
- SG03 House Extensions and Alterations**
- SG04 Shopfronts**
- SG05 Biodiversity and Development**
- SG06 Trees and Development**
- SG07 Frontiers of the Roman Empire (Antonine Wall) World Heritage Site**
- SG08 Local Nature Conservation and Geodiversity Sites ***
- SG09 Landscape Character Assessment and Landscape Designations ***
- SG10 Education and New Housing Development**
- SG11 Healthcare and New Housing Development ***
- SG12 Affordable Housing**
- SG13 Open Space and New Development**
- SG14 Spatial Framework and Guidance for Wind Energy Development**
- SG15 Low and Zero Carbon Development ***
- SG16 Listed Buildings and Unlisted Properties in Conservation Areas ***
- SG17 Renewable Energy ***

Local Nature Conservation and Geodiversity Sites

1. Falkirk Council's Local Nature Conservation Sites



2. Assessment and designation of Wildlife Sites and SINCs



3. Assessment and designation of Geodiversity Sites



4. Site Information and Monitoring



5. Site Protection and Management



6. References and Useful contacts



7. Appendices

- Appendix 1 Wildlife Site Statements
- Appendix 2 SINC Statements
- Appendix 3 Potential Wildlife Sites and SINCs
- Appendix 4 Potential Geodiversity Sites

1. Falkirk Council's Local Nature Conservation Sites

What are Local Nature Conservation Sites?

- 1.1 Local Nature Conservation Sites (LNCS) are sites which are given a non-statutory designation by local authorities in order to recognise and protect their local importance for natural heritage. The sites are selected primarily for their biodiversity or geodiversity value. A Local Nature Conservation Sites system can include a number of different site designations or names. Different site designations or names are used to distinguish sites with different types of locally important features.

Biodiversity =
the variety of all living things, including all plants, animals, habitats and ecosystems.

Geodiversity =
the variety of rocks, minerals, fossils, landforms, sediments and soils, together with the natural processes which form and alter them.

- 1.2 The main purpose of Local Nature Conservation Sites is to highlight to landowners, land managers, planners and developers where there are natural features of local importance which should be protected. As well as identifying locally important sites that require protection the system also helps to highlight key areas for environmental management and enhancement. Protecting a suite of important Local Nature Conservation Sites safeguards a vital reservoir of locally important biodiversity and geodiversity. These sites then provide a framework around which wider environmental conservation or habitat network creation can take place.

Falkirk Council's Local Nature Conservation Sites

- 1.3 Falkirk Council operates a suite of three Local Nature Conservation Site designations. These are:
- Wildlife Sites;
 - Sites of Importance for Nature Conservation (SINCs);
 - Geodiversity Sites.

1. Falkirk Council's Local Nature Conservation Sites

Wildlife Sites

- 1.4** A wildlife site is a site identified and demonstrated to be of ecological importance in the local context. It may consist of semi-natural habitat types, or be principally artificial habitats which have assumed an importance for local wildlife. The site may also have amenity and/or educational value, but these social factors are not key to its designation.

Wildlife Site designation aims to:

- Protect ecologically important sites from damaging development, through the planning process;
- Highlight the value of sites to site owners and managers, and encourage appropriate management; and
- Focus opportunities for appropriate management and enhancement towards key sites.

Sites of Importance for Nature Conservation

- 1.5** A Site of Importance for Nature Conservation (SINC) is a site identified and demonstrated to be of local importance due to its ecological value in association with its community, amenity and/or educational value. It may consist of semi-natural habitat types, or be principally artificial habitats which have assumed an importance for local wildlife. Community, amenity or educational value is demonstrated by features such as levels of informal use of the site, community or school involvement in the site, or use of the site for outdoor learning.

SINC designation aims to:

- Protect ecologically valuable sites which contribute to the quality of the local environment and provide opportunities for local people to find out about, enjoy and get involved in their local biodiversity;
- Highlight the value of sites to site owners and managers, and encourage appropriate management; and
- Focus opportunities for appropriate management, enhancement and community engagement towards key sites.

- 1.6** Wildlife Sites are designated because they are of high local ecological importance and meet specific ecological criteria. SINC's do not reach the same level of ecological importance, although they must exhibit some local ecological value. SINC's are designated because, despite having slightly lower ecological value, they also provide valuable opportunities for discovering, enjoying or learning about natural heritage and contribute to local well-being and quality of life.

Geodiversity Sites

- 1.7** A geodiversity site is a site identified and demonstrated to be of local geological importance. They represent good examples of local geodiversity features and provide opportunities for people to learn about, enjoy and understand the importance of earth heritage.

Geodiversity Site designation aims to:

- Protect locally and regionally important examples of geodiversity features, particularly those which provide opportunities for people to enjoy and find out more about earth heritage;
- Highlight the value of sites to site owners and managers, and encourage appropriate management and interpretation; and
- Focus opportunities for appropriate management, enhancement, interpretation and educational use towards key sites.

1. Falkirk Council's Local Nature Conservation Sites

Policy Context

- 1.7** Local Nature Conservation Sites have a well recognised place in the history of nature conservation in Scotland, complementing a range of statutory designations and recognising locally important features and issues.
- 1.8** During the passage of the Nature Conservation (Scotland) Bill through parliament in 2004, ministers recognised the continued relevance and importance of local nature conservation sites. Guidance was subsequently produced to help local authorities across Scotland to implement locally designated sites systems. That guidance has informed this document.
- 1.9** Scottish Planning Policy (2014) states:
“... locally designated areas and sites should be identified and afforded the appropriate level of protection in development plans. Reasons for local designation should be clearly explained and their function and continuing relevance considered when preparing plans. ...
.... local nature conservation sites should seek to accommodate the following factors:
- Species diversity, species or habitat rarity, naturalness and extent of habitat;
 - Contribution to national and local biodiversity objectives;
 - Potential contribution to the protection or enhancement of connectivity between habitats or the development of green networks; and
 - Potential to facilitate enjoyment and understanding of natural heritage.

Local nature conservation sites 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.”

- 1.10** The Falkirk Council Local Development Plan (2015) states:
“The promotion of biodiversity - the variety of life that exists on earth - is a key function of the green network. Public bodies have a duty under the Nature Conservation (Scotland) Act 2004 to further the conservation of biodiversity. An important part of this is the safeguarding of identified sites, habitats and species which are protected under national legislation, and international obligations such as the Habitats and Bird Directives. In addition, the Falkirk area has a system of non-statutory local nature conservation sites....”

Policy GN03 Biodiversity and Geodiversity (parts 4 & 5)

- 4.** Development affecting Local Nature Reserves, Wildlife Sites, Sites of Importance for Nature Conservation and Geodiversity Sites (as identified in Supplementary Guidance SG08 ‘Local Nature Conservation Sites: Biodiversity and Geodiversity’), and national and local priority habitats and species (as identified in the Falkirk Local Biodiversity Action Plan) will not be permitted unless it can be demonstrated that the overall integrity of the site, habitat or species will not be compromised, or any adverse effects are clearly outweighed by social or economic benefits of substantial local importance.
- 5.** Where development is to be approved which could adversely affect any site or species of significant nature conservation value, the Council will require appropriate mitigating measures to conserve and secure future management of the relevant natural heritage interest. Where habitat loss is unavoidable, the creation of replacement habitat to compensate for any losses will be required, along with provision for its future management.
- 1.11** To effectively conserve and enhance our biodiversity, it is essential to go beyond individual sites and create habitat networks through which species can move and in which they can thrive. Such networks tend to be more robust than individual sites, with the capacity to support a greater variety and number of species. The creation and enhancement of a green network is promoted within Falkirk Council's Local Development Plan (Policy GN01) and the Falkirk Greenspace Strategy. Local Nature Conservation Sites protect a crucial reservoir of ecologically rich habitat around which wider environmental conservation programmes and habitat network creation can be focused.

2. Assessment and Designation of Wildlife Sites and SINCs

2.1 The following is a summary of the procedure for assessing and designating Wildlife Sites and SINCs. Further details about this process are provided in “A technical guide to the assessment and designation of Wildlife Sites and Sites of Importance for Nature Conservation”.

2.2 Falkirk Council has responsibility for establishing and managing the Local Nature Conservation Sites system. Wildlife Site and SINC identification, assessment and review is undertaken by Falkirk Council but may also be informed by input from other appropriate experts and nature conservation organisations.

Key steps in the site assessment and designation process are:

- Identify a potential site;
- Gather sufficient ecological data for the site;
- Assess the site against set criteria;
- Designate the site if it meets the required criteria;
- Prepare and publish a Site Statement.

Identification of Potential Sites

2.3 Potential Wildlife Sites and SINCs may be identified at any time, and may come to light as a result of:

- Area wide surveys;
- Ad hoc site surveys (e.g. as part of a planning application);
- On the ground identification by appropriately experienced professionals (biodiversity officer, rangers, ecological surveyors, etc.); or
- Advice from members of the public followed up by a visit from an appropriately qualified professional.

Identification of a potential site is made where a visual inspection or other data provides a high expectation that the site will meet Wildlife Site or SINC standards.

Owners of potential Wildlife Sites or SINCs (where known) will be notified that their site has been identified as a ‘potential site’ and the implications of this identification.

Potential sites are surveyed and assessed as soon as resources allow. While awaiting survey, assessment and (if it meets the relevant criteria) designation, potential sites are afforded the same protection as designated Wildlife Sites or SINCs.

2. Assessment and Designation of Wildlife Sites and SINCs

Ecological Data

2.4 The minimum data required to assess a potential site is:

- A phase I habitat survey with target notes and species list;
- Details of site extent and the approximate area of each habitat type present;
- A nature conservation summary;
- A boundary map of the proposed designated site.

In addition, any other available and relevant ecological site data will also be used to inform the assessment process (e.g. fauna surveys, historical maps etc.).

Site Assessment

2.5 Site assessments are undertaken by a suitably qualified assessor (e.g. the Council's biodiversity officer or countryside ranger). They may also be informed by input from individuals with relevant interests and expertise such as:

- Council officers from both planning and environmental teams;
- Local environmental experts;
- Representatives from relevant conservation organisations;
- Representatives from statutory environmental bodies.

The importance of each potential site is assessed against set criteria and a formal record of the assessment made. A score is given for each criteria, providing a simple measure of relative quality. The overall score indicates whether a site should be designated or not.

Potential sites are assessed against the following criteria.

Ecological Criteria:

- Habitat Diversity;
- Habitat Rarity;
- Species Diversity;
- Species Rarity;
- Naturalness;
- Extent;
- Connectivity;
- Important Biodiversity Features.

Social Criteria:

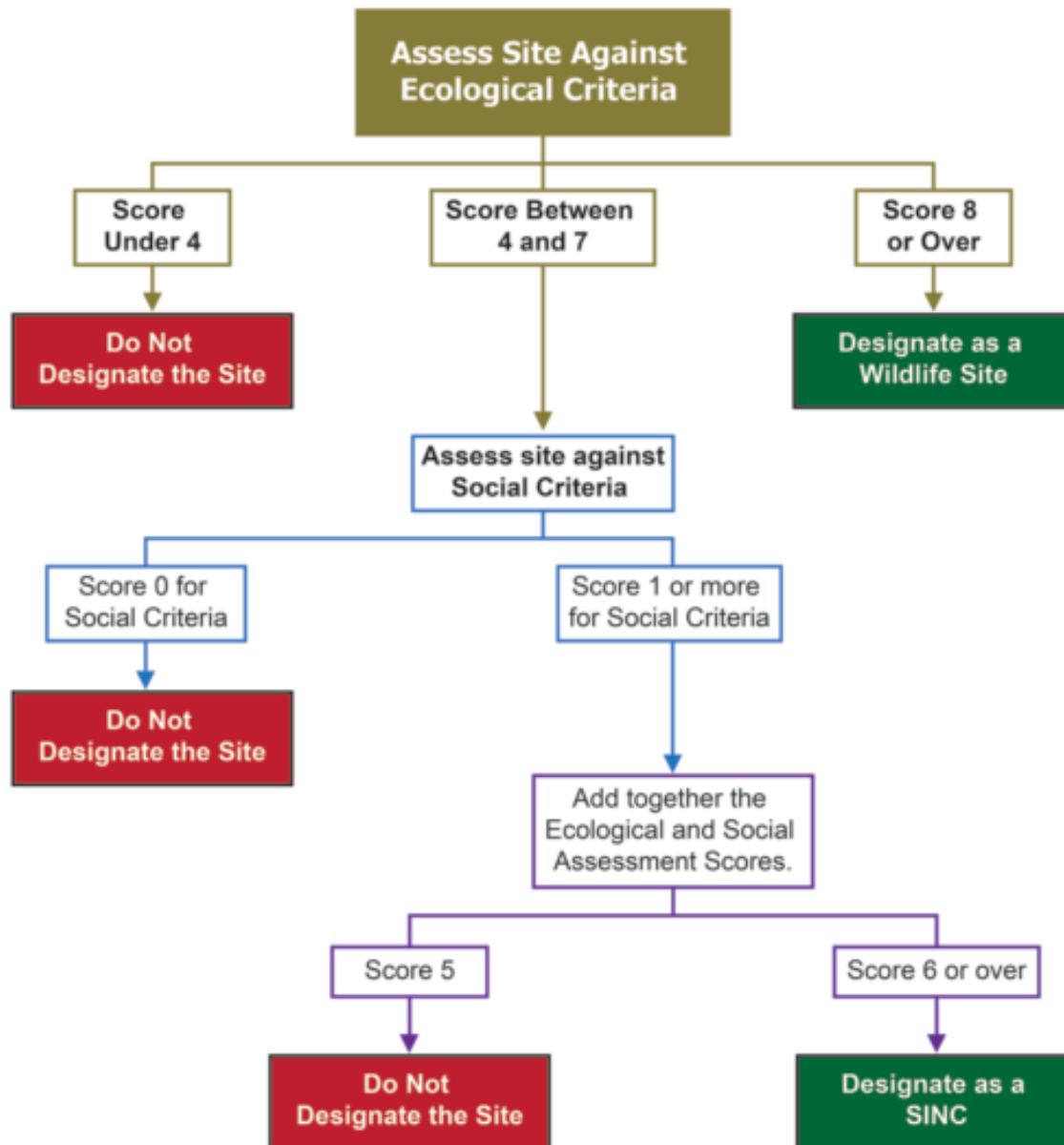
- Amenity/Community Value;
- Educational Value.

The following flow chart outlines the site assessment process for Wildlife Sites and SINCs.

Initially only the ecological criteria are considered, to determine whether a site should be designated a Wildlife Site. If a site does not meet the Wildlife Site threshold but does reach a set minimum ecological value it can go on to be assessed for SINC designation. This assessment takes into consideration social criteria as well as ecological criteria.

2. Assessment and Designation of Wildlife Sites and SINCs

Figure 1:



2. Assessment and Designation of Wildlife Sites and SINCs

Site Designation

- 2.6** Once assessed as meeting the criteria for designation, a site becomes formally designated by virtue of its inclusion in Falkirk Council's Local Development Plan. The Local Development Plan undergoes a programme of broad stakeholder and public consultation and this provides a mechanism for consultation on the proposed Wildlife Sites and SINCs.

In rare cases it may be necessary to designate (or de-designate) a Wildlife Site or SINC outwith the Local Development Plan process (for example, where a rapid assessment and designation is required to protect a site and the timescale for production of the next Local Development Plan is too long). In such cases the following designation procedure is followed:

- The landowner, if known, is notified of the proposed site designation;
- The proposal to designate the site is published on the Council's website;
- There is a public consultation period of 6 weeks;
- The designation will take effect from the end of the consultation period (unless consultation responses necessitate a reassessment of the site);
- The site is then added to an up to date list of designated sites held by Falkirk Council's Development Services.

Sites designated in this way are included in the next available Local Development Plan.

Public consultation offers the opportunity to comment on a proposed site designation, however it should be noted that a proposal to designate a site will only be reconsidered where either:

- There are grounds to indicate that the assessment of the site against one or more of the set criteria is unjustified or inaccurate; or
- Changes to the site or new data may result in a different assessment result.

3. Assessment and Designation of Geodiversity Sites

3.1 The following is a summary of the procedure for assessing and designating Geodiversity Sites. Further details about this process are provided in “A technical guide to the assessment and designation of Geodiversity Sites”, 2016, Falkirk Council.

3.2 Falkirk Council has responsibility for establishing and managing the Local Nature Conservation Sites system. Geodiversity Site identification, assessment and review are undertaken by Falkirk Council but may also be informed by input from other appropriate experts and geological conservation organisations.

Key steps in the site assessment and designation process are:

- Identify a potential site;
- Gather sufficient ecological data for the site;
- Assess the site against agreed criteria;
- Designate the site if it meets the required criteria;
- Prepare and publish a Site Statement.

Identification of Potential Sites

3.3 Potential Geodiversity Sites may be identified at any time, and may come to light as a result of:

- Area wide surveys;
- Ad hoc site surveys (e.g. as part of a planning application);
- On the ground identification by appropriately experienced professionals (rangers, geological surveyors, etc.); or
- Advice from members of the public followed up by a visit from an appropriately qualified professional.

Geological Data Required

3.4 The minimum data required to assess a potential Geodiversity Site is:

- A completed Potential Geodiversity Site survey form;
- Details of site extent and the approximate area and nature of each geodiversity feature present;
- A summary of the site’s geodiversity value;
- A boundary map of the proposed designated site.

In addition, any other available and relevant geological or geomorphological data for the site, as well as information relating to the sites history and past use, is also used to inform the assessment process.

Site Assessment

3.5 Site assessments are undertaken by a suitably qualified assessor. They may also be informed by input from other individuals with relevant interests and expertise such as:

- Council officers from both planning and environmental teams;
- Local geodiversity experts;
- Representatives from relevant conservation or geodiversity organisations;
- Representatives from statutory environmental bodies.

The importance of each potential site is assessed against set criteria and a formal record of the assessment made. An appropriate score is awarded to the site for each criterion (on a scale of 0 to 10). While there is no set score above which a site is designated, the scores awarded against each criterion allow for a comparison of local sites and their relative value, thus informing the decision whether or not to designate a site.

Potential sites are assessed against the following criteria:

- Geodiversity value;
- Education & research value;
- Cultural and/or historical value;
- Accessibility.

3. Assessment and Designation of Geodiversity Sites

Site Designation

- 3.6** Once assessed as meeting the criteria for designation, a site becomes formally designated by virtue of its inclusion in Falkirk Council's Local Development Plan. The Local Development Plan undergoes a programme of broad stakeholder and public consultation and this provides a mechanism for consultation on any proposed Geodiversity Site.

Public consultation offers the opportunity to comment on a proposed site designation, however it should be noted that a proposal to designate a site will only be reassessed where either:

- There are grounds to indicate that the assessment of the site against one or more of the set criteria is unjustified or inaccurate; or
- Changes to the site or new data may result in a different assessment result.

4. Site Information and Monitoring

Site Statement

- 4.1 For each designated Wildlife Site, Site of Importance for Nature Conservation or Geodiversity Site a Site Statement is prepared. This statement includes the following:

- Site name, designation, location and extent;
- Boundary map;
- Key features summary;
- Site description;
- Nature conservation summary;
- Conservation and enhancement opportunities.

Landowner Communication

- 4.2 Landowners and/or occupiers (where known) will be informed of the designation status of their site and of any subsequent changes to the designation status resulting from periodic monitoring and review.

For each designated site the landowner and/or occupier (where known) will be provided with a copy of the Site Statement. In addition they may also request copies of other data relating to the site such as site surveys or management plans.

Data Management

- 4.3 Ecological or geological data, site maps, the site assessment, site reviews, and site statements will be held and updated by Falkirk Council. This information will be available to members of the public upon request, although some reports or sections of reports may remain confidential to protect personal information or sensitive protected species data.

Where data is collected for a site which is subsequently assessed as not warranting designation, that data may be retained to facilitate reassessment in the future or inform other conservation work.

Monitoring and Review

- 4.4 The condition and nature of designated sites may change over time. A programme of site monitoring is in place to highlight any significant changes to a site and to inform future management requirements and opportunities.

A rolling programme of monitoring aims to check each site at least once every 10 years. However, where a site is at particular risk of significant change or is known to have experienced significant change (whether positive or negative) an earlier monitoring visit may be deemed appropriate.

A monitoring visit will identify:

- Any significant ecological or geological changes to the site since the last visit;
- Any significant changes in amenity and educational access or use;
- Any new management issues.

A site designation will only be reviewed if monitoring visits highlight significant changes which may impact on the designation of the site. Otherwise the site designation will continue unchanged.

Where resources are available additional surveys may be undertaken at specific sites, guided by recommendations within the site statement.

Site owners/occupiers (where known) will be notified of any change in the designation status of their site following monitoring and/or review.

5. Site Protection and Management

Site Protection

- 5.1** Local Nature Conservation Sites are not protected by legislation. However, they are afforded protection from damaging development through the planning process, guided by the Local Development Plan.

In addition the presence of a Local Nature Conservation Site may be considered by other organisations when making decisions which would affect the management or land use of the site. Falkirk Council encourages other organisations to take full account of Local Nature Conservation Sites within their decision making.

Site Management and Enhancement

- 5.2** While some Local Nature Conservation Sites require little or no active management to maintain their conservation value, others require on-going, active management.

It is acknowledged that Local Nature Conservation Sites may support a variety of land-uses, including recreation, agriculture, forestry and mineral extraction. Such uses often pre-date the sites designation as a Local Nature Conservation Site (sometimes by many hundreds of years) and may even have played a part in the development of the site as ecologically or geologically rich. It is important that, wherever possible, recommendations for conservation management and enhancement take full account of other existing land uses.

For each designated site the Site Statement aims to provide a brief summary of desirable conservation outcomes and recommended conservation management. These are updated at the same time as site monitoring is undertaken. In some cases, as well as conservation management, it may be appropriate to encourage sensitive recreational or educational use of a site. A number of sites have detailed management plans produced for them.

Positive conservation management of designated sites is promoted in various ways including:

- Informing site owners/managers of a site's designation and highlighting management recommendations in the site statement;
- Providing site owners/managers with other information about specific conservation management techniques or sources of further information;
- Advising site owners/managers of management schemes or conservation projects which might benefit their site;
- Passing on information about potential sources of funding to relevant site owners/managers.

In some instances designation of a site may help in securing grant funding for appropriate conservation management or enhancement work.

5. Site Protection and Management

Development and Local Nature Conservation Sites

- 5.3** The Falkirk Council Local Development Plan states that development affecting Wildlife Sites, Sites of Importance for Nature Conservation and Geodiversity Sites will not be permitted unless it can be demonstrated that the overall integrity of the site will not be compromised, or any adverse effects are clearly outweighed by social or economic benefits of substantial local importance.

Development proposals on or near to a Local Nature Conservation Site must carefully assess their likely impact on the site and its features of interest. This assessment should be based on appropriate and up to date ecological or geological survey data.

Where, in exceptional cases, development affecting a Local Nature Conservation Site is granted, protection of key elements of the site will be required. In such instances it will be essential for the developer to:

- Identify the likely impacts on the Local Nature Conservation Site;
- Identify ways of minimising negative impacts;
- Protect as much of the site as possible;
- Enhance the ecological value of the remaining site or features;
- Provide compensatory biodiversity creation or enhancement where negative impacts on key biodiversity features cannot be avoided;
- Ensure the long term value of the site by appropriate management.

Further advice on considering biodiversity within the development process is available in Supplementary Guidance note “SG05: Biodiversity and Development”.

Early discussions with Falkirk Council’s Development Management officers is always recommended to determine under what circumstances, if any, development affecting a Local Nature Conservation Site might be acceptable. Discussions can also determine the ecological or geological data and assessment likely to be required with a planning application.

6. References and Useful Contacts

References

Falkirk Council, 2015,
"Biodiversity and Development Supplementary Guidance SG05".

Falkirk Council, 2016,
"A technical guide to the assessment and designation of Wildlife Sites and Sites of Importance for Nature Conservation".

Falkirk Council, 2016,
"A technical guide to the assessment and designation of Geodiversity Sites".

RSNC, 1999,
"RIGS Handbook".

Scottish Government, 2014,
"Scottish Planning Policy".

SNH, 2006,
"Guidance on Establishing and Managing Local Nature Conservation Site Systems in Scotland".

Useful Contacts

Falkirk Area Biodiversity Officer
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Abbotsford House
David's Loan
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FK2 7YZ
Tel: 01324 504950
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Abbotsford House
David's Loan
Falkirk FK2 7YZ
Tel: 01324 504748
E-mail: dc@falkirk.gov.uk

Central Scotland Green Network Trust
Hillhouseridge
Shottskirk Road
Shotts
Lanarkshire
ML7 4JS
Tel: 01501 822015
E-mail: contact@csgnt.org.uk

Scottish Natural Heritage (SNH)
Silvan House
3rd Floor East
231 Corstorphine Road
Edinburgh
EH12 7AT
Tel. 0131 316 2600
E-mail: forth@snh.gov.uk

Scottish Wildlife Trust
Harbourside House
110 Commercial Street
Edinburgh
EH6 6NF
Tel: 0131 312 7765
E-mail: enquiries@swt.org.uk

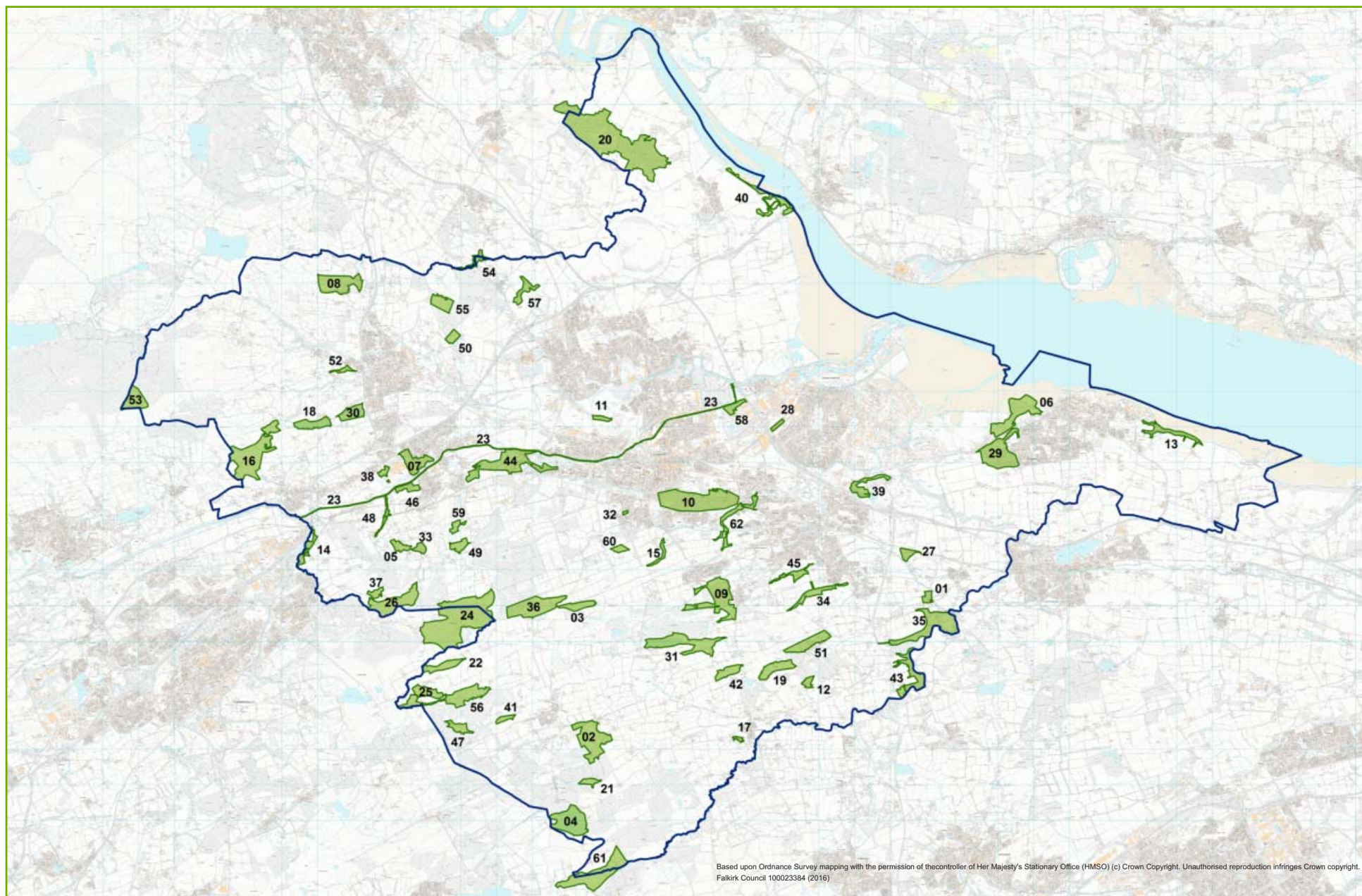
7. Appendix 1 Site Statements : Wildlife Sites

List of Wildlife Sites

Site No.	Site Name	Page No.
01	Almond Bing	01 - 01
02	Balquhatstone	01 - 02
03	Barleystide	01 - 03
04	Black Loch	01 - 04
05	Blackhill Moss	01 - 05
06	Bo'ness Foreshore	01 - 06
07	Bonnyfield Quarry	01 - 07
08	Braes Wood	01 - 08
09	California	01 - 09
10	Callendar Wood and Lake	01 - 10
11	Camelon Riverside	01 - 11
12	Candie Mire	01 - 12
13	Carriden Wood	01 - 13
14	Castlecary Wood	01 - 14
15	Cleuch Plantation	01 - 15
16	Cowden	01 - 16
17	Craigbank Quarry (Avonbridge)	01 - 17
18	Drumbowie Reservoir	01 - 18
19	Drumbroider	01 - 19
20	Dunmore Moss and Wood	01 - 20
21	Easter Drumclair	01 - 21
22	Easter Greenrig	01 - 22
23	Forth and Clyde Canal	01 - 23
24	Garbethillmuir Moss	01 - 24
25	Grangeneuk Moss	01 - 25
26	Graystone Knowe	01 - 26
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Map of All Wildlife Sites



7. Appendix 1 Site Statements : Wildlife Sites

01. Almond Bing



Grid Ref. **NS 296039 676235**

Area **7.1 Hectares**

Key Features

Habitat (s)

Semi-natural broadleaved woodland
Neutral grassland/bare ground mosaic.

Species

Helleborine orchid populations
Brownfield plant communities
Bryophytes
Badger, Bluebell, Wych Elm.

Connectivity

Part of an extensive habitat network
Linked to the canal and Muiravonside Country Park.

Community

Recreational access
Volunteer involvement in habitat management and orchid monitoring.

Description

Almond Bing consists of a steep sided, flat-topped bing and adjacent lower surrounding land.

It is bounded by a road to the north, the canal to the east and agricultural fields to the south and west.

The site is mainly closed canopy birch woodland, with more open canopy woodland on top of the bing. Here the woodland occurs over a mosaic of bare ground and bryophyte-rich unimproved neutral grassland.

There are also small areas of unimproved neutral grassland associated with the path running along the top of the bing.

Nature Conservation Summary

Almond Bing has a significant area of regenerating semi-natural birch woodland.

The mosaic of open canopy woodland, bare ground and neutral grassland at the top of the bing is of particular nature conservation value.

A number of LBAP species occur at the site including badger, bluebell and wych elm.

140 plant species have been recorded from the site, including the locally scarce common centaury and 8 ancient woodland indicator species.

Of particular note is the population of Helleborine orchids which include a range of species tending towards the very rare Young's Helleborine variant.

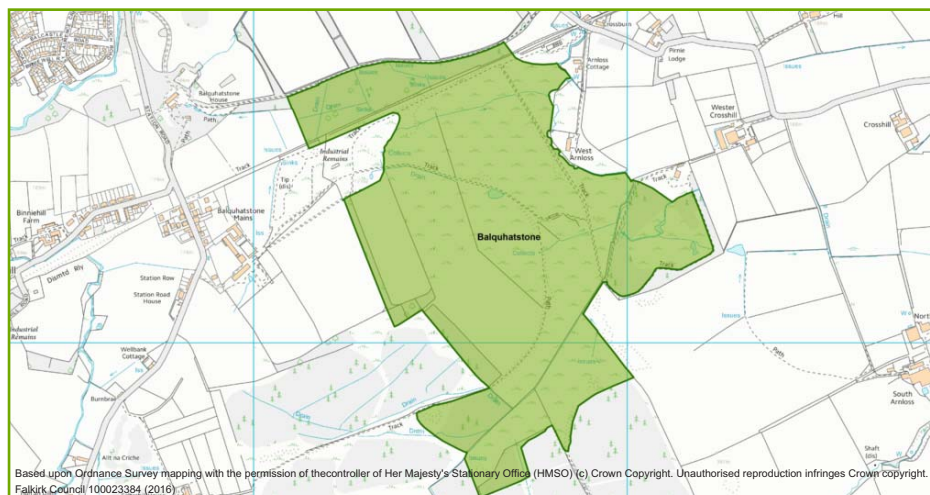
The site forms part of an extensive habitat network including the adjacent canal and Muiravonside Country park.

Conservation and Enhancement Opportunities

- Monitor orchid populations and manage as necessary.
- Maintain volunteer involvement in site monitoring.
- Ensure use and development of the canal basin does not have a detrimental impact on the wildlife site.
- Undertake woodland, scrub and grassland management as necessary to maintain the interest of the site.
- Maintain and manage the brownfield habitat at the top of the bing.
- Consider opportunities for site interpretation.

7. Appendix 1 Site Statements : Wildlife Sites

02. Balquhatstone



Grid Ref. NS 286645 672282

Area 63.4 Hectares

Key Features

Habitat (s)

Raised and modified bog, swamp, mire, marshy grassland, unimproved and semi-improved acidic grassland, semi-improved neutral grassland.

Species

A diverse range of species are present by virtue of the varied habitats within the site.
A number of locally rare species occur and over 15 LBAP species are suspected to occur.

Connectivity

Largely isolated by more intensive surrounding land-uses.
In proximity to a series of bogs in the local area (e.g. Easter Drumclair).

Community

Little or no recreational or educational use evident

Description

Situated on the Slamannan Plateau, Balquhatstone is an extensive site with a complex mosaic of habitats.

The centre of the site is dominated by a relic area of unimproved grassland with associated woodland strips and ponds.

To the north there is a mosaic of mire and grassland habitat edged by broadleaved and conifer woodland on the northern boundary.

A broad shallow valley to the south supports a complex mix of raised bog, mire, swamp, open water, marshy grassland, acidic and neutral grassland.

The surrounding landscape is more intensively managed agricultural land and forestry.

Nature Conservation Summary

This is an extensive site supporting a wide range of habitats, including nationally rare raised bog and locally rare mire and swamp habitats.

Due to the variety of different habitats the site has a high species diversity. It also supports a number of locally rare species and is likely to support a wide range of LBAP species. The lagg mire habitat has a particularly good range of species, including rarities.

This is an important site in its own right, but also in terms of its juxtaposition with other such bogs in the immediately vicinity and other such sites throughout the Slamannan Plateau.

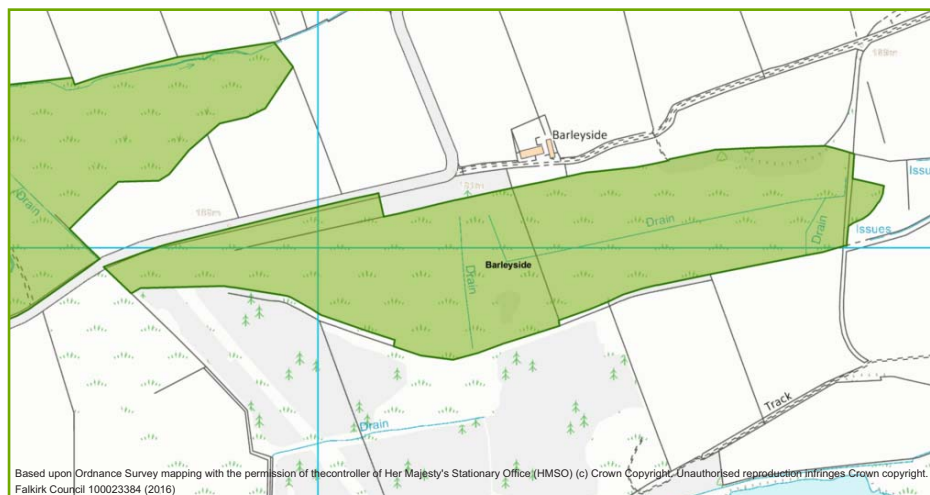
Drainage of mire habitats, tree planting and a lack of grazing may be impacting on the species diversity and habitat quality at this site.

Conservation and Enhancement Opportunities

- Grassland management.
- Bog enhancement may be possible with drain blocking and scrub removal.
- Protection of wetlands and grasslands from further tree planting.

7. Appendix 1 Site Statements : Wildlife Sites

03. Barleyside



Grid Ref. **NS 286290 676003**

Area **15.9 Hectares**

Key Features

Habitat (s)

Raised bog
Wet modified bog
Basin mire
Wet dwarf shrub heath.

Species

Several sphagnum species characteristic of raised bogs are present in parts of the site.

Connectivity

The site is close to Darnrig Moss SSSI and Newcraig Wildlife Site.

Community

No evidence of public access or use of the site.

Description

Barleyside is a large area of degraded raised bog habitat.

In the western half, although drained, primary bog habitat still remains. The central area of the bog is wettest overall, with peat-forming mosses *Sphagnum papillosum* and *magellanicum* present.

In the western section *Sphagnum* species are mainly restricted to the old drainage ditches. To the east the site is subject to fairly heavy grazing.

The bog has fairly broad lagg fen margins and marshy grassland habitat around the perimeter. The surrounding land is improved pasture and a fairly recent conifer plantation to the south.

The drains on site are not maintained which may be resulting in gradual improvement of the bog habitat.

Nature Conservation Summary

The site represents a significant area of raised bog on deep peat. Although much of it is degraded as a result of grazing and drainage, primary bog habitat does remain in the western half. Raised bogs are a nationally rare habitat and as such are of high conservation importance.

23 plant species, including heath spotted orchid and 7 sphagnum species, have been recorded on site.

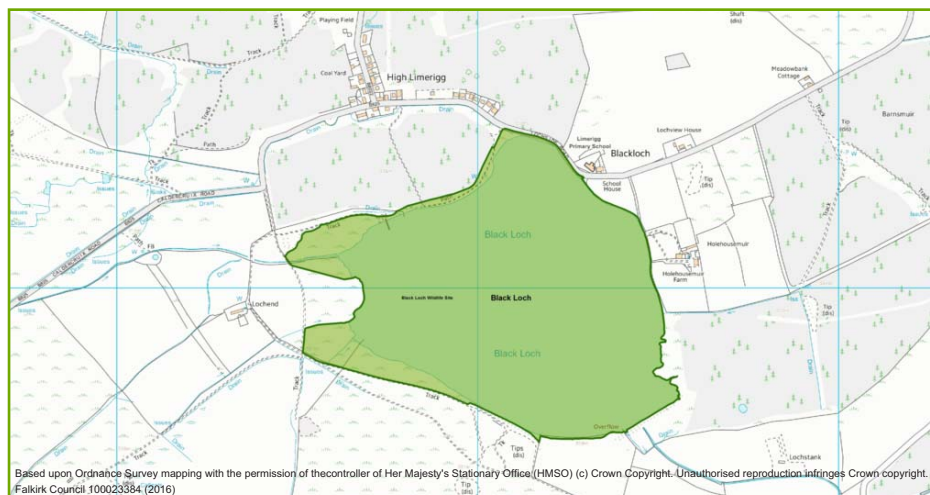
This is one of an important network of raised bogs across the Slamannan Plateau.

Conservation and Enhancement Opportunities

- Ditch blocking to increase the water level within the bog.
- Reduced grazing pressure (a grazing management plan).
- Birch scrub removal.

7. Appendix 1 Site Statements : Wildlife Sites

04. Black Loch



Grid Ref. NS 286056 669970

Area 56.7 Hectares

Key Features

Habitat (s)

Open water with some marginal vegetation
Swamp, fen and relic bog habitat
Dry and wet heath
Semi-improved acid grassland.

Species

131 higher plant species and 15 bryophytes recorded
4 LBAP species present and at least 7 others likely.

Connectivity

Immediately adjacent to Black Loch Moss Special Area of Conservation. Narrow wildlife corridors along the inflow and outflow watercourses.

Community

Formal access routes around N, NE and NW sides.
Recreational use of the loch.

Description

Black Loch is a large body of open water on a fairly exposed level plateau. The loch has short, sheer edges and the margins are generally shallow with sandy, stony substrate.

Surrounding land use includes semi- to highly improved pasture and forestry, as well as areas of semi-natural bog, fen, swamp and heath vegetation.

There are some narrow fringes of emergent or marsh vegetation around the loch edge but these are restricted due to the short, steep sides.

The loch is used for recreational purposes and paths extend around its northern half.

Nature Conservation Summary

The site supports a wide range of habitats, although other than the open water they are generally small in extent. Localised areas, particularly at the main inflows, are notable for their habitat quality.

The area of fen and swamp associated with the western in-flow is of particular note. Rich fen and bog habitats are of high ecological value.

The site supports a fairly good species diversity, although none of particular rarity. 131 higher plant and 15 bryophyte species have been recorded. 4 LBAP species are known to occur on site and others are likely.

The loch itself appears to be oligotrophic and impoverished, although there is some marginal fen development. It has importance due to it being one of the few, and the largest, open water bodies in the area.

Conservation and Enhancement Opportunities

- Ensure that any further leisure related development does not have a negative impact on the loch and surrounding semi-natural habitats.
- Survey the extent and quality of the bog to the southeast for potential future inclusion in Wildlife Site boundary.
- Consider scope for some management of marginal habitats.
- Undertake an aquatic survey to assess the ecology and management needs of the loch itself.

7. Appendix 1 Site Statements : Wildlife Sites

05. Blackhill Moss



Grid Ref. NS 281309 677662

Area 10.2 Hectares

Key Features

Habitat (s)	Raised bog Basin mire Heath Broadleaved woodland and scrub.
Species	A good range of species associated with mire, including sundew.
Connectivity	Lochgreen mire is nearby and may be hydrologically linked.
Community	No evidence of recreational use.

Description

The site is a complex area of mires and heaths on undulating ground in a poorly drained depression. Habitats include wet heath (and dry heath on raised knolls), wet woodland, pond, scrub, raised bog and wetter mire vegetation.

The western half of the site supports dense scrub woodland, tall heath and bog vegetation. The eastern half supports the wetter mire habitat and some areas of dry heath towards the north-eastern edge.

The site itself is surrounded by highly improved agricultural pasture. Loch green moss, to the immediate east, may be hydrologically linked to Blackhill Moss and is of ecological interest.

Nature Conservation Summary

The site contains a rich variety of habitats including raised bog which is nationally rare and mire habitat which is locally rare. The rich mosaic of vegetation adds to the site's diversity.

The habitats are of note for supporting a good range of mire species. Key bog/mire indicator species such as *Sphagnum magellanicum*, cranberry and common and harestail cottongrass are present. The LBAP species round-leaved sundew, snipe and frog are present. Others are likely.

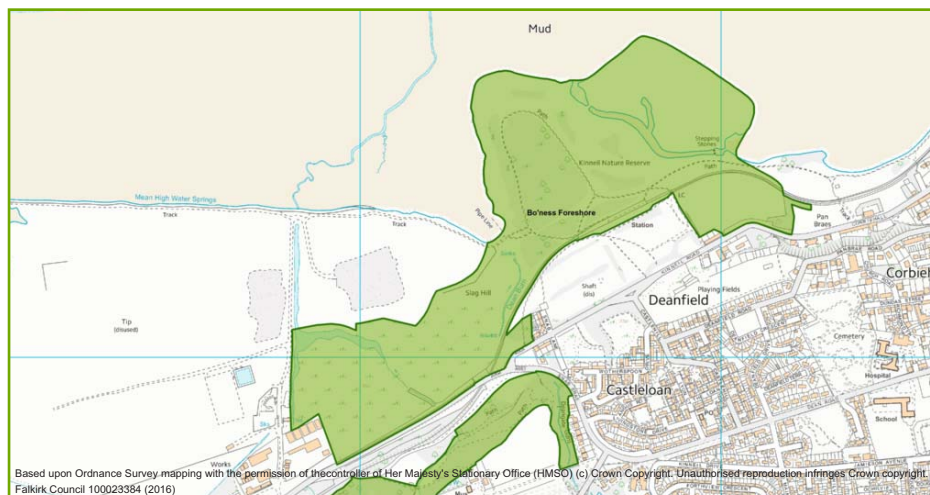
Despite a certain amount of enrichment and disturbance on the eastern edge, the site is a good example of a range of mire, bog and wet woodland habitats.

Conservation and Enhancement Opportunities

- Maintain the mires by removing encroaching scrub and saplings.
- Establish wet woodland in the SE corner of the site.
- Potential to restrict flow of water out of the mire to wet up habitats.
- Limit ground disturbance and enrichment of the mire habitats where possible.

7. Appendix 1 Site Statements : Wildlife Sites

06. Bo'ness Foreshore (aka Kinneil Foreshore)



Grid Ref. NS 298504 681359

Area 56 Hectares

Key Features

Habitat (s)	Unimproved neutral grassland Broadleaved woodland Scrub Saltmarsh and inter-tidal boulders.
Species	Significant species diversity with over 20 LBAP species likely to occur on site.
Connectivity	A large and central element of an extensive habitat corridor.
Community	Very good public access. Active community involvement. Some educational use.

Description

Bo'ness Foreshore is a large site located on the north-western edge of Bo'ness. It sits next to the internationally important Firth of Forth SPA.

The site is an area of reclaimed bing, old landfill and other waste ground. Restoration, landscaping, natural regeneration and succession have resulted in a variety of established habitats including unimproved neutral grassland, broadleaved woodland and scrub. The site also includes a fringe of inter-tidal habitats such as saltmarsh. The actual coast is formed by large boulders.

The site is highly valued by local people and well used by walkers. It is actively managed by a local community group and Falkirk Council.

Nature Conservation Summary

The site represents a large area of species-rich habitats, including extensive species-rich grassland. The grassland on the eastern slope of the bing dome is particularly diverse and supports a number of locally rare species. Habitat diversity is enhanced by the establishing woodland and dense and scattered scrub. Small areas of saltmarsh habitat, most occurring as fringes to the tidal channel, add local diversity.

The very high species diversity, easily exceeding 200 plant species, is of particular note. A number of locally rare species are present. A good range of saltmarsh species occur, Glasswort being of particular note. Invertebrate and bird interest is likely to be high and over 2 LBAP species probably occur.

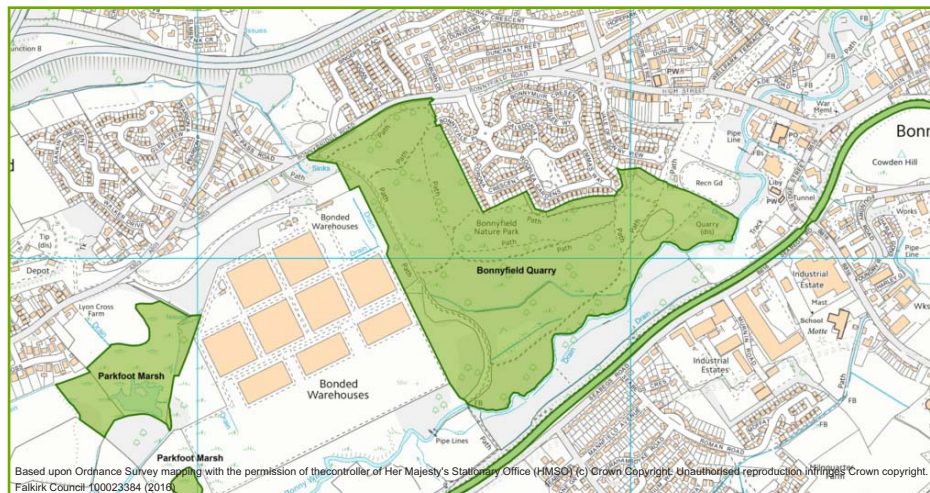
The site is a large, central element of an extensive habitat corridor running along the Carriden and Bo'ness foreshore to the east and into the woodlands of Kinneil and Polmont to the west.

Conservation and Enhancement Opportunities

- Extend boundary to include the meadows to the south of the site.
- Restore the old landfill site to the west to benefit wildlife.
- Maintain an appropriate grassland management regime.
- Scarify or disturb areas to retain early successional habitats.
- Control scrub encroachment on grassland areas.
- Continue appropriate woodland management.
- Minimise disturbance on the island area.
- Promote appropriate recreational use.

7. Appendix 1 Site Statements : Wildlife Sites

07. Bonnyfield Quarry



Grid Ref. NS 281711 680019

Area 28.8 Hectares

Key Features

Habitat (s)	Unimproved neutral grassland Scrub Broadleaved woodland Ponds Fen & swamp.
Species	Over 200 plant species, including 8 local rarities.
Connectivity	An important site in the Bonny Water and Forth & Clyde Canal wildlife corridors.
Community	Used by school groups. Actively managed with involvement of a community management group. Good access, well used by walkers.

Description

A disused aggregate quarry immediately west of Bonnybridge, the site has naturally regenerated and now supports a wide range of habitats. These include, a significant area of neutral grassland, woodland and scrub, several ponds and scrapes and species-rich swamp. The site is well used by local people and schools and has a network of paths.

To the south the site is immediately adjacent to the Bonny Water. Neighbouring the site to the north and east is housing and playing fields. To the west the land around the bonded warehouses provides a significant area of rough, open grassland. The site is linked to the wider countryside by wildlife corridors along the Bonny Water and Forth and Clyde canal.

Nature Conservation Summary

Bonnyfield Quarry is a large site with a diverse range of habitats. The extent of unimproved neutral grassland present is particularly notable.

The site supports a high species diversity. Over 200 plant species have been recorded, including 8 local rarities. The site is of great value for breeding birds (39 bird species recorded) and invertebrates. It is also likely to be of value for a range of mammal and amphibian species.

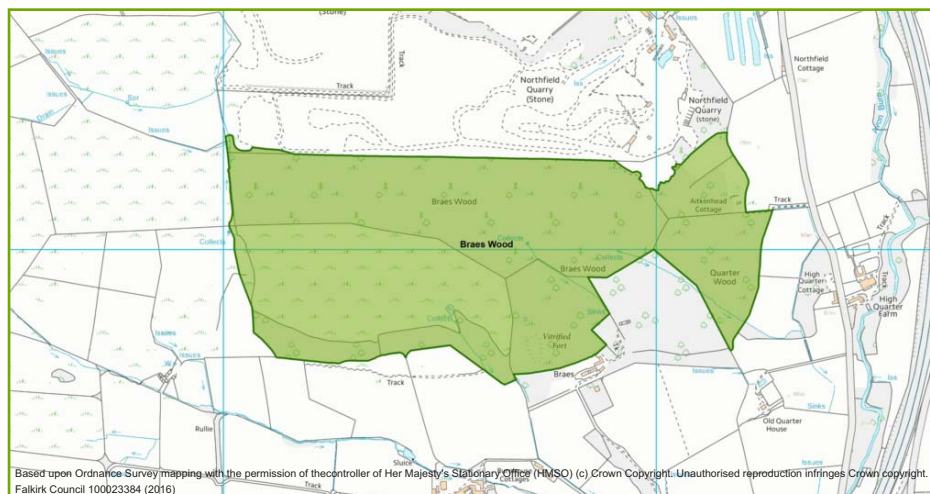
The site is well connected to wider habitat networks.

Conservation and Enhancement Opportunities

- Control invasive plants, particularly along the Bonny Water.
- Control encroachment by scrub/saplings in grassland areas.
- Grassland cutting regime to maintain species-diversity.
- Occasional scarification/disturbance of areas to encourage early successional habitats and provide open ground.
- Allow woodland vegetation to develop and mature in places.
- Monitor ponds and undertake management if needed.

7. Appendix 1 Site Statements : Wildlife Sites

08. Braes Wood



Grid Ref. NS 279551 685028

Area 49.6 Hectares

Key Features

Habitat (s)	Broadleaved semi-natural woodland Unimproved acid grassland Heath Marshy Grassland.
Species	195 plant species. 7 locally rare plants. Several LBAP species likely.
Connectivity	One of a series of extensive woodlands in the vicinity.
Community	Open access.

Description

This extensive site consists mainly of birch woodland (with some beech) surrounded by a mosaic of acid grassland, marshy grassland and heath. There are also areas of dense bracken and bracken encroachment into the grassland. Although originally planted, the birch woodland has been present for around 200 years and appears semi-natural in character.

The site is situated on a small outcrop of basaltic lava underlain with acid sandstone. The acid soils and rabbit/deer grazing contribute to the sparse ground flora beneath the woodland canopy. The underlying geology also influences the range of species present. The southwestern third of the site is grazed by livestock.

To the north of the site lies Boards Quarry which has increased in size since the site was first designated and is 'nibbling away' at the woodland edge. To the east, south and west the site is surrounded by agricultural land.

This is one of a series of extensive woodlands on the northern edge of the Falkirk Council area.

Nature Conservation Summary

This is an extensive and very complex site with significant habitat diversity demonstrating a wide range of successional stages - 11 different habitat types have been recorded. Of these habitats the species-rich grassland, diverse mires, wet heath slope and broadleaved woodland stand out as of particular quality.

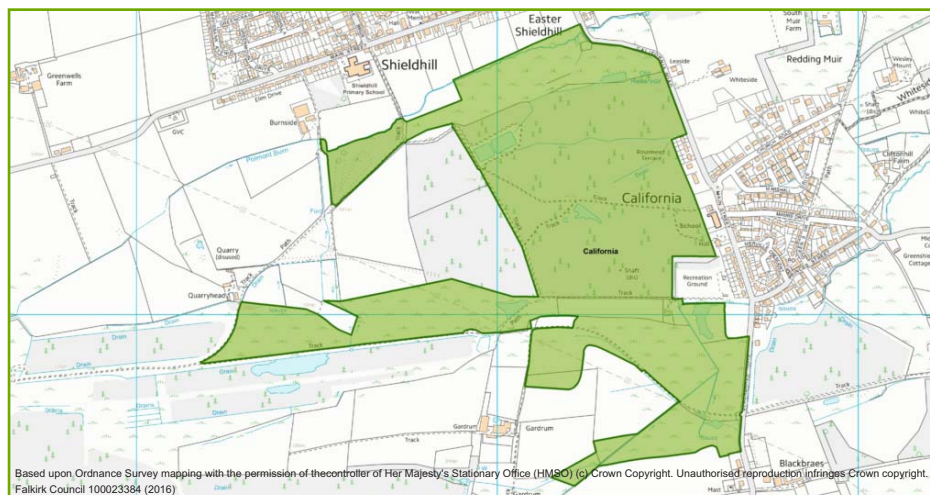
Species diversity in most of the habitat types is high, with over 195 plant species recorded. A number of locally rare species have been recorded including greater butterfly orchid, cowberry, heath milkwort, English stonecrop, round-leaved sundew, beech fern, oak fern and common polypody.

Conservation and Enhancement Opportunities

- Manage grazing in the SW third to reduce poaching of the grassland and allow woodland regeneration.
- Undertake further survey of the mire area.
- Prevent further encroachment by quarrying activities.

7. Appendix 1 Site Statements : Wildlife Sites

09. California



Grid Ref. NS 290176 676198

Area 68.6 Hectares

Key Features

Habitat (s)

Mire
Swamp
Acidic grassland
Recently planted broadleaved woodland
Scrub
Bog (wet modified)
Open water.

Species

Several notable and locally rare plant species.
High species diversity.

Connectivity

Links to peatland to the southwest. Linked to the wider area via habitat corridors along watercourses.

Community

Formal and informal access routes across north half of site.

Description

This is an extensive site lying to the south of Shieldhill and west of California. Previous surveys have divided the area into two halves:

The northern half consists of acidic grassland recently over-planted with broadleaved woodland, marshy grassland, open water, mire and swamp associated with old pools. The areas of particular interest are generally associated with the pools, reservoirs and wetlands.

The southern half of the site is a mix of degraded peat vegetation with some artificial ponds and marshy grassland. While the western pool is an isolated low lying lagg area, the eastern pond is more open with developing areas of swamp vegetation.

The site is neighboured to the north and east by the villages of Shieldhill and California and to the south and west by agricultural land. To the south-west lies Gardrum Moss - a large raised bog degraded by peat cutting.

The north of the site has formal and informal access routes across it.

Nature Conservation Summary

The site exhibits higher than average species and habitat diversity. It supports a diverse mosaic of wetland, grassland and mire habitat. Recent tree planting, while superseding much of the previously extensive acid grassland, has avoided those areas highlighted as of most interest (particularly the pools and wetland areas). As such the site retains its high conservation value. In time the establishing woodland may add to the diversity and interest of the site. The mire and swamp habitats are locally rare.

The species diversity of the site is high, helped by the mixed wetlands and the mosaic of habitats to the north. Species of note include Knotted pearlwort, Fairy flax and marsh arrowgrass and the local rarities whorled caraway, tea-leaved willow and common mare's tail.

Conservation and Enhancement Opportunities

- Re-survey as woodland establishes to update site information and confirm continuing nature conservation value.
- Check continued presence of the LBAP priority species whorled caraway following tree planting works.
- Avoid any further damage from tipping and drainage.
- Avoid damage from inappropriate grazing regimes.

10. Callendar Wood and Lake



Key Features

Description

While much of the woodland site is commercially managed conifer plantation, there is a significant proportion of broadleaved woodland which is semi-natural in character.

There is an area of grassland to the southwest of the site, known as Henry's Hill. The site has an extensive network of paths and tracks often with adjacent ditches.

Nature Conservation Summary

This is a large and important nature conservation site consisting of various woodland types ranging from semi-natural broadleaved woodland to dense conifer plantation. These provide a huge diversity of structure and species.

The broadleaved woodland supports relatively high species diversity and locally rare species. There has been significant improvement in the woodland habitat since extensive rhododendron removal. In particular the ground flora is likely to have become more diverse. The woodland shows signs of significant tree regeneration and has a good quantity of deadwood habitats.

Although the neutral grassland is dominated by knapweed with relatively few other herb species it is well used by insects such as bees and hoverflies.

The site is known to support bats and a good range of breeding birds.

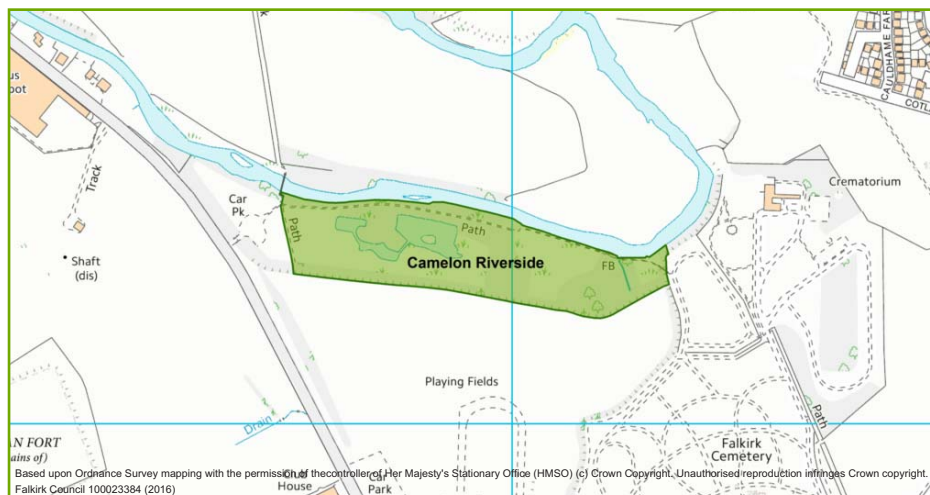
The south side of Callendar Lake supports a diverse range of aquatic plants including locally rare species.

Conservation and Enhancement Opportunities

- Continue rhododendron control to ensure it does not re-establish.
- Control other invasive non-native species (particularly Japanese Knotweed and Himalayan Balsam).
- Move towards more broadleaved woodland within the forestry plan.
- Enhance native ground flora by clearing areas where bracken/bramble dominate and seeding or planting with native species.
- Adjust the site boundary to take in more areas of open parkland of benefit to bats and birds.
- Enhance neutral grassland by sapling removal and a cutting regime.

7. Appendix 1 Site Statements : Wildlife Sites

11. Camelon Riverside



Grid Ref. NS 286931 681233

Area 5.4 Hectares

Key Features

Habitat (s)	Broadleaved semi-natural woodland Mixed plantation woodland Neutral and semi-improved grassland Ponds Scrub.
Species	High potential for otter, amphibians and woodland bird species.
Connectivity	A key site in the River Carron habitat corridor.
Community	Paths around the site edge frequently used.

Description

This site is immediately adjacent to the River Carron in an urban fringe setting. It sits at the base of an old landfill site (now sports pitches and amenity grassland) and is subject to occasional inundation by the river.

Although limited in size the site contains a number of distinct habitats including wetland, scrub and woodland.

Areas of open water and swamp are located in the centre of the site. Scrubby broadleaved woodland habitat occurs along the riverbank and into the centre of the site. Mixed plantation woodland forms the southern boundary.

Areas of grassland are primarily located in the western end of the site.

Nature Conservation Summary

This site, despite its limited size supports a good range of different habitats, some of which are semi-natural in character. The woodland exhibits a reasonably diverse scrub layer and ground-flora, although the ground flora may be inhibited by the increasing dominance of Himalayan balsam.

The ponds in the centre of the site, despite becoming rather silted up by vegetation, are relatively rich in biodiversity. The variety of conditions and species may be enhanced by occasional inundation of the wetland by the river.

93 plant species and a range of breeding birds, invertebrates, and amphibians have been recorded at the site. It is suggested that the site may be of importance for otter.

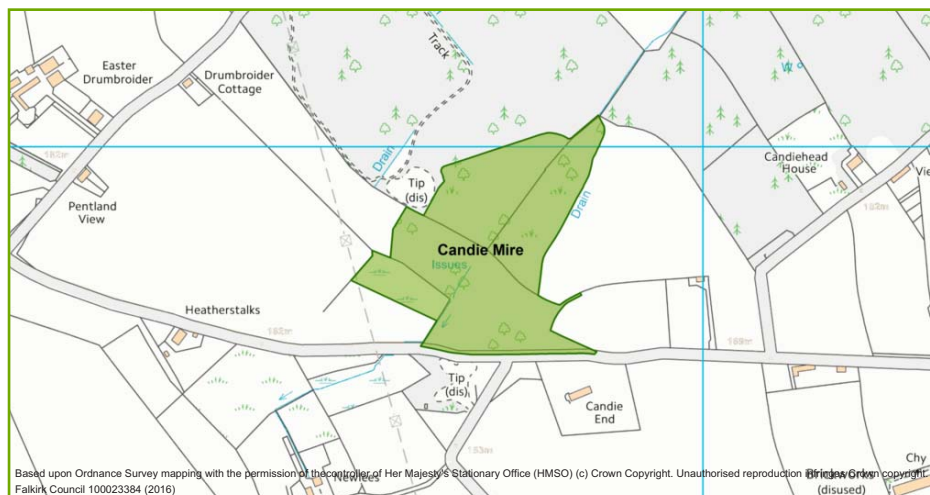
The site occupies an important position on the habitat corridor formed by the River Carron.

Conservation and Enhancement Opportunities

- Put in place woodland management to encourage structural and age diversity and favour native species.
- Potential for improved grassland management/meadow creation in grassland areas to the west of the site.
- Control of invasive plant species, particularly Himalayan Balsam and Japanese Knotweed.
- Extend site boundary to include the grassland to the west.
- Maintain areas of open water with careful removal of some shading tree limbs.

7. Appendix 1 Site Statements : Wildlife Sites

12. Candie Mire



Grid Ref. NS 292705 673860

Area 6.3 Hectares

Key Features

Habitat (s)	Raised bog Scrub Acidic and marshy grassland Pond.
Species	Good bryophyte diversity, including 11 sphagnum species. Several LBAP species present.
Connectivity	Contiguous to areas of woodland and marshy grassland to north.
Community	No formal access.

Description

Candie Mire is a relic area of raised bog situated in a broad valley. It has woodland and scrub on most margins of the bog, with some additional areas of marshy and acidic grassland around the edge of the site.

A pond has been created relatively recently in the south-western area of marshy grassland.

The surrounding land is agricultural pasture, with an area of mine spoil to the north-east.

Nature Conservation Summary

This site has considerable nature conservation interest. This is mainly due to its relic raised bog habitat with relatively intact mire surface, good sphagnum cover and good species diversity. Also of note are the wet 'carr' scrub area to the south, marshy grassland to the southwest and acidic grassland to the south. Scrub invasion into the marshy grassland and mire habitat is increasing the area of woodland cover

The site has good bryophyte species diversity (30 species recorded), including sphagnum species typical of raised bogs. The occurrence of *Sphagnum molle* and several leafy liverworts including the LBAP priority *lepidozia pearsonii* is of note. Several other LBAP plant and animal species are known to occur on the site, as well as the locally rare lesser twayblade and greater butterfly orchid.

Conservation and Enhancement Opportunities

- Scrub control on the raised bog and the acidic grassland areas.
- A grass cutting regime on the acid grassland to the SW of the site may be of benefit.
- Some drain blocking may benefit the bog.
- Limited thinning within the 'carr' scrub may be beneficial.

13. Carriden Wood



Key Features

Description

There are informal paths through the woods; however the main route is the John Muir Way running along the northern edge of the site, next to the shoreline.

Nature Conservation Summary

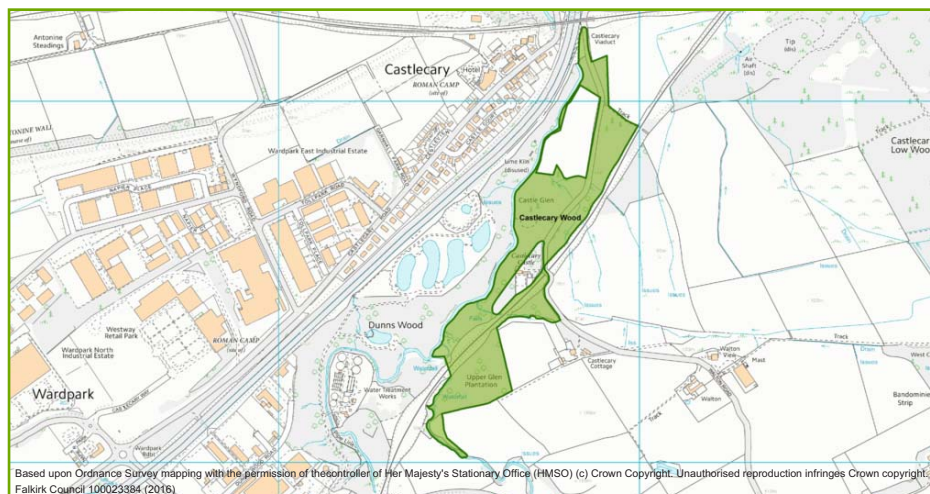
The site is an important element of a habitat network running along the shoreline linking open countryside and woodland to the east with foreshore, brownfield and grassland habitats further west.

Conservation and Enhancement Opportunities

- Woodland management, particularly in the dense central area to improve woodland structure.
- Control of encroaching Rhododendron and Laurel in the woodland.
- Investigate including the NW triangle of birch woodland in the wildlife site.
- Potential for improved path provision within the woods.

7. Appendix 1 Site Statements : Wildlife Sites

14. Castlecary Wood



Grid Ref. NS 278696 677574

Area 13.7 Hectares

Key Features

Habitat (s)	Semi-natural and plantation broadleaved woodland Conifer woodland Scrub.
Species	Several LBAP species recorded and others suspected. High species diversity.
Connectivity	An important site on the habitat corridor along the Red Burn.
Community	Open access.

Description

This site is a steep valley side with predominantly semi-natural mixed broadleaved and plantation woodlands. It lies on the east side of the Red Burn and is sandwiched between the burn and the railway to the east, with a small area of plantation woodland on the other side of the railway line.

An improved agricultural field lies within the woodland to the north but is not included in the boundary of the wildlife site.

Many small burns run through the woodland to the Red Burn.

Nature Conservation Summary

This site contains a wide range of woodland types, giving a high species diversity. Mature oaks form an important part of the tree canopy, although non-native beech and sycamore are tending to dominate. There is evidence of significant regeneration of sycamore, beech, hawthorn, ash and willow throughout. Overall the site supports exceptionally high value woodland, particularly below the castle.

The woodland is afforded added interest by the small flushes, rock exposures and grassland areas. The ground-flora is of interest due to this range of vegetation types and its generally semi-natural character.

The site has a high species diversity (150 species previously recorded), including several locally rare species and LBAP species. Exposed rock faces, particularly beside waterfalls, are of note for bryophyte diversity.

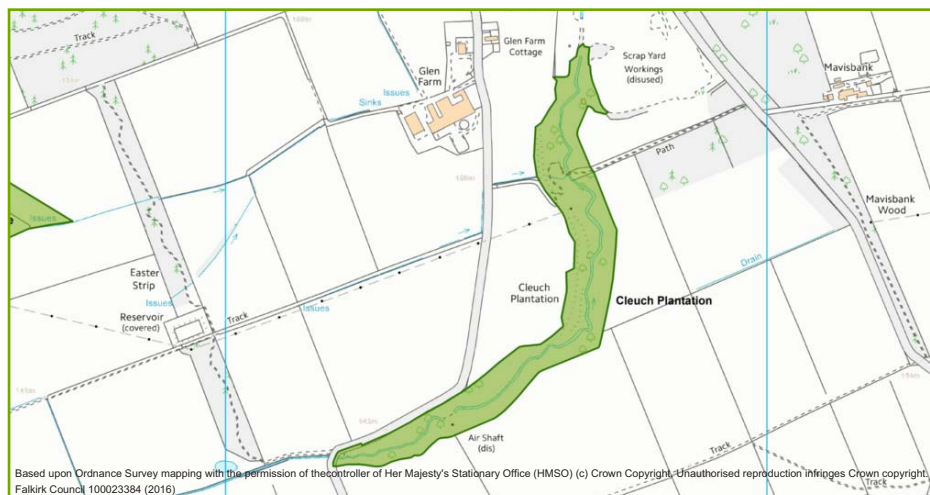
The site is part of a wider habitat corridor along the Red Burn, linking to road, rail and canal corridors to the north and Cumbernauld Glen to the south.

Conservation and Enhancement Opportunities

- Control of Himalayan balsam and Japanese Knotweed.
- Potential for tree planting in northern field to extend the woodland.
- Measures to deter dumping along the roadside would be beneficial.
- Woodland management could favour native species to help limit the dominance of beech and sycamore.

7. Appendix 1 Site Statements : Wildlife Sites

15. Cleuch Plantation



Grid Ref. NS 288573 677458

Area 7.2 Hectares

Key Features

Habitat (s)	Broadleaved woodland.
Species	Badger. Likely to be important for breeding birds and bats.
Connectivity	Part of a habitat network linking habitat to the east and south, along the burn.
Community	Open access with well used path.

Description

Cleuch Plantation is a broadleaved woodland in a steep sided gorge, situated to the south of Hallglen.

A stony burn flows through the bottom of the gorge. While sometimes dry, the burn clearly does receive periodic flows of clean water (fed from the bogs of the Slamannan Plateau).

Adjacent land use comprises improved agricultural fields and disturbed ground to the north associated with a large scrapyard.

Access to the site is limited by the steep sides, however there is a well-used path through the site.

Nature Conservation Summary

This woodland is a rare example of relatively undisturbed woodland of semi-natural character, the gorge preventing easy access to much of the site. Although much of the woodland has been planted, it has developed good semi-natural qualities with a diverse structure and range of species.

The wood is recovering from the loss of elm with plenty of regeneration of other species and has a diverse ground flora and shrub layer.

The gorge area also has good deadwood habitats. There is added conservation interest provided by the shaded gorge-like rocks which support a good range of ferns and bryophytes including the locally rare Oak fern.

The woodland is likely to be important for a number of LBAP species, including woodland birds, badgers, and bats.

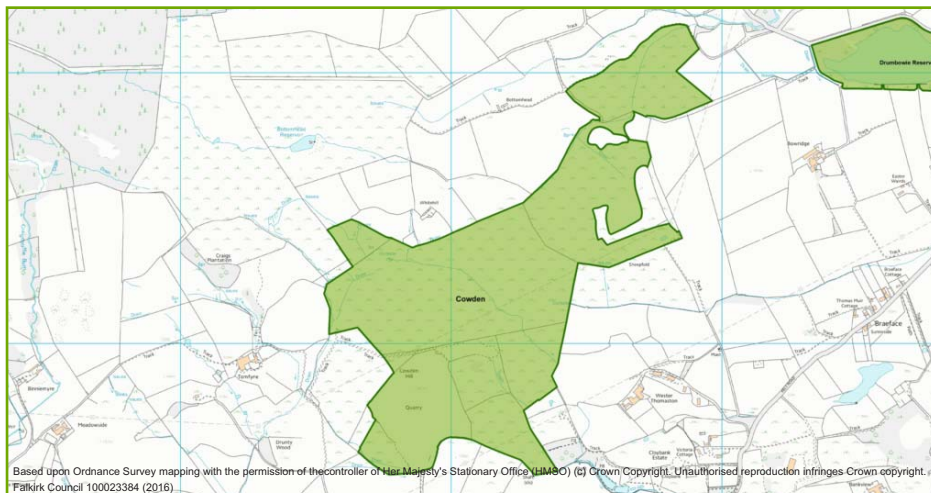
The site forms a key part of a habitat corridor along the burn reaching towards the Union canal, Hallglen Haven and Mavisbank wood to the north and east and towards other plantation woodlands to the south.

Conservation and Enhancement Opportunities

- Non-intervention in the 'wilder' gorge woodland.
- Control the level of Sycamore regeneration.
- Open up areas in the southern sycamore dominated area to encourage ash regeneration.
- Extend the wooded area with new planting if opportunities arise.

7. Appendix 1 Site Statements : Wildlife Sites

16. Cowden



Grid Ref. NS 277209 680244

Area 89.5 Hectares

Key Features

Habitat (s)	Blanket bog & wet modified bog Heath Heath & grassland mosaic Wetlands (swamp, marsh, mire and flushes) Unimproved grassland Scrub.
Species	The site supports a diverse range of species including LBAP priority - Brown hare.
Connectivity	A large site connecting to other sites and burns to the north, northwest and east.
Community	No formal access.

Description

Cowden is an extensive site within a highly modified agricultural and post industrial landscape.

It is an undulating area with upland characteristics containing remnant mire habitat, a range of grassland types, heath & grassland mosaics, wetland areas and scrub.

The site also includes Cowden quarry. Mire habitats cover a large part of the site and there are also two areas of swamp habitat.

The site also includes several areas of improved grassland and arable ground.

Nature Conservation Summary

This extensive site supports a wide variety of different habitat types, including locally rare swamp and heath habitats.

The site also contains a diverse range of species, some locally rare. Of note are fen bedstraw, bog sedge, dioecious sedge, and greater tussock sedge.

Locally rare species include marsh arrow grass, bog pondweed, and common yellow sedge. The LBAP species Brown hare also occurs.

Some areas of lower nature conservation interest have been included in the site boundary in order to preserve the overall integrity of the site and to promote beneficial management of these areas.

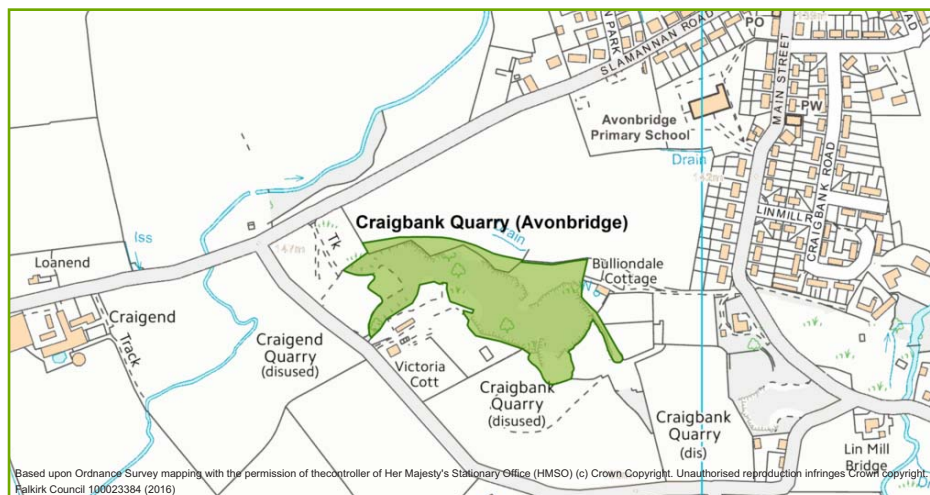
The site forms an extensive area and is part of a wider habitat network reaching towards the castlerankine burn to the northeast, drumbroder moss to the east, open upland countryside to the north and further mire to the northwest.

Conservation and Enhancement Opportunities

- Reassess site boundary to exclude highly modified habitats or improved fields not critical to the sites integrity.
- Restoration of the now disused quarry to benefit wildlife.
- Grazing management to prevent damage to sensitive habitats and enhance grasslands.

7. Appendix 1 Site Statements : Wildlife Sites

17. Craigbank Quarry (Avonbridge)



Grid Ref. NS 290774 672267

Area 2.5 Hectares

Key Features

Habitat (s)	Scrub and woodland Unimproved grassland Swamp and mire Rock and scree.
Species	High species diversity.
Connectivity	Relatively isolated but some links to the burn corridor to the north.
Community	Limited access.

Description

This site consists of land associated with old quarry workings and supports a diverse range of small scale habitat types including: mire, grassland, scrub and wetland. These are often present in complex habitat mosaics.

Scrub is a dominant feature on the site, with some areas of broadleaved woodland on the long-established embankment slopes.

There are a few large glades with sedge dominated mire.

The surrounding land supports intensive agriculture, a compound with caravans to the southwest and the edge of Avonbridge to the east.

Nature Conservation Summary

Although small, this is a highly diverse site with a complex range of different habitats. The site also supports a diverse range of higher plant species (151) including several unusual and locally rare species.

The sites high diversity and the species rich and somewhat unusual vegetation of the quarry floor, combined with the secluded setting and habitats of the surrounding quarry walls, produce a site of high nature conservation interest.

The wet quarry floor is important for the rich species diversity it supports, including several local rarities such as marsh arrowgrass, knotted pearlwort, field pepperwort and silvery hairgrass, as well as several mosses of local interest. 30 species of bryophyte have been recorded.

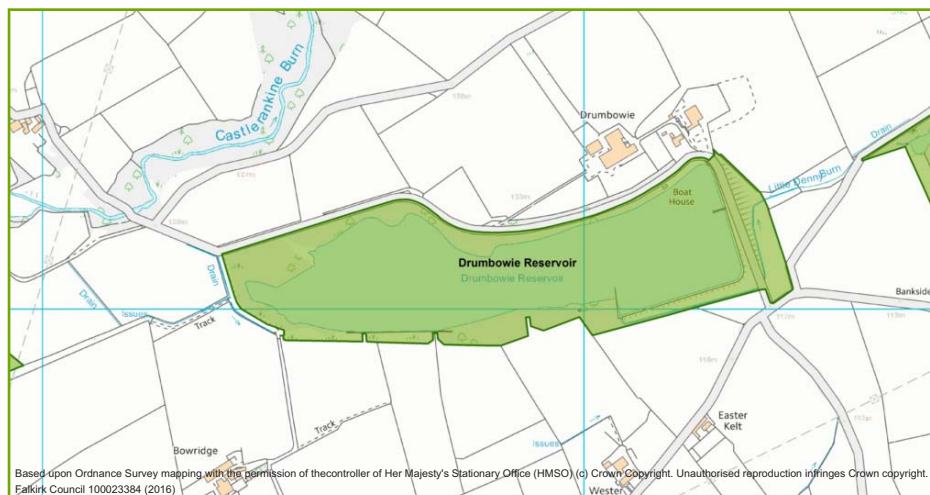
The site is relatively isolated, although it does link to scrub/woodland and a burn to the north.

Conservation and Enhancement Opportunities

- Adjust boundary to exclude area of dumped material in SW.
- Resurvey the site in spring.
- Management to maintain habitat diversity would be beneficial.
- Maintain open habitats by scrub control.
- Retain short grassland and ephemeral vegetation by periodic disturbance.
- Maintain the water quality and levels on the quarry floor.

7. Appendix 1 Site Statements : Wildlife Sites

18. Drumbowie Reservoir



Grid Ref. NS 278879 681078

Area 22 Hectares

Key Features

Habitat (s)

Open water
Woodland and scrub
Swamp
Grassland
Heath.

Species

15 locally rare species. Several LBAP species.

Connectivity

Close to Little Denny Reservoir and the Castlerankine Burn Corridor.

Community

Limited access. Used for fishing.

Description

This site, situated to the west of Denny, consists of a public water supply reservoir and the surrounding fringe of, relatively natural, habitats. These include woodland, scrub, grassland, heath and wetland.

While there is limited access for walkers the reservoir is used for fishing.

Nature Conservation Summary

This site has a high diversity of habitats including birch woodland, willow carr, scrub, swamp and inundation vegetation, open water, neutral and acid grassland and heath.

Extensive areas of open water, heath and willow carr are locally rare habitats. The emergent vegetation to the west of the site is of particular note.

Although species diversity is not huge (111 plant species recorded) there are a significant number of locally rare plant species.

Several LBAP priority species are also likely to be present including amphibians, woodland and wetland bird species and short-eared owl.

The site is in close proximity to Little Denny reservoir to the east and the Castlerankine Burn corridor to the west, forming an important wetland habitat corridor.

Conservation and Enhancement Opportunities

- Eradicate large areas of Rosebay Willowherb.
- Scrub control in areas of heath.
- Grassland management to encourage a diverse grassland sward.
- Re-establish heath in place of NW birch woodland.
- Consider exclusion of the amenity grassland to the east of the site.